

An
Bord
Pleanála

Inspector's Report

ABP-314724-22

Development	Railway (MetroLink - Estuary to Charlemont via Dublin Airport) Order [2022]
Location	MetroLink. Estuary through Swords, Dublin Airport, Ballymun, Glasnevin and City Centre to Charlemont, Co. Dublin
Planning Authority	Dublin City Council and Fingal County Council
Applicant	Transport Infrastructure Ireland
Type of Application	Railway Order Application
Observers	See Appendix 2
Date of Site Inspection	2 nd & 3 rd October 2023, 7 th February 2024, 6 th February 2025
Oral Hearing	19 th – 22 nd February; 26 th – 29 th February; 4 th – 7 th March; 11 th – 13 th March; 19 th – 21 st March; 25 th – 28 th March 2024 (22 No. days in total)
Inspector	Niall Haverty (Lead Inspector) Barry O'Donnell (Second Inspector)

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Table of Abbreviations

1877 Act	St Stephen's Green (Dublin) Act 1877
1930 Act	National Monuments Act 1930, as amended
2000 Act	Planning and Development Act 2000, as amended
2001 Act	Transport (Railway Infrastructure) Act 2001, as amended
2008 Act	Dublin Transport Act 2008
2015 Act / Climate Act	Climate Action and Low Carbon Development Act 2015, as amended
2023 Act	Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023
2024 Act	Planning and Development Act 2024
AA	Appropriate Assessment
AADT	Annual Average Daily Traffic
AC	Alternating Current
ACA	Architectural Conservation Area
ACP	Albert College Park
AEP	Annual Exceedance Probability
AIA	Arboricultural Impact Assessment
AZ	Assessment Zone
BDR	Building Damage Report
BS	British Standard
CAP	Climate Action Plan
CDP	City Development Plan / County Development Plan
CEMP	Construction and Environmental Management Plan
Ch.	Chainage
CH₄	Methane
CIÉ	Córas Iompair Éireann
CIRIA	Construction Industry Research and Industry Association
CNL	Construction Noise Level
CNT	Construction Noise Threshold
CNVMP	Construction Noise and Vibration Management Plan
CO_{2eq}	Carbon Dioxide Equivalent
CPO	Compulsory Purchase Order
CPPA	Corporate Power Purchase Agreement
CRR	Commission for Railway Regulation
CRU	Commission for Regulation of Utilities
CSO	Central Statistics Office
CTMP	Construction Traffic Management Plan
C&D	Construction and Demolition
D-Wall	Diaphragm Wall
DAA	Dublin Airport Authority
DANP	Dublin Airport North Portal
DASP	Dublin Airport South Portal
dB	Decibel
DC	Direct Current
DCC	Dublin City Council
DCU	Dublin City University

DM	Do Minimum
DN	Do Nothing
DECC	Department of Environment, Climate and Communications
DFB	Dublin Fire Brigade
DHLGH	Department of Housing, Local Government and Heritage
DMURS	Design Manual for Urban Roads and Streets
DS	Do Something
D&B	Design and Build
ECow	Ecological Clerk of Works
EC	European Commission
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMC	Electromagnetic Compatibility
EMF	Electromagnetic Fields
EMI	Electromagnetic Interference
EMR	Electromagnetic Radiation
EMRA	Eastern and Midlands Regional Assembly
EP	Expert Panel
EPA	Environmental Protection Agency
EPB	Earth Pressure Balance
EPR	Emerging Preferred Route
ERM	Eastern Regional Model
ESB	Electricity Supply Board
ESBN	ESB Networks
ETS	Emissions Trading Scheme
EU	European Union
FCC	Fingal County Council
FRA	Flood Risk Assessment
FST	Floating Slab Track
GHG	Greenhouse Gas
GDA	Greater Dublin Area
GDATS	Greater Dublin Area Transport Strategy 2022-2042
GDDS	Greater Dublin Drainage Scheme
GI	Ground Investigations
GIS	Gas Insulated Switchgear
GPO	General Post Office
GSI	Geological Survey of Ireland
GSWR	Great Southern and Western Railway (i.e. South Western Commuter or Kildare line)
GTC	Ground Transportation Centre
HIA	Heritage Impact Assessment
HCV	Heavy Commercial Vehicle
HGV	Heavy Goods Vehicle
HSA	Health and Safety Authority
HSE	Health Services Executive
HV	High Voltage
IAQM	Institute of Air Quality Management
IE	Iarnród Éireann

IEE	Independent Engineering Expert
IEMA	Institute of Environmental Management and Assessment
IFI	Inland Fisheries Ireland
IME	Independent Monitoring Engineer
Kt	Kilo tonnes
kV	Kilovolt
LA_{eq}	A-weighted equivalent continuous steady sound level during the sample period
LAP	Local Area Plan
LAS	Land Acquisition Strategy
LLCA	Local Landscape Character Area
LoD	Limits of Deviation
LOS	Level of Service
LVIA	Landscape and Visual Impact Assessment
MAND	Major Accident or Natural Disaster
MCA	Multi Criteria Analysis
MGWR	Midland Great Western Railway (i.e. Western Commuter or Maynooth line)
MMP	Mobility Management Plan
mOD	Metres above Ordnance Datum
MSCP	Multi-Storey Car Park
Mt	Million tonnes
MV	Medium Voltage
MW	Megawatt
NH₃	Ammonia
NIAH	National Inventory of Architectural Heritage
NO₂	Nitrogen Dioxide
NO_x	Nitrogen Dioxide and Nitric Oxide
NDP	National Development Plan
NHA	Natural Heritage Area
NIAH	National Inventory of Architectural Heritage
NIS	Natura Impact Statement
NPF	National Planning Framework
NPWS	National Parks and Wildlife Service
NSL	Noise Sensitive Location
NTA	National Transport Authority
OCR	Overhead Conductor Rail
OCS	Overhead Catenary System / Overhead Contact System
OHLE	Overhead Line Equipment
OLV	Our Lady of Victories
OPW	Office of Public Works
PCU	Passenger Car Unit
PFAS	Per- & Poly-fluoroalkylated Substances
PM₁₀	Particulate matter (aerodynamic diameter of equal or less than 10 micrometres)
PM_{2.5}	Particulate matter (aerodynamic diameter of equal or less than 2.5 micrometres)
pNHA	Proposed Natural Heritage Area

POPS	Property Owners Protection Scheme
pphpd	Passengers Per Hour Per Direction
PPV	Peak Particle Velocity
PR	Preferred Route
PRM	Persons with Reduced Mobility
P&R	Park and Ride
PT	Public transport
RMP	Record of Monuments and Places
RO	Railway Order
RPS	Record of Protected Structures
RSES	Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019-2031
SAC	Special Area of Conservation
SAEC	Schedule of Additional Environmental Commitments
SCL	Sprayed Concrete Lining
SMR	Sites and Monuments Record
SO₂	Sulphur Dioxide
SoE	Schedule of Errata
SPA	Special Protection Area
STMP	Scheme Traffic Management Plan
SuDS	Sustainable Drainage Systems
TAP	Trigger Action Plan
TBM	Tunnel Boring Machine
TCD	Trinity College Dublin
TII	Transport Infrastructure Ireland
TTM	Temporary Traffic Management
UÉ	Uisce Éireann (formerly Irish Water)
VDV	Vibration Dose Value
VOC	Volatile Organic Compound
WAP	Water Action Plan 2024: A River Basin Management Plan for Ireland
WFD	Water Framework Directive
WHO	World Health Organisation
WI	Waterways Ireland
WMP	Waste Management Plan
WWTP	Wastewater Treatment Plant
ZoI	Zone of Influence
μT	Micro Tesla

1.0 Introduction

1.1. Overview

- 1.1.1. The National Roads Authority (operating as Transport Infrastructure Ireland; referred to hereafter as TII or 'the applicant') has made a Railway Order application under section 37 of the Transport (Railway Infrastructure) Act 2001, as amended and substituted ('the 2001 Act'), for railway works and all works necessary to enable the construction, operation, maintenance and improvement of a railway designated as a metro including *inter alia* the construction of a fully segregated and automated railway and metro mostly underground c. 18.8km in length with 16 No. stations running from north of Swords at Estuary through Swords, Dublin Airport, Ballymun, Glasnevin and the City Centre to Charlemont in the south of Dublin City Centre. The proposed development would be located in the functional areas of both Fingal County Council and Dublin City Council.
- 1.1.2. The Railway Order would also authorise the applicant, with the subsequent consent of the Minister for Transport, to make arrangements with other parties to construct, maintain, improve or operate the said railway works and railway. The construction period provided for in the Draft Railway Order is ten years from the date it comes into effect.
- 1.1.3. The Railway Order, if granted, also includes powers for the applicant: to acquire compulsorily land or rights in, under or over land or any substratum of land specified in the order; to temporarily acquire and occupy land specified in the order; to acquire easements and other rights over land specified in the order; to extinguish public and/or private rights including rights of way specified in the order; and provides for other rights over land.
- 1.1.4. The Draft Railway Order is entitled 'Railway (MetroLink – Estuary to Charlemont via Dublin Airport) Order [2022]'.

1.2. Procedural Notes

- 1.2.1. In accordance with section 495(3) of the Planning and Development Act 2024, all references in this report to An Bord Pleanála ('the Board') should be construed as references to An Coimisiún Pleanála ('the Commission').

- 1.2.2. This report incorporates the report of the oral hearing held under section 42 of the 2001 Act, as required by section 43(1)(c) of said Act.

1.3. **Application Timeline**

- 1.3.1. The applicant made a request to enter into pre-application consultation under section 47B of the 2001 Act on 28th June 2018 (Ref. ABP-302010-18). Following a series of pre-application consultation meetings, the Board directed the applicant to serve certain prescribed bodies with a copy of the Draft Railway Order and accompanying documents in a Direction dated 10th December 2021.
- 1.3.2. The applicant subsequently lodged a section 37 Railway Order application on the 30th September 2022, which was accompanied by a Planning Report, Environmental Impact Assessment Report (EIAR), Natura Impact Statement (NIS), the Draft Railway Order, related drawings and various technical appendices and associated documents including Schedules, Books of Reference, statutory notices, letters of support from Dublin City Council and Fingal County Council and a letter from the National Transport Authority consenting to the submission of the Railway Order application.
- 1.3.3. Submissions were invited until 25th November 2022. However, due to the omission of certain documents from the application, the period for the making of submissions was extended until 16th January 2023.
- 1.3.4. The submissions were circulated to the applicant and a response was sought by 20th September 2023, with a short time extension subsequently granted under 27th September 2023. The applicant's response to the submissions was received on that date.
- 1.3.5. An oral hearing was subsequently held over a six week period (22 No. days in total), opening on 19th February 2024 and closing on 28th March 2024. Details of the oral hearing are set out in Section 7. The Board will note the substantial amount of additional information submitted by the applicant over the course of the oral hearing (as listed in Appendix 4).
- 1.3.6. Following the oral hearing, a request for further information was issued to the applicant on 26th April 2024 regarding the Railway Order Schedules. Details of the RFI request are set out in Section 12.2. The applicant sought, and was granted,

additional time to respond to the RFI request and a response was subsequently received on 12th June 2024.

- 1.3.7. A letter was then sent to the applicant on 1st July 2024, under the provisions of section 47D(1)(b) of the 2001 Act, requesting them to make all additional information relating to the application (i.e. the oral hearing documentation and the further information submitted to the Board) available for inspection and to invite further submissions in relation to it. The closing date for these further submissions was 8th October 2024.
- 1.3.8. The further submissions received were then circulated to the applicant and a written response was received from the applicant on 9th December 2024.
- 1.3.9. Separately, a letter was issued to the applicant under section 47D(1)(a) of the 2001 Act in relation to a submission (OH369) made on the second last day of the oral hearing by Sabrina Joyce-Kemper on behalf of herself and Wild Ireland Defence CLG (WID), both of whom were new observers at the oral hearing. This submission raised matters relating to ecology, PFAS contamination at Dublin Airport and EIA/AA legal matters. As these were new observers and their submission was made at the end of the oral hearing, TII stated that they did not have their necessary experts available to respond and asked that they be given an opportunity to respond as part of their future response to the further submissions. In the interests of fair procedures, a letter was sent to TII on 14th November 2024 inviting them to provide a response by 11th December 2024. TII, in a letter dated 4th December 2024, subsequently sought and were granted a time extension to 31st January 2025 to respond to the submission. The response was received on that date and included 3 No. reports: a response to WID (which included information relating to a PFAS management strategy at Dublin Airport); an update to the cumulative impact assessment; and a post-oral hearing AA update.
- 1.3.10. Subsequently, letters were sent to all observers and the EPA inviting submissions pursuant to section 47D(1) of the 2001 Act within a period of 4 weeks, ending on 27th March 2025. Observers were advised that submissions must only be in relation to the above information.
- 1.3.11. No further cross-circulation occurred.

2.0 Site Location and Description

2.1. Overview

2.1.1. The proposed development is located fully within County Dublin and passes through the administrative areas of Fingal County Council and Dublin City Council. The metro railway would extend from 'Estuary', located in the Lissenhall area to the north of Swords, North County Dublin, to the south of Charlemont, Ranelagh, Dublin 6.

2.1.2. The application documentation divides the proposed development into the following 4 No. assessment zones (AZs) which I will also use in this report for ease of reference:

- **AZ1 Northern Section:** Estuary Station to Dublin Airport North Portal.
- **AZ2 Airport Section:** Dublin Airport North Portal to Dublin Airport South Portal.
- **AZ3 Dardistown to Northwood:** Dublin Airport South Portal to Northwood.
- **AZ4 Northwood to Charlemont:** City Section.

2.1.3. The proposed station locations are listed in the table below:

Area	Station Name	Level	Location
AZ1	Estuary	At surface	In farmland off the R132 adjacent to M1 Junction 4, north of the Broadmeadow River.
	Seatown	Retained cut	On the eastern side of the R132 Swords Bypass, south of Seatown Road Roundabout.
	Swords Central	Retained cut	On the eastern side of the R132 Swords Bypass, south-east of the Malahide Road Roundabout.
	Fosterstown	Retained cut	At Airside Retail Park, adjacent to the R132 Swords Bypass.
AZ2	Dublin Airport	Underground	Under the existing Terminal 2 surface carpark within Dublin Airport
AZ3	Dardistown	Retained cut	On an undeveloped site between Dublin Airport and M50 Motorway adjacent to the proposed Dardistown Depot

	Northwood	Underground	Under the R108 Ballymun Road near Northwood Avenue junction with access from both sides of the road.
AZ4	Ballymun	Underground	On the west side of the R108 Ballymun Road at the site of the former Ballymun Shopping Centre (now demolished).
	Collins Avenue	Underground	To the east of the R108 Ballymun Road, south of the junction with Collins Avenue and in front of Our Lady of Victories Church.
	Griffith Park	Underground	Under the playing pitch used by Home Farm FC, adjacent to the R108 St Mobhi Road at the entrance to Whitehall College of Further Education.
	Glasnevin	Underground	Just north of the Royal Canal along the R135 at Cross Guns Bridge. Includes an interchange with the Iarnród Éireann mainline and commuter services on the MGWR (Western Commuter Line/Maynooth line) and the GSWR (South-Western Commuter/Kildare line).
	Mater	Underground	Under the Four Masters Park to the south-west of the Mater Hospital.
	O'Connell Street	Underground	Under a development area between O'Connell Street, Moore Lane and Henry Place and south of Parnell Street. Directly west of the O'Connell Street Luas Stop.
	Tara	Underground	Adjacent to the existing Iarnród Éireann Tara Street Station to provide for interchange to DART and mainline train services.
	St Stephen's Green	Underground	Under St Stephen's Green East roadway and park.
	Charlemont	Underground	Under an area of land linked to the Carroll's Building on Grand Parade, in close proximity to the Charlemont Luas Stop.

2.1.18. The various aspects of the proposed development and their locations are described in Section 3 below.

3.0 Proposed Development

3.1. Overview

- 3.1.1. The proposed development is described in the statutory notices as railway works and all works necessary to enable the construction, operation, maintenance and improvement of a railway designated as a metro including, inter alia, the construction of a fully segregated and automated metro railway mostly underground c. 18.8km in length with 16 No. stations running from north of Swords at Estuary through Swords, Dublin Airport, Ballymun, Glasnevin and the City Centre to Charlemont in the south of Dublin City Centre.
- 3.1.2. The proposed works generally comprise but are not limited to the construction of a railway c. 18.8km in length which is mostly underground. It includes a 9.4km section of single bore tunnel running beneath Dublin City Centre running from Charlemont to Northwood Station and a 2.3km section of single bore tunnel running beneath Dublin Airport. Tunnel sections include intervention access facilities for emergency services at Dublin Airport, Albert College Park and just south of Charlemont Station. Tunnel Portal structures will be provided at Northwood, Dardistown and Dublin Airport. North of Dublin Airport the railway will emerge from tunnel and will run at surface level and in cut and cover structures to Estuary Station. Surface running sections and cut and cover sections will include earthworks, the use of retained cut and cover structures, elevated sections plus miscellaneous drainage and accommodation works. A new 99m long bridge is proposed over the M50 and a 261m long multi-span viaduct is proposed over the Broadmeadow and Ward Rivers.
- 3.1.3. There will be a total of 16 No. stations, including:
- 1 No. at grade station at Estuary;
 - 4 No. retained cut stations at Seatown, Swords Central, Fosterstown and Dardistown; and
 - 11 No. underground stations at Dublin Airport, Northwood, Ballymun, Collins Avenue, Griffith Park, Glasnevin, Mater, O'Connell Street, Tara, St. Stephen's Green and Charlemont.

- 3.1.4. A 3,000 space 'Park and Ride' multi-storey car park is proposed close to the M1 Motorway at Estuary Station and an extensive operations and maintenance depot is proposed near Dardistown Station, which will house all the facilities required for the maintenance and operation of the MetroLink and its rolling stock and the Operational Control Centre.
- 3.1.5. The proposed works also include: railway signalling, command and control and communications systems; provision of electrical substations; establishment of temporary construction compounds; establishment of temporary traffic management and road diversions; new and realigned access routes and road junction improvements; diversion of existing utilities; provision of new drainage infrastructure; provision of environmental mitigation measures; and other infrastructural modifications to facilitate the overall project.

3.2. **Area-by-Area Description**

- 3.2.1. The following is a brief area-by-area description of the proposed development. A more detailed description is provided in Chapter 4 of the EIAR.
- 3.2.2. AZ1 Northern Section
- 3.2.3. The **Estuary Station and Park & Ride (P&R) Facility** will be located in the Lissenhall area, c. 560m south-west of Junction 4 of the M1 Motorway. The P&R Facility will be a 3,000 space multi-storey car park with associated road, cycle and pedestrian infrastructure. Access to the station will require the construction of a public road connecting the R132 to the access to the P&R Facility. From Estuary Station and P&R facility, the railway alignment heads south, passing over the Broadmeadow and Ward Rivers on a proposed 261m long Viaduct and then along the east side of Balheary Park before going into a section of cut and cover under Estuary Roundabout¹ on the R132 Swords Bypass.
- 3.2.4. South of Estuary Roundabout, the alignment will be in open cut for a short distance before entering another section of cut and cover to cross to the eastern side of the R132. This section of cut and cover will continue to a point south of Seatown Road

¹ As detailed in Section 5.5, the Board approved the R132 Connectivity Project in 2021 (Ref. ABP-310145-21), which includes the conversion of Estuary, Seatown and Malahide Road roundabouts to signalised intersections, the provision of pedestrian crossings and other works.

Roundabout where **Seatown Station** will be located. The alignment between Seatown Station and **Swords Central Station** will be east of the R132 and consists of sections of retained cut, with localised cut and cover sections under the Malahide Road Roundabout and at specific locations to allow reinstated access to some private properties and public open space areas at Estuary Court and Ashleigh Avenue. The alignment between Swords Central Station and **Fosterstown Station** will similarly consist of sections of retained cut, with cut and cover sections to support future eastern development access, and to pass under Pinnock Hill Roundabout. It will then cross to the western side of the R132 just south of the existing junction of the R132/Nevinstown Lane/Boroimhe Road in a further section of cut and cover construction. To construct Fosterstown Station, it is proposed to demolish the existing Smyth's toy store at Airside Retail Park.

- 3.2.5. The alignment then passes through existing agricultural lands, initially in retained cut, then on low embankments and cuttings, crossing the Sluice River and Forrest Little Stream, which will be culverted.
- 3.2.6. Just north of the Naul Road, AZ1 ends at the proposed **Dublin Airport North Portal (DANP)**.
- 3.2.7. Associated works in this section include the demolition of four existing pedestrian footbridges over the R132, utility diversions and associated works and landscaping.
- 3.2.8. AZ2 Airport Section
- 3.2.9. The proposed alignment enters the Airport Tunnel via the **DANP** and proceeds south underneath Dublin Airport to exit at ground level via the **Dublin Airport South Portal (DASP)** south of the Old Airport Road. The 2.3km tunnel passes under the northern part of the airport apron, hangar areas, and internal roads with the proposed **Dublin Airport Station** located under an area currently occupied by surface car parking within the area designated as a Ground Transportation Centre in the Dublin Airport LAP. The Airport Tunnel continues south, passing between Terminals 1 and 2 before emerging through DASP in agricultural land south of the airport in Dardistown.
- 3.2.10. Both the Airport Tunnel and the City Tunnel comprise a single bore, twin track tunnel with an external diameter of 9.2m and an internal diameter of 8.5m. Parallel to the Airport Tunnel are two smaller diameter tunnels, a c.315m long evacuation tunnel to

the west of the Airport Tunnel and a c. 600m long ventilation tunnel to the east of the Airport Tunnel, both running northwards from DASP and both connected to the main Tunnel at their ends.

- 3.2.11. One of the two proposed transmission substations associated with the project will be located near the DANP.

3.2.12. AZ3 Dardistown Section

- 3.2.13. From the DASP, the alignment continues in a cut and cover section, rising in retained cut to **Dardistown Station**. The **Dardistown Depot** and associated buildings and side lines will be located to the west of the rail line and the station. The proposed Depot will cover an area of 19.5ha located between the Old Airport Road to the north and the M50 to the south and will house the main stabling area for the rolling stock, train maintenance facilities and the Operational Control Centre. The main vehicular access to the site is via Collinstown Lane (also known as the Old Airport Road) to the northwest of the depot. A public access road to Dardistown Station is not proposed as part of the proposed development as it is intended that the station will only open to the public when plans for the development of adjoining lands are in place. In the interim, the station will be solely for the use of personnel working in the Depot who will be able to arrive and depart via MetroLink.

- 3.2.14. From Dardistown Station the alignment continues south, rising out of cut to cross over the M50, to the east of Junction 4, on a new 99m long bridge, before descending to ground level, turning to the south-west and descending below ground level in cut and cover to **Northwood Station** which will be located under the R108 Ballymun Road, with access from both sides. The **Northwood Portal** for the City Tunnel will lie immediately south of Northwood Station.

- 3.2.15. Associated works in this section include utility diversions and improvements and landscaping.

3.2.16. AZ4 Northwood to Charlemont

- 3.2.17. The alignment will continue in tunnel from Northwood Portal to **Ballymun Station** on the west side of the R108 Ballymun Road, on the site of the now-demolished Ballymun Shopping Centre. It then continues southwards to **Collins Avenue Station**, located on the east side of the R108 Ballymun Road, close to the junction

with the R103 Collins Avenue, and adjacent to Our Lady of Victories Church. It then continues further southwards to the south west corner of Albert College Park, where a tunnel **intervention shaft** is proposed. The stated purpose and rationale for the intervention shaft is to comply with European Standards which recommend that the maximum spacing between emergency exits is 1,000m. Since the distance between Collins Avenue and Griffith Park Stations is in excess of this, the intervention shaft is proposed to support evacuation/emergency service access in the event of an incident.

- 3.2.18. The alignment continues south under the R135 St Mobhi Road to **Griffith Park Station**, located under playing pitches adjacent to Whitehall College of Further Education, and continues south passing under the Tolka River, residential areas and then crossing under the R135 Botanic Road. Continuing south, it follows Botanic Road, before reaching **Glasnevin Station**, which will provide direct interchange with Iarnród Éireann's Western Commuter Line and South-Western Commuter Line.
- 3.2.19. South of Glasnevin Station the alignment passes under the Royal Canal moving slightly away from the R135 Phibsborough Road in a south-easterly direction towards **Mater Station**, located in the Four Masters Park, a small triangular park at the junction of Eccles Street and Berkeley Road.
- 3.2.20. From Mater Station, the alignment continues underground in a south-easterly direction, progressing under Georgian terraces lining Blessington Street, Frederick Street North and Parnell Square East and passing near to the Garden of Remembrance, the Rotunda Hospital and the Gate and Ambassador Theatres. **O'Connell Street Station** is located within a planned development area located immediately west of O'Connell Street and south of Parnell Street.
- 3.2.21. South of O'Connell Street Station the alignment passes under O'Connell Street, progressing east and passes under the Luas Red Line near the Abbey Theatre and crosses under the River Liffey towards Tara Station. The location for the **Tara Station** will be underneath an area bordered by existing railway to the east, Poolbeg Street to the north, Tara Street to the west and Townsend Street to the south. Tara Station will provide direct interchange with IÉ rail and DART services.
- 3.2.22. From Tara Station the alignment continues south, passing under the eastern end of Trinity College Dublin's campus and then proceeding south of Leinster Street South,

under Leinster House, Government Buildings, the National Gallery, National Library, and the National Museum of Ireland. The alignment will then pass under St Stephen's Green North before reaching **St Stephen's Green Station**.

- 3.2.23. St Stephen's Green Station will be located partially under the R138 St Stephen's Green East and partially under the existing park, with the station entrance at the north-eastern corner of St Stephen's Green.
- 3.2.24. Continuing south-west, the alignment follows St Stephen's Green East and continues along Earlsfort Terrace, passing close to the National Concert Hall, at which point it curves southwards and passes under Harcourt Terrace and the Grand Canal before reaching **Charlemont Station**, located between the Carroll's Building on Grand Parade and the rear of Dartmouth Square West to the east. Charlemont Station interchanges with the Luas Green Line via the Charlemont Luas stop.
- 3.2.25. The tunnel then continues southwards to allow for a turnback and terminates c. 360m south of Charlemont Station. A smaller diameter evacuation and ventilation tunnel will run parallel to the City Tunnel, from the end of the City Tunnel back to Charlemont Station.

3.3. **Construction Compounds and Logistics Sites**

- 3.3.1. A total of 34 No. construction compounds are proposed during the construction phase, including 20 No. main construction compounds and 14 No. satellite construction compounds. The main construction compounds will be located at each of the proposed station locations, the portal locations and the Dardistown Depot Location (also covering the Dardistown Station) with satellite compounds located at other locations along the alignment.
- 3.3.2. Outside of these construction compounds, there will also be works areas and sites associated with the construction of all elements of the project, including an easement strip along the surface sections.
- 3.3.3. Included within the 14 No. satellite construction compounds are main logistics sites located at Estuary, near Pinnock Hill east of the R132 Swords Bypass, and north of Saint Margaret's Road at the Northwood Compound.

- 3.3.4. Two main tunnel boring machine (TBM) launch sites are proposed, one at DASP to serve the TBM boring the Airport Tunnel in a northward direction and the other at the Northwood Compound to serve the TBM boring the City Tunnel in a southward direction.

3.4. **Construction Phasing and Programme**

- 3.4.1. TII are intending to procure the MetroLink project using Design and Build contracts and the main construction phases and typical works within each phase are as follows:

- **Enabling works:**
 - Pre-construction surveys and monitoring.
 - Site establishment and preparation.
 - Establishment of construction compounds.
 - Utility diversions.
 - Vegetation and invasive species clearance.
 - Installation of monitoring.
 - Demolition works.
 - Heritage surveys and preservation works.
 - Establishment of temporary traffic measures.
- **Main civil engineering works:**
 - Excavation, earthworks, construction of stations, tunnels, shafts, embankments, bridges and viaducts etc.
 - Construction of new roads and access routes.
 - Road realignments and modifications.
- **Railway systems installation:**
 - Installation of track, overhead line equipment, control and telecommunications systems.
 - Installation of M&E equipment.

- Construction of power supply infrastructure and connection to grid.
- **Site finalisation works:**
 - Removal of construction compounds.
 - Land reinstatement.
 - Planting, landscaping and fencing.
- **Systems testing and commissioning:**
 - Testing of railway systems.
 - Commissioning and trial running.

3.4.2. Chapter 5 of the EIAR and its appendices describe in detail the various construction phases and construction methodologies proposed.

3.4.3. The overall construction programme is 9.25 years, with works ongoing at multiple sites concurrently. Details on the programme are set out in Appendix A5.2, with sequencing of construction works at each work site set out in Appendix A5.3. It is envisaged that the heavy civil engineering works at stations will generally be undertaken in the first 4 to 5 years, with fitout and reinstatement occurring after this.

3.4.4. I note that article 17(1) of the Draft Railway Order states that execution of the works shall be substantially completed by the end of the period of 10 years from the coming into operation of the Railway Order, in so far as is reasonably practicable.

3.5. **Limits of Deviation**

3.5.1. Initially Proposed Limits of Deviation

3.5.2. The Board will note that the applicant has sought allowance for a certain amount of deviation in the alignment as part of the application. The proposed limits of deviation (LoDs) are set out in Article 6 of the Draft Railway Order and are as follows:

(a) where those works are situated in a public road:

- i. deviate laterally by any distance not exceeding 2.5m from the lines or situations shown on the plans,
- ii. deviate vertically by any distance not exceeding 1m upwards from the levels shown on the plans,

- iii. deviate vertically by any distance not exceeding 1m downwards from the levels shown on the plans,

(b) where those works are not situated in a public road:

- i. deviate laterally by any distance not exceeding 5m from the lines or situations shown on the plans,
- ii. deviate vertically by any distance not exceeding 2m upwards from the levels shown on the plans,
- iii. deviate vertically by any distance not exceeding 2m downwards from the levels shown on the plans,

(c) where those works form part of a station: amend the internal layout of the station,

(d) where those works form part of an underground tunnel:

- i. deviate laterally by any distance not exceeding 15m from the lines or situations shown on the plans,
- ii. deviate vertically by any distance not exceeding 5m upwards from the levels shown on the plans,
- iii. deviate vertically by any distance not exceeding 10m downwards from the levels shown on the plans,

(e) where those works form part of an underground station:

- i. deviate laterally by any distance not exceeding 2m from the lines or situations shown on the plans,
- ii. deviate vertically by any distance not exceeding 5m upwards from the levels shown on the plans,
- iii. deviate vertically by any distance not exceeding 10m downwards from the levels shown on the plans,

(f) where those works form part of Retained Cut and Cover Alignment, including stations:

- i. deviate laterally by any distance not exceeding 2.5m from the lines or situations shown on the plans,

- ii. deviate vertically by any distance not exceeding 1m upwards from the levels shown on the plans,
- iii. deviate vertically by any distance not exceeding 2m downwards from the levels shown on the plans.

3.5.3. Notwithstanding the proposed LoDs, Section 1.4 of Appendix A5.19 of the EIAR ('Wider Effects Report') identifies certain locations where it is not possible to apply the LoDs, due to the presence of constraints such as proximity to sensitive receptors, roads, rail lines and major sewers.

3.5.4. Revised Limits of Deviation

3.5.5. At the oral hearing, and in light of submissions made, the applicant proposed reducing the upward Limits of Deviation for underground tunnels and underground stations (i.e. items (d)(ii) and (e)(ii) above) from 5 metres to 1 metre. These proposed changes were reflected in the final updated Draft Railway Order submitted at the oral hearing on 26th March 2024 (Ref. OH342 and OH343 ('redline' version)).

3.5.6. A number of further commitments were made at the oral hearing not to avail of the LoDs in certain locations, as set out in commitment 3.17 of the Final Schedule of Additional Environment Commitments submitted on 27th March 2024 (Ref. OH376). The additional locations are as follows:

- At the Cut and Cover adjacent to Estuary Court, there will be no lateral deviation.
- At the retained cut alignment section adjacent to Woodie's Seatown, there will be no lateral deviation.
- At Seatown Station adjacent to Hertz Europe Head Office, there will be no lateral deviation.
- At the retained cut alignment adjacent to Ashley Avenue, there will be no lateral deviation.
- At the retained cut alignment section adjacent to Fujitsu Ireland Limited, there will be no lateral deviation.
- At the retained cut alignment section adjacent to Swords Veterinary Hospital, there will be no lateral deviation.

- At the underground tunnel section under Trinity College Dublin, there will be no vertical deviation upwards beyond construction tolerances and no lateral deviation to the east.
- The MetroLink tunnel located under the Cadenza Building located at Earlsfort Terrace, Dublin 2 will not move vertically upwards or horizontally west.
- In the section of the alignment between 18+640 and 19+035, there will be no deviation upwards.

3.6. Operational Phase

3.6.1. The Operational Phase of the project is based on the following operational elements:

- 16 Metro stations including interchange opportunities with:
 - Dublin Airport.
 - Western and South Western commuter rail lines at Glasnevin.
 - DART at Tara Station.
 - Luas Green Line at O'Connell Street Station, St Stephen's Green and Charlemont Station.
 - Park & Ride Facility at Estuary Station.
 - Existing Dublin Bus network and future BusConnects bus services.
- A maintenance depot at Dardistown, including: vehicle stabling; maintenance workshops and pits; automatic vehicle wash facilities; test track; sanding system for rolling stock; Operations Control Centre (OCC); substation; mast; other staff facilities and a carpark. A back-up OCC will be provided at Estuary.
- Dardistown Station will be only for use by staff arriving and leaving by train, until development in the area merits the opening of the station as a public station.
- It is proposed to operate the Metro system 19 hours per day (05:30 – 00:30), 365 days a year. It is stated that the currently proposed operational strategy does not include for 24-hour services but that occasional late night or overnight services may run to facilitate busy holiday periods or special events.

The operational scenario includes a long loop (Charlemont to Estuary) during peak hours and alternate long and short (Charlemont to Dublin Airport) loops during inter-peak hours.

- Dardistown Depot will operate on a 24 hour per day basis and other maintenance of the operational corridor will also occur outside the operational hours.
- 20 No. 64m long trains operating per hour at a frequency of three minutes between trains in the opening year operations and up to every 100 seconds at peak demand. System is designed to operate up to a maximum frequency of one train every 90 seconds, should it be extended in the future and/or should demand exceed predictions.
- Maximum capacity of 20,000 passengers per hour per direction (pphpd) in the peak hour. Each train will accommodate up to 500 passengers. It is stated that modelling indicates that peak demand in the 2065 Forecast Year occurs during the AM peak, with 15,000 southbound and 8,000 northbound passengers.
- c. 25 minutes journey time between Swords and the City Centre and 20 minutes journey time from the City Centre to Dublin Airport.
- Design speed of 80 km/h, with restrictions at certain locations due to geometric restrictions. Dwell time at each station will be between 20 – 40 seconds.
- Fully automated trains with full-height platform screen doors.
- Trains will mostly be stabled overnight at Dardistown Depot, however up to five trains could be stabled in the tunnel south of Charlemont, ready for the start of service.
- Automatic fare collection system is proposed, compatible with other public transport providers, to include automatic ticket vending machines, smart card validators and gate-free access to the platforms.
- Security measures include secure boundary treatments along the surface section to deter unauthorised entrance and vehicle restraint barriers to

prevent road vehicles driving off roadways onto sections of rail in retained cut or ramming station entrances. Station entrances will be closed at night outside operating hours. Passenger safety measures include clear wayfinding, lighting design, full-height platform screen doors, good line of sight in the urban realm areas, CCTV, passenger help points and an Access Control and Intrusion Detection (ACID) System.

- Safety features include the choice of fire-retardant materials and fire walls within structures, intervention shafts at the stations and Albert Park no more than 1km apart, intervention tunnels, dedicated emergency lifts for the use of Dublin Fire Brigade, fire detection, emergency lighting, signage, smoke exhaust, forced ventilation, CCTV, firefighting water supply and fire suppression systems. The automated trains facilitate evacuation via emergency doors from both ends of the train and include use of fire-retardant materials in the body of the train and soft furnishings, door unlocking devices, and CCTV. Training of operational staff in emergency evacuation protocols is proposed.
- The total workforce required to operate and maintain the Metro system is estimated to be c. 300, including c. 270 operation and maintenance staff and 22 administration staff at Dardistown Depot and c. 10 No. staff at the Estuary P&R.

3.7. Proposed Land Acquisition

- 3.7.1. The Railway Order, if granted, includes powers to acquire compulsorily land or rights in, under or over land or any substratum of land specified in the order; to temporarily acquire and occupy land specified in the order; to acquire easements and other rights over land specified in the order; to extinguish public and/or private rights including rights of way specified in the order; and provides for other rights over land.
- 3.7.2. Details of the proposed land acquisition to facilitate construction and operation of the proposed development are set out in Chapter 21 of the EIAR, while details of individual properties, lands, rights of way etc. affected are set out in the Railway Order Schedules and the associated drawings.

- 3.7.3. During the construction phase, a total of 189 ha of land lies within the project boundary, including 92 ha to be acquired temporarily to accommodate construction compounds and construction activities.
- 3.7.4. With regard to residential property acquisition, it is stated that there are 20 No. individual residential buildings impacted by the permanent or temporary land take, of which 7 No. were vacant at the time of writing of the EIAR. The total number of residential units impacted is 85 No., including 70 No. apartments at College Gate, Townsend Street, Dublin 2.
- 3.7.5. A summary of the main demolition requirements to facilitate the proposed development is set out in Table 5.7 of the EIAR and includes:

Location	Demolition Category
Swords (Estuary, Seatown, Swords Stations)	<u>Footbridges, community and residential properties:</u> • Malahide Roundabout footbridge. • Chapel Lane, Swords footbridge. • R132 Swords Bypass, Mantua, Swords footbridge. • Seaview Bungalow - single storey house. • Seatown West Bungalow, Seatown West – single storey house. • Estuary Roundabout, Swords footbridge. • Lissenhall Great, Swords - residential building off Ennis Lane. • Unofficial halting site.
Airside, Swords (Fosterstown Station)	<u>Commercial/ industrial properties:</u> • Retail unit at Airside Retail Park. • Airside HV substations – 2 no. single storey buildings. • Northwest of Airside Retail Park - communications tower.
Nevinstown West, Swords (Fosterstown Station)	<u>Residential and commercial properties:</u> • Nevinstown Lodge – single storey bungalow. • East of Nevinstown Lane – residential building. • Boland Car Dismantler – 2 no. single storey bungalows and adjoining commercial land.
M50 (Dardistown Depot)	<u>Community / industrial properties:</u>

	• Whitehall Rangers Club house – single storey community building and adjacent portal frame structure. • Sillogue Green Road – 2 single storey commercial warehouse buildings.
Santry Demesne (Northwood Station)	<u>Residential properties:</u> • North of Santry Lodge Gatehouse – 2 storey residential building. • Santry Lodge Gatehouse (bungalow) – single storey residential building. • Old Ballymun Road opposite Gulliver's Retail Park – redundant single storey residential building. • Old Ballymun Road opposite Gulliver's Retail Park – communications tower.
Griffith Park	<u>Community property:</u> • Sports changing rooms and café.
Glasnevin Station	<u>Commercial/industrial properties during Enabling Works and retaining walls and MGWR tunnel during Civil Works:</u> • Prospect House, Prospect Road - commercial 2-storey building. • Des Kelly Interiors, 1A, Prospect Road - large 2-storey commercial/ industrial building. • Brian Boru Public House, 5 Prospect Road – 2-storey building.
O'Connell Street Station (MetroLink and Developer delivered scenarios)	<u>Commercial properties to be demolished:</u> ▪ 46-49 O'Connell Street Upper. ▪ 55-56 O'Connell Street Upper. <u>Commercial properties to be partially demolished, maintained and supported:</u> ▪ 43 O'Connell Street Upper – building façade. ▪ 44 O'Connell Street Upper – building façade. ▪ 45 O'Connell Street Upper – building façade. ▪ 52-54 O'Connell Street Upper – building façade. ▪ 57 O'Connell Street Upper- building façade. ▪ 58 O'Connell Street Upper- building façade.
Tara Station	<u>Commercial and residential properties:</u>

	• Ashford House, Tara Street - large 8-storey office building. • Poolbeg Street - large 4-storey office building. • Markievicz Leisure Centre (includes College Gate Apartments) – large 7-storey building. • 22 Luke Street - 4 storey residential building (disused). • 24 Townsend Street – 4 storey residential building (disused). • 25 - 32 Townsend Street - 3 storey building.
Charlemont Station	<u>Industrial/ commercial properties:</u> • 19 and 19a Dartmouth Road - 2 storey commercial building. • Existing boundary wall; a lane way wall west of Dartmouth Square West - northern half of the wall to be removed and reinstated after construction, southern section of the wall to be protected during construction.

3.8. Proposed Modifications and Changes

3.8.1. Over the course of the oral hearing the applicant proposed a number of changes and modifications to address matters raised by observers, prescribed bodies, the Board's representatives and for other reasons. The main changes or modifications, working from north to south, included:

- Balheary Park, Swords: Revised GAA pitch layout.
- Seatown Pumping Station, Swords: Proposed emergency overflow discharge to Ward River omitted and replaced with connection to Uisce Éireann foul sewer in Estuary Road, connecting to UÉ WWTP.
- R132 landscape amendments to return green space and boundary walls to existing condition rather than the proposed network of footpaths and the linear park.
- Seatown Villas, Swords: Additional 30m of cut-and-cover tunnel replacing a section of open retained cut.
- Pinnockhill, Swords: Additional 50m of cut-and-cover tunnel replacing a section of open retained cut and revisions to property access.

- Fosterstown: Splitting of property folio to reflect agreement with landowner.
- Dardistown: Amendment to rising main utility diversion and amendment to M50 viaduct embankment arising from agreement with landowner.
- Santry Lodge: Amendments to entrance, arising from agreement with Fingal County Council.
- Northwood: Revised roundabout layout at Gulliver's Retail Park to reduce permanent landtake.
- Glasnevin Station: Revision of road layout and street level layout and change within station from 'retail use' to 'retail/café/community use' including addition of mezzanine level and access.
- Mater Station: Reduction in height of skylights.
- O'Connell Street Station: Revisions to correct drawing errors, to clarify details of proposed station entrance and to reflect commitment to retain trees on O'Connell Street.
- Tara Station: Revision of landscaping layout and number of skylights.
- Leinster Street South: Addition of omitted underground pumping station.
- St Stephen's Green: Modifications to paving and hostile vehicle management bollards.
- St Stephen's Green to Charlemont: Lowering of section of tunnel alignment by 5m and consequential new underground pumping station.
- Charlemont Station: Revisions to parking layout on internal access road linking Grand Parade to Dartmouth Road and PRM space and widened footway on Grand Parade. Property drawing updated to reflect agreement with landowner.

3.8.2. The applicant also made a considerable number of additional commitments over the course of the oral hearing. These are primarily detailed in the Schedule of Additional Environmental Commitments. I also refer the Board to the Schedule of Updates and Schedule of Errata. The final versions of these three documents were submitted to the oral hearing on 27th March 2024 (Ref. OH374, OH375 and OH376).

- 3.8.3. Subsequent to the oral hearing, the applicant has also submitted details of a proposed PFAS Management Strategy for Dublin Airport, in their response to the oral hearing submission of Wild Ireland Defence CLG/Sabrina Joyce-Kemper in January 2025. This includes a Triage and Material Management Centre within the Dardistown Depot temporary landtake area for the temporary holding of material excavated from the Airport campus, before it is either treated as normal spoil, or exported to a facility in Europe if contaminated with PFAS.

4.0 Submissions and Observations

4.1. Overview

- 4.1.1. A total of **318²** No. written submissions were received, including both submissions related to planning and environmental matters and objections to the proposed compulsory acquisition of properties, lands or rights over lands associated with the Railway Order.
- 4.1.2. Submissions were received from Dublin City Council, Fingal County Council and from the following prescribed bodies:
- An Taisce.
 - Commission for Railway Regulation.
 - CIÉ.
 - DECC (Geological Survey Ireland).
 - DHLGH (Development Applications Unit).
 - DAA.
 - EirGrid.
 - Failte Ireland.
 - HSE National Drug Treatment Centre.
 - Iarnród Éireann.
 - Irish Water (now Uisce Éireann).
 - OPW (28 No. submissions).
 - Waterways Ireland.
- 4.1.3. The submissions are listed, grouped on an area-by-area basis and summarised in Appendix 2.

² The numbering discrepancy in Appendix 2A is due to a small number of duplicate submissions and the recording of a TII letter as a submission. See table for further details.

4.2. Applicant's Response to Submissions

- 4.2.1. The applicant was invited to provide a written response to the submissions, in advance of the oral hearing, on 27th July 2023. The applicant's response was received on 27th September 2023 and contained a response to each individual submission as well as an overview document analysing the submissions by area and key issues. The applicant's response was a voluminous document and is not summarised here. Instead, it is addressed in the relevant sections of the report, where relevant.
- 4.2.2. The applicant summarised the break-down of the number of submissions by area as follows:

Area		Description	No. of Submissions
AZ1 Northern Section		Estuary Station and alignment as far as Dublin Airport North Portal (DANP).	28
AZ2 Airport Section		DANP and tunnel as far as Dublin Airport South Portal (DASP).	2
AZ3 Dardistown Section		DASP and tunnel as far as Northwood Station	5
AZ4 City Section	AZ4(a)	Northwood Portal and tunnel as far as Collins Avenue Station.	3
	AZ4(b)	Collins Avenue Station and tunnel as far as Griffith Park Station, including Albert College Park Intervention Shaft.	14
	AZ4(c)	Griffith Park Station and tunnel as far as Glasnevin Station.	9
	AZ4(d)	Glasnevin Station and tunnel as far as Mater Station.	30
	AZ4(e)	Mater Station and tunnel as far as O'Connell Street Station.	17
	AZ4(f)	O'Connell Street Station and tunnel as far as Tara Station.	6
	AZ4(g)	Tara Station and tunnel as far as St Stephen's Green Station.	34
	AZ4(h)	St Stephen's Green Station and tunnel as far as Charlemont Station.	32

	AZ4(i)	Charlemont Station and tunnel turnback.	59
	Multi AZ4	Refer to multiple AZ4 sub-areas	35
General		General or not specific to one AZ area	43

- 4.2.3. The applicant's response was not circulated to the observers for further submissions. Instead, the observers were advised that their submission to the oral hearing should consist solely of their response to the applicant's written response, as well as a response to any matters arising from the applicant's initial submissions to the oral hearing. Observers were advised that all previous written submissions could be taken as read.

4.3. **Withdrawals and Agreements**

- 4.3.1. Further to the receipt of written submissions, the applicant's written response to those submissions and the subsequent oral hearing, the Board should note the following:
- 4.3.2. Withdrawals
- 4.3.3. A total of 12 No. observers withdrew their submissions before, during or after the oral hearing.
- 4.3.4. Public Body Agreements
- 4.3.5. Copies of agreements with a number of public bodies were submitted over the course of the oral hearing and the applicant has proposed that these be included in the Thirteenth Schedule of the Railway Order. The agreements and the associated oral hearing document reference numbers relate to the following bodies:
- Dublin City Council (Ref. OH76).
 - Fingal County Council (Ref. OH147).
 - OPW, excluding St Stephen's Green (Ref. OH73, OH73A).
 - DAA (Ref. OH77).
- 4.3.6. Private Agreements

4.3.7. Over the course of the oral hearing, a number of letters, emails and oral statements were received from observers, which typically stated that agreement had been reached with TII in relation to the issues of concern to the observer and that they support the project. The applicant refers to these as private agreements with third parties and they submitted a final list of both public and private agreements in a Schedule of Third Party Agreements³ (Ref. OH381) at the oral hearing on 27th March 2024. The relevant observers, excluding those who have withdrawn their submissions, are as follows:

- Alstead Securities Limited (Ref. S5).
- Bindford Limited (Ref. S21).
- BORG Developments and JOM Investments (Ref. S22).
- Bovale Developments ULC (Ref. S23).
- Bovale ULC and Balheary Properties ULC (Ref. S24).⁴
- Earldev Properties Unlimited Company (Ref. S79).
- Greybitch Limited (Ref S109).
- Hammerson ICAV (Ref. S110).
- Hugo Byrne c/o John Byrne (Ref. S119).
- IPUT plc and Irish Life Assurance plc (Ref. S125).
- Jerdip Properties Unlimited Company (Ref. S140).
- Mater Misericordiae and the Childrens University Hospitals (Ref. S186).
- Mater Misericordiae University Hospital (Ref. S187).
- Sainfoin Property Company Limited (Ref. S273).
- The Abbey Theatre (Amharclann na Mainistreach) (Ref. S291).

³ The Board will note that the Schedule of Third Party Agreements refers to an agreement with Home Farm FC, who are not an observer. When I queried this at the oral hearing on 28th March 2024, the applicant stated that agreement had been reached prior to the RO application being submitted and hence no submission was made.

⁴ A further submission was received from NAMA (Ref. 1FS34), advising that the relevant lands at Lissenhall are now owned by NAMA DAC and that the agreement reached between Bovale and TII is now assigned to NAMA DAC. The Board should note that the submission recorded as Bovale Developments ULC (S23) is stated to relate to lands at Barrysparks and does not appear to now be under the control of NAMA DAC.

- The Rotunda Hospital (S296).
- Trinity College Dublin (S303).

4.3.8. Details of the private agreements were not submitted to the Board.

4.3.9. Section 43(1)(e) of the Transport (Railway Infrastructure) Act 2001, as amended, requires that the Board consider any submission made to it and not withdrawn. In relation to the abovementioned agreements and letters of support confirming that matters of concern had been addressed to the satisfaction of the observers, I consider that these supersede the original written submissions made by those prescribed bodies and observers. Therefore, I do not propose to address matters arising from those earlier written submissions, except where necessary.

4.4. Further Submissions

4.4.1. Following the oral hearing and receipt of the applicant's response to the request for further information ('RFI response') on 12th June 2024, a letter was sent to the applicant on 1st July 2024, under the provisions of section 47D(1)(b) of the 2001 Act, requesting them to make all additional information relating to the application (i.e. the oral hearing documentation and the RFI response) available for inspection and to invite further submissions in relation to it. The applicant subsequently placed public notices, with a period for the making of these submissions running from 19th August to 8th October 2024.

4.4.2. A total of 42 No. further submissions were made, of which 5 No. were from new observers (Berkeley Road Area Residents Association, Charlemont and Dartmouth Community Group (3-11 Cambridge Terrace), D. Holohan, McGreevy & Taylor families, and NAMA). Two of the further submissions were subsequently withdrawn.

4.4.3. The further submissions are listed alphabetically in Appendix 2C and summarised by area in Appendix 2D.

4.4.4. Applicant's Response to Further Submissions

4.4.5. The applicant was invited to provide a written response to the submissions received from new observers and to the new Issues raised in the submissions by existing

observers. Their response was received on 9th December 2024 and is addressed in the relevant sections of this report, where relevant⁵.

4.4.6. Further Submissions Following Circulation of Applicant's Response to Wild Ireland Defence CLG Oral Hearing Submission

4.4.7. A letter was issued to the applicant on 14th November 2024 under section 47D(1)(a) of the 2001 Act inviting them to respond to a submission (OH369) made on the second last day of the oral hearing by Sabrina Joyce-Kemper on behalf of herself and Wild Ireland Defence CLG (WID), both of whom were new observers at the oral hearing. This was done in the interests of fair procedures.

4.4.8. A response was received on 31st January 2025 and circulated to all observers and the EPA inviting submissions within a period of 4 weeks, ending on 27th March 2025⁶. Observers were advised that submissions must only be in relation to the above information. A total of 12 No. further submissions were received.

4.4.9. The further submissions are listed alphabetically in Appendix 2E and summarised by area in Appendix 2F.

4.4.10. No further cross-circulation of submissions took place.

4.5. **Note on numbering of submissions**

4.5.1. In the interests of clarity and to assist the Board in its determinations, all submissions listed in Appendix 2 are provided with a unique reference number, which is utilised in the relevant sections of this report. The numbering system is as follows ('XX' being the number of each submission):

- **SXX:** Written submissions made following lodgement of the application.
- **1FSXX:** Further submissions made following the publication of notices inviting submissions in relation to the documentation submitted at the oral hearing and the response to the request for further information.

⁵ Due to an administrative issue, the further submission from Donal O'Brolchain which was circulated to the applicant was incomplete. A complete copy of the submission was subsequently circulated to the applicant, with a deadline of 8th August 2025 for a response. A response was received on 24th July 2025.

⁶ Due to an administrative issue, the letters to the representatives of Bovale Developments UC & Balheary Properties UC and Bovale ULC did not issue. Letters were subsequently issued to these observers with a deadline of 17th April 2025.

- **2FSXX:** Further submissions made following the circulation of the applicant's response submission to Wild Ireland Defence CLG's oral hearing submission.

4.5.2. Documents submitted at the oral hearing are numbered in the format '**OHXX**' and will be referenced as appropriate.

5.0 Planning History

5.1. Metro Underground Cables Application (ABP-317831-23)

- 5.1.1. ESB lodged an application on 17th August 2023 under section 182A of the 2000 Act for proposed development consisting of up to c. 24km of underground cable (UGC) at various locations in North Dublin between Forrest Little, Belcamp, Clonshaugh and Harristown, County Dublin. The primary purpose of the proposed UGCs is to provide electrical power to the proposed MetroLink project.
- 5.1.2. The proposed cable routes are located in North County Dublin, crossing 35 townlands in the parishes of Coolock, Santry, St. Margaret's, Cloghran, Kinsaley, Balgriffin and Swords.
- 5.1.3. The proposed development consists of the installation of three new 110kV UGC circuits:
- Proposed (MetroLink) Forrest Little 110kV substation – Belcamp 110 kV substation (two options are provided).
 - Proposed (MetroLink) Ballystruan 110kV substation - Newbury 110 kV substation.
 - Proposed (Metrolink) Ballystruan 110kV substation – proposed (Metrolink) Forrest Little 110 kV substation.
- 5.1.4. The proposed development also includes:
- Communication links and fibre optic cables between all substations.
 - Joint bays, communication chambers and link boxes along the alignment (c. every 850m).
 - Temporary construction laydown and work areas with ancillary staff facilities and parking, temporary access tracks, passing bays and water and utility crossings.
 - Associated site development works.
 - Roadworks and excavation (including HDD) and vegetation clearance.

5.1.5. The application was accompanied by an EIAR and NIS and a decision is pending on the application.

5.2. **Metro North**

5.2.1. Metro North Railway Order (ABP Ref. NA06F.NA0003)

5.2.2. A Railway Order application for the Metro North project was lodged by the Railway Procurement Agency in September 2008. The project was described in the Inspector's report as follows:

"Metro North is a light rail system proposed to connect the townland of Belinstown in north County Dublin to Dublin city centre. The route would serve a number of key destinations including Dublin Airport, hospitals, universities and retail centres as well as high density residential and employment districts. It would serve an 18km long corridor. It would comprise a metro system running under full signal control on a segregated alignment between St. Stephen's Green and Fosterstown stops and running on a line of sight basis, at grade, in underpasses or on elevated sections between Fosterstown and Belinstown. It would run in bored tunnels beneath the city and beneath Dublin Airport and in cut and cover tunnels beneath Ballymun.

The proposal would interchange with existing Luas Green Line services at St. Stephen's Green and Red Line services at Abbey Stop adjacent to the O'Connell Bridge Stop. The route for the proposed Lucan Luas line serving the west of the city is yet to be determined but is expected to provide interchange with the proposed scheme at either St. Stephen's Green or O'Connell Bridge Stops. The scheme would also interchange with the DART (Dublin Area Rapid Transit) and with suburban rail services at St. Stephen's Green via the proposed rail interconnector and at Drumcondra following the electrification of the Iarnród Éireann line.

2,600 Park & Ride spaces would be provided at key locations along the route. The proposed scheme would also interchange with local and regional bus services and taxi services, with bus interchange facilities being provided at most metro stops. Bus pull-in bays and pick-up/drop-off facilities would be

designed into all at-grade stops (i.e. Belinstown, Fosterstown and Dardistown). Cycle facilities would be provided at all stops.

When opened, the Metro would carry approximately 80,000 passengers per day. This is forecast to increase over time, with an ultimate capacity in excess of 40,000 passengers per hour (20,000 in each direction). The scheme is expected to carry some 35 million passengers each year once it is operational.”

5.2.3. The Board granted the Railway Order for the Metro North project in October 2010, subject to modifications and conditions. These modifications included the omission of: the depot and park & ride facility at Belinstown; the disposal of waste material at Belinstown; the stop at Lissenhall; and the rail line north of chainage 2300. The Board required that a new Railway Order application be made for a re-located depot in the general vicinity of Dardistown and a revised scheme for spoil management.

5.2.4. Dardistown Depot and Spoil Strategy for Metro North Railway Order (ABP Ref. NA06F.NA0007)

5.2.5. Following the Board’s decision on the Metro North application, a Railway Order application for a proposed depot at Dardistown and a revised spoil strategy was submitted in April 2011. The Board granted the Railway Order in September 2011.

5.2.6. Decision to Defer Metro North

5.2.7. The document ‘Infrastructure and Capital Investment 2012 – 2016: Medium Term Exchequer Framework’ (DPER, 2011) deferred a number of major infrastructural projects, including the Metro North project, due to the economic downturn at that time. It stated that “these projects are being deferred, not cancelled: they remain key elements of the overall integrated transport strategy for the GDA and will be progressed when fiscal and market conditions improve”.

5.3. **DART Underground**

5.3.1. DART Underground Railway Order (ABP Ref. NA29S.NA0005)

5.3.2. A Railway Order application for the DART Underground project was lodged by CIÉ in June 2010. The project was described in the Inspector’s report as follows:

“The proposed [DART Underground] alignment is approximately 8.6 km in length, approximately 7.6 km of which comprises a nominal 6 m diameter twin-bore running tunnels, connected by cross passages at approximately 250 m intervals along the alignment. The route runs west to east from the CIÉ Railway Works, Inchicore, Dublin 8 to North Wall Yard, East Wall, Dublin 3 where it connects with the existing Northern Line. The tie-in is achieved by means of a newly configured at-grade junction at the location of the existing East Wall junction. At Inchicore, the DU will not connect with the existing Kildare Line. However, future provision for a tie-in west at CIÉ Railway Works as part of phase 2 of the Kildare Route Project (KRP2) is incorporated into the DU design.

The proposed DU comprises five underground stations located within the city, these are located at Heuston, Christchurch, St. Stephen's Green, Pearse and Docklands. An additional station is provided at Inchicore with platforms in a retained open cut. A turnback and stabling facility is also provided at Inchicore within a retained cut to facilitate the operational requirements of DART Underground.

A number of ancillary intervention (comprising fire-fighting and emergency escape) and/or ventilation (comprising passive draught relief and forced ventilation) shafts are also provided as part of DART Underground. [...]”

5.3.3. The Board granted the Railway Order for the DART Underground project in December 2011, subject to conditions.

5.3.4. Decision to Defer DART Underground

5.3.5. As with Metro North, the document ‘Infrastructure and Capital Investment 2012 – 2016: Medium Term Exchequer Framework’ deferred the DART Underground project due to the economic downturn at that time.

5.4. **Other Large-Scale Public Transport Applications**

5.4.1. Since 2022, a considerable number of other applications have been made to the Board for large-scale public transport projects in the Dublin Area. These projects, and their current status at the time of completing this report, are listed in the table

below. At the time of writing a number of the decided cases were the subject of ongoing judicial review proceedings.

ABP Ref. No.	Project	Status
ABP-321278-24	Railway (Luas Finglas - Broombridge to Charlestown) Order 2024	Pending
ABP-320164-24	DART+ Coastal North Railway Order 2024 - Northern Line between Dublin City Centre and Drogheda including the Howth Branch	Pending
ABP-316119-23	DART+ South West Railway Order (Hazelhatch & Celbridge Station to Heuston Station, and Heuston Station to Glasnevin)	Approved, Nov. 2024
ABP-314232-22	DART+ West Railway Order (Dublin City to Maynooth and M3 Parkway)	Approved, July 2024
ABP-317742-23	BusConnects Bray to City Centre Core Bus Corridor Scheme	Approved, Jan. 2025
ABP-317679-23	Ringsend to City Centre Core Bus Corridor Scheme	Approved, August 2024
ABP-317660-23	BusConnects Kimmage to City Centre Bus Corridor Scheme	Approved, May 2025
ABP-317121-23	BusConnects Swords to City Centre Bus Corridor Scheme	Approved, June 2024
ABP-316828-23	BusConnects Tallaght/Clondalkin to City Centre Core Bus Corridor	Approved, Oct. 2024
ABP-316272-23	BusConnects Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme	Approved, Dec. 2024
ABP-314942-22	BusConnects Lucan to City Centre Core Bus Corridor Scheme	Approved, August 2024
ABP-314610-22	BusConnects Ballymun/Finglas to City Centre Core Bus Corridor Scheme	Approved, March 2024
ABP-314056-22	BusConnects Liffey Valley to City Centre Core Bus Corridor Scheme	Approved, Dec. 2023
ABP-313892-22	BusConnects Blanchardstown to City Centre Core Bus Corridor Scheme	Approved, June 2024
ABP-313509-22	BusConnects Belfield/Blackrock to City Centre Core Bus Corridor Scheme	Approved, March 2024
ABP-313182-22	BusConnects Clongriffin to City Centre Core Bus Corridor Scheme	Approved, Jan. 2024

5.5. R132 Connectivity Project (ABP-310145-21)

- 5.5.1. Fingal County Council submitted an application in May 2021 under section 177AE of the Planning and Development Act 2000, as amended, for the R132 Connectivity

Project, which comprises road alteration works along a 2.6km section of the R132 Regional Road between Lissenhall Interchange and Pinnockhill Junction to the east of Swords Town Centre.

5.5.2. The development was described in the Inspector's report as follows:

- Conversion of Estuary, Seatown and Malahide Road roundabouts to signalised intersections with 'at-grade' pedestrian and cyclist crossing points,
- Installation of signalised toucan crossings at 3 No. points along the R132.
- Pedestrian linkages to Chapel Lane and Ashley Avenue at the proposed Chapel Lane toucan crossing.
- Installation of 2 No. turning areas along the R132.
- Carriageway alterations including the establishment of 3m wide bus lanes, 2m wide cycleways and 2m wide pedestrian walkways along each side.
- Reconfiguration of the Drynam Road arm of the Malahide Road Roundabout to link directly to Malahide Road as a one-way road.
- Construction of new bus stops on Malahide Road.
- Installation of a sub-surface attenuation system and landscaping and other ancillary works.

5.5.3. The Board approved the proposed development in January 2022.

5.6. Other Relevant Planning History

5.6.1. Given the scale, linear nature and location of the proposed development primarily within an urban/suburban environment, there are obviously potential interactions with a large number of other projects. I would refer the Board in the first instance to Appendices A30.1 and A30.2 of the EIAR, where the applicant has tabulated what they consider to be other relevant planning cases. The submissions made by the two planning authorities (S71 and S321) also identify what they consider to be relevant planning history in the vicinity of the alignment.

5.6.2. At the oral hearing, the applicant was requested to provide an update of any other projects permitted since the lodgement of the application, with the potential to result in significant cumulative or in-combination effects with the proposed MetroLink

project. A cumulative impacts addendum report was submitted on 28th February 2024 (Ref. OH98) and an Appropriate Assessment Update Report (including updated in-combination assessment) was submitted on 7th March 2024 (Ref. OH202).

- 5.6.3. In their response to the Wild Ireland Defence CLG oral hearing submission in January 2025, the applicant submitted a further update to the cumulative impact assessment and a 'Post Oral Hearing AA Update' which provided updates to the in-combination assessment.
- 5.6.4. Potential significant cumulative impacts and in-combination effects are considered in the EIA and AA sections of this report, respectively.

6.0 Policy Context

6.1. European Policy

- 6.1.1. The Ten-T Regulation (EU) 2024/1679 of the European Parliament and Council, adopted on 13th June 2024, relates to guidelines for the development of the trans-European transport network.
- 6.1.2. Article 34(1)(a) requires that Member States shall ensure that:

“the airports of the trans-European transport network with a total annual passenger traffic volume of more than 12 million passengers are connected to the trans-European railway network, including the high-speed railway network where possible, allowing long distance services by 31 December 2040, except where specific geographic or significant physical constraints prevent such connections.”
- 6.1.3. The Irish Rail railway from Northern Ireland to Dublin to Cork is identified in the Ten-T Regulation as part of the Core trans-European rail network.

6.2. National Policy

- 6.2.1. Project Ireland 2040: National Planning Framework, First Revision 2025
- 6.2.2. The National Planning Framework (NPF), recently updated and revised in April 2025, is the Government’s high-level strategic plan for shaping the future growth and development of the country out to the year 2040. It is stated to be a framework to guide public and private investment, to create and promote opportunities for people, and to protect and enhance the environment.
- 6.2.3. The NPF states that “the continued performance of Dublin as a high quality international city of scale is critical to Ireland’s overall competitiveness”. It goes on to state that:

“The delivery of critical strategic infrastructure in areas such as transport, water services management, waste management, education, health and community services is essential to the sustainable growth of Dublin into the future. Key priorities include enhanced airport and port access and capacity;

expansion of the public transport network including the delivery of DART+, MetroLink, Luas expansion and BusConnects.”

6.2.4. A number of ‘key future growth enablers for Dublin’ are set out, including:

- “Delivering the key transport projects set out in the Transport Strategy for the Greater Dublin Area including DART+, MetroLink, Luas expansion, BusConnects Dublin and key elements of the metropolitan area cycle network, inclusive of commuter routes and urban greenways.”
- Improving access to Dublin Airport, to include improved public transport access, connections from the road network from the west and north and in the longer term, consideration of heavy rail access to facilitate direct services from the national rail network in the context of potential future electrification.”
- “Progressing the sustainable development of new brownfield and greenfield areas for housing along existing and planned high capacity public transport corridors focusing on large-scale Transport Orientated Development (TOD) opportunities particularly along high- capacity rail corridors within the metropolitan area.”

6.2.5. The NPF sets out a series of National Strategic Outcomes (NSOs), which are stated to be a shared set of goals. A number of these are relevant to the proposed MetroLink development, including NSO 1 (‘Compact Growth’), NSO 4 (‘High-Quality International Connectivity’), NSO 5 (‘Sustainable Mobility’) and NSO 8 (‘Transition to a Carbon Neutral and Climate Resilient Society’).

6.2.6. NSO 4 (‘High Quality International Connectivity’) identifies the importance of airports as key enablers of economic development by supporting tourism, export-led growth and foreign direct investment. NSO 4 refers to “enhancing land-side access, particularly in public transport terms, such as through the MetroLink and BusConnects projects and associated road network capacity in Dublin”.

6.2.7. NSO 5 (‘Sustainable Mobility’) states that:

“The National Sustainable Mobility Policy, published in 2022, provides the means for achieving the provision of a well-functioning, integrated sustainable transport system (walking, cycling and public transport), enhancing

competitiveness, sustaining economic progress and enabling sustainable mobility choices for citizens, supports the overall Framework objectives.

Dublin and other cities and major urban areas are too heavily dependent on road and private, mainly car-based, transport with the result that our roads are becoming more and more congested. The National Development Plan makes provision for transformational investment in public transport and sustainable mobility solutions in the main urban centres that will progressively put in place a more sustainable alternative.

For example, major public transport infrastructure projects identified in the Transport Strategy for the Greater Dublin Area to 2042, such as the MetroLink and DART+ as well as the Luas and BusConnects investment programmes, will keep our capital and other key urban areas competitive.”

6.2.8. NSO 5 seeks to expand attractive alternatives to car transport to reduce congestion and emissions and enable the transport sector to cater for the demands associated with longer-term population and employment growth in a sustainable manner through various measures, including:

- “Deliver key public transport objectives of the Transport Strategy for the Greater Dublin Area 2022-2042 by investing in projects such as MetroLink, DART+, Luas and BusConnects in Dublin and Eastern Region and key rail and bus-based projects identified by the NTA in the other cities and towns.”
- “Enable more effective traffic management, enhanced road safety and better air quality within and around cities and towns through demand management measures including the re-allocation of urban road-space, kerbside management and parking controls in favour of bus-based public transport services, shared mobility services and walking/cycling facilities, as well as measures supporting the efficiency and green transition of freight and delivery services.”
- “Deliver Transport Orientated Development at scale at suitable brownfield and greenfield locations in cities and metropolitan areas, along high capacity public transport corridors with a focus on land management, institutional and funding arrangements needed to accelerate this type of development.”

6.2.9. The following National Policy Objectives (NPOs) are also noted:

- **NPO 3:** Eastern and Midland Region: 470,000 additional people between 2022 and 2040 (c. 690,000 additional people over 2016-2040) i.e. a population of almost 3 million [...].
- **NPO 4:** A target of half (50%) of future population and employment growth will be focused in the existing five cities and their suburbs.
- **NPO 10:** Deliver Transport Orientated Development (TOD) at scale at suitable locations, served by high capacity public transport and located within or adjacent to the built up footprint of the five cities or a metropolitan town and ensure compact and sequential patterns of growth.
- **NPO 12:** Ensure the creation of attractive, liveable, well designed, high quality urban places that are home to diverse and integrated communities that enjoy a high quality of life and well-being.
- **NPO 13:** Develop cities and towns of sufficient scale and quality to compete internationally and to be drivers of national and regional growth, investment and prosperity.
- **NPO 97:** The Metropolitan Area Strategic Plans, shall include provision for large-scale Transport Orientated Development (TOD) opportunities and may target a proportion of planned growth in the metropolitan areas towards the delivery of new sustainable communities at brownfield and greenfield locations in the principal city and suburbs areas and in the wider metropolitan areas focused on opportunities arising from existing and planned major public transport investment, along planned high capacity public transport corridors and in accordance with the principles of Transport Orientated Development.
- **NPO 69:** Reduce our carbon footprint by integrating climate action into the planning system in support of national targets for climate policy mitigation and adaptation objectives, as well as targets for greenhouse gas emissions reductions as expressed in the most recently adopted carbon budgets.

6.2.10. National Development Plan Review 2025

6.2.11. The National Development Plan (NDP) Review 2025 sets out departmental capital ceilings to 2030 and overall capital investment out to 2035. It states that it is the plan

to secure Ireland's future, to transform the country, build more housing, upgrade water and energy infrastructure, deliver more roads, and provide better public transport.

6.2.12. The NDP notes that ongoing population growth, as well as demographic changes, will continue to generate demand for infrastructure across a wide range of sectors, presenting both challenges and opportunities to be addressed in terms of supply.

6.2.13. In relation to 'Low Carbon Transport', the NDP states that:

"The Government has identified the need to provide support for the development of low carbon transport projects such as Metrolink before 2030. Given the unique scale of the Metrolink, Government has decided to fund it from the Infrastructure, Climate and Nature Fund. The funding approach will allow the ambitious pipeline of other public transport projects."

6.2.14. Under the heading of 'NDP Priority Infrastructure', it is stated that:

"The revised NDP Transport investment levels of €24.33 billion will support further expansions of key Transport programmes over the next five years. There will be provision of €2 billion for the commencement of Metrolink construction. Government will support Metrolink's construction through funding from the Infrastructure, Climate and Nature Fund."

6.2.15. Programme for Government – Securing Ireland's Future

6.2.16. The following commitments are included in the Programme for Government:

- Progress all key public transport infrastructure in the National Development Plan and consider new public transport projects in the review of the NDP.
- Commission an independent feasibility study into continuing MetroLink from the city to South West Dublin.
- Improve connectivity and public transport to all airports.

6.2.17. Climate Action and Low Carbon Development Act 2015, as amended

6.2.18. Section 3(1) of the Climate Action and Low Carbon Development Act 2015, as amended, states that the State shall, so as to reduce the extent of further global warming, pursue and achieve, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and

climate neutral economy. This is referred to in the Act as the "national climate objective".

6.2.19. Section 15 of the Act sets out the duties of certain bodies (i.e. the Board in this instance) with respect to climate. It states that the relevant body shall, in so far as practicable, perform its functions in a manner consistent with:

- (a) the most recent approved climate action plan,
- (b) the most recent approved national long term climate action strategy,
- (c) the most recent approved national adaptation framework and approved sectoral adaptation plans,
- (d) the furtherance of the national climate objective, and
- (e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State

6.2.20. Ireland's Long-term Strategy on Greenhouse Gas Emissions Reduction 2024

6.2.21. Preparation of a Long-Term Climate Strategy is a requirement of national, EU and international law. The 2024 strategy is stated to be the first prepared under the national Climate Act and it sets out Ireland's 2050 climate action targets and describes sector-specific pathways to reaching those targets.

6.2.22. Section 8.4 of the Strategy relates to 'Transport'. It notes that the population of Ireland is expected to reach 5.7 million by 2040 from a current estimate of 5.1 million in 2022. In parallel, over the next two decades there are projections of both employment and economic growth that may stimulate greater transport activity and demand. The Strategy states that without systemic and transformative changes in travel patterns, modal share, and technology, a growth in current transport activity and demand will further diminish our national competitiveness, quality of life, and decarbonisation goals.

6.2.23. Among the identified challenges facing decarbonisation are:

- "In the absence of suitable alternatives to the car at a national level, a cultural mindset has been embedded over decades whereby only car ownership is associated with perceptions of freedom and convenience – this is partly a result of our settlement patterns and previous policy-making;

- How to decouple travel demand from economic growth;
- How to address transport poverty while achieving decarbonisation of the sector;
- Addressing the significant lead-in times associated with the delivery of major transport infrastructure and rollout of additional public transport services as attractive and compelling alternatives to private car use;”

6.2.24. Under the heading of ‘Pathway to 2030’, the Strategy states that:

“As well as continuing the technology improvements previously committed to, demand reduction with modal shift will play an important role in the development of a more sustainable transport system over the next decade. Government investment in public transport, cycling and walking infrastructure, along-side the provision of increased public transport services and shared mobility options, will help to reduce reliance on private cars and address congestion in our cities. This investment is essential if we are to meet the level of system and behavioural change required to deliver on our climate ambition (including targets of a 50% increase in daily active travel journeys and a 130% increase in daily public transport journeys by 2030).”

6.2.25. Modal shift is identified as playing a key role in decarbonisation by 2050. The Strategy states that:

“Our cities will be leaders in transport innovation due to the predominance of short-distance journeys, existing availability of public transport alternatives, air quality considerations and due to the requirement to provide for greater urban density in residential development, to ensure improved proximity to services and more viable public transport, and consequently a reduced demand for private car ownership. This will lead to large improvements in the quality of urban living in the coming decades.”

6.2.26. Climate Action Plans 2025 and 2024

6.2.27. The Climate Action Plan (CAP) 2025 is the most recent CAP update at the time of completion of this report. I note that Section 3.1 states that “in contrast to previous iterations of the Climate Action Plan, CAP25 is to be read in conjunction with CAP24”.

- 6.2.28. CAP 2025 states that it outlines the strategies necessary to progress towards the goals re-affirmed in the Government's Programme for Government of a 51% reduction in greenhouse gas (GHG) emissions by 2030 and reaching climate neutrality by no later than 2050.
- 6.2.29. The Executive Summary states, in relation to 'Transport', that:
- "Emissions in the transport sector increased by 0.3% in 2023, as the rebound in emissions since the Covid pandemic plateaus. Remaining within the sectoral emissions ceiling would now require an unprecedented 12.4% decrease in emissions in both 2024 and 2025. Key targets to further reduce emissions include a 20% reduction in total vehicle kilometres travelled relative to business-as-usual, a 50% reduction in fuel usage, and significant increases to sustainable transport trips and modal share. Fleet electrification and the use of biofuels will continue to provide the greatest share of emissions abatement in the medium term."
- 6.2.30. The sectoral emission ceilings for transport are 54 MtCO₂eq for the carbon budget period 2021-2025 and 37 MtCO₂eq for the carbon budget period 2026-2030.
- 6.2.31. Section 14 relates to Transport but does not contain any actions or policy specifically relevant to MetroLink.
- 6.2.32. The equivalent Section 14 of the CAP 2024, which is to be read in conjunction with the CAP 2025, states that the fundamental challenge for the transport sector is decoupling the direct correlation between transport emissions and wider social and economic activity. The focus is therefore on pursuing measures to address travel demand including measures that promote greater efficiency in the transport system and significant investment in sustainable alternatives.
- 6.2.33. The CAP utilises a hierarchical Avoid-Shift-Improve approach to transport decarbonisation, underpinned by transport modelling undertaken by the NTA and utilising their Regional Modelling System.
- 6.2.34. One of the 'Shift' measures in the 2024 CAP is the major public transport infrastructure programme. The 2024 CAP states that:
- "Significant investment in new public transport infrastructure is required to deliver on our carbon emissions reduction targets, and to provide people with

the sustainable alternatives to private car usage. Major public transport projects and programmes that are being progressed under the National Development Plan include MetroLink, DART+, BusConnects programmes in all five cities and commuter rail programmes in Cork and Limerick, which have been progressing through major delivery milestones.”

6.2.35. It goes on to state that:

“Meeting the levels of behavioural change and modal shift from private car usage required to meet our climate targets will require large-scale expansion of our public transport services.”

6.2.36. Table 15.6 of the 2024 CAP sets out key actions to deliver abatement in transport for the period 2024-2025. Under the heading of major public transport infrastructure programme this includes advancing the DART+ and BusConnects programmes (Actions TR/24/12 and TR/24/13), but it does not reference MetroLink.

6.2.37. National Adaptation Framework 2024 and Sectoral Adaptation Plan for Transport 2019

6.2.38. The National Adaptation Framework 2024 (NAF) is a statutory framework outlining the Government’s approach to climate change adaptation in Ireland. The NAF seeks to reduce Ireland’s vulnerability to climate change impacts and it requires Government departments to produce sectoral adaptation plans. It states that a climate resilient Ireland will have a reduced reliance on fossil fuel and will have widely accessible electrified public transport.

6.2.39. The Sectoral Adaptation Plan for Transport sets policy on climate change adaptation strategies for the transport sector.

6.2.40. The overarching goal of transport adaptation planning is stated to be to ensure that the sector can fulfil its continuing economic, social and environmental objectives by ensuring that transport infrastructure is safeguarded from the impacts of climate change. The Plan sets out the following implementation objectives:

1. Improve understanding of the impacts of climate change on transport infrastructure, including cross-sectoral cascading impacts, and close knowledge gaps.

2. Assist transport stakeholders in identifying and prioritising climate risks to existing and planned infrastructural assets and enabling them to implement adaptation measures accordingly.
3. Ensure that resilience to weather extremes and longer-term adaptation needs are considered in investment programmes for planned future transport infrastructure.

- 6.2.41. Action 17 is to “strengthen sectoral adaptation responses by ensuring that climate resilience is considered in appraisal guidance, including in the update to the Common Appraisal Framework, for all future transport infrastructure projects over appropriate timescales.”
- 6.2.42. The Board should note that the second Transport Climate Change Sectoral Adaptation Plan (T-SAP II) is currently being prepped. Public consultation has taken place and the Department of Transport website⁷ states that the new Plan will be released in September 2025.
- 6.2.43. National Investment Framework for Transport in Ireland
- 6.2.44. The National Investment Framework for Transport in Ireland (NIFTI) is the Department of Transport’s framework for prioritising future investment in the land transport network to support the delivery of the NPF’s National Strategic Outcomes.
- 6.2.45. It states that “to cater for rising travel demand while decarbonising the transport sector, we will invest significantly in sustainable mobility. This will include major public transport schemes in our cities...”.
- 6.2.46. It goes on to state that “NIFTI establishes four Investment Priorities: Decarbonisation, Protection and Renewal, Mobility of People and Goods in Urban Areas, and Enhanced Regional and Rural Connectivity. Future transport projects must align with these priorities to be considered for funding. Moreover, as the National Strategic Outcomes are embedded in NIFTI, future investment made in accordance with the priorities will support the delivery of the National Planning Framework over the coming decades.”
- 6.2.47. NIFTI sets out the following modal hierarchy and intervention hierarchy:

⁷ <https://www.gov.ie/en/department-of-transport/consultations/public-consultation-on-the-second-transport-climate-change-sectoral-adaptation-plan-t-sap-ii/>

Modal Hierarchy:

1. Active travel.
2. Public transport.
3. Private vehicles.

Intervention Hierarchy:

1. Maintain.
2. Optimise.
3. Improve.
4. New.

- 6.2.48. Section 2.4 of NIFTI ‘delivering clean, low-carbon and environmentally sustainable mobility’ states that:

“While ensuring surface access to ports and airports is primarily a question of facilitating the efficient movement of economic activity, NIFTI will support the development of sustainable mobility options for private passengers to access strategic links, such as progressing the MetroLink project.”

- 6.2.49. Section 3 of NIFTI seeks to identify the challenges. Key Transport Challenge 9 ‘ensuring the future capacity of key strategic links to Ireland’s international gateways’ states that:

“A growing population will put increased pressure on these key international gateways. There are also planned capacity expansions at Dublin airport, Dublin port and Shannon Foynes port. An increase in the public transport modal share of travel to these facilities through projects such as MetroLink will be crucial to maintaining adequate surface access and ensuring sufficient capacity on key strategic links for freight.”

- 6.2.50. National Sustainable Mobility Policy 2022

- 6.2.51. The purpose of the National Sustainable Mobility Policy is to set out a strategic framework to 2030 for active travel and public transport to support Ireland’s overall requirement to achieve a 51% reduction in carbon emissions by the end of this decade. The target is to deliver at least 500,000 additional daily active travel and

public transport journeys and a 10% reduction in kilometres driven by fossil fuelled cars by 2030 in line with metrics for transport set out in the Climate Action Plan 2021.

6.2.52. The foreword to the Policy states that:

“Increased funding under the National Development Plan will allow us to improve and expand walking, cycling and public transport options across the country to enable access to education, health care, work, cultural and public life by sustainable modes of travel. This will include commencing delivery of BusConnects programmes in our five cities, DART+ and Metrolink in Dublin along with increased investment in the inter-urban and regional rail network.”

6.2.53. It goes on to state that:

“There is a need to rebalance transport movement in metropolitan areas and other urban centres away from the private car and towards active travel and public transport. This will require a greater allocation of available road/street space to be given to sustainable mobility. In addition, a rebalancing of traffic light signalling at junctions to better facilitate walking, cycling and public transport is required. The overarching objective in urban centres should be to focus more on the movement of people rather than the movement of the private car.”

6.2.54. The Policy sets out the following 3 No. key principles, supported by 10 No. high-level goals, as follows:

Principles	Goals
Safe and Green Mobility	1. Improve mobility safety. 2. Decarbonise public transport. 3. Expand availability of sustainable mobility in metropolitan areas. 4. Expand availability of sustainable mobility in regional and rural areas. 5. Encourage people to choose sustainable mobility over the private car.

People Focused Mobility	6. Take a whole of journey approach to mobility, promoting inclusive access for all. 7. Design infrastructure according to Universal Design Principles and the Hierarchy of Road Users model. 8. Promote sustainable mobility through research and citizen engagement.
Better Integrated Mobility	9. Better integrate land use and transport planning at all levels. 10. Promote smart and integrated mobility through innovative technologies and development of appropriate regulation.

- 6.2.55. The Policy states that safe and green mobility will be supported by, inter alia, “commencing construction of MetroLink in Dublin”.
- 6.2.56. Goal 3 is to “expand availability of sustainable mobility in metropolitan areas”. The Policy states with respect to this goal that “over the period of this Policy, construction of MetroLink in Dublin will commence which, once completed, will provide a sustainable, safe, efficient, integrated and accessible public transport service between Swords, Dublin Airport and Dublin City Centre. This new link will form a key spine of the overall integrated public transport system for Dublin, alongside BusConnects and DART+, and facilitate compact, transport-orientated development at key locations.”
- 6.2.57. The associated National Sustainable Mobility Policy Action Plan 2022 – 2025 identifies commencing delivery of MetroLink as Core Action 24 to achieve the abovementioned Goal 3.
- 6.2.58. All-Island Strategic Rail Review 2024
- 6.2.59. The All-Island Strategic Rail Review (AISRR), published in July 2024, was jointly commissioned by the Department of Transport in Ireland and the Department for Infrastructure in Northern Ireland. The Review seeks to inform policy and future strategy for the railways in both jurisdictions.
- 6.2.60. Among the key challenges and constraints identified by the Review is the following:
- “No major airport on the island is currently served by passenger rail services. Only Kerry and George Best Belfast City Airports are currently served by the

rail network, and these do not have direct connections to terminal buildings. Dublin Airport is the busiest airport in Europe without a railway or metro station.”

6.2.61. MetroLink is identified as one of a number of committed and proposed interventions.

6.2.62. Recommendation 17 of the AISRR relates to connecting Dublin, Belfast, and Shannon airports to the railway network and recommends:

“Building a spur from Clongriffin to Dublin Airport. This intervention, which aims to complement the planned MetroLink project in Dublin, would enable intercity and other longer-distance services to directly access Ireland’s busiest airport. With the proposed cross-Dublin tunnel outlined in the intercity section above, this intervention could connect places like Cork and Galway to Dublin Airport.”

6.2.63. Also included in the final package of recommendations is a “cross-Dublin tunnel from the north of Spencer Dock to Heuston, with connections for DART and MetroLink at several stations in Dublin City Centre”.

6.2.64. The Review states that, ultimately, it will be for the Irish Government and the Northern Ireland Executive to consider which of the recommendations should be taken forward for further development.

6.2.65. With regard to the status of the Review and its alignment with the Greater Dublin Area Transport Strategy 2022-2042 (GDATS), it is stated in Chapter 4 of the Review that its recommendations are intended, within the GDA, to represent potential additional complementary provision which could be considered for inclusion in future updates to the GDATS. It acknowledges that GDATS is the statutory plan for the development of transport within the GDA and states that it is intended that the AISRR will be an input for the next review of the GDATS.

6.2.66. National Cycle Policy Framework 2009-2020

6.2.67. The National Cycle Policy Framework 2009-2020 (NCPF) is Ireland’s cycling policy framework. The introduction to the NCPF states that such a framework can provide a common, integrated basis for the long term development and implementation of cycling policies among various sectors and levels of government.

6.2.68. The NCPF contains 19 objectives so that by the year 2020, 10% of all journeys are made by bicycle. These include:

- **Objective 7:** Provide secure parking for bikes.
- **Objective 8:** Ensure proper integration between cycling and public transport.

6.2.69. With regard to Objective 8, it states that:

“The reach of public transport is limited when PT users are limited to walking to the PT stop or station. There is considerable scope for increasing the catchment area serviced by a particular PT corridor when bikes are combined with PT. As per objective 7 above, there needs to be high quality cycling parking at all PT stops and stations. It is noted that of all train travellers in the Netherlands, 33% use the bicycle to get between home and the station. (Ministerie van verkeer en Waterstaat, 2007).”

6.2.70. The NCPF does not appear to have been updated to cover the period post-2020.

6.2.71. National Biodiversity Action Plan 2023-2030

6.2.72. The purpose of the National Biodiversity Action Plan (NBAP) is described as follows:

“This 4th National Biodiversity Action Plan strives for a “Whole-of-Government, Whole-of Society” approach to the governance and conservation of biodiversity. The aim is to ensure that every citizen, community, business, local authority, semi-state and state agency has an awareness of biodiversity and its importance, and of the implications of its loss, whilst also understanding how they can act to address the biodiversity emergency as part of a renewed national effort to act for nature.

To do this, the NBAP takes account of the wide range of policies, strategies, conventions, laws and targets at the global, EU and national level that influence our shared environment in order to scale up biodiversity action.”

6.2.73. The NBAP sets out the following 5 No. objectives which have numerous supporting targets and actions:

- Objective 1: Adopt a Whole-of-Government, Whole-of-Society Approach to Biodiversity.
- Objective 2: Meet Urgent Conservation and Restoration Needs.

- Objective 3: Secure Nature's Contribution to People.
- Objective 4: Enhance the Evidence Base for Action on Biodiversity.
- Objective 5: Strengthen Ireland's Contribution to International Biodiversity Initiatives.

6.2.74. The Wildlife (Amendment) Act 2023 introduced a new public sector duty on biodiversity. Section 59B states that every public body shall, in the performance of its functions, have regard to the objectives and targets in a National Biodiversity Action Plan. An Bord Pleanála is included in the list of 'public bodies' under section 59H for the purposes of that Part of the Act.

6.2.75. The impact of development on biodiversity, including species and habitats, can be assessed at a European, National and Local level and is taken into account in the Board's decision-making having regard to the Habitats and Birds Directives, Environmental Impact Assessment Directive, Water Framework Directive and other relevant legislation, strategy and policy where applicable.

6.2.76. Water Action Plan 2024: A River Basin Management Plan for Ireland

6.2.77. The Water Action Plan 2024 (WAP) is Ireland's third River Basin Management Plan and it outlines the measures the Government and other sectors are taking to improve water quality in Ireland's groundwater, rivers, lakes, estuarine and coastal waters, and provide sustainable management of Ireland's water resources. The WAP is based on a single national River Basin District for the country, broken down into 46 catchment management units, which are further broken down into 583 sub-catchments. The relevant catchment management units for the proposed development are the Nanny-Delvin (CMU Ref. 08) and the Liffey and Dublin Bay (CMU Ref. 09).

6.3. **Regional Policy**

6.3.1. Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019 – 2031

6.3.2. The Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019 – 2031 (RSES), published by the Eastern and Midland Regional Assembly, is a strategic plan and investment framework to shape future development and to better

manage regional planning and economic development throughout the Region. It identifies regional assets, opportunities and pressures and provides appropriate policy responses in the form of Regional Policy Objectives.

6.3.3. The RSES states that it has the following three cross-cutting key principles:

- **Healthy Placemaking:** To promote people's quality of life through the creation of healthy and attractive places to live, work, visit, invest and study in.
- **Climate Action:** The need to enhance climate resilience and to accelerate a transition to a low carbon society recognising the role of natural capital and ecosystem services in achieving this.
- **Economic Opportunity:** To create the right conditions and opportunities for the Region to realise sustainable economic growth and quality jobs that ensure a good living standard for all.

6.3.4. The RSES contains 16 Regional Strategic Outcomes (RSOs), including:

- **RSO 2:** Compact Growth and Urban Regeneration – Promote the regeneration of our cities, towns and villages by making better use of under-used land and buildings within the existing built-up urban footprint and to drive the delivery of quality housing and employment choice for the Region's citizens.
- **RSO 6:** Integrated Transport and Land Use – Promote best use of Transport Infrastructure, existing and planned, and promote sustainable and active modes of travel to ensure the proper integration of transportation and land use planning.
- **RSO 9:** Support the Transition to Low Carbon and Clean Energy – Pursue climate mitigation in line with global and national targets and harness the potential for a more distributed renewables-focussed energy system to support the transition to a low carbon economy by 2050.
- **RSO 14:** Global City Region – Promote Dublin as a global city region and protect and enhance international connectivity, including ports and airports and promote the Region as a gateway to Ireland.

- **RSO 15:** Enhanced Strategic Connectivity – Protect and enhance international connectivity and regional accessibility to support economic development, build economic resilience and support strengthened rural communities and economies including the blue-green economy and tourism.

6.3.5. The following Regional Policy Objectives are noted:

- **RPO 3.2:** Local authorities, in their core strategies shall set out measures to achieve compact urban development targets of at least 50% of all new homes within or contiguous to the built up area of Dublin city and suburbs and a target of at least 30% for other urban areas.
- **RPO 4.2:** Infrastructure investment and priorities shall be aligned with the spatial planning strategy of the RSES. All residential and employment developments should be planned on a phased basis in collaboration with infrastructure providers so as to ensure adequate capacity for services (e.g. water supply, wastewater, transport, broadband) is available to match projected demand for services and that the assimilative capacity of the receiving environment is not exceeded.
- **RPO 4.3:** Support the consolidation and re-intensification of infill/brownfield sites to provide high density and people intensive uses within the existing built up area of Dublin City and suburbs and ensure that the development of future development areas is co-ordinated with the delivery of key water infrastructure and public transport projects

6.3.6. Swords is identified as one of three 'Metropolitan Key Towns' in the Region. These are described as large economically active service towns located within the Dublin Metropolitan Area, with high quality transport links and capacity for increased residential and employment densities at strategic transport nodes. They are stated to be important in a regional and in a county context and they have the capacity and future growth potential to accommodate above average growth in the Region with the requisite investment in employment creation, services, amenities and sustainable transport.

6.3.7. With regard to enabling infrastructure to support the development of Swords, the RSES states that:

“The delivery of Metrolink in co-ordination with other public transport proposals, including the Bus Rapid Transport/Busconnects and Park and Ride programmes and electric vehicle charging infrastructure, is crucial for the future sustainable development of Swords. There is significant potential to transition towards sustainable and low carbon transport modes through the provision of high-quality walking and cycling permeability offering direct routes to local destinations and public transportation hubs. Improvements to the road and cycle network are required to capitalise on this, together with the delivery of new road infrastructure.”

6.3.8. With regard to residential development in Swords, the RSES states that:

“Residential development, in the shorter term, is mainly directed to the western and southern areas of the town, with longer term development of Lissenhall. This strategic landbank offers the opportunity for the development of a well-connected mixed-use urban district on the northern side of Swords within 1 km of the Metrolink corridor. The development of the area follows the sequential development of Swords and is in keeping with the Council’s long-term strategic vision for the town.”

6.3.9. With regard to economic development, it is stated that:

“There are opportunities to create a strategic employment node maximising opportunity presented by Sword’s strategic location well served by air, Metrolink and the national road network. Furthermore, Swords-Dublin Airport has developed as a key location for industry and employment generating activities.”

6.3.10. The delivery of Metrolink in co-ordination with other public transport proposals is stated to be crucial for the future sustainable development of Swords.

6.3.11. The following Regional Policy Objectives are noted:

- **RPO 4.28:** Support the continued development of Swords as a vibrant Key Town with a thriving economy; an integrated public transport network; an attractive and highly accessible built environment with the highest standards of housing, employment, services, recreational amenities and community facilities.

- **RPO 4.31:** Support Swords-Dublin Airport as a key location for airport related economic development and employment provision linked to the protection and enhancement of access to Dublin Airport lands including the delivery of Metrolink.
- **RPO 4.32:** Encourage transition towards sustainable and low carbon transport modes in Swords through the provision of high quality walking and cycling permeability offering direct routes to local destination and public transportation hubs.

6.3.12. The Dublin Metropolitan Area Strategic Plan (MASP) is incorporated as Chapter 5 of the RSES. The MASP is an integrated land use and transportation strategy for the Dublin Metropolitan Area that sets out:

- A Vision for the future growth of the metropolitan area and key growth enablers, identifying strategic corridors based on their capacity to achieve compact sustainable and sequential growth along key public transport corridors, existing and planned.
- Large scale strategic residential, employment and regeneration development opportunities and any infrastructure deficits or constraints that need to be addressed.
- A sequence of infrastructure priorities to promote greater co-ordination between local authorities, public transport and infrastructure providers for the phased delivery of sites.

6.3.13. The MASP sets out a series of 'Guiding Principles' for the growth of the Dublin Metropolitan Area, including:

- Dublin as a Global Gateway – In recognition of the international role of Dublin, to support and facilitate the continued growth of Dublin Airport and Dublin Port, to protect and improve existing access and support related access improvements.
- Compact sustainable growth and accelerated housing delivery – To promote sustainable consolidated growth of the Metropolitan Area, including brownfield and infill development, to achieve a target to 50% of all new homes within or contiguous to the built-up area of Dublin City and suburbs, and at least 30% in

other settlements. To support a steady supply of sites and to accelerate housing supply, in order to achieve higher densities in urban built up areas, supported by improved services and public transport.

- Integrated Transport and Land use – To focus growth along existing and proposed high quality public transport corridors and nodes on the expanding public transport network and to support the delivery and integration of ‘BusConnects’, DART expansion and LUAS extension programmes, and Metro Link, while maintaining the capacity and safety of strategic transport networks.
- Increased employment density in the right places – To plan for increased employment densities within Dublin City and suburbs and at other sustainable locations near high quality public transport nodes, near third level institutes and existing employment hubs, and to relocate less intensive employment uses outside the M50 ring and existing built-up areas.
- Alignment of growth with enabling infrastructure – To promote quality infrastructure provision and capacity improvement, in tandem with new development and aligned with national projects and improvements in water and waste water, sustainable energy, waste management and resource efficiency.

6.3.14. A number of strategic development corridors are identified, including:

- Metrolink - LUAS Corridor (Metrolink, LUAS green line upgrades): The development of the proposed Metrolink project, subject to appraisal and delivery post 2027, will unlock significant long-term capacity in Swords-Lissenhall and in South Fingal - Dublin Airport, subject to the protection of airport capacity and accessibility. Proposed upgrades to the existing LUAS Green line will support development in the south county at Sandyford, Cherrywood and Ballyogan.

6.3.15. The following Regional Policy Objectives are noted:

- **RPO 5.2:** Support the delivery of key sustainable transport projects including Metrolink, DART and LUAS expansion programmes, Bus Connects and the Greater Dublin Metropolitan Cycle Network and ensure that future

development maximises the efficiency and protects the strategic capacity of the metropolitan area transport network, existing and planned.

- **RPO 5.3:** Future development in the Dublin Metropolitan Area shall be planned and designed in a manner that facilitates sustainable travel patterns, with a particular focus on increasing the share of active modes (walking and cycling) and public transport use and creating a safe attractive street environment for pedestrians and cyclists.
- **RPO 5.6:** The development of future employment lands in the Dublin Metropolitan Area shall follow a sequential approach, with a focus on the re-intensification of employment lands within the M50 and at selected strategic development areas and provision of appropriate employment densities in tandem with the provision of high quality public transport corridors.

6.3.16. Chapter 8, 'Connectivity', includes the following RPOs:

- **RPO 8.8:** The RSES supports delivery of the rail projects set out in Table 8.2⁸, subject to the outcome of appropriate environmental assessment and the planning process.
- **RPO 8.14:** The RSES supports delivery of the strategic park and ride projects set out in Table 8.5⁹ subject to the outcome of appropriate environmental assessment and the outcome of the planning process.
- **RPO 8.18:** Improved access to Dublin Airport is supported, including Metrolink and improved bus services as part of BusConnects, connections from the road network from the west and north. Improve cycle access to Dublin Airport and surrounding employment locations. Support appropriate levels of car parking and car hire parking.

6.3.17. Greater Dublin Area Transport Strategy 2022 – 2042

6.3.18. The Greater Dublin Area Transport Strategy 2022-2042 (GDATS) was published by the National Transport Authority post-lodgement of this Railway Order application (a draft version had been published prior to lodgement) and it sets out the framework

⁸ The rail projects contained in Table 8.2 of the RSES include "complete construction of Metrolink from Swords to Sandymount, including underground extensions to UCD and Knocklyon from Charlemont".

⁹ Table 8.5 includes Swords as a location for new and enhanced park and ride.

for investment in transport infrastructure and services over the next two decades to 2042.

6.3.19. MetroLink is identified in Section 2.7 as one of the ‘forthcoming schemes’.

6.3.20. Section 6.2 relates to consultation on the Draft Strategy. Among the main issues raised were:

- Ambition and delivery timelines.
- Public consultation and engagement.
- MetroLink and the Charlemont Terminus.
- Metro to South West Dublin.
- Accessibility and catering for disabled people.

6.3.21. Section 9.2 relates to the Dublin-Belfast Economic Corridor, the development of which is stated to be one of the growth enablers for the Eastern and Midland Region. It states that the Transport Strategy facilitates this national objective in a number of ways, including delivery of MetroLink and major Park and Ride at M1 Lissenhall.

6.3.22. Section 9.3 relates to International Gateways. It notes the importance of Dublin Airport as an economic asset in the state and states that it is the responsibility of the NTA to ensure that the landside transport network meets the requirements of this international gateway. It goes on to state that:

“In terms of Dublin Airport – as a major employer, passenger destination and freight hub – access by all modes is vital. Furthermore, by its nature, Dublin Airport requires bespoke transport solutions such as high-frequency high capacity bus vehicles which also cater for passengers with luggage; out-of-hours and late night services for passengers and staff; and enhanced bus services in the wider North Dublin Area for staff travelling to work.

This strategy incorporates MetroLink, BusConnects Dublin and demand management measures which will enhance and protect essential access to Dublin Airport, and ensure that it will operate in a sustainable fashion in terms of landside transport. Surface access to the Airport will be periodically reviewed and improved as necessary, including consideration of additional access from the western side of the airport campus.”

6.3.23. The following Measure is noted:

- **INT2 – International Gateways:** It is the intention of the NTA, in conjunction with public transport operators, TII, and the local authorities, to serve the international gateways with the landside transport infrastructure and services which will facilitate their sustainable operation.

Throughout the lifetime of the strategy, the NTA will continue to work with Dublin Port Company, other port and harbour operators and DAA in respect of Dublin Airport, in monitoring, assessing and delivering these transport requirements.

6.3.24. Section 9.5 relates to Park & Ride and Interchanges. It states that:

There is a substantial number of people in regional towns, the rural hinterland and to a lesser extent in the metropolitan area, who do not have ease of access to high quality public transport by walking or cycling.

Appropriately located and designed Park & Ride facilities can enable these people to access public transport and enhance their options to reach a wide range of destinations in a sustainable manner and increase the usage of public transport, thereby maximising the value of investment in existing and new schemes.

Park & Ride can intercept car trips where people are reliant on private car at an early point in their journey thereby reducing the distances travelled by private car with a corresponding reduction in carbon emissions and congestion.

Caution must be exercised in the planning of Park & Ride facilities to ensure that unintended consequences do not arise as a result of their provision, such as:

- Encouraging more dispersed development patterns by enabling longer distance commuting;
- Allocating excessive public transport capacity to motorists and thereby promoting local car trips, including outbound trips, to the facility; and

- The opportunity cost of developing land for extensive uses in a highly accessible location.

6.3.25. Figure 9.1 sets out the Park and Ride Strategy for the GDA. Lissenhall is identified as a Bus/Metro P&R, with the number of spaces indicated as 1,000/3,000.

6.3.26. The following Measure is noted:

- **INT4 – Park & Ride:** It is the intention of the NTA to secure the development of a network of regional level bus and rail based Park and Ride facilities in the GDA at appropriate locations where the national road network meets, or is in close proximity to, high capacity bus and rail services.

6.3.27. Section 9.5.2 relates to Major Interchange Facilities/Mobility Hubs. It states that “as high-capacity bus routes, heavy rail plus light rail increase their coverage across the urban area of Dublin and the region’s settlements, the full benefit of this investment, (the “network effect”) can only be fully capitalised on by the development of high-quality interchange facilities or Mobility Hubs”. In relation to Dublin Airport it states:

“Dublin Airport also comprises a major interchange facility with multiple bus services converging at this location, as well as a major taxi facility. This interchange will be enhanced through the delivery of MetroLink and improved local and orbital bus services as part of BusConnects.”

6.3.28. Section 12.3 relates to Light Rail and states that:

“Luas lines are significantly more cost-effective to deliver than underground Metro lines or Heavy Rail lines, the cost of which are only justifiable when the level of forecast transport demand in an area exceeds that which can be provided by one or more Luas lines. Furthermore, underground Metro lines function best in serving very high levels of demand, particularly where this occurs throughout the day in both directions such as that which would exist between a city centre and an Airport, while surface tram lines work better when providing high quality public transport connectivity in medium density settings.”

[...]

The strategy therefore proposes that demand on this corridor will be served in part by the provision of MetroLink. Given that the MetroLink infrastructure will

be in place for many decades, the strategy seeks to ensure it is future-proofed so that it can be expanded if demand exceeds the current forecast.”

6.3.29. Section 12.3.2 relates to MetroLink. It states:

“In the Transport Strategy, the term Metro is used to describe a fully-segregated light rail system. It has a potential capacity significantly higher than Luas and can run at much greater speeds as there is no interaction with other transport modes. In order to provide this level of service, however, substantial sections of these systems are required to operate underground and are therefore more expensive than Luas.

The proposal to serve the northern suburbs of Dublin City, Swords and Dublin Airport by a direct rail line from the City Centre has been a long-standing objective of transport planning in Dublin. This is based on the forecast travel demand along this corridor. Swords had a population of just under 40,000 in 2016 and is planned to grow significantly. Dublin Airport is Ireland’s main international gateway and, post-pandemic, is forecast to grow in terms of passenger numbers and employee numbers. Between the Airport and the South City Centre terminus, there are also major population centres such as Ballymun and Glasnevin, plus the North City Centre defined by its commercial, retail and cultural attractions.

The current Metrolink project has been identified as the most advantageous way to serve the critical levels of transport demand on this corridor. The Preferred Route for MetroLink, which runs from Estuary in North Dublin, where a strategic Park and Ride is also proposed, to the south city at Charlemont was determined following the completion of a comprehensive route options assessment study, which was also informed by the outcome from two rounds of non-statutory public consultation.

MetroLink will integrate with local, regional and national bus and rail services at several points along its route, including key interchanges at Dublin Airport, Glasnevin, Tara Street and Charlemont.

Charlemont offers the optimal location for the primary interchange with the Green Line in response to growing demand in the longer term and is an appropriate location to facilitate any potential future metro extensions to serve

the south west, south or south east of the city region should sufficient demand arise.”

6.3.30. The following Measures are noted:

- **LRT1 – Metrolink:** A Railway Order application for the MetroLink was made to An Bord Pleanála in 2022. Subject to receipt of approval, it is intended to proceed with the construction of the project.
- **LRT2 – Further Metro Development:** In reviewing and updating the Transport Strategy, which takes place every 6 years, the NTA will assess the requirement to provide additional Metro lines in the GDA based on updated forecast demand for travel and on emerging significant changes in land use and spatial policy, including previously considered options to extend Metrolink southwards towards UCD, or along the existing Luas Green Line, or towards South West Dublin.

6.3.31. Section 12.3.8 identifies a number of corridors where the NTA considers that upgrading to light rail will be required in the period after 2042. These are listed in the following Measure:

- **LRT7 – Post-2042 Luas Lines:** The NTA will undertake detailed appraisal, planning and design work for the following Luas lines, with a view to their delivery in the period after 2042:
 1. City Centre to Clongriffin;
 2. City Centre to Beaumont and Balgriffin;
 3. Green Line Extension to Tyrrelstown;
 4. City Centre to Blanchardstown;
 5. Red Line Reconfiguration to provide the following lines*:
 - a. Clondalkin-City Centre; and
 - b. Tallaght-Kimmage-City Centre.
 6. Tallaght to City Centre via Knocklyon*;
 7. Green Line Reconfiguration to provide the following lines*:
 - a. City Centre to Bray via UCD and Sandyford; and

b. Sandyford to City Centre

* Subject to Measure LRT2

6.3.32. Section 12.3.10 relates to the Luas Green Line upgrade. It states that:

“The challenges associated with the upgrading of the Luas Green Line to a metro standard of service have led to the emergence of an alternative proposal which seeks to meet travel demand from south of Sandyford along a new light rail corridor which serves UCD post-2042. As such, the upgrading of the Green Line to metro standard is not being pursued as part of this strategy. Instead, for this strategy period, the capacity and frequency on the current Green Line from Sandyford northwards to the city centre will be incrementally increased through the provision of additional tram fleet and services and associated turnback arrangements to meet forecast passenger demand.”

6.3.33. Section 12.3.13 relates to ‘Expanded Depots’ and states that:

“As services expand, the need for depot space also increases. The extension of the Green Line to Finglas requires an extension to the depot facilities at Broombridge, while Metrolink will include a depot at Dardistown, south of Dublin Airport. As service capacity increases are sought on the existing Green and Red lines, and as other lines are developed, the requirement for associated depot facilities will also be examined.”

6.3.34. This is supported by the following Measure:

- **LRT12 – Additional Depot Facilities:** It is intended to provide additional depot facilities as required to cater for an expanded light rail network.

6.3.35. In relation to DART+ West, Section 12.4.3 notes that it includes:

“Integration with a combined metro / rail station to be developed at Glasnevin under the MetroLink project to serve both the Maynooth Line and Kildare Line.”

6.3.36. Section 12.4.13 relates to upgrades to existing stations and states that:

“In addition, a major upgrade of Tara Station will be undertaken to facilitate enhanced interchange between MetroLink and the DART network.”

6.3.37. This is supported by the following Measure:

- **RAIL7 – Station Upgrades:** The NTA, in conjunction with Irish Rail, will upgrade, refurbish and maintain train stations across the GDA to ensure that they are of an appropriate standard and provide a good quality experience for passengers.

6.3.38. With regard to a future DART+ Tunnel, Section 12.4.8 states that:

“The DART+ Tunnel project is an updated version of DART Underground which received planning consent in 2010. This scheme was not brought forward at that time, primarily due to funding constraints and also due to the potential to utilise the Phoenix Park Tunnel for passenger service.

Since then, the Phoenix Park Tunnel link has been brought into operational service, providing connectivity from the Kildare line to the city centre stations of Connolly, Tara and Pearse. In addition, the NTA and Irish Rail have reviewed the tunnel project in order to further optimise its potential and ensure that its progress would deliver the maximum benefits for transport in the city-region.

The NTA are satisfied that, in the longer term, the requirement for an additional heavy rail line through Dublin City Centre will arise. As such, an alignment for the DART+ Tunnel will be preserved and protected to allow its future delivery subsequent to the strategy period. However, the timing of implementation of the DART+ Tunnel will be reassessed as part of the periodic reviews of the Transport Strategy and its implementation can be brought forward if required by emerging transport patterns.”

6.3.39. The following Measure is noted:

- **RAIL2 – DART+ Tunnel:** An alignment for the DART+ Tunnel will be preserved and protected to allow its future delivery subsequent to the strategy period, but subject to periodic review to determine whether earlier implementation is required by emerging transport patterns.

6.3.40. Section 13.3.2 relates to National Roads Projects. It states that during the period of the Strategy it is intended to further manage, develop and enhance the national road network. It sets out a series of projects including “improvements to the Lissenhall

junction on the M1, supporting the delivery of a Metrolink Park and Ride facility at this location”.

6.3.41. Chapter 17, ‘Strategy Outcomes’, states in respect of travel to Dublin Airport that:

“The overall number of people that access Dublin Airport increases by 66% in 2042 with the strategy in place compared to 2016. The numbers travelling by public transport is forecast to almost triple to over 16,000 in the same period. It should also be noted that the number of car trips reduces significantly with the strategy in place in 2042 compared to a scenario without the strategy, with an associated increase in public transport. This clearly demonstrates the manner in which the measures proposed in the strategy, such as MetroLink and the Core Bus Corridors, protect and foster the growth of this strategic national asset. Similar outcomes arise for the AM Peak period. See Figure 17.8.

Travel time to Dublin Airport by car decreases by 13% in the AM Peak as a result of the Transport Strategy and by 21% by Public Transport compared to a scenario without the strategy in place in 2042. This primarily reflects the impact of Metrolink and the Core Bus Corridors. As more people use bus and light rail, the reduced numbers travelling by car also benefit from reduced congestion. While the time travelled by car increases relative to 2016, this must be viewed in the context of the significant shift to sustainable modes that the strategy enables.”

6.3.42. Figure 19.1 sets out the Strategy Phasing, with MetroLink identified as a Medium Term 2031-2036 project. BusConnects, DART+ and Luas Green Line Upgrades are all listed as Short-Term 2022-2030 projects. Included under the Longer-Term 2037-2042 projects is ‘planning and design for DART+ Tunnel’.

6.4. Local Policy

6.4.1. Dublin City Council Administrative Area

6.4.2. ***Dublin City Development Plan 2022-2028***

6.4.3. The Dublin City Development Plan 2022-2028 was adopted and came into effect post-lodgement of the Railway Order application.

6.4.4. The MetroLink alignment and stations are not shown on the zoning maps contained in the Development Plan. The zoning objectives applicable to each station vary and are addressed in the planning assessment section of this report.

6.4.5. Chapter 1, 'Strategic context and vision', states that:

“On the public transportation front, the new Luas cross-city line is complete and there are plans for further significant public transport investments including Metro, Bus Connects, Dart + and the Luas extension. An ambitious upgrade of the city’s cycle paths is planned over the next number of years, and works to enhance the city centre public realm are advancing as well as a number of city greening initiatives.”

6.4.6. Section 1.3 sets out the following vision for Dublin:

“Within the next 10 years, Dublin will have an established international reputation as one of Europe’s most sustainable, dynamic and resourceful city regions. Dublin, through the shared vision of its citizens and civic leaders, will be a beautiful, compact city, with a distinct character, a vibrant culture and a diverse, smart, green, innovation-based economy. It will be a socially inclusive city of urban neighbourhoods with excellent community and civic infrastructure based on the principles of the 15 minute city, all connected by an exemplary public transport, cycling and walking system and interwoven with a high quality bio-diverse, green space network. In short, the vision is for a capital city where people will seek to live, work, experience, invest and socialise, as a matter of choice.”

6.4.7. Section 1.9.7 notes the NTA Greater Dublin Area Transport Strategy 2022-2042 and the MetroLink project contained therein. It states that “over the course of the development plan, it is expected that these key infrastructural projects will either be delivered or be at an advanced stage of design/planning. The alignment of future growth and key public transport infrastructure is a key consideration of the plan”.

6.4.8. Chapter 4 relates to the Shape and structure of the City and the following Policies are noted:

- **Policy SC1:** Consolidation of the Inner City – To consolidate and enhance the inner city, promote compact growth and maximise opportunities provided by

existing and proposed public transport by linking the critical mass of existing and emerging communities such as Docklands, Heuston Quarter, Grangegorman, Stoneybatter, Smithfield, the Liberties, the North East Inner City and the south and north Georgian cores with each other, and to other regeneration areas.

- **Policy SC8:** Development of the Inner Suburbs – To support the development of the inner suburbs and outer city in accordance with the strategic development areas and corridors set out under the Dublin Metropolitan Area Strategic Plan and fully maximise opportunities for intensification of infill, brownfield and underutilised land where it aligns with existing and pipeline public transport services and enhanced walking and cycling infrastructure.
- **Policy SC9:** Key Urban Villages, Urban Villages and Neighbourhood Centres – To develop and support the hierarchy of the suburban centres, including Key Urban Villages, Urban Villages and Neighbourhood Centres, in order to:
 - support the sustainable consolidation of the city and align with the principles of the 15 minute city;
 - provide for the essential economic and community support for local neighbourhoods; and
 - promote and enhance the distinctive character and sense of place of these areas by ensuring an appropriate mix of retail and retail services
- **Policy SC11:** Compact Growth – In alignment with the Metropolitan Area Strategic Plan, to promote compact growth and sustainable densities through the consolidation and intensification of infill and brownfield lands, particularly on public transport corridors, which will:
 - enhance the urban form and spatial structure of the city;
 - be appropriate to their context and respect the established character of the area;
 - include due consideration of the protection of surrounding communities and provide for enhanced amenities for existing and future residents;

- be supported by a full range of social and community infrastructure such as schools, shops and recreational areas;
- and have regard to the criteria set out in Chapter 15: Development Standards, including the criteria and standards for good neighbourhoods, quality urban design and excellence in architecture.
- **Policy SC19: High Quality Architecture** – To promote development which positively contributes to the city’s built and natural environment, promotes healthy placemaking and incorporates exemplar standards of high-quality, sustainable and inclusive urban design and architecture befitting the city’s environment and heritage and its diverse range of locally distinctive neighbourhoods.

6.4.9. Chapter 5 relates to quality housing and sustainable neighbourhoods. The following Policy is noted:

- **Policy QHSN11: 15-Minute City** – To promote the realisation of the 15-minute city which provides for liveable, sustainable urban neighbourhoods and villages throughout the city that deliver healthy placemaking, high quality housing and well designed, intergenerational and accessible, safe and inclusive public spaces served by local services, amenities, sports facilities and sustainable modes of public and accessible transport where feasible.

6.4.10. Chapter 7 relates to the City Centre, urban villages and retail. The following public realm Policies are noted:

- **Policy CCUV37: Plan Active and Healthy Streets** – To promote the development of a network of active, healthy, attractive, high quality, green, and safe streets and public spaces which are inviting, pedestrian friendly and easily navigable. The aspiration is to encourage walking as the preferred means of movement between buildings and activities in the city. In the case of pedestrian movement within major developments, the creation of a public street is preferable to an enclosed arcade or other passageway.
- **Policy CCUV38: High Quality Streets and Spaces** – To promote the development of high-quality streets and public spaces which are accessible and inclusive in accordance with the principles of universal design, and which

deliver vibrant, attractive, accessible and safe places and meet the needs of the city's diverse communities regardless of age, ability, disability or gender.

- **Policy CCUV39:** Permeable, Legible and Connected Public Realm – To deliver a permeable, legible and connected public realm that contributes to the delivery of other key objectives of this development plan namely active travel and sustainable movement, quality urban design, healthy placemaking and green infrastructure.
- **Policy CCUV40:** Public Safety – To promote the development of a built environment and public spaces which are designed to deter crime and anti-social behaviour and which promote safety, as set out in the 'Your City Your Space' Public Realm Strategy 2012.
- **Policy CCUV41:** New Infrastructure Development – Infrastructure projects in Dublin City should ensure placemaking outcomes through a design-led approach. Dublin City Council will work the relevant agencies / infrastructure providers to achieve public realm enhancements in the design, implementation and delivery of infrastructure projects.
- **Policy CCUV42:** Public Realm – City Centre – To move to a low traffic environment generally and to increase the amount of traffic free spaces provided in the city centre over the lifetime of the Plan as well as create new high quality public realm areas where possible taking into account the objective to enhance access to and within the city centre by public transport, walking and cycling.

6.4.11. Chapter 8 relates to sustainable movement and transport. It states that:

“Sustainable and efficient movement of people and goods is crucial for the success and vitality of the city. It is important that we transition away from the private car and fossil fuel based mobility to mitigate against the negative impacts of transport and climate change. A considerable shift towards sustainable modes has been achieved over the last 15 years and this must be accelerated over the next decade with an emphasis on increased active travel and public transport use and decarbonisation of transport.”

6.4.12. Section 8.5.2 states that:

“The key role in delivering social, economic and environmental sustainability is the effective integration of land use and transportation. The NPF and RSES also recognise its importance and focus on the development of an integrated, efficient and sustainable mobility system in the long term interests of society, the economy and the environment. The NTA’s Transport Strategy for the Greater Dublin Area (GDA) 2022-2042, also builds on this approach and sets out the guiding policy and objectives for the efficient, effective and sustainable movement of people and goods.

This plan encourages higher-density development along public transport routes (i.e. Transit Oriented Development), a method of planning development around a main transport link. Adopting this approach recognises the opportunities presented by Metrolink, Luas and DART+ proposals, as well as the existing and planned bus improvements under BusConnects. Together with focusing mixed use developments around public transport nodes, a key element in successfully achieving this integration is through the provision of high quality pedestrian and cycling infrastructure and permeability links to encourage the use of sustainable modes to access the public transport station.”

6.4.13. With regard to public realm and placemaking, Section 8.5.3 notes that:

“Providing new, high quality public realm together with reimagining and reinventing existing spaces are all key factors in the successful integration of public transport and active travel proposals and creating a sense of place for communities. Dublin City Council recognises and welcomes the opportunities for developing public realm around the city and in the urban villages where new public transport proposals are being developed such as Metrolink, BusConnects and the Luas expansion and DART+ project.”

6.4.14. Section 8.5.5 states that:

“Dublin City Council commits to a review of the 2016 City Centre Transport Study, having regard to the major proposed public transport projects which will have a transformative impact on the city centre. Priority for pedestrians and pedestrian space as well as the provision of high quality public realm will underpin the future vision for the city centre. The challenges presented by the

construction of new public transport infrastructure will be approached as an opportunity to work with residents, employees and other stakeholders to support changes in travel behaviour during the plan period.”

6.4.15. The following Policies and Objectives are noted:

- **Policy SMT1:** Modal Shift and Compact Growth – To continue to promote modal shift from private car use towards increased use of more sustainable forms of transport such as active mobility and public transport, and to work with the National Transport Authority (NTA), Transport Infrastructure Ireland (TII) and other transport agencies in progressing an integrated set of transport objectives to achieve compact growth.
- **Policy SMT2:** Decarbonising Transport – To support the decarbonising of motorised transport and facilitate the rollout of alternative low emission fuel infrastructure, prioritising electric vehicle (EV) infrastructure.
- **Objective SMT01:** Transition to More Sustainable Travel Modes – To achieve and monitor a transition to more sustainable travel modes including walking, cycling and public transport over the lifetime of the development plan, in line with the city mode share targets of 26% walking/cycling/micro mobility; 57% public transport (bus/rail/Luas); and 17% private (car/van/HGV/motorcycle).
- **Policy SMT3:** Integrated Transport Network – To support and promote the sustainability principles set out in National and Regional documents to ensure the creation of an integrated transport network that services the needs of communities and businesses of Dublin City and the region.
- **Policy SMT4:** Integration of Public Transport Services and Development – To support and encourage intensification and mixed-use development along public transport corridors and to ensure the integration of high quality permeability links and public realm in tandem with the delivery of public transport services, to create attractive, liveable and high quality urban places.
- **Policy SMT5:** Mobility Hubs – To support the development of mobility hubs at key public transport locations and local mobility hubs in tandem with new developments to include shared car and micro mobility initiatives, creating a

vibrant, accessible and liveable place to support the transportation experience.

- **Policy SMT9:** Public Realm in New Developments – To encourage and facilitate the co-ordinated delivery of high quality public realm in tandem with new developments throughout the city in collaboration with private developers and all service/utility providers, through the Development Management process.
- **Policy SMT11:** Pedestrian Network – To protect, improve and expand on the pedestrian network, linking key public buildings, shopping streets, public transport points and tourist and recreational attractions whilst ensuring accessibility for all, including people with mobility impairment and/or disabilities, older persons and people with children.
- **Policy SMT12:** Pedestrians and Public Realm – To enhance the attractiveness and liveability of the city through the continued reallocation of space to pedestrians and public realm to provide a safe and comfortable street environment for pedestrians of all ages and abilities.
- **Policy SMT14:** City Centre Road Space – To manage city centre road-space to best address the needs of pedestrians and cyclists, public transport, shared modes and the private car, in particular, where there are intersections between DART, Luas and Metrolink and with the existing and proposed bus network.
- **Objective SMT05:** Review of the City Centre Transport Study – To review the City Centre Transport Study 2016 in collaboration with the NTA in the lifetime of the plan, setting out a clear strategy to prioritise active travel modes and public transport use, whilst ensuring the integration of high quality public realm.
- **Policy SMT19:** Integration of Active Travel with Public Transport – To work with the relevant transport providers, agencies and stakeholders to facilitate the integration of active travel (walking/cycling etc.) with public transport, ensuring ease of access for all.

- **Policy SMT22:** Key Sustainable Transport Projects – To support the expeditious delivery of key sustainable transport projects so as to provide an integrated public transport network with efficient interchange between transport modes, serving the existing and future needs of the city and region and to support the integration of existing public transport infrastructure with other transport modes. In particular the following projects subject to environmental requirements and appropriate planning consents being obtained:
 - DART +
 - Metrolink from Charlemont to Swords
 - BusConnects Core Bus Corridor projects
 - Delivery of Luas to Finglas
 - Progress and delivery of Luas to Poolbeg and Lucan
- **Objective SMT017:** Additional Interchanges and Rail Stations
 - (i) To promote and seek the development of a new interchange station at Cross Guns Glasnevin, subject to environmental requirements being satisfied and appropriate planning consents being obtained, as part of the DART+ and Metro link projects.
 - (ii) To promote the provision of a station at Croke Park Stadium.
 - (iii) To promote and seek provision of additional stations as part of the DART+ projects in consultation with Iarnród Éireann/Irish Rail.
- **Objective SMT021:** Cross Guns Bridge – To seek improvements to Cross Guns Bridge for pedestrian and cycle users, taking into consideration the BusConnects and Metrolink projects.

6.4.16. Chapter 9 relates to sustainable environmental infrastructure and flood risk. The following Policies are noted:

- **Policy SI21:** Managing Surface Water Flood Risk – To minimise flood risk arising from pluvial (surface water) flooding in the City by promoting the use of natural or nature-based flood risk management measures as a priority, by requiring the use of sustainable drainage systems (SuDS) to minimise and

limit the extent of hard surfacing and paving, and requiring the use of sustainable drainage techniques, where appropriate, for new development or for extensions to existing developments, in order to reduce the potential impact of existing and predicted flooding risk and to deliver wider environmental and biodiversity benefits, and climate adaption.

- **Policy SI22:** Sustainable Drainage Systems – To require the use of Sustainable Drainage Systems (SuDS) in all new developments, where appropriate, as set out in the Greater Dublin Strategic Drainage Study (Vol 2: New Development)/ Greater Dublin Regional Code of Practice for Drainage Works and having regard to the guidance set out in Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas, Water Sensitive Urban Design Best Practice Interim Guidance Document (DHLGH, 2021). Sustainable Drainage Systems (SuDS) should incorporate nature-based solutions and be designed in accordance with the Dublin City Council Sustainable Drainage Design & Evaluation Guide (2021) which is summarised in Appendix 12. SuDS should protect and enhance water quality through treatment at source while enhancing biodiversity and amenity.
- **Policy SI33:** Remediation of Contaminated Sites – That all potentially contaminated sites shall be remediated to internationally accepted standards prior to redevelopment. Any unearthed contaminants will require some form of remediation measures which may require a licence from the Environmental Protection Agency (EPA).
- **Policy SI34:** Management of Air Quality – To monitor, pro-actively manage and improve air quality in the City through integrated land use and spatial planning measures to avoid, mitigate and minimise unacceptable levels of air pollution in accordance with national and EU policy directives on air quality and, where appropriate, drive compliance with established targets.
- **Policy SI36:** Noise Management – To support pro-active management of noise in the City through measures such as appropriate road surfaces to avoid, mitigate, minimise noise in accordance with good practice, relevant legislation and in line with the Dublin Agglomeration Environmental Noise Action Plan 2018-2023 (and subsequent plans).

- **Policy SI41:** Lighting Standards – To provide and maintain high quality and appropriate street/ outdoor lighting on public roads, footways, cycleways, public realm throughout the City in accordance with the Council’s Vision Statement for Public Lighting in Dublin City and related public lighting projects. In general, the lighting of roads and public amenity areas shall be provided in accordance with the requirements of the latest Public Lighting Standards IS EN13201 and further updates.
- **Policy SI42:** Light Pollution – To not allow unnecessary, inappropriate or excessive artificial lighting and to ensure that the design of public and external lighting proposals minimises light spillage or pollution and has due regard to the character, environmental sensitivity and residential amenity of the surrounding area.

6.4.17. Chapter 10 relates to green infrastructure and recreation. The following Policies and Objectives are noted:

- **Policy GI9:** European Union Natura 2000 Sites – To conserve, manage, protect and restore the favourable conservation condition of all qualifying interest/special conservation interests of all European sites designated, or proposed to be designated, under the EU Birds and Habitats Directives, as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) (European / Natura 2000 sites).
- **Policy GI10:** Flora and Fauna Protected under National and European Legislation Located Outside Designated Areas – To adequately protect flora and fauna (under the EU Habitats and Birds Directives), the Wildlife Acts 1976 (as amended), the Fisheries Acts 1959 (as amended) and the Flora (Protection) Order 2022 S.I No. 235 of 2022, wherever they occur within Dublin City, or have been identified as supporting the favourable conservation condition of any European sites.
- **Policy GI11:** Proposed Natural Heritage Areas – To protect and enhance the ecological functions and connectivity of habitats and species of proposed Natural Heritage Areas (pNHAs) to be designated by the National Parks and Wildlife Service (NPWS).

- **Policy GI12:** National and International Sites for Nature Conservation – To protect sites for nature conservation as designated under the Ramsar Treaty for wetland sites, National Special Amenity Areas, National Nature Reserves, Important Bird Areas and Flora Protection Order Sites.
- **Policy GI13:** Areas of Ecological Importance for Protected Species - To ensure the protection, conservation and enhancement of all areas of ecological importance for protected species, and especially those listed in the EU Birds and Habitats Directives, including those identified as supporting the favourable conservation condition of any European sites, in accordance with development standards set out in this plan.
- **Policy GI14:** Ecological / Wildlife Corridors – To maintain and strengthen the integrity of the city's ecological corridors and stepping stones which enable species to move through the city, by increasing their connectivity [to be shown in the proposed Green Infrastructure Strategy] under Article 10 of the EU Habitats Directive. Development proposals should not compromise their ecological functions and should realise opportunities to contribute to enhancing the nature conservation value of them by landscaping that provides complementary habitats. An Ecological Impact Assessment will be required for any proposed development likely to have a significant impact on habitats and species of interest on or adjacent an ecological corridor.
- **Policy GI16:** Habitat Creation and New Development – That new developments (as appropriate) will be required to support local biodiversity and incorporate biodiversity improvements through urban greening and the use of nature-based infrastructural solutions that are of particular relevance and benefit in an urban context. Opportunities should be taken as part of new development to provide a net gain in biodiversity and provide links to the wider Green Infrastructure network. All suitable new buildings will be required to incorporate swift nesting blocks into the building fabric.
- **Policy GI18:** Minimise Impact – Light and Noise – To minimise the environmental impact of external lighting and noise at sensitive locations to achieve a sustainable balance between the needs of an area, the safety of

walking and cycling routes and the protection of sensitive species such as bats.

- **Objective GIO30:** Fitzwilliam Square and Four Masters Park – To seek the opening of Fitzwilliam Square and Four Masters Park at Berkeley Road/Eccles Street to the public.
- **Policy GI40:** Tree Planting - General – To require appropriate and long-term tree and native hedgerow planting in the planning of new development, urban spaces, streets, roads and infrastructure projects. New development should seek to provide for additional tree planting using a diversity of species including native species as appropriate to the location of the development in the interests of natural heritage, amenity, environmental quality and climate resilience.
- **Policy GI41:** Protect Existing Trees as Part of New Development – To protect existing trees as part of new development, particularly those that are of visual, biodiversity or amenity quality and significance. There will be a presumption in favour of retaining and safeguarding trees that make a valuable contribution to the environment.
- **Policy GI43:** Hedgerows – To protect and enhance the City's hedgerow network, in particular, hedgerows that form townland, parish and barony boundaries. It is Council policy to increase hedgerow coverage and promote the planting of hedgerows in new developments using native species.
- **Policy GI46:** To Improve and Upgrade/ Provide Access to Sports / Recreational Facilities – To improve and upgrade existing sports/recreational facilities in the city and to ensure the availability of and equal access to a range of recreational facilities to the general population of all ages and groups (including women/girls and minority sports) at locations throughout the city, including housing complexes. In areas where a deficiency exists, Dublin City Council will work with the providers of such facilities, including schools, institutions and private operators, to ensure access to the local population.
- **Policy GI49:** Protection of Existing and Established Sport and Recreational Facilities – To protect existing and established sport and recreation facilities,

including pitches, unless there is clear evidence that there is no long term need for the facility; unless the loss would be replaced by equivalent or better provision in terms of quantity or quality in an accessible and suitable location; or the development is for alternative sports and recreational provision, or required to meet other open space deficiencies, the benefits of which would clearly outweigh the loss of the former or current use.

6.4.18. Chapter 11 relates to built heritage and archaeology. It states that two Areas of Special Planning Control have been created for Dublin City Centre, O'Connell Street and Environs ASPC and Grafton Street and Environs ASPC. The designation of these ASPC's allows DCC to specify development objectives for the preservation or enhancement of the area that would further strengthen its designation as an ACA.

6.4.19. The following Policies and Objectives are noted:

- **Policy BHA2:** Development of Protected Structures – That development will conserve and enhance protected structures and their curtilage and will:
 - (a) Ensure that any development proposals to protected structures, their curtilage and setting shall have regard to the Architectural Heritage Protection Guidelines for Planning Authorities (2011) published by the Department of Culture, Heritage and the Gaeltacht.
 - (b) Protect structures included on the RPS from any works that would negatively impact their special character and appearance.
 - (c) Ensure that works are carried out in line with best conservation practice as advised by a suitably qualified person with expertise in architectural conservation.
 - (d) Ensure that any development, modification, alteration, or extension affecting a protected structure and/or its setting is sensitively sited and designed, and is appropriate in terms of the proposed scale, mass, height, density, layout and materials.
 - (e) Ensure that the form and structural integrity of the protected structure is retained in any redevelopment and ensure that new development does not adversely impact the curtilage or the special character of the protected structure.

- (f) Respect the historic fabric and the special interest of the interior, including its plan form, hierarchy of spaces, structure and architectural detail, fixtures and fittings and materials.
 - (g) Ensure that new and adapted uses are compatible with the architectural character and special interest(s) of the protected structure.
 - (h) Protect and retain important elements of built heritage including historic gardens, stone walls, entrance gates and piers and any other associated curtilage features.
 - (i) Ensure historic landscapes, gardens and trees (in good condition) associated with protected structures are protected from inappropriate development.
 - (j) Have regard to ecological considerations for example, protection of species such as bats.
- **Policy BHA3:** Loss of Protected Structures – That the City Council will resist the total or substantial loss of protected structures in all but exceptional circumstances.
 - **Policy BHA5:** Demolition of Regional Rated Building on NIAH – That there is a presumption against the demolition or substantial loss of any building or other structure assigned a 'Regional' rating or higher by the National Inventory of Architectural Heritage (NIAH), unless it is clearly justified in a written conservation assessment that the building has no special interest and is not suitable for addition to the City Council's Record of Protected Structures (RPS); having regard to the provisions of Section 51, Part IV of the Planning and Development Act, 2000 (as amended) and the Architectural Heritage Protection Guidelines for Planning Authorities (2011).
 - **Policy BHA6:** Buildings on Historic Maps – That there will be a presumption against the demolition or substantial loss of any building or other structure which appears on historic maps up to and including the Ordnance Survey of Dublin City, 1847. A conservation report shall be submitted with the application and there will be a presumption against the demolition or substantial loss of the building or structure, unless demonstrated in the

submitted conservation report this it has little or no special interest or merit having regard to the provisions of the Architectural Heritage Protection Guidelines for Planning Authorities (2011).

- **Policy BHA7: Architectural Conservation Areas**

- (a) To protect the special interest and character of all areas which have been designated as an Architectural Conservation Area (ACA). Development within or affecting an ACA must contribute positively to its character and distinctiveness, and take opportunities to protect and enhance the character and appearance of the area, and its setting, wherever possible. Development shall not harm buildings, spaces, original street patterns, archaeological sites, historic boundaries or features, which contribute positively to the ACA. Please refer to Appendix 6 for a full list of ACAs in Dublin City.
- (b) Ensure that all development proposals within an ACA contribute positively to the character and distinctiveness of the area and have full regard to the guidance set out in the Character Appraisals and Framework for each ACA.
- (c) Ensure that any new development or alteration of a building within an ACA, or immediately adjoining an ACA, is complementary and/or sympathetic to their context, sensitively designed and appropriate in terms of scale, height, mass, density, building lines and materials, and that it protects and enhances the ACA. Contemporary design which is in harmony with the area will be encouraged.
- (d) Seek the retention of all features that contribute to the character of an ACA including boundary walls, railings, soft landscaping, traditional paving and street furniture.
- (e) Promote sensitive hard and soft landscaping works that contribute to the character and quality of the ACA.
- (f) Promote best conservation practice and encourage the use of appropriately qualified professional advisors, tradesmen and craftsmen,

with recognised conservation expertise, for works to buildings of historic significance within ACAs.

All trees which contribute to the character and appearance of an Architectural Conservation Area, in the public realm, will be safeguarded, except where the tree is a threat to public safety, prevents universal access, or requires removal to protect other specimens from disease.

- **Policy BHA8:** Demolition in an ACA – There is a presumption against the demolition or substantial loss of a structure that positively contributes to the character of the ACA except in exceptional circumstances where such loss would also contribute to a significant public benefit.
- **Policy BHA9:** Conservation Areas – To protect the special interest and character of all Dublin's Conservation Areas – identified under Z8 and Z2 zoning objectives and denoted by red line conservation hatching on the zoning maps. Development within or affecting a Conservation Area must contribute positively to its character and distinctiveness and take opportunities to protect and enhance the character and appearance of the area and its setting, wherever possible.

Enhancement opportunities may include:

1. Replacement or improvement of any building, feature or element which detracts from the character of the area or its setting.
2. Re-instatement of missing architectural detail or important features.
3. Improvement of open spaces and the wider public realm and reinstatement of historic routes and characteristic plot patterns.
4. Contemporary architecture of exceptional design quality, which is in harmony with the Conservation Area.
5. The repair and retention of shop and pub fronts of architectural interest.
6. Retention of buildings and features that contribute to the overall character and integrity of the Conservation Area.
7. The return of buildings to residential use.

Changes of use will be acceptable where in compliance with the zoning objectives and where they make a positive contribution to the character, function and appearance of the Conservation Area and its setting. The Council will consider the contribution of existing uses to the special interest of an area when assessing change of use applications, and will promote compatible uses which ensure future long-term viability.

- **Policy BHA10:** Demolition in a Conservation Area – There is a presumption against the demolition or substantial loss of a structure that positively contributes to the character of a Conservation Area, except in exceptional circumstances where such loss would also contribute to a significant public benefit.
- **Policy BHA18:** Historic Ground Surfaces, Street Furniture and Public Realm
 - (a) To protect, conserve and retain in situ historic elements of significance in the public realm including milestones, jostle stones, city ward stones, bollards, coal hole covers, gratings, boot scrapers, cast iron basement lights, street skylights and prisms, water troughs, street furniture, post boxes, lampposts, railings and historic ground surfaces including stone kerbs, pavement flags and setts, and to promote conservation best practice and high standards for design, materials and workmanship in public realm improvements within areas of historic character, having regard to the national Advice Series on Paving: The Conservation of Historic Ground Surfaces (2015).
 - (b) To maintain schedules of stone setts, historic kerbing and historic pavers/flags, and associated features in the public realm, to be protected, conserved or reintroduced (Appendix 6), and to update and review these schedules during the period of this development plan.
- **Policy BHA26:** Archaeological Heritage
 - 1. To protect and preserve Monuments and Places listed on the statutory Record of Monuments and Places (RMP) as established under Section 12 of the National Monuments (Amendment) Act 1994 which have been identified in the Record of Monuments and Places and the Historic Environment Viewer

(www.archaeology.ie) and all wrecks over 100 years old including those in the Shipwreck Inventory of Ireland.

2. To protect archaeological material in situ by ensuring that only minimal impact on archaeological layers is allowed, by way of re-use of standing buildings, the construction of light buildings, low impact foundation design, or the omission of basements (except in exceptional circumstances) in the Monuments and Places listed on the statutory Record of Monuments and Places (RMP) as established under Section 12 of the National Monuments (Amendment) Act 1994.
3. To seek the preservation in situ (or where this is not possible or appropriate, as a minimum, preservation by record) of all archaeological monuments included in the Record of Monuments and Places; all wrecks and associated objects over 100 years old and of previously unknown sites, features and objects of archaeological interest that become revealed through development activity. In respect of decision making on development proposals affecting sites listed in the Record of Monuments and Places, the council will have regard to the advice and/or recommendations of the Department of Housing, Heritage and Local Government.
4. Development proposals within the Record of Monuments and Places (RMP) as established under Section 12 of the National Monuments (Amendment) Act 1994, notification of sites over 0.5 hectares size with potential underwater impacts and of sites listed in the Dublin City Industrial Heritage Record, will be subject to consultation with the City Archaeologist and archaeological assessment prior to a planning application being lodged.
5. To preserve known burial grounds and disused historic graveyards. Where disturbance of ancient or historic human remains is unavoidable, they will be excavated according to best archaeological practice and reburied or permanently curated.
6. Preserve the character, setting, and amenity of upstanding and below ground town wall defences.
7. Development proposals in marine, lacustrine and riverine environments and areas of reclaimed land, shall have regard to the Shipwreck Inventory

maintained by the Department of Housing, Local Government and Heritage and be subject to an appropriate level of archaeological assessment.

8. To have regard to national policy documents and guidelines relating to archaeology and to best practice guidance published by the Heritage Council, the Institute of Archaeologists of Ireland and Transport Infrastructure Ireland.
- **Objective BHA019:** Built Heritage and Archaeology – To provide for the protection, preservation and promotion of built heritage, including architectural heritage, archaeological heritage and underwater heritage, and support the in situ presentation and interpretation of archaeological finds within new developments.
- **Policy BHA30:** Moore Street National Monument – To co-operate with, and facilitate, the state in its preservation of the National Monument at 14-17 Moore Street on a joint venture basis, and to support the retention and refurbishment of the cultural quarter associated with 1916 on Moore Street and taking account of the contents and relevant recommendations of the Moore Street Advisory Group Report to the Minister for Heritage and Electoral Reform and the minister's response.

6.4.20. Chapter 13 relates to Strategic Development Regeneration Areas (SDRAs). It states that a key element in the delivery of compact growth will be the sustainable development of the SDRAs. 17 SDRAs are identified and the Plan states that these areas are capable of delivering significant quantities of homes and employment for the city. Elements of the proposed development are located within SDRAs 2, 6 and 10.

6.4.21. Table 13.1 identifies MetroLink as supporting infrastructure required for SDRA 2, Ballymun. Section 13.4 states that:

“The remaining sites [in SDRA 2] have the capacity to deliver between 2,200 – 2,350 new housing units, new commercial and employment opportunities having regard to compact growth principles, development of infill sites and intensification of development along the proposed new Metrolink route.”

6.4.22. With regard to SDRA 6, Docklands, the movement and transport strategy seeks to enhance public realm to accommodate increased pedestrian movement.

6.4.23. With regard to SDRA 10, North East Inner City, it is stated in Section 13.12 that:

“The area has excellent public transport connectivity due to its proximity to the city centre, and will also benefit from the proposed Metrolink and ongoing development of the Royal Canal Greenway. The area clearly has many location advantages and is home to long established business and a diverse residential community. It is however, an area with a history of socio-economic deprivation and is identified as being in need of both social and economic regeneration.”

6.4.24. Section 13.12 states that DCC is committed to preparing a Local Area Plan for this SDRA during the lifetime of the Development Plan, and, therefore, the SDRA forms an interim strategy and sets guiding principles for the LAP.

6.4.25. Within SDRA 10, the ‘O’Connell Street to Moore Lane incorporating Carlton Site’ is identified as a Key Opportunity Site. The ‘guiding principles’ for the site states that:

“Scheme design shall be based on a comprehensive masterplan that incorporates a convenient access route to the planned Metrolink stop, quality connections across the site, and a cultural interpretative element.”

6.4.26. It also states that the Masterplan proposals should incorporate “a new civic square, open to the public, and quality pedestrian access to the proposed Metrolink station.”

6.4.27. ***Ballymun Local Area Plan 2017***

6.4.28. The life of the Ballymun Local Area Plan (LAP) 2017 has been extended to 2027.

6.4.29. The LAP notes the designation of Ballymun as a Strategic Development and Regeneration Area and a Key District Centre under the Dublin City Development Plan 2016-2022, which was in effect at the time the LAP was adopted.

6.4.30. The lands to the north of the LAP area, where the Northwood Station and Portal are proposed, are within the Fingal County Council administrative area and are identified in the Ballymun LAP as ‘the M50 lands’. It states that the M50 lands form a crucial contextual zone for the LAP.

6.4.31. In relation to the former Ballymun Shopping Centre site, where the Ballymun Station is proposed, the LAP states that “delivering future options for the redevelopment of this site and for delivery of additional retail and employment in the area forms a key element of the development strategy of this LAP”.

6.4.32. Section 5.4.3 relates to 'Metro North'. It states that:

"The delivery of Metro North through Ballymun is seen as an essential component of the regeneration process and attracting and delivering high density mixed-use developments along the Main Street and the M50 lands. The extent of vacant lands along this route and in public ownership provides the opportunity to deliver suitably high density schemes along the Metro line, helping to secure sustainable travel patterns in the city and the economic rationale for this route.

While the LAP fully supports the route, it is imperative that any rail line through the Main Street does not segregate east and west Ballymun as was the case pre-regeneration when the dual carriageway ran through the area. Considerable public money has been invested creating and developing an urban Main Street, with new connections and ease of pedestrian and cycle movement. In order to prevent the segregation which a rail transport system requires, the LAP calls for any future Metro line to have regard to the LAP objectives to create an urban Main Street with enhanced permeability and to ideally run the Metro underground through the Main Street until after the junction with Santry Avenue. Light rail systems such as LUAS can be easily accommodated at grade on Main Street.

The City Council will work with Fingal County Council and the NTA to ensure the provision of a high quality transport system is delivered along this corridor."

6.4.33. The following Objectives are noted:

- **E11:** Support the delivery of Metro North and the provision of a station in the heart of Ballymun Main Street in the vicinity of Cearnóg on tSeachtar Laoch) and also in the vicinity of/linking to the M50 lands.
- **MO2:** Work with Fingal County Council and the NTA to ensure the provision of a high quality rail transport system (Metro North) is delivered through Ballymun. In order to protect the character of the emerging Main Street the LAP is seeking that the future Metro line respects the desire for enhanced permeability, with the line ideally run underground until the junction with

Santry Avenue. Future realignment of the Main Street should also provide for enhanced and segregated cycle facilities.

- 6.4.34. Section 6.2 relates to the Main Street Shopping Centre Site. It states that a strong urban edge is required to address Main Street. It also states that:

“In order to provide a central hub for this significant Main Street development site, it is a specific objective of the LAP (Objective UD2) that an area of open space is provided fronting onto Main Street. Synergies between this space and the Plaza [...] across the road are desirable, e.g. unity in landscape treatment.”

- 6.4.35. The LAP includes an indicative masterplan for the M50 lands, notwithstanding that they are primarily not within DCC’s administrative area. It includes an underpass under the R108 and shows the old Metro North alignment.

- 6.4.36. ***George’s Quay Local Area Plan 2012***

- 6.4.37. The George’s Quay LAP, which is referenced in the applicant’s Planning Report, expired in July 2022.

- 6.4.38. ***O’Connell Street and Environs Scheme of Special Planning Control 2022***

- 6.4.39. The stated Vision for the Scheme of Special Planning Control is “to strengthen O’Connell Street and environs as a place of importance in the social, economic and cultural life of citizens and visitors, where buildings and their uses reflect a civic dignity and pride, and property owners and occupiers acknowledge their obligations as stakeholders in this area of special significance to the Irish Nation”.

- 6.4.40. The Scheme provides detailed guidance regarding shopfront and signage design.

- 6.4.41. ***Phibsborough Local Environmental Improvements Plan 2017-2022***

- 6.4.42. This Plan would appear to have expired in 2022.

- 6.4.43. ***Dublin City Centre Transport Plan 2023***

- 6.4.44. The stated purpose of the Dublin City Centre Transport Plan (DCCTP) is to identify and prioritise changes to the current transport arrangements which are necessary to fulfil the vision for the City as a sustainable, dynamic, and inclusive place. It also facilitates the implementation of the NTA’s GDATS by providing a more detailed

framework for accommodating significantly higher numbers of people travelling into the city centre, in particular by rail, bus, cycling and walking.

6.4.45. Section 8.3 relates to changes to be made at the junction of Westland Row and Pearse Street to facilitate priority for public transport, walking and cycling. Only public transport and cyclists will be allowed to turn left from Westland Row onto Pearse Street. A new right turn for general traffic will be introduced at this Junction and the section of Pearse Street from Westland Row to Sandwith Street will be made two-way. It is stated this change will facilitate the pedestrian movements in the area especially at Pearse and Tara Street stations and allow for increase in use of these stations as a result of DART+ and prepare for the construction and operation of MetroLink in the medium term.

6.4.46. Section 9 sets out public realm opportunities for various parts of the city centre. In relation to Tara Street, it states that:

“...the consideration of a wider scheme [...] branded as the Tara Triangle, provides additional opportunities for placemaking by creating an alternative pedestrian route along the railway arches, from Pearse Street to Tara Train Station and the future Metro Stop. Activating the underused arches with cafés, breweries, restaurants, creative workshops and flexible workspaces will stimulate walking journeys through the quarter and could encourage the manifestation of a new destination for Dublin, which celebrates the infrastructural heritage of the city, whilst providing additional commercial activity.”

6.4.47. This public realm and pedestrian improvement zone around Tara Street, including the proposed MetroLink station, is illustrated in Figure 9.8.3 of the Plan.

6.4.48. Section 11.1 sets out priorities for the city centre public transport network. These include:

“The streets of the City Centre will be planned and designed with a view to accommodating the physical requirements of new patterns of increased pedestrian activity arising out of BusConnects, DART+, MetroLink and future Luas development;”

6.4.49. Fingal County Council Administrative Area

6.4.50. ***Fingal County Development Plan 2023-2029***

6.4.51. The Fingal County Development Plan 2023-2029 was adopted and came into effect post-lodgement of the Railway Order application.

6.4.52. The MetroLink alignment and stations are indicatively shown on the zoning maps contained in the Development Plan. The zoning objectives applicable to each station vary and are addressed in the planning assessment section of this report.

6.4.53. Lissenhall is one of two tracts of land identified in Section 2.2.12 of the Development Plan as Strategic Long-Term Reserves. It states that:

“Given the MetroLink route will extend into the lands at Lissenhall, the zoning must be appropriate for the area. Furthermore, a substantial portion of these lands will be within 1km of the agreed Estuary Stop. Lissenhall is an expansive, low-lying, rural landscape comprising approximately 240 hectares (of which 225.5 is zoned for development). The area, in broad terms, is bounded by the M1 and R132 to the east, the Broadmeadow River to the south and south west, and the proposed route of the Swords Western Ring Road to the north. These lands are adjacent to the M1 and Belfast-Dublin corridor. By identifying Lissenhall as a key future development area, the Council is seeking to maximise the opportunities created by the delivery Planning for Growth Core Strategy Settlement Strategy of this key piece of strategic infrastructure in accordance with best planning practice and the principles of sustainable development. The development of the area following the sequential development of the existing Swords envelope, is also consistent with the Council’s long term strategic vision for Swords to develop as a sustainable city. It is envisaged that this area could accommodate the development of a significant mixed-use urban district providing for a significant level of employment in addition to approximately 6,000–7,000 residential units. A statutory land use plan will be prepared for these lands to provide a framework for development.”

6.4.54. The ‘MetroLink-LUAS Corridor’ is identified in the Settlement Strategy as one of the Strategic Corridors for Fingal. The Development Plan states that “the development of the proposed MetroLink project [...] will unlock significant long-term capacity in

Swords-Lissenhall and in South Fingal – Dublin Airport, subject to the protection of airport capacity and accessibility.

6.4.55. The Core Strategy notes the importance of Swords to the County and Region and states that “the delivery of MetroLink in co-ordination with other transport proposals, including BusConnects, future Park and Ride facilities and enhanced electric vehicle charging infrastructure, are all crucial for the future sustainable development of Swords”.

6.4.56. The following Policies and Objectives relating to Swords are noted:

- **Policy CSP26:** Promote and facilitate the long-term consolidation and growth of Swords as a Key Town including the provision of key enabling public transport infrastructure, including MetroLink and BusConnects, in accordance with the relevant provisions of the NPF, RSES and the MASP.
- **Policy CSP28:** Promote Swords as an economic driver and provide for strategic employment locations to improve its economic base and increase the ratio of jobs to workers.
- **Policy CSP29:** Promote and facilitate the development of MetroLink, connecting Swords to the Airport and on to the City Centre.
- **Policy CSP30:** Support the continued development of Swords as a vibrant Key Town with a thriving economy; an integrated public transport network; an attractive and highly accessible built environment with the highest standards of housing, employment, services, recreational amenities and community facilities.
- **Objective CSO43:** Support Swords-Dublin Airport as a key location for airport related economic development and employment provision linked to the protection and enhancement of access to Dublin Airport lands including the delivery of MetroLink.

6.4.57. Section 6.5.7 relates to ‘Public Transport’ and notes its importance in supporting future sustainable and economic growth within the County, providing more efficient and reliable access to key urban centres within the region and enabling mode shift which will help to reduce traffic congestion and emissions and improve quality of life.

6.4.58. It notes that MetroLink is one of the key growth enablers for Fingal, facilitating compact growth, sustainable mobility and opportunities for high-density residential development, mixed-use and employment generating activities.

6.4.59. The following Policies and Objectives relating to transport are noted:

- **Policy CMP1:** Support the decarbonisation of motorised transport and facilitate modal shift to walking, cycling and public transport and taking account of National and Regional policy and guidance, while supporting an efficient and effective transport system.
- **Objective CMO1:** Work with the NTA, TII and other transport agencies in facilitating the integrated set of transport objectives for the County as set out in this Plan, in line with National and Regional policy including the NTA's GDA Transport Strategy and any subsequent plan to encourage modal shift towards more sustainable modes of transport and patterns of commuting to reduce reliance on the private car.
- **Policy CMP 3:** Provide for an integrated approach to land-use and transportation aimed at minimising the demand for travel and prioritising sustainable modes of transport including walking, cycling and public transport.
- **Objective CMO3:** Support and facilitate high-density, mixed-use development and trip intensive uses along public transport corridors and to ensure the integration of high-quality permeability links and public realm in conjunction with the delivery of public transport services through plan frameworks to generate and reinforce sustainable patterns of compact growth and development in the County.
- **Policy CMP 6:** Support and facilitate sustainable mobility objectives set out in the NPF, RSES, Smarter Travel and the NTA's GDA Transport Strategy and any subsequent plan to ensure the creation of a high-quality and integrated transport network to serves the needs of the County and the wider region.
- **Policy CMP 10:** Improve bicycle priority measures and cycle parking infrastructure throughout the County in accordance with best accessibility practice.

- **Objective CMO6:** Maintain and improve the pedestrian and cyclist environment and promote the development of a network of pedestrian/cycle routes which link residential areas with schools, employment, recreational destinations and public transport stops to create a pedestrian / cyclist environment that is safe, accessible to all in accordance with best accessibility practice.
- **Policy CMP18:** Support the provision of a high-quality public transportation system that is accessible to all to serve the needs of the County and to enable a significant shift from car-based travel to public transport.
- **Objective CMO23:** Support the delivery of key sustainable transport projects including MetroLink, BusConnects, DART+ and LUAS expansion programme so as to provide an integrated public transport network with efficient interchange between transport modes to serve needs of the County and the mid-east region in collaboration with the NTA, TII and Irish Rail and other relevant stakeholders.
- **Objective CMO24:** Support NTA and other stakeholders in implementing the NTA Strategy including MetroLink, BusConnects, DART +, LUAS and the GDA Cycle Network.
- **Policy CMP21:** Support the provision of Park and Ride facilities in conjunction with supporting ancillary infrastructure to accommodate the transition to sustainable mobility modes at suitable locations in accordance with the large-scale transportation projects being delivered under the NTA Strategy.
- **Policy CMP22:** Support the development of mobility hubs at key public transport locations and local mobility hubs in tandem with new developments to include shared and personal mobility initiatives with a focus on ease of connectivity and quality public realm.
- **Policy CMP27:** Support the continued protection of the core transport function of Dublin Airport including measures to enhance surface access, public transport connections and strategic freight movements.
- **Objective CMO34:** Promote and facilitate the development of MetroLink, connecting Swords to the Airport and on to the City Centre.

6.4.60. Section 7.5.1 relates to employment and economic development. It states that:

“MetroLink will also be served by Park and Ride destinations including one at Estuary (to the north of Swords). This network will therefore serve Dublin Airport, Irish Rail, DART, Dublin Bus and LUAS services and connect key destinations including Ballymun, the Mater Hospital, the Rotunda Hospital, Dublin City University and Trinity College Dublin. MetroLink is anticipated to carry up to 50 million passengers annually. The introduction of this transportation link will greatly improve accessibility for employment hubs all across Fingal along the Metro and Rail Economic Corridor and Dublin City Centre.”

6.4.61. In relation to Dublin Airport, the Development Plan states at section 8.5.4 that “the delivery of the proposed new MetroLink will further improve transportation links between the Airport, Swords and Dublin City enhancing the role of the Airport within Fingal”.

6.4.62. The following Policies and Objectives relating to Dublin Airport are noted:

- **Objective DAO7:** Require and facilitate the provision of an integrated public transport network to serve Dublin Airport.
- **Objective DAO8:** Protect and enhance the transportation capacity required to provide for the surface access needs of the Airport.
- **Objective DAO9:** Maintain and protect accessibility to the Airport as a priority.

6.4.63. Chapter 9 relates to green infrastructure and natural heritage and the following policies and objectives are noted:

- **Policy GINHP2:** Ensure that areas and networks of green infrastructure are identified, protected, enhanced, managed and created to provide a wide range of environmental, social and economic benefits to communities.
- **Policy GINHP3:** Encourage measures for the ‘greening’ of new developments including the use of green roofs, brown roofs, green walls and water harvesting. Where feasible require new developments to incorporate greening elements such as green roofs, brown roofs, green walls, green car parking and SuDs (e.g. clean water ponds fed by rainwater via downpipes).

- **Policy GINHP5:** Develop the green infrastructure network to ensure the conservation and enhancement of biodiversity, including the protection of European Sites, the provision of accessible parks, open spaces and recreational facilities (including allotments and community gardens), the sustainable management of water, the maintenance of landscape character including historic landscape character and the protection and enhancement of archaeological and heritage landscapes.
- **Objective GINHO2:** Reduce fragmentation and enhance the resilience of Fingal's green infrastructure network by strengthening ecological links between urban areas, Natura 2000 sites, proposed Natural Heritage Areas, parks and open spaces and the wider regional network by connecting all new developments into the wider green infrastructure network.
- **Objective GINHO3:** Make provision for biodiversity within public open space and include water sensitive design and management measures (including SuDS) as part of a sustainable approach to open space design and management.
- **Objective GINHO4:** Resist development that would fragment or prejudice the County's strategic green infrastructure network.
- **Policy GINHP7:** Protect and enhance the natural, historical, amenity and biodiversity value of the County's watercourses, flood plains, riparian corridors, wetlands and coastal area through long-term and liaison with relevant Prescribed Bodies where appropriate.
- **Objective GINHO12:** Ensure the provision of new green infrastructure addresses the requirements of functional flood storage, the sustainable management of coastal erosion, and links with provision for biodiversity, Sustainable Drainage Systems (SuDS) and provision for parks and open space wherever possible and appropriate
- **Objective GINHO15:** Limit surface water run-off from new developments through the use of appropriate Sustainable Urban Drainage Systems (SuDS) using nature-based solutions and ensure that SuDS is integrated into all new development in the County.

- **Policy GINHP10:** Seek a net gain in green infrastructure through the protection and enhancement of existing assets, through the provision of new green infrastructure as an integral part of the planning process, and by taking forward priority projects including those indicated on the Development Plan Green Infrastructure maps during the lifetime of the Development Plan.
- **Objective GINHO21:** Avoid the fragmentation of green spaces in site design and to link green spaces /greening elements to existing adjacent green infrastructure / the public realm where feasible and to provide for ecological functions.
- **Objective GINHO22:** Resist development that would fragment or prejudice the County's strategic green infrastructure network.
- **Policy GINHP14:** Promote biodiversity net gain in new developments and develop a planning guidance document on Biodiversity Net Gain.
- **Objective GINHO30:** All greenway and infrastructure projects are to have a net biodiversity gain and this principle shall be incorporated from the start of the project.
- **Policy GINHP20:** Protect the ecological corridor function along rivers by including mammal ledges or tunnels in new bridges over any of the main rivers: Liffey, Tolka, Pinkeen, Mayne, Sluice, Ward, Broadmeadow, Ballyboghil, Corduff, Matt and Delvin. New bridge structures will also cater for Dipper boxes and Bats where possible. Where new road infrastructure crosses significant urban ecological corridors, tunnels shall be installed underneath the road to facilitate movement of small mammals and amphibians.
- **Objective GINHO41:** Protect rivers, streams and other watercourses and maintain them in an open state capable of providing suitable habitat for fauna and flora, including fish.
- **Objective GINHO44:** Set back new surface water drainage outfalls from the main river channel on the landward edge of the floodplain or a designed wetland feature to cater for water quality improvement before the surface discharges into the river.

- **Policy GINHP21:** Protect existing woodlands, trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character and ensure that proper provision is made for their protection and management in line with the adopted Forest of Fingal-A Tree Strategy for Fingal.
- **Policy GINHP22:** Provide for appropriate protection of trees and hedgerows, recognising their value to our natural heritage, biodiversity and climate action and encourage tree planting in appropriate locations.
- **Objective GINHO46:** Ensure adequate justification for tree removal in new developments and open space management and require documentation and recording of the reasons where tree felling is proposed and avoid removal of trees without justification.

6.4.64. Chapter 10 relates to Heritage, Culture and Art and the following Policies and Objectives are noted:

- **Policy HCAP3:** Safeguard archaeological sites, monuments, objects and their settings listed in the Record of Monuments and Places (RMP), Sites and Monuments Record (SMR), underwater cultural heritage including protected wrecks and any additional newly discovered archaeological remains.
- **Policy HCAP4:** Favour the preservation in-situ (or at a minimum preservation by record) of all sites and features of historical and archaeological interest.
- **Objective HCAO1:** Favour the preservation in situ or at a minimum preservation by record, of archaeological sites, monuments, features or objects in their settings. In securing such preservation the Council will have regard to the advice and recommendations of the National Monuments Service of the Department of the Housing, Local Government and Heritage.
- **Objective HCAO2:** Protect all archaeological sites and monuments, underwater archaeology, and archaeological objects, which are listed in the Record of Monuments and Places, Wreck Inventory of Ireland and all sites and features of archaeological and historic interest discovered subsequent to the publication of the Record of Monuments and Places, and to seek their preservation in situ (or at a minimum, preservation by record) through the planning process.

- **Objective HCAO8:** Require that proposals for linear development over one kilometre in length; proposals for development involving ground clearance of more than half a hectare; or developments in proximity to areas with a density of known archaeological monuments and history of discovery; to include an Archaeological Impact Assessment and refer such applications to the relevant Prescribed Bodies.
- **Objective HCAO11:** Ensure that proposals for large scale developments and infrastructure projects consider the impacts on the archaeological heritage and seek to avoid them.
- **Policy HCAP11:** Conserve and protect buildings, structures and sites of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest by adding or retaining them on the Record of Protected Structures or by designating groups of structures as Architectural Conservation Areas.
- **Policy HCAP12:** Ensure that direct or indirect interventions to Protected Structures or adjoining development affecting them are guided by architectural conservation principles so that they are sympathetic, sensitive and appropriate to the special interest, appearance, character, and setting of the Protected Structure and are sensitively scaled and designed.
- **Policy HCAP13:** Require the retention and appropriate active use of Protected Structures.

6.4.65. Chapter 14 of the Development Plan sets out Development Management Standards. The following Policies and Objectives are noted:

- **Objective DMSO17:** Where possible, new utility structures such as electricity substations and telecommunication equipment cabinets should not be located adjacent or forward of the front building line of buildings or on areas of open space.
- **Objective DMSO18:** Require new utility structures such as electricity substations and telecommunication equipment cabinets to be of a high-quality design and to be maintained to a high standard by the relevant service provider.

- **Objective DMSO108:** Support improvements to the public transport network by reserving proposed public transport connections and corridors free from inappropriate development. Provide setbacks along public transport corridors to allow for future improvement to enable the provision of a safe and efficient network of public transport infrastructure.

6.4.66. Table 14.17 sets out bicycle parking standards and states:

“Rail, Metro, Light Rail Stations and Stops: Sufficient to meet the anticipated demand for cycling when planned cycling and active travel infrastructure is in place. Where the anticipated demand for cycling to a metro/heavy rail/light rail station hasn't been estimated, a norm of 10 to 30% of trips to rail stations being made by bicycle will be used for the provision of bicycle parking.”

- **Objective DMSO109:** Ensure that all new development provides high quality, secure and innovative bicycle parking provision in accordance with the bicycle parking standards set out in Table 14.17 and the associated design criteria for bicycle parking provision set out in this Plan, where feasible, practical and appropriate, having regard to local, national and international best practice.
- **Objective DMSO110:** Ensure that all new and renovated public transport stations/stops provide appropriate levels of cycle parking provision based on the existing and proposed passenger levels, surrounding environments and future transportation infrastructure.

6.4.67. The following natural heritage related policies and objectives are noted:

- **Objective DMSO125:** Protect, preserve and ensure the effective management of trees and groups of trees and hedgerows.
- **Objective DMSO126:** Ensure during the course of development, trees and hedgerows that are conditioned for retention are fully protected in accordance with BS5837 2012 Trees in relation to the Design, Demolition and Construction – Recommendations or as may be updated and are monitored by the appointed arboriculture consultant.
- **Objective DMSO127:** Require the use of native species where appropriate in new developments in consultation with the Council.

- **Objective DMSO138:** Ensure all development and infrastructure proposals include measures to protect and enhance biodiversity leading to an overall net biodiversity gain.
- **Objective DMSO153:** Provide green corridors in all new developments where the opportunity exists.
- **Objective DMSO154:** Protect and enhance the ecological corridors along the following rivers in the County by ensuring that no development takes place, outside, development boundaries within a minimum distance of 48m from each riverbank along the main channels of following rivers Liffey, Tolka, Pinkeen, Mayne, Sluice, Ward, Broadmeadow, Ballyboghil, Corduff, Matt and Delvin, Bracken River, Daws River, Richardstown River, Turvey River (see Green Infrastructure Maps). A minimum 10 m wide riparian buffer strip applies to lands within development boundaries. Additional width may be required to provide for additional protections of sensitive habitats, as appropriate.
- **Objective DMSO156:** Ensure that no development, including clearance and storage of materials, takes place within 10m as a minimum, measured from each bank of any river tributary or small stream or watercourse in the County (see Green Infrastructure Maps).
- **Objective DMSO157:** Protect, develop and enhance terrestrial urban ecological corridors along existing linear features such as hedgerows where possible with a minimum corridor width of 25 m. These corridors comprise of a mixture of hedgerow, scrub, rank grassland, wildflower meadow, ponds, marshland and dead timber. SuDS features such as ponds and wetlands can be incorporated within these corridors. Green corridors should be incorporated into all new large developments, as part of multi-functional Green Infrastructure provision, linking large areas of open space and linking with areas outside the development site.
- **Objective DMSO158:** Protect rivers and streams and maintain them in an open state capable of providing suitable habitat for fauna and flora, including fish. Deculvert or 'daylight' existing culverts where appropriate and in accordance with relevant river catchment proposals restore the watercourse to acceptable ecological standards for biodiversity wherever possible

improving habitat connection and strengthening the County's green infrastructure network. Clear span structures should be used on fisheries waters, where possible.

- **Objective DMSO159:** Protect the ecological corridor function along rivers by including mammal ledges or tunnels in new bridges over any of the main rivers: Liffey, Tolka, Pinkeen, Mayne, Sluice, Ward, Broadmeadow, Ballyboghil, Corduff, Matt and Delvin. New bridge structures will also cater for Dipper boxes and Bats where possible. Where new road infrastructure crosses significant urban ecological corridors, tunnels shall be installed underneath the road to facilitate movement of small mammals and amphibians.
- **Objective DMSO185:** Prevent the demolition or inappropriate alteration of Protected Structures.

6.4.68. ***Lissenhall East Local Area Plan 2023***

6.4.69. The Lissenhall East lands cover an area of c. 27.7 ha, located east of the R132, west of the M1 Motorway and south of the M1 intersection, within the existing northern development boundary of Swords.

6.4.70. The LAP states that “planned significant public transport upgrades which will enhance the connectivity of the LAP lands include Bus Connects and the MetroLink project”. The stated intention of the LAP is “to establish new employment development on site but within a framework which anticipates the delivery of MetroLink”. It goes on to state that:

“It is the aim of this Local Area Plan to safeguard and promote the strategic employment potential of the Lissenhall East lands by providing a policy and development framework with appropriate employment and necessary supporting infrastructure which anticipates the delivery of MetroLink but is also reflective of current road network capacity.”

6.4.71. Relevant considerations with regard to the potential for economic opportunity in the LAP area include:

- The capacity of the existing road network pre-MetroLink and in advance of other public transport and roads proposals. The Draft Transport Strategy for

the Greater Dublin Area notes that a Railway Order application for MetroLink will be made in 2022 and it is in the list of projects to be completed between 2031 – 2042.

- The lead in time for establishing strategic employment locations and the need to establish a sustainable quantum of development on site pre-MetroLink but within an indicative overarching spatial framework which anticipates the delivery of MetroLink. This includes:
 - The optimal use of land through the development at an appropriate density, in particular having regard to proximity of the lands to the proposed Estuary MetroLink stop.
 - A practical approach to delivering the infrastructure necessary to service an Initial Development Area in the first instance, but which can be extended to support the future development of the remaining LAP lands in the future.

6.4.72. The LAP notes that the LAP lands are adjacent to the site of the proposed MetroLink Estuary Park & Ride. With regard to public transportation, the LAP notes that:

“The delivery of MetroLink will provide for a frequent, high-capacity rail service, capable of sustainably taking thousands of people to and from Swords, Dublin City and the Lissenhall East LAP area.”

“Connectivity between the Lissenhall East LAP Lands and the future MetroLink Estuary Station will be a key objective. The access strategy and design of the junction with the R132 must ensure high quality connectivity to future public transport services on both sides of the R132 so that a high modal split towards public transport is achievable.”

6.4.73. The following Objectives are noted:

- **Objective MT2 – South Fingal Transport Study:** Implement the relevant objectives of the South Fingal Transport Study. It shall be a requirement that any planning applications that result in an increased demand for travel, shall clearly demonstrate the required transport infrastructure and measures to accommodate the proposed increase in line with the recommendations of the South Fingal Transport Study.

- **Objective MT3 – Improvements along the R132 Frontage:** Ensure proposals for improvements along the R132 frontage integrate with existing public transport services as well as future services such as BusConnects and MetroLink to include:
 - Improved bus facilities on the R132 including sheltered stops.
 - Provide for the upgrade of pedestrian and cycle infrastructure on the R132 bordering the LAP lands. As existing sites / businesses come forward for extension and or redevelopment applicants will need to sufficient space along the boundary for such upgrades.
- **Objective MT5 – Junction with R132:** Require the junction design to integrate and align with proposals for the R132 regional road, the future Western Distributor Road and MetroLink.
- **Objective MT6 – New Access Junction:** Ensure the design of the new access junction to the lands from the R132 is capable of enhanced pedestrian and cycle connectivity across the R132 to link with a future MetroLink Estuary Stop and MetroLink Park and Ride.

6.4.74. With regard to subsequent development of the remainder of the LAP lands, it states that “given the forecast delivery period of 10-15 years for the completion of the MetroLink Project, it is acknowledged that any future additional development on the Lissenhall East LAP lands beyond what is currently specified in the Development Framework is indicative only and that any such potential future development will only occur having regard to all relevant environmental, transport, and planning assessment requirements”.

6.4.75. ***Sustainable Swords Strategy 2022***

6.4.76. The purpose of Sustainable Swords is to produce a placemaking strategy focused on the strategic regeneration and compact, sustainable development of Swords. It states that Swords is a dynamic town that has rapidly grown in recent decades due to its proximity to Dublin Airport, the city centre and major local investment and growth of employment hubs such as nearby Dublin Airport, the Pavilions Shopping Centre and business parks along the R132 (including Airside, Swords Business Park and Swords Business Campus). It goes on to state that this growth is anticipated to

continue, albeit there is reliance on the implementation of MetroLink to catalyse development opportunities within the 'Metro Economic Corridor'.

6.4.77. One of the key strategy objectives that is stated as having guided the Public Realm and Transport Strategy is “**Maximising Transformational Public Transport Investment** offered by BusConnects, future MetroLink and associated Park & Ride to transition to low carbon modes of transport and reallocate space from the private car (movement and storage)”.

6.4.78. The Strategy outlines how various roads and streets could support sustainable transport with linkages to Metro stations. The associated Public Realm and Transport Strategy states that “the proposed route for MetroLink will act to further enhance and strengthen Swords’ strategic location”. With regard to traffic modelling undertaken for the Strategy, it is stated that:

“The assessment reaffirms a justification for the delivery of MetroLink and the multi-modal Swords Western Distributor Road. It was found that both schemes are important infrastructural projects that would have a positive impact on mode share for walking, cycling and public transport use.”

- **Objective SS 3: MetroLink:** It is recommended that east-west connectivity needs to be strengthened between the proposed MetroLink stops and the town centre and surrounding residential areas. The following links are considered the most important:
 - Seatown Road.
 - Malahide Road.
 - Chapel Lane via the proposed at-grade pedestrian crossing on the R132.

6.4.79. ***Dublin Airport Local Area Plan 2020***

6.4.80. The Dublin Airport Local Area Plan was adopted in 2020 and has recently been extended to 2030.

6.4.81. The Introduction to the LAP notes the Airport’s growth and importance to the State:

“Dublin Airport has grown significantly in size and importance since the adoption of the last Local Area Plan (LAP) in 2006. Passenger throughput of just over 20 million passengers per annum (mppa) in 2006 had increased to

31.5 mppa by 2018. This ranked Dublin as the 11th largest airport in the European Union in terms of passenger volumes. Dublin Airport has grown an extensive route network of short haul and long haul destinations in recent years. Dublin Airport now handles 80% of all international flights to Ireland. In addition, the Airport has begun to create a hub role within the European airport system servicing the transatlantic aviation market. This has been facilitated by the combined benefits of the Airports western European location and its unique ability to offer customs and immigration pre-clearance for passengers travelling to the US.”

6.4.82. It states that “the LAP recognises that uncongested surface access and increased use of public transport greatly reduces the environmental impacts of airports and are also essential to their sustainable growth.” Section 3.2.1 states that “the most immediate capacity constraint affecting the Airport is that of congestion of the surface access to the Airport”.

6.4.83. The Ground Transportation Centre is described as follows:

“The GTC functions as the key public transport focal point for bus set down and pick up associated with numerous public and private bus operators that operate across local, regional and national areas within the Country. It is envisaged that the future Metrolink station to serve the Airport will be integrated with the GTC to form a public transport interchange. [...] Maintaining appropriate levels of access to the Airport in order to ensure it fulfils the strategic function as the primary gateway to the Country is an objective of the National Planning Framework and supporting plans.”

6.4.84. MetroLink is identified in the LAP as a measure that will support climate action at the Airport. The following Objective is noted:

- **OBJECTIVE CA05:** Facilitate improved public transport links to and from the Airport and require that all traffic generating applications at the Airport demonstrate measures to maximise non-motorised and public transport use while minimising the use of the private car.

6.4.85. Given existing constraints on surface access to the airport, the LAP states that further large-scale office development lands within the Dublin Airport Central Masterplan area should only be considered when the identified infrastructural

constraints in the form of road access measures and the Swords CBC and Metrolink are operational. This is supported by Objective ED02.

6.4.86. With regard to design of development at Dublin Airport, the following Objective is noted:

- **OBJECTIVE DS01:** Ensure that all development at Dublin Airport will be of high quality design and finishes to reflect Dublin Airport's status as an international gateway airport.

6.4.87. Section 8.3, relating to public transport, states that:

"The implementation of MetroLink by 2027 will add substantial new public transport capacity on the key corridor linking Dublin City Centre and Dublin Airport and, in some respects, it is in the intervening years between the adoption of this LAP and the commencement of MetroLink services that significant challenges will arise due to the level of forecast growth. The step-change increase in public transport accessibility that MetroLink will deliver, however, will provide an opportunity to set more aspirational public transport mode share targets for both passenger and staff travel alike and a key outcome of this LAP is to create the environment in which significant sustainable transport mode usage is achieved."

6.4.88. Similarly, Section 8.3.2 states that:

Fingal County Council recognises the key benefits that MetroLink will deliver for Fingal, Dublin Airport and the wider region, and as such it is a key priority of Fingal County Council to facilitate MetroLink delivery. Passengers and staff using the service to travel to and from Dublin Airport will experience a reliable and frequent service, fully segregated from general traffic and the associated delays that can arise due to traffic congestion. The service will be used by a range of different users including regular commuters to and from Dublin City Centre, air passengers, airport staff and staff working at ancillary properties in and around Dublin Airport."

6.4.89. Section 8.3.3 sets out primary public transport measures for the LAP. This includes:

- MetroLink: Support NTA, TII and other stakeholders in ensuring that MetroLink is delivered as soon as possible and provides the best possible

service for all users including people travelling to and from Dublin Airport. This would include the physical design of the stations and trains and potentially conversion of some bus services to serve as feeders to MetroLink rather than operating competing services on the same corridor.

- **Coordination:** Transport networks serving Dublin Airport should be coordinated to ensure optimal efficiency for all users. A review of how this would best be achieved may be required and Fingal County Council will support the National Transport Authority and DAA, and others, in working with Dublin Airport's bus operators to undertake such a review and implement any recommendations as required.
- **Early Morning / Late Night Services:** It is important to ensure that services are available to serve early departing flights and late arriving flights, even though such services may be less commercially advantageous to the operator. Similar issues apply to airport staff working early and late shifts. This issue should be one of the key themes for consideration through the multi-agency coordination referred to above.

6.4.90. The following transport related Objectives are noted:

- **OBJECTIVE SF01:** Implement the recommendations of the South Fingal Transport Study in relation to Dublin Airport in order to ensure that a balanced response to the expansion of Dublin Airport occurs. It shall be a requirement that any planning applications to increase passenger numbers or that result in an increased demand for travel, shall clearly demonstrate the required transport infrastructure and measures to accommodate the proposed increase in line with the recommendations of the South Fingal Transport Study.
- **OBJECTIVE EA09:** Enable efficient and reliable bus access on the R108 and Collinstown Lane and to ensure this function is provided as part of a future capacity upgrade as appropriate, whilst allowing for any road realignment required as part of Dublin Airport's runway end safety area requirements and MetroLink portal construction.
- **OBJECTIVE PT01:** Encourage and facilitate the provision of an integrated public transport network to serve Dublin Airport.

- **OBJECTIVE PT02:** Require the development of a transport interchange including a MetroLink station at the centre of the Dublin Airport campus, in accordance with the implementation of MetroLink by 2027 by the National Transport Authority and Transport Infrastructure Ireland.
- **OBJECTIVE PT03:** Ensure that the proposed MetroLink station and interchange in Dublin Airport campus is undertaken to best international standards for public transport interchanges.
- **OBJECTIVE PT06:** Investigate and provide for connections from the western parts of the airport campus to MetroLink, in the context of potential future planned development to the west of the existing terminals.
- **OBJECTIVE PT07:** Identify and protect an alignment for the Orbital Metro (Metro West) and to ensure connectivity between Metro West and Dublin Airport.

6.4.91. The Ground Transportation Centre is described in Section 8.4.2 as follows:

“The GTC comprises various pick-up and set-down areas, car parking, and bus and coach boarding facilities. Private car and taxi drop-off activities are catered for via designated departures kerbs immediately adjacent to Terminal 1 and Terminal 2. Private car pick-up activities are officially designated to be undertaken in the short stay car-parks serving Terminal 1 and Terminal 2.

Whilst somewhat outside the scope of this LAP, the provision of improved way-finding, real-time passenger information, public transport information boards and other passenger facilities in the Airport terminals and on the interconnections between terminals and the GTC is considered a critical feature in enhancing the attractiveness of the various public transport options to arriving passengers in particular.”

- **OBJECTIVE IA01:** Require a review of traffic management arrangements around the Dublin Airport campus including internal access road and connections to the surrounding transport network, in order to provide for safe and efficient movement for all modes, as part of any planning application for an increase in origin-destination passenger numbers, which should assess the need for alterations in road alignment, grade separation, directional

movement, and variable messaging signage, in order to provide for safe and efficient movement for all modes.

- **OBJECTIVE IA03:** Ensure that passenger facilities and services are designed and operated so as to enhance the experience of airport users. This includes provision of high quality, legible and efficient circulation routes for all modes, appropriate passenger and travel information, including public transport information boards, and wayfinding infrastructure, waiting facilities and other relevant passenger information.
- **OBJECTIVE CP01:** Facilitate a review of the location of bus/coach parking in front of Terminal 1 in conjunction with an analysis of new MetroLink Station, Terminal 2, and Kerb proposals, in order to provide for an efficient multi-mode transport interchange convenient to all airport users.

6.4.92. Section 8.5.2 notes a private car mode share of 35% for passengers and 72% for staff in 2016. The mode share for bus was 36% for passengers and 21% for staff. MetroLink is identified as providing substantial further opportunities to create and reinforce positive travel trends for all airport users.

6.4.93. ***Swords Masterplans 2019***

6.4.94. In 2019 FCC prepared Masterplans for the following areas in Swords: Barrysparks & Crowscastle; Fosterstown and Estuary West. The Masterplans were prepared concurrently, with a single 'front-end' document (Part A) setting out the context, while Parts B, C and D present the proposals for each of the Masterplan areas.

6.4.95. Part A states that the proposed route for MetroLink through Swords will act to enhance and strengthen Swords' strategic location. It notes that Swords had a population of 39,248 in 2016, with 19,531 resident workers and 15,338 jobs. It states that the vision for Swords is that of a settlement which ultimately accommodates 100,000 people, which would result in a workforce of approximately 50,000 people based on the current ratio. The improved connectivity for Swords via the MetroLink and BusConnects services is stated as being likely to further diversify the employment population and therefore, diversify the skills that are accessible in the area.

6.4.96. The following opportunities are identified with regard to MetroLink:

- Provide pedestrian and cyclist access to MetroLink stations to encourage usage.
- Improve local bus services to get people to and from MetroLink stations.
- Support sustainable commuting and travel patterns by increasing residential densities in proximity to MetroLink stations.
- Create public spaces/ squares around MetroLink stations to form a hub for the local community, including local amenities such as shops/ cafes.
- Provide new road links through the Masterplan lands, including the Airside-Feltrim Link Road and the Fosterstown Link Road.

6.4.97. One of the Key Principles for supporting sustainable transport in the Masterplan area is to “facilitate safe pedestrian/ cyclist access from, and through, the Masterplan lands to the proposed MetroLink stations”. It goes on to state that:

“Following the publication of the preferred route for MetroLink and associated public consultation the key principles of full integration with the Masterplan lands, creating an attractive urban elevation and ensuring good connectivity are crucial to the delivery of all MetroLink Stations and Masterplan lands across Swords.

Appropriate pedestrian and cyclist links should be provided from the Masterplan areas to the Metro stops, in order to attract users.”

6.4.98. *Part B: Barrysparks & Crowcastle*

6.4.99. The Barrysparks & Crowcastle Masterplan lands are described as consisting of c. 35 ha strategically located in the south eastern part of Swords, which is the main ‘Gateway’ to Swords, close to Dublin Airport and with excellent access to the national road network (M50 and M1). The vision for the Masterplan lands is as follows:

“...the creation of a unique business campus with complimentary residential development, capable of attracting top-tier employers, set in a high quality green environment. Strong transport connections from MetroLink and BusConnects, coupled with the nature and scale of development envisaged, will enable the lands to play a key role in the economic life of the region.”

6.4.100. With reference to the Swords Central Station the Masterplan sets out the following requirements that should be adhered to:

- Encourage and facilitate a MetroLink station that enables full permeability in order to realise the full development potential of the Masterplan lands and ensure a positive visual contribution which contributes to the objective to provide a strong urban edge to the R132.
- Create a high quality public realm which fully integrates the MetroLink development, providing access to the Masterplan lands with a strong link to the Pavilions and Main Street. These high quality links should provide a safe, attractive and easily accessible link from the Masterplan lands to the Pavilions centre side.

6.4.101. No more than 25% of the overall quantum of development envisaged shall be constructed and occupied prior to the operation of Metrolink.

6.4.102. *Part C: Fosterstown*

6.4.103. The Masterplan incorporates approximately 13.14 ha of greenfield land in south-west Swords. The area is bounded by the R132 to the east, Forest Road to the west, Boroimhe housing estate to the south and Lidl to the north.

6.4.104. The vision for Fosterstown is to create a residential community that is mixed and balanced, and forms a clear nexus with the scale of commercial development anticipated on the nearby Barrysparks & Crowscastle area. The Fosterstown lands have a unique opportunity to utilise the new connections that will emerge in Swords via the MetroLink station and Core Bus Corridor on the R132.

6.4.105. No more than 25% of the overall quantum of development envisaged shall be constructed and occupied prior to the operation of Metrolink.

6.4.106. *Part D: Estuary West*

6.4.107. The Masterplan incorporates approximately 19.4 ha of land to the north of Swords. The area is bounded by the Glen Ellan Road to the south, Jugback Lane to the west, Balheary Road to the east and the Broadmeadow River to the north.

6.4.108. The vision for Estuary West is that it will become a vibrant residential and mixed-use community, with active and friendly streetscapes. The aim is to produce an

exemplary environment; a place that is desirable to live and one which balances usable private space within an overall structure of high quality public spaces. The community will be prioritised, with parks, open space and public plazas filtered throughout.

6.4.109. Given that the Estuary Station will be approximately 1,500 metres from the Masterplan lands, creating pedestrian and cyclist friendly routes, over the shortest distance possible, is stated to be critical to maximising the benefits of MetroLink.

6.4.110. No more than 25-30% of the overall quantum of development envisaged shall be constructed and occupied prior to the operation of Metrolink.

6.4.111. ***South Fingal Transport Study 2019***

6.4.112. The South Fingal Transport Study (SFTS) was commissioned by FCC and is a study of the transport network in South Fingal, recommending key transport infrastructure and outline levels of land use development that will enable its sustainable growth leading up to the delivery of MetroLink and beyond.

6.4.113. The following recommendations from the SFTS are noted:

- **SFTS Recommendation 6:** The Swords Western Distributor Road will form a crucial link from north west Swords to the future Estuary MetroLink station and Park and Ride. From Oldtown-Mooretown to Estuary the road alignment should consider similar design principles as set out in the LAP/Masterplans. Its southern extension to Brackenstown Road/Ward River Valley should be considered as a pedestrian and cycling only route.
- **SFTS Recommendation 7:** The Fosterstown Link Road is required as a priority to relieve existing pressures on the approach to Swords on Forest Road.
- **SFTS Recommendation 11:** Improve connectivity for pedestrians and cyclists travelling across the R132 Swords Road from existing and proposed development lands to the town centre. This will be achieved by replacing the existing roundabouts with signalised junctions and incorporating controlled Toucan crossings. This will replace or supplement the existing footbridges.

- **SFTS Recommendation 12:** Creation of a more active frontage along the R132 Swords Road by providing footpaths, segregated cycle facilities and encouraging new developments to face onto the street.
- **SFTS Recommendation 13:** Encourage higher density mixed use developments adjacent to the MetroLink stations with improved connectivity for pedestrians and cyclists and provide a controlled level of access to future developments along the R132 Swords Road.
- **SFTS Recommendation 15:** Junctions on R132 Swords Road should be improved from a pedestrian and cyclist point of view. The Council should engage with the NTA and TII on preliminary designs with a view to developing a complementary scheme that achieves the required improvements and prepares for the Metro alignment.

6.4.114. ***Your Swords: An Emerging City, Strategic Vision 2035***

6.4.115. This Strategy sets out the long-term strategic vision for Swords to create a sustainable city with a commensurate level of jobs, services and infrastructure. It is envisaged that Swords will be a major transport hub with an integrated public transport system, exploiting the opportunities of key public transport projects including MetroLink to advance Swords as a highly accessible and attractive location to live, work and do business.

6.4.116. ***Dublin Airport Central Masterplan 2016***

6.4.117. This Masterplan, prepared by FCC in consultation with DAA, is a framework for the future development of lands strategically located adjacent to Dublin Airport. The Masterplan lands comprise two parcels of land, referred to as Zone 1 and Zone 2. The Masterplan specifically focuses on the development of Phases 1 and 2 of Zone 1 for high quality, high value office accommodation supplemented with ancillary uses. The Masterplan lands are located to the east of the proposed MetroLink Airport Station, on the other side of the T2 Multi-Storey Car Park.

6.4.118. ***Other Fingal Plans***

6.4.119. The FCC submission identified the following plans that are also to be prepared during the new Development Plan period:

- Swords Local Area Plan.

- Dubber (Horizon Business Park) Framework Plan.
- Northwood Framework Plan.

6.4.120. At the time of completion of this report, none of these plans had been prepared.

7.0 Oral Hearing

7.1. Format of Oral Hearing

- 7.1.1. Prior to the oral hearing, a registration form was sent to all parties, asking if they wished to participate in the hearing and if so, which modules they wished to participate in and how much time they were seeking. Following receipt of the completed registration forms, a detailed agenda was prepared and everyone who sought to engage in the hearing was accommodated as far as reasonably possible, having regard to the legislative requirement to hold the hearing in as expeditious a manner as possible.
- 7.1.2. In the agenda, which was issued to all parties in advance of the oral hearing, the applicant was requested to address the following matters in their submissions at the start of the hearing:
- Provide a brief overview of the proposed development.
 - Identify any errata or proposed changes, modifications or updates as required, including Draft Railway Order, associated Schedules and property drawings.
 - Submit copies of any agreements made for the purposes of the Thirteenth Schedule of the Draft Railway Order.
 - Address implications of any policy changes since lodgement of the application (e.g. Dublin City Development Plan 2022-2028, Fingal County Development Plan 2023-2029, Greater Dublin Area Transport Strategy 2022-2042, Climate Action Plan, National Biodiversity Action Plan etc.).
 - Address implications of any relevant legislative or guidance updates since lodgement of the application (e.g. TII Carbon Tool and Ambient Air Quality Standards Regulations 2023).
 - Identify additional projects permitted since lodgement of the application for the purposes of assessment of cumulative impacts and in-combination effects.
 - Address potential implications of the designation of the North West Irish Sea cSPA with regard to both Appropriate Assessment and the Biodiversity assessment contained in the EIAR. Identify if there have been any changes

(e.g. Conservation Objectives or qualifying interests) for any relevant European Site.

- Provide a list of all other consents, licences and approvals that will be required for the proposed development.
- Present the following:
 - Property Owner Protection Scheme.
 - Collins Avenue Station: Environmental Assessment Report of the Options.
 - Approach to the proposed Asset Protection Policy.
 - MetroLink Land Acquisition Strategy (referenced in Chapter 21 of EIAR).
 - Stakeholder and Community Engagement Plan (referenced in Chapter 5 of EIAR).
 - MetroLink Preferred Route Design Development Report 2019.
 - Proposed approach to monitoring, communications and risk management during the construction phase, including respective roles and responsibilities of contractor(s) and TII.
 - Overview of the fire safety, emergency and evacuation strategies (to include basis for, and location of, 1 No. intervention shaft at Albert College Park as proposed and the need for separate fire brigade/emergency services lifts at each underground station).
 - Character appraisal/impact assessment of Santry Lodge and its curtilage.

7.1.3. The oral hearing was split into two modules, as follows:

- **Module 1:** The following matters only –
 1. Tunnelling and excavation related issues (groundborne noise and vibration, hydrogeological and soils impacts, settlement, property damage etc.).
 2. Airborne noise and vibration.
- **Module 2:** All other matters.

- 7.1.4. Having regard to the linear nature of the project, each module was divided into a series of geographical areas, beginning at the northern end in the Swords area (area AZ1) and finishing at the southern end in the Charlemont area (area AZ4), followed by general or non-area specific submissions.
- 7.1.5. As noted in Section 4.2 above, the applicant had been requested to submit a written response to the written submissions in advance of the hearing. The observers were therefore advised that their submission to the oral hearing should consist of their response to the applicant's written response. They were also advised that they could respond to any matters raised by the applicant in their submission at the start of the hearing.

7.2. Overview of Oral Hearing

- 7.2.1. The oral hearing commenced on Monday 19th February 2024 in the Gresham Hotel, O'Connell Street, Dublin 1.
- 7.2.2. Days 1 and 2 of the oral hearing consisted of the applicant's submissions addressing the matters outline above and submissions by the two Planning Authorities, prescribed bodies and elected representatives.
- 7.2.3. Module 1 began on Day 3, with the Agenda clearly indicating in advance that only the specified matters would be discussed during this module. Module 1 concluded on Day 11¹⁰ (6th March 2024), with Module 2 commencing on Day 12 (7th March 2024).
- 7.2.4. The oral hearing ran for a total of 22 days over a 6 week period, closing on the 28th March 2024.
- 7.2.5. An audio recording of the oral hearing was made by the Board's appointed service provider and is attached to the file.
- 7.2.6. While the oral hearing was principally an in-person hearing, a small number of persons (both applicant representatives and an observer) were permitted to join the oral hearing remotely, via Microsoft Teams, due to particular accessibility reasons.
- 7.2.7. A day-by-day list of the submissions made at the oral hearing is included in Appendix 3 and a list of all documents received at the oral hearing is included in Appendix 4.

¹⁰ With the exception of a 'satellite' Module 1 day on Day 18 (21st March 2024) to address outstanding Module 1 matters relating to a number of commercial buildings between St Stephen's Green and Charlemont.

Each document is assigned a chronological reference number and they are referenced as appropriate throughout the report.

- 7.2.8. All key issues raised in the course of the oral hearing as well as responses provided by the applicant are addressed throughout the assessment section of this report, where appropriate.

7.3. Re-Opening of Oral Hearing

- 7.3.1. As noted in Section 4.4, subsequent to the close of the oral hearing the applicant was requested to place new public notices, inviting the making of further submissions in relation to the information submitted at the oral hearing and the updated Book of Reference which was submitted as further information following the oral hearing.
- 7.3.2. A total of 42 No. further submissions were received (2 No. of which were subsequently withdrawn). These were circulated to the applicant and a response to the submissions was received. I note that none of the further submissions explicitly sought that the oral hearing be reopened, although a number expressed concerns around procedural matters and the issue of fair procedures.
- 7.3.3. Those procedural issues are addressed in the planning assessment section of this report. However, having considered the content of the further submissions, and the applicant's response, I did not consider that they gave rise to any substantive new issues that would warrant the reopening of the oral hearing. I am satisfied that there is sufficient information on file for me to complete this report and for the Board to make its decision. Should the Board, in considering this report, determine that the reopening of the hearing would be appropriate, it may of course direct me to do so.

8.0 Overview of Assessment

8.1. Format and Inputs

- 8.1.1. Consent is being sought for the railway works outlined in the Draft Railway Order¹¹ and for the compulsory acquisition of lands, properties, or rights in respect of land, required for the construction of the proposed development.
- 8.1.2. In undertaking this assessment, I have: examined the file and the planning history; considered relevant legislation, European, national and local policies and guidance; conducted an oral hearing; considered all written and oral submissions; and inspected the route and surrounding lands on a number of occasions.
- 8.1.3. This assessment is divided into four main parts:
1. Planning assessment;
 2. Environmental Impact Assessment;
 3. Compulsory acquisition assessment; and
 4. Appropriate Assessment.
- 8.1.4. In each assessment, where necessary, I refer to the main issues raised by the parties in written and/or oral submissions to the Board. There is an inevitable overlap between the assessments, for example between matters falling within both the planning assessment and the environmental impact assessment. In the interest of brevity, I have attempted to avoid undue repetition and utilise cross-referencing where possible.
- 8.1.5. The planning assessment portion of this report is divided into project-wide issues and area-based issues, with the project divided into areas and sub-areas as follows:

Area	Description
AZ1 Northern Section	Estuary Station (including Park & Ride facility), alignment and stations as far as Dublin Airport North Portal (DANP).

¹¹ The Board should note that the latest updated version of the applicant's Draft Railway Order is that submitted at the oral hearing on 26th March 2024 (Ref. OH342). A 'red line' version of the RO was also submitted on that date identifying the changes proposed (Ref. OH343). The latest version of the associated Schedules 2 – 10 of the Book of Reference (i.e. those Schedules relating to land acquisition) is that submitted in response to the request for further information in June 2024.

AZ2 Airport Section		Including ESNB connection and new substations, DANP, tunnel beneath Dublin Airport, Dublin Airport Station, as far as Dublin Airport South Portal (DASP) and associated intervention and ventilation tunnels.
AZ3 Dardistown Section		DASP, Dardistown Station, Dardistown Depot, ESNB connection and substations, M50 viaduct, Northwood Station
AZ4 City Section	AZ4(a)	Northwood Portal and tunnel as far as Collins Avenue Station.
	AZ4(b)	Collins Avenue Station and tunnel as far as Griffith Park Station, including Albert College Park Intervention Shaft.
	AZ4(c)	Griffith Park Station and tunnel as far as Glasnevin Station.
	AZ4(d)	Glasnevin Station and tunnel as far as Mater Station.
	AZ4(e)	Mater Station and tunnel as far as O'Connell Street Station.
	AZ4(f)	O'Connell Street Station and tunnel as far as Tara Station.
	AZ4(g)	Tara Station and tunnel as far as St Stephen's Green Station.
	AZ4(h)	St Stephen's Green Station and tunnel as far as Charlemont Station.
	AZ4(i)	Charlemont Station and tunnel turnback.

- 8.1.6. A second Inspector, Barry O'Donnell (Senior Planning Inspector), was appointed by the Board to assist with the assessment of the application.
- 8.1.7. The Board also engaged Tyréns Group AB, a Swedish consultancy group with international experience in the design and construction of large-scale infrastructural projects such as metros, railways and tunnels. The consultants' scope of work was to advise the Board in relation to tunnelling and deep excavation related matters including groundborne noise and vibration, settlement, property damage, hydrogeology, airborne noise and vibration and related matters. These matters were addressed in Module 1 of the oral hearing, and the consultants were present for the entirety of that module. The report prepared by the consultants is included as Appendix 1. It has informed the assessment undertaken in this report and will be referenced where necessary.

8.2. Relevant Considerations by the Board

8.2.1. The principal matters that the Board must consider before deciding whether to grant a railway order are set out in section 43(1) of the Transport (Railway Infrastructure) Act 2001, as amended, and comprise:

- The application;
- The draft order and documents that accompanied the application;
- The report of any oral hearing held under section 42 and the recommendations (if any) contained therein;
- The likely consequences for proper planning and sustainable development in the area in which it is proposed to carry out the railway works and for the environment of such works; and
- The matters referred to in section 143 of the 2000 Act, as amended.

8.2.2. The matters referred to in section 143 of the 2000 Act are as follows:

- the policies and objectives for the time being of the Government, a State authority, the Minister, planning authorities and any other body which is a public authority whose functions have, or may have, a bearing on the proper planning and sustainable development of cities, towns or other areas, whether urban or rural,
- the national interest and any effect the performance of the Board's functions may have on issues of strategic economic or social importance to the State, and
- the National Planning Framework and any regional spatial and economic strategy for the time being in force.

8.2.3. Under section 42B of the 2001 Act, the Board is also required to reach a reasoned conclusion on the significant effects on the environment of the activity to which the application relates, taking into account the EIAR, any additional information, any submissions made and not withdrawn in relation to the likely significant effects on the environment and any other evidence obtained in relation to likely significant effects on the environment.

- 8.2.4. Having considered the matters referred to in section 43(1) and the reasoned conclusion under section 42B, and being satisfied that the reasoned conclusion remains up-to-date, the Board shall make or refuse to make the order to which the application relates.
- 8.2.5. In addition to the provisions of the 2001 Act and the relevant sections of the 2000 Act, the Board has further duties under other Irish and European legislation, for example with regard to climate action, waterbody status, biodiversity and protection of European Sites. These matters will be addressed in the relevant sections of this report.

9.0 Planning Assessment – Project-Wide Issues

9.1. Introduction

9.1.1. I consider that the main project-wide issues in respect of the planning assessment include:

- Policy considerations.
- Need for proposed development.
- General scheme design.
- The Board's climate duties.
- Public consultation.
- Metro Extension / Realignment to South West Dublin.
- Alternatives.
- General station and tunnel construction issues.
- Settlement and property damage.
- Property Owners Protection Scheme.
- Construction programme.
- Hours of construction.
- Hours of operation.
- Monitoring and communications.
- Operational Fire Safety, Emergency and Evacuation Approach.
- Legal and procedural matters.
- Limits of Deviation.
- Excavated material and waste management.
- Over-site development.
- Construction worker travel to site.
- Cycle issues.

- Loss of trees and hedgerows.
- Lighting.
- Proposed substations.
- Other issues.

9.2. Policy Considerations

- 9.2.1. I have set out relevant policy in Section 6.0 above from European to local level. The sections below consider the level of compliance/consistency of the proposed development with policy under the headings of planning policy, climate policy and transport policy.
- 9.2.2. The applicant's Planning Report, submitted with the application, sets out their view on the compliance of the proposed development with applicable policy. However, given that the application was lodged shortly before new Development Plans were adopted for both Dublin City and Fingal and shortly before the GDA Transport Strategy 2022-2042 was adopted, and noting the passage of time since lodgement, the applicant was requested to provide a policy update at the oral hearing. I refer the Board to the submission made by the applicant's planning advisor John Kehoe (Ref. OH32), the updated MetroLink Planning Report (Ref. OH22) and an associated Table identifying the amendments to the Planning Report, which was submitted with the errata (Ref. OH16) on the first day of the oral hearing. A further update to elements of the Planning Report was submitted to the hearing on 21st March 2024 (Ref. OH294) to reflect the Dublin City Climate Action Plan 2024-2029, the agreements with DCC and FCC, further environmental commitments made and to address previously omitted policies in the Dublin City Development Plan 2022-2028 in relation to built heritage.
- 9.2.3. **Planning Policy**
- 9.2.4. **National Level**
- 9.2.5. At a national level, the project is explicitly supported by the recently revised National Planning Framework (NPF) and National Development Plan (NDP). The NPF identifies MetroLink and improved access to Dublin Airport as 'key future growth enablers' for Dublin. National Strategic Outcome 5 refers to MetroLink and other

public transport projects in the context of sustainable mobility and notes their importance in terms of enhancing competitiveness, sustaining economic progress and enabling sustainable mobility choices for citizens. NSO 8 and NPO 69 relating to climate action and GHG reductions are also of relevance to the proposed development.

- 9.2.6. The NDP identifies MetroLink as a 'Low Carbon Transport' project and as 'NDP Priority Infrastructure'. It commits €2 billion for the commencement of construction. It states that MetroLink construction will be supported through funding from the Infrastructure, Climate and Nature Fund.
- 9.2.7. I note that the Programme for Government commits to progressing all key public transport infrastructure in the NDP and to improving connectivity to all airports. It also contains a commitment to commission an independent feasibility study into continuing MetroLink from the city to south west Dublin.
- 9.2.8. Regional Level
- 9.2.9. At a regional level, the Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019-2031 (RSES) contains a number of Regional Strategic Outcomes (RSOs) relating to climate action, sustainable transport infrastructure, compact growth and enhancing connectivity to Dublin Airport which are aligned with national policy, as detailed above (e.g. RSO2, RSO6, RSO9 and RSO14).
- 9.2.10. Swords is identified in the RSES as a 'Metropolitan Key Town' for the region, with the capacity for increased residential and employment densities at strategic transport nodes. MetroLink, together with Park & Ride facilities and BusConnects projects, are identified as being crucial to future sustainable development of Swords. The Regional Policy Objectives (RPOs) 4.28, 4.31 and 4.32 which relate to supporting Swords' development, supporting the delivery of MetroLink in the context of a Swords-Airport link and supporting low-carbon transport in Swords are noted.
- 9.2.11. Other RPOs supporting the proposed development include RPOs 8.8, 8.14, 8.18, which relate to rail projects, Park & Ride facilities and MetroLink access to Dublin Airport, respectively.
- 9.2.12. It is clear from the above that national and regional policy fully supports the proposed development, both explicitly, and in broader terms of climate action, sustainable

transport, connectivity of airports, compact growth enablers and economic development.

9.2.13. Fingal Development Plan 2023-2029

9.2.14. ***General Policies and Objectives***

9.2.15. The MetroLink project is strongly supported in the Fingal Development Plan 2023-2029, with both the Settlement Strategy and the Core Strategy noting the importance of the project for the sustainable development of Swords. It is noted as being a strategic corridor in terms of unlocking the long-term capacity of the lands at Lissenhall to the north of Swords and lands in the vicinity of Dublin Airport.

9.2.16. A number of Policies and Objectives explicitly support the MetroLink project, including Policy CSP29 and Objectives CSO43, CMO23, CMO24 and CMO34. Other policies and objectives implicitly support MetroLink with regard to sustainable transport, climate action, sustainable growth of Swords as a Key Town, connectivity and accessibility to the city and Dublin Airport. I have listed the relevant Policies and Objectives in Section 6.4 above.

9.2.17. With regard to the proposed Estuary Park & Ride Facility, I note that the provision of park and ride facilities to accommodate the transition to sustainable mobility is supported by Policy CMP21.

9.2.18. ***Land Use Zoning***

9.2.19. Given the linear nature of the proposed development and its extent, the alignment obviously passes through lands with a variety of land use zoning objectives. I note that the indicative MetroLink alignment and stations are shown on the relevant zoning maps (Sheets 8 and 11).

9.2.20. Appendix 7 of the Fingal CDP provides technical guidance on use classes relevant to the zoning objectives. The following use class definitions are noted:

- Public Transportation Station: A building, or part thereof, or land used for the transfer of people to public modes of transport.
- Park and Ride Facilities: Car park to facilitate the users of private cars to complete their journey by public transport.

- 9.2.21. With regard to the railway alignment between stations, I note that ‘rail infrastructure’, or a similar such use, is not a defined use class. The Development Plan states that “uses which are neither ‘Permitted in Principle’ nor ‘Not Permitted’ will be assessed in terms of their contribution towards the achievement of the Zoning Objective and Vision and their compliance and consistency with the policies and objectives of the Development Plan.
- 9.2.22. The railway alignment can therefore be assessed in terms of its merits. Given that the MetroLink railway alignment is shown indicatively on the zoning maps, and that the MetroLink project is a key infrastructural element underpinning the vision for the Development Plan and that it is clearly supported by a multitude of policies and objectives of the Plan, I consider that the alignment is generally consistent with the Development Plan zoning objectives.
- 9.2.23. The table below outlines the zoning objective(s) applicable to each station, the P&R facility and the Dardistown Depot and identifies applicable map-based local objectives and applicable LAPs or Masterplans.

Fingal County Development Plan Zoning Objectives, LAPs, Map-Based Objectives				
Station	Zoning	Permitted in Principle or Not Permitted?	Applicable LAPs/Masterplan	Map-based Local Objectives
Estuary and P&R Facility	MRE	Station: Permitted in principle P&R Facility: Neither	Close to but outside Lissenhall East LAP (opposite side of R132)	Local Objective 30: Support and facilitate a Park and Ride Facility. Construction of Swords Western Distributor Road.
Seatown	MRE	Permitted in principle	None	None
Swords Central	MRE	Permitted in principle	Barrysparks and Crowcastle Masterplan	Close to map-based objective to preserve trees, woodlands and hedgerows
Fosterstown	HT / RW	HT: Neither RW: Not permitted	Close to but outside Fosterstown Masterplan (opposite side of R132)	Objective to south of station, along R132, to preserve views
Dublin Airport	DA	Permitted in principle	Dublin Airport LAP	Within Dublin Airport Noise Zone. Outside Dublin Airport Outer PSZ
Dardistown Depot	HT / GE	Neither	None	Within Dublin Airport Noise Zone

				Partially within Dublin Airport Outer PSZ
Northwood Station	MRE	Permitted in principle	Adjacent to but outside Northwood Framework Plan area.	Local Objective 74 to north: 'Facilitate provision of an underpass to include provision for a car, bus, cycle, and pedestrian link to link lands east and west of R108 to enhance connectivity'.

9.2.24. The various zoning objectives listed in the table are defined as follows:

- **MRE (Metro and Rail Economic Corridor):** The objective is to “Facilitate opportunities for high-density mixed-use employment generating activity and commercial development, and support the provision of an appropriate quantum of residential development within the Metro and Rail Economic Corridor.”

The vision is to “Provide for an area of compact, high intensity/density, employment generating activity with associated commercial and residential development which focuses on the MetroLink, or rail or light rail stations within settings of exemplary urban design, public realm streets and places, which are permeable, secure and within a high-quality green landscape. Landmark buildings will provide strong quality architectural features, which respect and enhance the character of the area into which they sit. The designated areas will form sustainable districts which possess a high degree of connectivity and accessibility and will be developed in a phased manner subject to the necessary provision of social and physical infrastructure.”

- **HT (High Technology):** The objective is to “Provide for office, research and development and high technology/high technology manufacturing type employment in a high quality built and landscaped environment.

The vision is to “Facilitate opportunities for high technology, high technology and advanced manufacturing, major office and research and development based employment within high quality, highly accessible, campus style settings. The HT zoning is aimed at providing a location for high end, high-quality, value added businesses and corporate headquarters. An emphasis on

exemplar sustainable design and aesthetic quality will be promoted to enhance corporate image and identity.”

- **RW (Retail Warehousing):** The objective is to “provide for retail warehousing development.”

The vision is to “facilitate the sale of bulky goods/goods in bulk within high quality settings and highly accessible locations, with an emphasis on exemplar sustainable design and aesthetic quality.”

- **DA (Dublin Airport):** The objective is to “ensure the efficient and effective operation and development of the Airport in accordance with an approved Local Area Plan.”

The vision is to “Facilitate air transport infrastructure and airport related activity/uses only (i.e. those uses that need to be located at or near the Airport). All development within the Airport area should be of a high standard reflecting the status of an international airport and its role as a gateway to the country and region. Minor extensions or alterations to existing properties located within the Airport area which are not essential to the operational efficiency and amenity of the Airport may be permitted, where it can be demonstrated that these works will not result in material intensification of land use.”

- **GE (General Employment):** The objective is to “Provide opportunities for general enterprise and employment.”

The vision is to “Facilitate opportunities for compatible industry and general employment uses including appropriate sustainable employment and enterprise uses, logistics and warehousing activity in a good quality physical environment. General Employment areas should be highly accessible, well designed, permeable and legible.”

9.2.25. It can be seen from the table above that the MetroLink stations, with the exception of Fosterstown Station, are located on lands where a ‘public transportation station’ is a permitted in principle use. I consider that all of these stations are therefore acceptable in principle in terms of their land use zoning.

- 9.2.26. In the case of Fosterstown Station, the station structure is primarily located on HT zoned lands, where it is neither 'Permitted in Principle' nor 'Not Permitted' and thus has to be assessed in terms of its contribution towards the achievement of the Zoning Objective and Vision and wider compliance with the Development Plan. I am satisfied that a metro station on HT zoned lands is acceptable, since the vision for this zoning objective including highly accessible and high quality business and corporate headquarters, both of which would be enhanced by the provision of a high capacity electrified metro linking the lands to Dublin Airport and the city centre with high quality public realm around the station entrance. Part of the Fosterstown Station does, however, encroach slightly into the RW zoned lands, on the footprint of the Smyths Toy Store within Airside Retail Park, which it is proposed to demolish. Somewhat surprisingly, 'public transportation stations' are 'not permitted' on RW zoned lands.
- 9.2.27. It was contended in the written submissions made on behalf of Smyths Toys Superstores and Tanrat Ltd. T/A Starbucks (located within the Smyths retail unit) (S283 and S288, respectively) that a material contravention of the Fingal Development Plan therefore arises in respect of this station.
- 9.2.28. Fingal County Council, in their initial submission on the first day of the oral hearing (Ref. OH40) noted the issue with regard to Fosterstown Station and stated that:
- "Under the RW zoning objective, 'public transport station' is a 'Not Permitted' use. However, the location of a station here is justified by virtue of the need for a station serving this area, which is identified in the Development Plan and the overarching need for the project in this location and therefore in this instance, it is considered acceptable."
- 9.2.29. I note that Fosterstown Station is identified on the applicable zoning map (Sheet 8), however a schematic icon is utilised for the station, rather than the actual station dimensions. The icon is located on the HT zoned lands.
- 9.2.30. I have addressed the issue of 'material contravention' and whether it arises with respect to Railway Order applications in the 'legal and procedural matters' section of this report at Section 9.17.
- 9.2.31. With regard to Fosterstown Station, given that support for MetroLink is woven throughout the Development Plan in terms of the vision for the County and its

sustainable development, and noting that: the alignment and station are shown on the applicable zoning map; that the station is substantially located on the HT zoned lands; that the vision for RW zoned lands includes that they are “highly accessible”; and that the Fosterstown Masterplan 2019 (which Policy CSP7 of the Development Plan seeks to implement) also identifies the station in this location and outlines its importance for the development of the Masterplan lands, I consider that the station is acceptable in terms of planning policy.

9.2.32. With regard to the proposed P&R Facility at Estuary Station, this use class is not listed as a ‘permitted in principle’ or as a ‘not permitted’ use class under the MRE zoning. It therefore falls to be considered on its merits. I note that map-based local objective 30 is to support and facilitate a Park and Ride Facility. Noting the objective and vision for MRE zoned lands, as set out above, it is clear that they are identified for high-density mixed use development with a high degree of connectivity and accessibility. I am satisfied that the provision of a metro-related Park and Ride Facility at this location would be consistent with the MRE zoning objective. I also note that the delivery of a portion of the Swords Western Distributor Road would be consistent with the map-based objective for this road.

9.2.33. With regard to Dardistown Depot, this does not appear to fall clearly within any of the identified use classes. Potentially relevant use classes include:

- Heavy Vehicle Park: The use of a building, or part thereof, or land for the parking of Heavy Goods Vehicles (including buses). I don’t consider this use class to be relevant since it relates to HGVs and buses (i.e. road-based transport), not rail.
- Road Transport Depot: Use of a building or land as a depot associated with the operation of road transport business to include parking and servicing of vehicles, particularly HGVs. I don’t consider that this use class is relevant since it relates to road transport only, not rail.
- Utility Installations: A structure composed of one or more pieces of equipment connected to or part of a structure and/ or a facility designed to provide a public utility service such as the provision of heat, electricity, telecommunications, water or sewage disposal and/or treatment. I don’t

consider this use class to be relevant since it appears to be intended for ancillary equipment connected to another facility/structure.

- Vehicle Servicing/Maintenance Garage: The use of a building and/or land for the maintenance and repair of small motor vehicles and vans (excluding HGV's and buses). I don't consider that this use class is relevant since it relates to small motor vehicles and would seem to relate to a small scale commercial garage.

9.2.34. I therefore consider that the depot use is one that is to be considered on its merits.

9.2.35. Given that an operations and maintenance depot and related infrastructure is a fundamental requirement for a metro line and noting that the MetroLink project is supported by a number of Policies and Objectives of the Development Plan, I consider that the Dardistown Depot is an acceptable land use on the HT and GE zoned lands. The proposed depot structures will be industrial/commercial in appearance and character and would not be out of place on these lands, given their current zoning. Furthermore, the future opening of the proposed Dardistown Station to public use will support the sustainable development of the surrounding HT/GE zoned lands by providing high quality public transport access to this large block of primarily undeveloped lands.

9.2.36. In conclusion, I am satisfied that the portion of the proposed development within the Fingal County Council administrative area is acceptable in terms of land use zoning.

9.2.37. ***Inconsistencies with Development Plan***

9.2.38. Section 7 of the applicant's updated Planning Report (Ref. OH22), as amended by the Planning Report Update (Ref. OH294), both submitted at the oral hearing, identifies a number of general policies and objectives of the Fingal Development Plan that they consider not to be met in full in certain locations. I also note the 'Note on Plan Level Biodiversity Policy Compliance' (Ref. OH319) submitted at the oral hearing on 25th March 2024.

9.2.39. The applicant's list includes the Fosterstown Station zoning that I have addressed above, as well as the following:

- "Changes in the plan in respect of biodiversity net gain as set out in Objective GINHO30 will not be met in full. This objective was introduced in the new

Fingal Development Plan. TII is working with Fingal County Council to agree additional landscaping and planting to work towards the achievement of local net gain.

- Given the nature of the proposed Project as a linear infrastructure project developed over a number of development plan cycles that interfaces with elements of the Green Infrastructure Network in the county and unavoidably leads to some fragmentation, some elements of a number of policies and objectives of the Fingal Development Plan 2023-2029 will not be met in full - GINHP2, GINHO2, GINH04, GINHP10, GINHO21, GINHP20, GINHO41 GINHO44 and GINHP21 and their associated development management objectives, although this is reduced with the application of the proposed conditions agreed with Fingal County Council.
- While the Proposed Project has sought to minimise impacts on Protected Structures, some negative impacts will occur, as set out in the EIAR. As a result, a number of relevant policies will not be met in full, including Policy HCAP12, HCAP13 and Objective DMSO185. This relates to the protection of Santry Lodge which was added to the Record of Protected Structures in the new Fingal Development Plan. It is noted that the design has been developed to avoid any direct impacts on Santry Lodge itself.
- The approach taken by the Proposed Project in relation to cycle parking has been to develop a tailored MetroLink-specific methodology. The numbers of cycle parking to be provided preserves the capacity of the NTA and planning authorities in determining appropriate bike parking standards and objectives with public input in future strategic land use plans as the use of the proposed Project grows. However, the project is not fully in accord with objective DMSO109.”

9.2.40. The identified policies and objectives relate to green infrastructure, biodiversity net gain, built heritage and cycle parking. The applicant contends that these inconsistencies have been addressed, to a degree, in the agreement with FCC that was submitted at the oral hearing (Ref. OH147). In addition to this, I note the further submission made by FCC following the oral hearing (1FS24), which states that:

“The Fingal Development Plan 2023-2029 Written Statement and maps specifically identifies the route of MetroLink and its associated stations. The alignment of the Railway Order is reflective of the Development Plan maps and the principle of the route is compliant with policies, objectives and land use zoning requirements of the Fingal Development Plan.”

- 9.2.41. With reference to my discussion on the applicability of the issue of ‘material contravention’ to Railway Order applications in Section 9.17 below, I do not consider that any of the above issues can reasonably be considered fatal to the proposed development. The proposed development is explicitly and unambiguously supported by a wide array of policies and objectives of the Fingal Development Plan and the alignment and stations are shown on the applicable zoning maps.
- 9.2.42. Issues with regard to Santry Lodge are addressed in Section 10.3 and I note that the applicant has agreed a revised landscaping proposal for this location with FCC, and has undertaken to agree further details with FCC in advance of construction, as outlined in their agreement that they wish to be included in the Thirteenth Schedule of the Railway Order (Ref. OH147). Similarly, the agreement contains a requirement that TII work collaboratively with FCC to quantify tree and hedgerow loss and agree additional landscaping and planting with FCC. Biodiversity policy matters are addressed in Section 9.23 of this report. With regard to the various Green Infrastructure policies and objectives, a number of these are merely aspirational and non-specific, and while the proposed development will result in some increased fragmentation of green spaces, I do not consider that it is contrary to any of these. While the proposal to return the existing green spaces in the three residential estates along the R132 generally to their existing condition, rather than the originally proposed linear park arrangement, does not reduce fragmentation, there will be potential for FCC to open up these areas in the future as the area develops and the traffic calmed conditions on the R132 likely reduce local residents concerns in this regard. Issues associated with these green spaces are addressed in Section 10.1.
- 9.2.43. Finally, in relation to cycle parking, I address this in Section 9.22 below, where I conclude that the applicant’s approach, as supported by the NTA and FCC, of a multi-agency response to cycle parking provision in the future in line with the GDATS is the most appropriate means of ensuring adequate cycle parking in what are constrained urban/suburban areas.

9.2.44. Fingal Local Area Plans/Masterplans

9.2.45. The **Lissenhall East LAP 2023** relates to lands to the east of the R132, west of the M1 Motorway and south of the M1 intersection, within the existing northern development boundary of Swords. The aim of the LAP is “to safeguard and promote the strategic employment potential of the Lissenhall East lands by providing a policy and development framework with appropriate employment and necessary supporting infrastructure which anticipates the delivery of MetroLink but is also reflective of current road network capacity”.

9.2.46. Connectivity between the LAP Lands and the MetroLink Estuary Station are identified as a key objective and there are a number of Objectives relating to the roads infrastructure required for the LAP lands that seek to ensure it is aligned with the MetroLink proposals. The LAP notes that the delivery of MetroLink will provide for a frequent, high-capacity rail service, capable of sustainably taking thousands of people to and from Swords, Dublin City and the LAP area.

9.2.47. I am satisfied that that the proposed development is fully consistent with the provisions of the Lissenhall East LAP 2023.

9.2.48. The **Dublin Airport LAP 2020**, recently extended to 2030, notes the importance of Dublin Airport to the State and outlines the importance of MetroLink to the continued operation and ongoing growth of the airport, noting that congested surface access to the airport is the most immediate capacity constraint affecting the airport. I have outlined the relevant provisions of the LAP in Section 6.4 above. It can be seen that the LAP is strongly supportive of the proposed development in terms of airport connectivity for passengers, staff and commuters. It identifies the Ground Transportation Centre as the location for the MetroLink station and notes the importance of ensuing a high quality public transport interchange at this location. In addition to the transport related provisions of the LAP, there is also a focus on ensuring that the MetroLink station is of a high quality design and finishes, given the airport’s status as an international gateway (e.g. Objectives DS01 and PT03).

9.2.49. I am satisfied that the proposed Dublin Airport station is consistent with the LAP and its objectives in terms of its high quality design and finishes, its location on the Ground Transportation Centre site, which is centrally located for access to the two

terminals and which will provide for a high quality of interchange with other public transport modes.

- 9.2.50. In addition to the abovementioned LAPs, there are a number of relevant non-statutory plans, including Swords Masterplans 2019, Your Swords: An Emerging City, Strategic Vision 2035, Sustainable Swords Strategy 2022 and the Dublin Airport Central Masterplan 2016.
- 9.2.51. In relation to the **Swords Masterplans**, while these date from 2019, the Fingal County Development Plan 2023-2029 states that the Council will continue to implement the Masterplans currently in place at the time of adoption of the Development Plan, including the Swords Masterplans. This is supported by Policy CSP8, which seeks to “Implement Masterplans prepared in accordance with the Development Plan.”
- 9.2.52. There are four parts to the Swords Masterplans, including a ‘front-end’ document (Part A), and Parts B, C and D which present the proposals for the areas of Barrysparks & Crowscastle, Fosterstown and Estuary West.
- 9.2.53. I have outlined the relevant provisions of the Masterplans in Section 6.4 above, where it can be seen that they fully support the MetroLink project and that the full implementation of the vision for the Masterplans is contingent on MetroLink being delivered (e.g. the three plans state that no more than 25% of the overall quantum of development envisaged shall be constructed and occupied prior to the operation of MetroLink (25-30% in the case of Estuary West)). I am therefore satisfied that MetroLink proposal is consistent with the objectives of the Swords Masterplans.
- 9.2.54. **Your Swords: An Emerging City, Strategic Vision 2035** and **Sustainable Swords Strategy 2022** both support the MetroLink project and link the future sustainable population and economic development of Swords to the delivery of MetroLink.
- 9.2.55. The **Dublin Airport Central Masterplan 2016** is also given continuing effect by Policy CSP8 of the Development Plan. The Masterplan lands are located to the east of the proposed MetroLink Airport Station, on the other side of the T2 Multi-Storey Car Park and the Masterplan focuses on their development for office accommodation supplemented with ancillary uses. The MetroLink station, which is outside of the Masterplan area, is indicated as a Ground Transportation Centre on the Masterplan layouts. The Masterplan states that the exact location of the Metro stop for the

Airport is likely to be at the Ground Transportation Centre. The proposed MetroLink development is not contrary to any aspects of the Masterplan, and I consider that having a MetroLink station in the immediate vicinity of what is intended to be a high-quality exemplar office development would provide high quality public transport for office workers and visitors. It is of note that the Dublin Airport LAP ties the further development of the Dublin Airport Central lands to the delivery of MetroLink.

9.2.56. Dublin City Development Plan 2022-2028

9.2.57. ***General Policies and Objectives***

9.2.58. The Dublin City Development Plan's vision for Dublin includes "exemplary public transport" and various Policies of the Plan seek to leverage public transport projects to consolidate the inner city, promote compact growth and to support development, particularly brownfield and infill development, in the inner suburbs and outer city (e.g. Policies SC1, SC8, SC9 and SC11).

9.2.59. MetroLink is identified as one of the projects that delivers opportunities for encouraging higher-density mixed-use development along public transport routes (i.e. Transit Oriented Development).

9.2.60. The development of MetroLink is identified as proving an opportunity for developing high quality public realm and reinventing existing spaces to create a sense of place and this desire for high quality connected public realm is supported by a number of Policies (e.g. CCUV38, CCUV39, CCUV40). In particular, I note Policy CCUV41 which seeks to ensure that new infrastructure projects should ensure placemaking outcomes through a design-led approach. It states that Dublin City Council will work the relevant agencies / infrastructure providers to achieve public realm enhancements in the design, implementation and delivery of infrastructure projects.

9.2.61. The Development Plan seeks to deliver on sustainable transport, moving to a low traffic environment and increasing the number of traffic free spaces (see Policy CCUV42). It notes the need to accelerate the transition away from the private car towards sustainable modes and the transformative impact on the city centre of major transport projects. It states that priority for pedestrians, pedestrian space and provision of high quality public realm will underpin the future vision for the city centre.

9.2.62. A series of Policies and Objectives seek to support modal shift, sustainable transport and greater integration of transport networks (including active travel modes), these include Policies SMT1, SMT2, SMT3, SMT4, SMT14, SMT19 and Objectives SMT01 and SMT05. In particular, I note Policy SMT22 which explicitly supports the expeditious delivery of MetroLink from Charlemont to Swords as part of the provision of an integrated public transport network with efficient interchange between transport modes, serving the existing and future needs of the city and region and to support the integration of existing public transport infrastructure with other transport modes.

9.2.63. Elements of the proposed development are located within Strategic Development Regeneration Areas (SDRAs) 2, 6 and 10. The Development Plan provisions relating to these SDRAs generally reference the delivery of MetroLink in terms of enabling their full regeneration.

9.2.64. ***Land Use Zoning***

9.2.65. Unlike the Fingal Development Plan, the Dublin City Development Plan 2022-2028 does not show the MetroLink alignment and stations on the relevant zoning maps. It is, however, shown as an indicative alignment on Map J, 'Existing and Future Strategic Transport and Parking Areas'.

9.2.66. With regard to use classes, there is no directly applicable 'train station' or 'public transport station' use class contained in Appendix 15 of the Development Plan. DCC, in their initial written submission (S71), state that it can be considered a sui generis use or a 'public service installation', while the applicant, in their Planning Report, contend that a 'public service installation' is the appropriate use class.

9.2.67. Appendix 15 of the CDP defines 'public service installation' as follows:

"Public Service Installation: A building, or part thereof, a roadway or land used for the provision of public services including those provided by statutory undertakers. Public services include all service installations necessary for electricity, gas, telephone, radio, telecommunications, television, data transmission, drainage, including wastewater treatment plants. It also includes bring centres, green waste composting centres, public libraries, public lavatories, public telephone boxes, bus shelters, water fountains, moorings, jetties etc. It does not include incinerators/waste to energy plants. The offices

of such undertakers and companies involved in service installations are not included in this definition.”

9.2.68. I note that the Development Plan states that there will be a presumption against uses not listed under the permissible or open for consideration categories in zones Z1, Z2, Z6, Z8, Z9, Z11, Z12 and Z15 and that other uses will be dealt with in accordance with the overall policies and objectives in this plan.

9.2.69. While the definition of ‘public service installation’ does not reference public transport, I consider that public transport can reasonably be considered to be a ‘public service’ and I note that TII is a statutory undertaker.

9.2.70. The table below outlines the zoning objective(s) applicable to each station and the Albert College Park Intervention Shaft and identifies applicable map-based local objectives and applicable LAPs or Masterplans.

Dublin City Development Plan Zoning Objectives, LAPs, Map-Based Objectives				
Station	Zoning	Permissible/ Open for Consideration?	Applicable LAPs/Masterplan	Map-based Local Objectives etc.
Ballymun Station	Z4	Permissible	Ballymun LAP	Ballymun is a Strategic Development and Regeneration Area. Site is identified as a Key District Centre.
Collins Avenue Station	Z15 primarily. Also Z9	Permissible	None	None
Albert College Park Intervention Shaft	Z9	Permissible	None	None
Griffith Park Station	Z15 primarily. Also Z9	Permissible	None	River Tolka is a Conservation Area
Glasnevin Station	Z3 primarily. Also Z1, Z2, Z9	Permissible		Royal Canal is a Conservation Area.
Mater Station	Z9 Z2	Permissible	None	Within Conservation Area
O’Connell Street Station	Z5	Permissible	None, except Scheme of Special Planning Control	Within ACA and Conservation Area

Tara Station	Z5	Permissible	None	Within Zone of Archaeological Interest
St Stephen's Green Station	Z9	Permissible	None	Within Conservation Area
Charlemont Station	Z6 primarily. Also Z1, Z2	Permissible	None	Partially within Grand Canal Conservation Area. Dartmouth Square is an ACA.

9.2.71. The various zoning objectives listed in the table are defined as follows:

- **Z1 Sustainable Residential Neighbourhoods:** To protect, provide and improve residential amenities.
- **Z2 Residential Neighbourhoods (Conservation Areas):** To protect and/or improve the amenities of residential conservation areas.
- **Z3 Neighbourhood Centres:** To provide for and improve neighbourhood facilities.
- **Z4 Key Urban Villages/Urban Villages:** To provide for and improve mixed-services facilities.
- **Z5 City Centre:** To consolidate and facilitate the development of the central area, and to identify, reinforce, strengthen and protect its civic design character and dignity.
- **Z6 Employment/Enterprise:** To provide for the creation and protection of enterprise and facilitate opportunities for employment creation.
- **Z9 Amenity/Open Space Lands/Green Network:** To preserve, provide and improve recreational amenity, open space and ecosystem services.
- **Z15 Community and Social Infrastructure:** To protect and provide for community uses and social infrastructure.

9.2.72. It can be seen from the table above that the MetroLink stations and the Intervention Shaft are located on lands where a 'public service installation' is a permissible use. I consider that all of these stations are therefore broadly acceptable in principle in terms of their land use zoning. However, I consider that an inconsistency arises

with regard to those elements located on Z9 zoned land, and this issue will be addressed below.

- 9.2.73. ACRA and Ballymun Road North Residents Association, in their first oral hearing submission (Ref. OH45) contended that the proposed Collins Avenue Station is in contravention of the Z15 'Community and Social Infrastructure' zoning objective applicable to the Our Lady of Victories Church and Schools.
- 9.2.74. Given that the schools and church will be able to operate throughout the construction phase (albeit with some disruption) and will benefit from the presence of a MetroLink station in the operational phase, I do not consider that the proposed development is in contravention of the zoning objective. The improved public transport provision in the area will contribute to the creation of vibrant neighbourhoods, as sought by the Planning Authority, and will be supportive of community uses and social infrastructure more generally.
- 9.2.75. It is contended by a number of observers in the vicinity of the proposed Charlemont Station that the impacts of the proposed development are such that it will materially contravene the Z2 residential conservation area zoning of Dartmouth Square. The applicant's response submission noted that the Z2 zoning has the objective to "protect them from unsuitable new developments or works that would have a negative impact on the amenity or architectural quality of the area". They contend that the element of the project within the Z2 zoned area will affect below ground areas only and that the majority of the Charlemont Station and all above ground elements are within lands zoned Z5 "To provide for the creation and protection of enterprise and facilitate opportunities for employment creation".
- 9.2.76. I agree with the fundamental point being made in TII's response, although I note that they incorrectly refer to Z5, rather than the correct Z6 zoning and that the aboveground elements at the southern (i.e. Dartmouth Road) end of the station will be within an area zoned Z1 (residential).
- 9.2.77. The impacts on Dartmouth Square and Road will be addressed in the relevant sections of this report, but I am satisfied that the primarily underground nature of the development and its low profile aboveground elements, none of which are on Z2 zoned lands, will not undermine or be contrary to the Z2 zoning objective at Dartmouth Square and Road.

9.2.78. ***Inconsistencies with Development Plan***

9.2.79. Section 7 of the applicant's updated Planning Report (Ref. OH22), as amended by the Planning Report Update (Ref. OH294), both submitted at the oral hearing, identifies the following general policies and objectives of the Dublin City Development Plan that they consider not to be met in full in certain locations. I also note the 'Note on Plan Level Biodiversity Policy Compliance' (Ref. OH319) submitted to the oral hearing on 25th March 2024:

- "Construction of certain stations and of the intervention shaft will take place on lands zoned Z9 – Amenity / Open Space Lands / Green Network under the Dublin City Development Plan 2022-2028. In these locations, the proposed uses, while permitted in principle, are not consistent with the general permitted new uses. In these station locations, above ground interventions at operational stage will largely be limited street level access, lifts, vents and skylights reducing the effect on open space amenity. For the intervention shaft, the design was developed to reduce the effect on the amenity of the park.
- While the proposed Project has sought to minimise impacts on Protected Structures and National Monuments, some negative impacts will occur, as set out in the EIAR. As a result, Dublin City Council policies BHA2, BHA7, BHA9 and BHA26 are not met in full, although this is reduced with the application of the proposed conditions agreed with Dublin City Council.
- Given the nature of the proposed Project as a linear infrastructure project developed over a number of development plan cycles that interfaces with elements of the Green Infrastructure Network in the city and unavoidably leads to some fragmentation, tree loss and loss of amenity, there are inconsistencies with elements of a number of policies and objectives of the Dublin City Development Plan 2022-2028 – GI16, GIO23, GI29 and GI41, although this is reduced with the application of the proposed conditions agreed with Dublin City Council.
- The demolition of the Markievicz Leisure Centre is inconsistent with Policies GI45 and GI46 of the plan.

- The approach taken by the proposed Project in relation to cycle parking number and form has been to develop a tailored MetroLink-specific methodology. The numbers of cycle parking to be provided preserves the capacity of the NTA and Dublin City Council in determining appropriate bike parking standards and objectives with public input in future strategic land use plans as the use of the Proposed Project grows. Condition No. 12 Item 8 as agreed with Dublin City Council considers cycle parking in the future and resolves this requirement. ‘Pedestrian and cyclist connectivity to and within stations shall be improved as part of the project where possible. Cycle parking shall be provided at all stations in secure, well-lit and convenient locations. Details to be agreed with Dublin City Council at detailed design stage. Principles of universal design shall be adhered to, and accessibility requirements shall be met throughout the project.”

9.2.80. The applicant contends, in their updated Planning Report, that where the project does not fully meet policies and objectives of the statutory plans, mitigation has been put in place to reduce the effects. They note the strategic importance of the project to the long-term development of the Dublin region, the weight of policy support in favour of the project and contend that it is therefore consistent with proper planning and sustainable development.

9.2.81. The compatibility of the Intervention Shaft with the Z9 zoning objective for the park was also raised by GADRA and by Louise Boughton and Glen Sharpe in their oral hearing submission on 22nd February 2024. They contend that the shaft could not be described as a ‘public service installation’, which is a permissible use within the Z9 zoning objective, whereas they believe that a station in the park would be compatible with this use. Given the broad definition and examples set out for ‘public service installation’, which incorporates quite intensive land uses such as wastewater treatment plants and bring centres, I do not consider that the intervention shaft compound on Z9 zoned lands would be contrary to the Z9 zoning objective, noting that it is a critical installation required for public service infrastructure and that it will not impact on the overall integrity or usability of Albert College Park as amenity / open space. With regard to the stations on the Z9 zoned lands, I note that the open space will be reinstated above the stations, with a marginal loss in amenity due to the presence of vents, grilles, hatches etc. I would agree with the classification of the

impacts of MetroLink elements on Z9 zoned lands as being as a matter of them being not fully consistent with the zoning objective.

- 9.2.82. Impacts on protected structures and other buildings of architectural heritage value, such as those on the NIAH, are addressed in the relevant sections of this report together with consideration of the built heritage policies and objectives. I consider that there a number of areas where the proposed development is not fully consistent with the identified policies and objectives.
- 9.2.83. I agree with the applicant that aspects of the proposed development are not fully consistent with the identified green infrastructure related policies and objectives, due to the need to remove existing trees and vegetation, excavate parks and potentially impact on watercourses. This is, to some extent, unavoidable in large-scale linear infrastructure projects, and I consider that the mitigation measures, including landscaping, reinstatement and replacement tree planting proposals will be sufficient to ensure that the proposed development is not contrary to these policies and objectives. I have addressed biodiversity policy compliance in more detail in Section 9.23.
- 9.2.84. With regard to Markievicz Leisure Centre and Policies GI45 and GI46, I note that these are relatively aspirational and non-specific Policies. While the loss of the leisure centre does not further the delivery of these Policies, neither is it contrary to them, in my opinion.
- 9.2.85. With regard to cycle parking, there are no specific requirements in the Dublin City Development Plan for public transport stations. Appendix 5 of the Plan states that “secure cycle parking stations/facilities shall be provided in new public transport interchanges, Luas stops (in association with TII), Park and Ride facilities, office blocks, apartment blocks, shopping centres, hospitals, etc., in accordance with the standards set out in Table 1, unless otherwise agreed with the planning authority.” However, Table 1 of said Appendix does not set out a cycle parking requirement for public transport stations. I also note Objective SMTO13, which commits to preparing a guide setting out design standards and requirements for cycle parking within two years of the adoption of the Plan. These do not appear to have been published yet. I have addressed cycle parking in Section 9.22, but in terms of Dublin City’s planning policy, I do not consider that any significant inconsistencies arise.

9.2.86. Dublin City Local Area Plans/Other Plans

9.2.87. The **Ballymun LAP 2017**, which has been extended to 2027, notes the importance of the then-current Metro North project as an essential component of the regeneration process for Ballymun, in terms of attracting high density mixed-use developments along the Main Street and in the 'M50 lands' (an area outside of DCC's administrative area where the Northwood Portal and Station would be located).

9.2.88. The LAP seeks that the metro alignment be located underground in Ballymun main street in order to avoid segregation. This is of course proposed in the MetroLink application, and is thus consistent with the LAP and Objective MO2, which relates to this matter. Objective E11 supports the delivery of 'Metro North', while the LAP also seeks that the redevelopment of the Ballymun Shopping Centre site include an area of open space, fronting onto Main Street. The provision of such a plaza area forms part of the MetroLink project and I am satisfied that the proposed development is consistent with the provisions of the Ballymun LAP.

9.2.89. The **O'Connell Street and Environs Scheme of Special Planning Control 2022** provides detailed guidance regarding shopfront and signage design for O'Connell Street, due to the importance of the street and to need to reflect civic dignity and pride. As will be addressed in Section 10.9 below, there were inconsistencies in the proposed design of the MetroLink station entrance on O'Connell Street in the submitted documentation. Having reviewed the information submitted by the applicant at the oral hearing, I am satisfied that the design of the O'Connell Street Station entrance is of a suitably high standard as befits the importance of this city centre metro station located within a structure with a protected façade and given the historic and architectural importance of O'Connell Street.

9.2.90. **Climate Policy**

9.2.91. European and national level climate legislation and policy has been in a state of flux in recent years, as the magnitude of the climate change issue and its potential consequences has become better understood. However, while the policy framework underpinning climate action is ever evolving, the fundamental goal of transitioning to a net climate neutral society and economy remains constant.

- 9.2.92. The need to shift from the private car to more sustainable modes of transport is noted in relevant climate policy, including Ireland's Long-term Strategy on Greenhouse Gas Emissions Reduction 2024 and the Climate Action Plans 2024 and 2025.
- 9.2.93. The Long-Term Strategy on GHGs notes the stimulating effect of Ireland's population, employment and economic growth on transport activity and demand and identifies a risk that decarbonisation goals could be compromised unless there are systemic and transformative changes in travel patterns, modal share, and technology. Increased investment in public transport and active travel is identified as ways to reduce reliance on private cars and address congestion. This investment is stated to be essential to deliver on Ireland's climate ambitions, such as a 130% increase in daily public transport journeys by 2030.
- 9.2.94. The Long-Term Strategy notes that cities will be leaders in transport innovation due to the predominance of short-distance journeys and the requirement to provide for greater urban density, making public transport more viable and reducing the demand for private car ownership.
- 9.2.95. The Climate Action Plan (CAP) 2025 and the CAP 2024, which are to be read in conjunction, note the need for transformational change and accelerated action to meet carbon abatement targets for the transport sector. It identifies a need for a significant behavioural shift from private car usage to active travel and public transport and the need for expansion and investment in the public transport network. The CAP sets out a hierarchical Avoid-Shift-Improve approach to transport decarbonisation, with one of the 'Shift' measures being the major public transport infrastructure programme, including delivery of the MetroLink project. One of the 'Improve' measures is the decarbonisation of public transport services. The MetroLink project, being electrically powered with a commitment to use renewable energy, would be consistent with this measure.
- 9.2.96. Other national level climate policy, including the National Adaptation Framework 2024 (NAF) and the Sectoral Adaptation Plan for Transport are aligned with the CAP and the Long-Term Strategy on GHGs in seeking to reduce Ireland's vulnerability to climate change impacts and carbon emissions through modal shift to electrified public transport.

- 9.2.97. The Fingal Climate Action Plan 2024-2029 and the Dublin City Council Climate Action Plan 2024-2029 reflect national climate objectives and targets at a local level and both support improvements and investment in public transport provision, with the Fingal CAP referencing the MetroLink project as an Action (Ref. T20) to enhance public transport provision and support climate action.
- 9.2.98. The proposed development will provide a high capacity electrified public transport corridor between the fast-growing Swords area and the City Centre, via Dublin Airport. Due to this capacity and in particular the fact that it is segregated and high frequency, it will likely prove an attractive mode of transport that will drive behavioural change and support a modal shift from the private car. It is also likely to act as a catalyst for higher density and more sustainable forms of residential and commercial development in the vicinity of metro stations, which will also assist in meeting Ireland's climate targets.
- 9.2.99. The impacts of the construction and operation of the proposed development on the climate, particularly with regard to emissions and embodied carbon, are addressed in the EIA section of this report, while the Board's duties under the Climate Action and Low Carbon Development Act 2015, as amended, are addressed in Section 9.5 below.
- 9.2.100. In terms of policy, I am satisfied that the proposed development is fully consistent with all relevant climate policy and climate related aspects of planning policy (such as the NPF, RSES and City/County Development Plans) and that it will assist in achieving Ireland's climate action objectives.
- 9.2.101. **Transport Policy**
- 9.2.102. At a European level, the recently updated Ten-T Regulation (Regulation 2024/1679) requires member states to connect certain airports to the trans-European railway network by 2040. In an Irish context, this would require a connection of Dublin Airport to the Irish Rail heavy rail network from Northern Ireland to Dublin and onwards to Cork. I note that a heavy rail link to Dublin Airport by means of a spur from Clongriffin is also a recommendation (No. 17) of the All-Island Strategic Rail Review 2024 (AISRR).
- 9.2.103. By reason of its proposed alignment, I do not consider that the MetroLink project would prejudice the future delivery of a separate heavy rail spur to the Airport from

Clongriffin and I note that the AISRR states that such a rail link aims to complement the MetroLink project by providing Intercity and long-distance rail connections to the airport. I consider that the two projects, if both approved and built, could be complementary in terms of enhancing connectivity, interchangeability and in achieving a significant modal shift to more sustainable forms of transportation. The proposed MetroLink Station at Dublin Airport is located in an area designated as a Ground Transportation Centre, and any future heavy rail link would serve to improve the interconnectivity of the transport network in a manner consistent with the objectives of the Ten-T Regulation. In the interim, pending the development of a heavy rail link project, the MetroLink would be operational before the Ten-T deadline of 2040 and would provide connection to the trans-European railway network at Tara Street and Glasnevin.

9.2.104. While the proposed development is consistent with the relevant provisions of the AISRR, I note that the AISRR comprises a review document, rather than a policy document, and that it acknowledges that GDATS is the statutory plan for the development of transport within the GDA, with the AISRR being an input for the next review of the GDATS.

9.2.105. At a national level, the proposal for a metro railway from Swords to Dublin City Centre via Dublin Airport dates from 2001 and has been included in transport policy since then. As detailed above, a Railway Order was previously granted by the Board in 2010 for the previous Metro North project, which was subsequently deferred and ultimately abandoned, with the current MetroLink proposal instead developed over a period of years.

9.2.106. The MetroLink project is explicitly supported by the National Investment Framework for Transport in Ireland, both in terms of providing sustainable mobility for passengers to Dublin Airport and in terms of improved public transport more generally. In the same vein, the National Sustainable Mobility Policy 2022 and its associated Action Plan identify MetroLink as a key project for safe and green mobility in Dublin. Commencing the delivery of MetroLink is identified as Core Action 24 of the Action Plan, which seeks to achieve Goal 3 of the Policy to “expand availability of sustainable mobility in metropolitan areas”. The Policy states that MetroLink will provide a sustainable, safe, efficient, integrated and accessible public transport service between Swords, Dublin Airport and Dublin City Centre. It also states that

MetroLink will form a key spine of the overall integrated public transport system for Dublin, facilitating compact, transport-orientated development at key locations.

- 9.2.107. At a regional level, the Greater Dublin Area Transport Strategy 2022-2042 (GDATS), which was published post-lodgement of the MetroLink Railway Order application, notes the importance of MetroLink in terms of supported the national objective of developing a Dublin-Belfast Economic Corridor (including the P&R Facility) and in terms of supporting the international gateway of Dublin Airport.
- 9.2.108. Measures LRT1 and LRT2 of GDATS commit to constructing Metrolink, subject to approval, and to undertaking future reviews of the need for additional metro lines in Dublin. This may include extensions of MetroLink to south, along the Luas Green Line or to the south west. The Board should note that GDATS identifies Charlemont as the optimal location for the primary interchange with the Luas Green Line and describes it as an appropriate location to facilitate any potential future metro extensions.
- 9.2.109. GDATS states that the upgrading of the Luas Green Line to metro standard is not being pursued as part of the 2022-2042 strategy, with capacity and frequency instead being increased through the provision of additional trams and turnback arrangements to meet forecast passenger demand.
- 9.2.110. At a local level, the Dublin City Centre Transport Plan 2023 seeks to facilitate the implementation of GDATS and sets out various proposals for public realm, pedestrian improvements and redirection of vehicular traffic. This includes proposals to pedestrian movements around the Tara Street MetroLink station and more generally to support increased pedestrian activity around the city as a result of MetroLink and the other public transport projects being developed, such as BusConnects, DART+ and future Luas development.
- 9.2.111. In Fingal, the South Fingal Transport Study 2019 (SFTS) recommends key transport infrastructure and outlines levels of land use development that will enable its sustainable growth leading up to the delivery of MetroLink and beyond. The SFTS is given continuing effect by the Development Plan, with Objective CM031 stating that it is an objective to “implement the recommendations of the South Fingal Transport Study 2019 in consultation with the relevant stakeholders”.

9.2.112. I have outlined the relevant recommendations from the SFTS in Section 6.4 above, and I am satisfied that the proposed development is compliant with and supportive of the transport actions that the SFTS seeks to achieve, particularly with regard to the R132, pedestrian and cycle infrastructure and sustainable mobility more generally.

9.2.113. It is clear from the above that the proposed development is consistent with all relevant transport policy at European, national, regional and local level. I am satisfied that the proposed development, in principle, will assist in encouraging a modal shift from the private car to more sustainable public transport modes, in providing high quality access to/from Dublin Airport, as well as to the fast-growing Swords area.

9.2.114. **Conclusion on Policy**

9.2.115. It is clear from the above that the proposed MetroLink development enjoys very strong policy support at national, regional and local level in terms of planning, transport and climate policy. This includes both explicit support of the MetroLink project itself, and implicit support with regard to climate action, sustainable transport, facilitating compact growth, connectivity and accessibility of Dublin Airport and other matters.

9.2.116. While there are a number of aspects of the proposed development that are not fully consistent with the provisions of the two Development Plans, it is clear to me that there is strong and overarching support in both Development Plans for the proposed development. I note the submissions made by the two Local Authorities, confirming this position.

9.2.117. I am satisfied, therefore, that the proposed development is acceptable in principle, subject to consideration of planning, environmental and CPO issues.

9.3. **Need for Proposed Development**

9.3.1. The applicant addressed the need for the proposed development in section 1.3 of their Planning Report and in Chapter 3 of the EIAR.

9.3.2. The origin of a metro project in Dublin dates back to 2001 when the then-Dublin Transportation Office published 'A Platform for Change – An integrated transportation strategy for the Greater Dublin Area (GDA) 2000 to 2016' and has since been carried forward to all subsequent transport policy for Dublin. As noted

above, the Board previously granted the Metro North Railway Order application and I consider that the subject MetroLink project enjoys a strong level of policy support from national to local level, including all relevant planning, transport and climate policy.

- 9.3.3. The proposed development, while a standalone project, is stated to be part of an integrated transport solution including BusConnects and DART+ which together will result in reliable, sustainable, integrated public transport that will support the economy, help meet climate action targets and make Dublin a more liveable and sustainable city. The EIAR notes in this regard the 1.6 million people projected to live in the Dublin region by 2040 and the demand that this growing population and higher-density housing will create for a reliable, high-capacity, sustainable public transport system that helps Ireland meet its climate change commitments.
- 9.3.4. The EIAR notes the challenges facing Dublin, and Ireland as a whole, including unsustainable development, GHG emissions, air quality, noise and traffic congestion.
- 9.3.5. Ireland is noted as having the second highest carbon intensity per capita in the EU in 2019, with the transport sector being the 2nd highest contributor to Ireland's GHG emissions after agriculture. The EIAR notes the legally binding obligations introduced under the Climate Act including national emissions, sectoral emissions and carbon budgeting. With regard to air quality and associated health impacts, the contributions made by road transport to NO_x and particulate matter emissions is noted, as are Ireland's commitments to reduce emissions for these and other air pollutants under the National Emissions Reduction Commitments (NEC) Directive (2016/2284/EU). Transport is also noted to be the most widespread noise source in Ireland by the EPA, and the effects of excessive noise on human health and wellbeing, as recognised by the WHO, are noted.
- 9.3.6. In terms of traffic congestion, Dublin ranked as the 35th most congested city in the world in 2021 and the EIAR states that a single Dublin commuter will, on average, spend over 213 hours a year stuck in traffic. The cost of this congestion and lost time is estimated at over €2 billion per annum by 2033 and the other consequences of congestion on access to viable employment, education, healthcare, or other essential needs are noted. The societal and economic inefficiencies generated by an inefficient transportation system is also noted, with peak spreading of journeys

outside of natural peak times leading to increased childcare demands, reduced disposable income, stress and reduced quality of life.

9.3.7. The applicant contends that MetroLink is critical to the overall transport strategy for Dublin for the following reasons:

- It is the only public transport option to meet the future predicted passenger number requirements for the Swords to Dublin City Centre corridor.
- It provides capacity far in excess of any other public transport option and will facilitate compact sustainable growth along the alignment to a level not possible with other transport options.
- It will provide a frequent and reliable public transport alternative to the private car and achieve significant modal shift to public transport along the corridor.
- The predicted reduction in private car use along the corridor will reduce emissions to air and noise.
- It will provide a key transport link, enhancing connectivity through Dublin City and Dublin Airport.
- It will generate agglomeration impact benefits for the economy due to improved productivity and reduced costs for businesses.
- It will allow enhanced access for passengers in the surrounding communities and in rural areas further afield to access childcare, educational and medical facilities.

9.3.8. With regard to the capacity of the MetroLink system, I note the MetroLink Project Director's submission at the opening of the oral hearing (Ref. OH2), which compares the MetroLink maximum capacity of 20,000 pphpd to the Luas Green Line's capacity of 9,000 pphpd. MetroLink is estimated to carry up to 53 million passengers per annum when operational, with a 25 minute journey time from Swords to the city.

9.3.9. While a myriad of issues and concerns were raised in the written and oral submissions received by the Board, I note that there was reasonably widespread support for the principle of a metro system in Dublin in the submissions. The applicant's analysis, contained in their response to the initial written submissions, was that 58% of the submissions expressed support for the overall scheme, but

objected to specific elements. This was replicated at the oral hearing, with many observers beginning their submission by expressing support for a metro development in principle, before going on to raise the issues that were of concern to them. Other submissions were fully supportive of the development, as proposed.

9.3.10. Conversely, a number of submissions considered that a metro was not required and that other forms of public transport would be more effective in terms of addressing Dublin's transport issues, such as additional Luas and DART lines, bus services or autonomous vehicles. These alternatives are addressed in Section 11.4 below.

9.3.11. The potential cost of the proposed development was also raised by a number of parties, in terms of the overall cost of the project, the effect this expenditure will have on the delivery of other transport projects, and in particular the cost of the St Stephen's Green to Charlemont section, which numerous submissions argue is a wasteful duplication of the Luas Green Line. These cost issues are addressed in Section 9.26 below.

9.3.12. I am satisfied that the applicant has adequately demonstrated the need for the proposed development, with reference to key challenges facing Dublin and Ireland both currently and into the future with projected population increases and economic growth. I am further satisfied that the need for the project has been established with reference to policy, transport issues, climate change, compact growth and sustainable development.

9.3.13. While the general need for the proposed development has been adequately demonstrated, issues arising with regard to alternatives, various aspects of the design, planning and environmental impacts and land acquisition issues will be addressed throughout this report.

9.4. General Scheme Design

9.4.1. The area-based planning assessment section of this report will address design issues for individual stations and other key elements of the proposed development. In this section, I will comment on the general design approach and elements common to many or all locations in this section.

9.4.2. General Architectural Approach

- 9.4.3. It is clear from the submitted drawings and photomontages that a coherent and consistent approach has been taken to the alignment-wide design of structures, with the use of a common design language which I consider to be of benefit in developing a unique character for the metro line and in making MetroLink stations immediately obvious to the general public.
- 9.4.4. Chapter 4 of the EIAR and the 'Materials Palette' document submitted with the application sets out the design principles and vision for the project and details the design rationale for common elements of the project in terms of materials and form. A useful element of the Materials Palette document is the illustration of benchmarks/precedents for these components in other modern metro systems, identifying the successful and less successful elements of those designs and detailing how the MetroLink proposal seeks to learn from these and apply them in an Irish context. The document also addresses landscaping principles for each station and the Estuary P&R Facility.
- 9.4.5. I would also refer the Board to the detailed presentation given by the applicant's architects at the oral hearing on 13th March 2024 (Ref. OH236), which sets out the design intent and the design development for the various common components and station integration.
- 9.4.6. Deep Station Entrances
- 9.4.7. The presence of deep MetroLink stations (i.e. those in the tunnelled sections) will be identifiable through the relatively standard canopy design found at the majority of station entrances, with the exception of Dublin Airport and Glasnevin where a larger entrance structure is proposed, Griffith Park Station where the entrance is within a retaining wall and O'Connell Street Station where the entrance is within an existing building whose façade will be retained. In the absence of a monopole 'Metro' sign, such as found in many other metro systems, the canopies will be the defining aboveground feature of the proposed MetroLink.
- 9.4.8. I note that one entrance canopy is proposed to each underground station, with the exceptions of Northwood, O'Connell Street, Tara and Charlemont which will each have two entrances.
- 9.4.9. The canopies comprise rectangular structures with a monopitch roof and extensive glazing to the sides and rear elevations. The front elevations are entirely open and

the structures are framed in relatively deep profile grey metal cladding with timber soffits.

- 9.4.10. I note that the provision of a canopy structure over metro station entrances is used in some metro systems around the world, but not in many others. While the requirement could be said to be related to Ireland's climate, it is notable that other modern metro systems in cities such as Copenhagen which has a similar climate to Dublin, do not generally utilise entrance canopies. However, an important distinction in this case is that escalator access from street level is proposed at all underground stations, unlike Copenhagen for example, where stairs are utilised at street level, with escalators at concourse level. I consider that the provision of escalator access from street level is a positive aspect of the design from an accessibility perspective, and as well as the canopies' primary placemaking purpose of 'announcing' metro stations, it is reasonable that the applicant would seek to provide weather protection to this electrical equipment. Other reasons for the proposed canopies include passenger comfort and that they allow the stations to be locked at street level during the night-time period when the MetroLink is not operating, with a view to avoiding the potential for anti-social behaviour. Again, I consider this to be reasonable.
- 9.4.11. The size of the canopies is notable and is ultimately related to the opening in the ground level slab that it seeks to cover. It can be seen from the sections drawings that the openings are somewhat larger than they need to be to provide adequate headroom on escalators/stairs, resulting in enlarged canopies. However, the benefit of the larger openings is the increased natural light it brings into underground areas and the greater sense of openness and light which will improve the amenity of the service. It is also of note that a reduced size canopy is proposed at the northern entrance to Charlemont Station, due to the space constraints in that location.
- 9.4.12. I note that the canopy design was developed following engagement with DCC Architects, with various designs and sizes of canopies considered. It was ultimately agreed to keep them smaller and this design development process is outlined in the abovementioned oral hearing document OH236.
- 9.4.13. The design of the canopies is generally uniform and while this has benefits in terms of creating a unique and consistent identity for the metro, it is less successful in areas that are more sensitive to visual and cultural heritage impacts, such as at

Mater Station and St Stephen's Green Station. The canopy design is somewhat overbearing in these areas, due to its deep metal frame and the dark colouring proposed.

- 9.4.14. I note the additional commitment made at the oral hearing in relation to Mater Station, that "signage will not be affixed to the glass façade on the canopy at Mater Station" (see final SAEC, Ref. OH376). Given the expansive glazing on the sides of all of the canopy structures, I consider that this should apply to all stations, to avoid the accrual of incoherent and visually intrusive signage, advertising etc. at station entrances.
- 9.4.15. The individual stations will be addressed in the relevant sections of this report, but on balance, I consider the general approach to the proposed canopies to be acceptable.
- 9.4.16. Passenger Lifts
- 9.4.17. The proposed passenger lifts stand apart from the canopy entrances and comprise relatively simple and functional structures with similar grey metal cladding to the canopies and glazed elements. The design is stated to have been developed to ensure reliability and to stand up to wear and tear, including through the use of solid corner panels and upstands. I consider the design of the passenger lifts to be generally acceptable and of sufficiently high quality.
- 9.4.18. A number of observers queried the proposed lift provision with Dublin Commuter Coalition, for example, noted the recurring issues with lifts on the DART and Luas networks being out of order and the consequences that this has for accessibility. They stated that it is redundant to have multiple lifts from Concourse to Platform level if there is a single lift from Street level to Concourse level.
- 9.4.19. Keeping lifts in operation seems to be a problematic and endemic issue in the Irish public transport system. It is not clear to me if the issues are primarily related to anti-social behaviour or the specification and maintenance regime of the lifts. Single lift access from street level is a common feature in metro systems around Europe, and there is no fundamental reason why this should be problematic in an Irish context.
- 9.4.20. I note that the abovementioned issues with lifts are referenced in the GDATS, with Measure INT20 'Accessible Infrastructure' stating that:

“During the period of the Transport Strategy, the NTA will ensure that public transport infrastructure and facilities in the GDA are made accessible for all users and that additional resources for the maintenance and repair of lifts are made available.”

- 9.4.21. As noted above, escalators are proposed from street level, rather than just stairs. While this will not fully resolve accessibility issues in the event that a lift is out of order, it may be beneficial for people with minor mobility issues or the elderly.
- 9.4.22. While additional lifts could be provided at each underground station, this would be an unduly onerous and unnecessary requirement and would create additional visual clutter. As noted above, there are separate fire brigade lifts proposed at underground stations and the applicant has undertaken to make these available for public use in the event that the public lifts are out of service. I consider this to be a reasonable compromise that avoids the need for additional aboveground elements.
- 9.4.23. Skylights
- 9.4.24. A number of the underground stations (Dublin Airport, Ballymun, Collins Avenue, Mater and Tara) incorporate a series of raised skylights. These slope in both directions and range in height from 1.88m-1.58m at Collins Ave to the smallest of 1.78m-1.11m at Tara. At Mater Station, the applicant proposed a reduction in their height at the oral hearing, to between 1.1m-0.8m above ground level in order to reduce their visual impact within the Four Masters Park.
- 9.4.25. The Final Schedule of Additional Environmental Commitments (Ref. OH376) submitted to the oral hearing on 27th March 2024 states that the design intent for the skylights is that they will be “low lying structures that will not create visual segregation within the public realm”. The Materials Palette document submitted with the application discusses the design of these elements and I note that, in addition to their primary function as a means of allowing natural light into the underground areas, they are intended to be “highly interactive elements encourage play and selected views in and out of the gallery below”. Examples of similar skylights in other cities are shown, demonstrating how they create visual interest and views into the station below. It is unclear, therefore, why the skylights are proposed to be so tall, i.e. taller than the average human. This is not discussed within the application

documents, but I am satisfied that there is no security or anti-social behaviour requirement, in view of the fact they are to be interactive and encourage play.

- 9.4.26. The height and close spacing of the skylights is such that, in some areas (e.g. Tara Station), they contribute to the visual impact and sense of visual clutter of the development.
- 9.4.27. As addressed in the LVIA section of this report, I therefore recommend that a condition be attached requiring that underground station skylights shall have a maximum height of 1.5m above ground level (noting that they slope in both directions) and that revised designs shall be agreed with Dublin City Council and Fingal County Council.
- 9.4.28. Ancillary Elements
- 9.4.29. A number of observers, including Dublin City Council in their original submission and then-MEP Ciaran Cuffe raised the issue of visual clutter, noting the experience with previous Luas projects which it is contended resulted in haphazard placement of unplanned electrical cabinets across the city, such as the so-called 'Luas Henge' at College Green as well as excessive signage.
- 9.4.30. The applicant's response was generally that the station layouts had been carefully designed to minimise clutter with aboveground features consolidated and integrated where possible.
- 9.4.31. The issue of visual clutter, excessive signage etc. is a perennial issue in Ireland's urban environment and seems to have various drivers, such as the prescriptive Traffic Signs Manual, health and safety considerations, a lack of aesthetic consideration often evident in engineering-led projects and, perhaps, Ireland's litigious culture.
- 9.4.32. While it is clear that the proposed MetroLink project has had strong architectural and landscape architectural input into its aboveground design, it can be seen from the street level layout drawings, there are a considerable number of surface elements associated with metro stations beyond the entrance canopy. These include multiple ventilation and access grilles and hatches, passenger lifts, separate Dublin Fire Brigade lifts and various other elements. Clearly the ventilation grilles and passenger

lifts are necessary with regard to the operation and accessibility of the metro, while the need for separate DFB lifts is addressed below.

- 9.4.33. In my opinion the most notable contributor to the sense of visual clutter at the stations is the proposed installation of large numbers of Hostile Vehicle Mitigation (HVM) bollards around the station entrances. The origin and need for these bollards was queried by the Inspectors at the oral hearing and the applicant subsequently gave a presentation on this matter on 20th March 2024 (Ref. OH258).
- 9.4.34. The applicant clarified that HVM refers to the measures and techniques used to prevent or mitigate the damage potentially caused by vehicles that are used as weapons in hostile or criminal acts and that the design follows TII's engagement with An Garda Síochána. The station entrances are protected by creating a secure perimeter through the use of structural elements to form physical obstructions. The design is stated to be based on international best practice on such security matters. The HVM line is established by both the bollards, as well as planters, benches and existing trees of appropriate size, with a maximum gap between obstructions of 1.2m.
- 9.4.35. The proposed bollards are shown differently in various visualisations and drawings submitted by the applicant, including internally illuminated bollards and chunky stainless steel bollards with high visibility marking. At St Stephen's Green, the applicant proposed a modification at the oral hearing, to provide granite-facing to the bollards to match the existing bollards which surround the park. At Mater Station, they undertook to consult with DCC and to follow a contextual integration approach.
- 9.4.36. While the proposed bollards are somewhat unsightly, due to their number and their size, they do perform an important and unfortunately necessary security function protecting pedestrians and the metro infrastructure, and as such they are required to be of sufficient physical robustness to withstand vehicle impacts. While alternatives to bollards, such as additional structural planters and benches or changes in level could perform the same role in a more visually appealing way, I consider that these would impede pedestrian flows to a greater degree and would present increased navigation obstacles for people with visual or mobility impairments. At St Stephen's Green I consider that the proposed utilisation of granite clad bollards to match the existing granite bollards is a welcome additional commitment in this visually and

historically sensitive location. In relation to the other stations, and the Mater Station in particular, I consider that the application should agree the final design and positioning of the HVM measures with the relevant local authority. Subject to this, I consider the HVM bollards to be acceptable.

9.4.37. Dublin Fire Brigade Lifts

9.4.38. The Board will note that the typical station layout includes both passenger lifts and separate Dublin Fire Brigade lifts. Noting that many other modern metro systems in Europe do not provide separate standalone firefighting lifts¹² and that the duplication of lifts contributes to the sense of visual clutter around the proposed MetroLink stations, the applicant was asked to address the need for separate Fire Brigade lifts at the oral hearing.

9.4.39. The applicant's response, contained in the submission by Sandeep Upadhyia on the first day of the oral hearing (Ref. OH38), was that the problems associated with reaching a fire merit the provision of additional facilities to avoid delay and to provide a sufficiently secure operating base for the fire service, but ultimately their inclusion is a requirement of the Building Regulations Technical Guidance Document B for Fire Safety 2006, which states that all buildings with a basement more than 10m below ground should be provided with firefighting shafts containing firefighting lifts¹³. Similar requirements are also contained in British Standards BS 9999 and BS 9992, both relating to fire safety. Mr Upadhyia noted that similar intervention lift provision is made in the recently constructed Elizabeth line on the London Underground.

9.4.40. Ultimately, as I have addressed in more detail in Section 9.16, the provision of appropriate fire safety measures is a matter for the applicant to address with Dublin Fire Brigade and the Commission for Railway Regulation, not the Board. For the purposes of this Railway Order application, I consider that the applicant has provided adequate justification for the proposed provision of separate DFB lifts, and I will turn, therefore, to their design.

9.4.41. The DFB lifts have been designed in a different manner to the public lifts and appear as relatively featureless brick boxes, with the clear appearance of a service

¹² I understand that in such cases the Fire Brigade has the ability to over-ride and take control of the passenger lifts in an emergency.

¹³ I note that this document has since been replaced by the Building Regulations Technical Guidance Document B 2024, which contains the same requirement.

entrance, rather than a public entrance. This is generally an appropriate design approach in my opinion, which serves to visually relegate these structures to a subservient background status and differentiate them from the public lifts, which will assist in minimising confusion for passengers. The exception to this is the Mater Station, where I consider that revisions to the design should be required by way of condition (see Section 10.8).

- 9.4.42. As noted above, a number of submissions raised accessibility related issues regarding access to the stations if the passenger lift is out of operation and I therefore note the applicant's commitment in their response to the submissions to make the DFB lifts available for public use in this scenario, which is a welcome commitment to ensuring accessibility and making efficient use of the available facilities.
- 9.4.43. In conclusion, while the DFB lifts do contribute to the sense of visual clutter around the MetroLink stations, I am satisfied that the need for dedicated DFB lifts has been adequately justified and that their design, which is intentionally nondescript, is appropriate to their function and subservient status.
- 9.4.44. Internal Station Design
- 9.4.45. In terms of the internal design of the deep stations, they are well considered from an architectural perspective, with a logical layout for ease of wayfinding, clean, spacious and light detailing and forms and, in a number of cases, the use of skylights will bring natural daylight deep into the stations. Another notable aspect is the use of inclined station side walls, which increase the sense of openness in underground areas and which allows for increased service rooms at upper levels, reducing the overall size of the station boxes. The use of platform screen doors and barrier-free entry from street level to platform level will assist in creating an orderly use and a high level of amenity, compared to older style metro systems.
- 9.4.46. As a result of the proposed single bore tunnel, the underground stations will feature separate side platforms rather than the central island platform generally found on twin bore metro systems. While this has operational disadvantages in terms of circulation (i.e. for people wishing to change direction or where a train is being taken out of service) and due to the inability to make use of the full island platform width when passenger flows are primarily in one direction (e.g. if a major event is on in the

city centre) it is a direct consequence of the single bore tunnel decision. Having addressed the single bore Vs double bore issue in Section 11.4, where I conclude that the applicant has provided adequate justification for their chosen option, I consider that the proposed station arrangement will still provide a high quality public transport experience.

9.4.47. It can be seen from the structures drawings that the public will have access to roughly half of the underground station boxes, with the remainder taken up by back-of-house facilities, including the extensive mechanical and electrical plant requirements, offices, stores and various ancillary functions. It is proposed to provide toilet facilities for passengers in the main interchange stations only and I have addressed this issue in Section 9.26 where I conclude that the applicant's proposals, as supplemented by the additional commitments made at the oral hearing, are acceptable.

9.4.48. In conclusion, I consider the internal station design to be acceptable.

9.4.49. Drainage Design

9.4.50. I have primarily addressed the proposed drainage design in the hydrology section of this report. The Board will note the proposed extensive utilisation of SuDS measures along the entire alignment, with a catchment-based drainage design that seeks to minimise water transfer across natural catchments. The SuDS measures include various features, including ponds, swales, attenuation storage, green roofs at certain stations and in-line storage in oversized drainage channels. A total of 8 No. discharge points are proposed to watercourses in the operational phase. This discharge will be managed at greenfield run-off rates, through the use of flow control devices. The potential for contamination is inherently very low given the electrified nature of the development but I note the proposed use of hydrocarbon interceptors, given potential risks at the P&R Facility and the Dardistown Depot. Provision is also made for the collection and segregation of firewater in the event of a fire event, rather than allowing it to be discharged to watercourses.

9.4.51. Toilet facilities in the stations, which includes public toilets in interchange stations, and at other MetroLink facilities will be connected to the public sewerage system.

9.4.52. I note also, the agreements with DCC and FCC submitted at the oral hearing (Ref. OH76 and OH147) which include various 'conditions' relating to drainage to be

agreed with the local authorities. These generally relate to fine-grained detailed design issues and are most appropriately dealt with through the auspices of these agreements which the applicant has requested be incorporated into the Railway Order. Uisce Éireann (UÉ) made a detailed initial submission raising various issues, however a letter from the UÉ CEO to the TII CEO was subsequently submitted at the oral hearing (Ref. OH89) stating that they are confident that agreement can be reached on all of the issues that arise from that submissions and all other issues that they need to reach agreement on. As detailed in the hydrology section of this report, I recommend that a standard condition be attached, requiring agreement with UÉ, should the Board be minded to grant the Railway Order.

9.4.53. Finally, as addressed, in the hydrology section of this report, the MetroLink project passes through a number of areas where there are existing issues with pluvial flooding due to undersized drains and extensive hardstanding areas. The applicant states that it is beyond the scope of the MetroLink project to resolve these issues. I consider this position to be reasonable, noting that the proposed drainage system provides for the attenuation of water from all new hardstanding areas created by the MetroLink project, thus ensuring no worsening of any existing pluvial flooding issues.

9.4.54. In conclusion, I am satisfied that a high level of sustainable drainage has been designed into the scheme, and that it is well co-ordinated with the landscaping and architectural design to produce a high quality approach to the sustainable management of surface water run-off.

9.4.55. Accessibility Issues

9.4.56. Accessibility concerns were also raised with regard to the plaza areas surrounding stations and the potential for conflict between cyclists and the visually impaired, and general wayfinding and accessibility concerns. See, for example, the submissions by the National Disability Authority (S198) and Voice of Vision Impairment (S311).

9.4.57. Dr Robbie Sinnott of Voice of Vision Impairment made a submission at the oral hearing on 20th March 2024 regarding accessibility issues with the MetroLink proposals and legal requirements and obligations on TII in relation to this matter. He also noted accessibility concerns regarding the plaza areas around stations, stating that raised pedestrian crossings were anathema to VVI and that matters such as the hostile vehicle bollards, dockless bike sharing and the situating of entrances within a

larger plaza would present orientation difficulties for the visually impaired. Internally within the stations, he noted issues such as the underside of escalators not being fenced off and that the multi-level underground stations would create navigation difficulties. He also sought that taxi drop-off be provided at all stations.

9.4.58. Neil Cowie, on behalf of the applicant, outlined various accessibility features, including tactile paving, signalised crossings, audible and visual messaging within stations, platform screen doors, level access, assistance help points, ticket validation at wheelchair height etc.

9.4.59. There was further discussion between Dr Sinnott and representatives of TII regarding accessibility issues, consultation that had occurred prior to making the RO application and the differing roles of disability service providers and Disabled Persons Organisations. Subsequent to Dr Sinnott's submission, the applicant added the following additional commitment to the final SAEC (Ref. OH376):

- TII will establish a Working Group to consult with disability groups, through the User Group forum and through bi-lateral meetings with Disabled Persons Organisations (DPOs) to ensure that the construction and operational phases of the scheme are disability-proofed and that a universal design approach continues to be incorporated into the design of the scheme.

9.4.60. This is a potentially complex area, as what assists one disability group may cause issues for another group. An example of this is raised tables for pedestrians across junctions. These are of assistance to wheelchair users (and pedestrians generally), but as noted above VVI contend that they create difficulties for visually impaired people, due to the trip/fall risk at the edge of the table.

9.4.61. I consider the principle of high quality landscaped plazas at station entrances to be a particularly positive aspect of the proposed development, which will both assist in management of pedestrian circulation during busy periods and enhance the locality around the station. I am satisfied that concerns regarding wayfinding around and within stations for different groups can be addressed in various ways such as through the use of tactile paving, signage and other methods.

9.4.62. I consider TII's proposed Working Group approach and engagement with a range of DPOs to be a suitable means of seeking to balance the needs of different groups and to deliver a universally accessible metro for all passengers.

9.4.63. I note that the agreements between TII and the two local authorities, which were submitted at the oral hearing (Ref. OH76 and OH147) include items relevant to this issue, that TII has agreed to agree with the relevant local authority:

- **FCC Agreement (OH147):** 'Condition' 14: At the detail design stage and prior to commencement of development, details of materials, finishes, fixed furniture, bicycle parking, lighting, wayfinding, paving and any ancillary matters relative to the proposed public spaces in front and around the proposed Stations to be constructed pursuant to the Railway Order shall be provided for written agreement of Fingal County Council.
- **DCC Agreement (OH76):**
 - 'Condition' 12, Item 8: Pedestrian and cyclist connectivity to and within stations shall be improved as part of the project where possible. Cycle parking shall be provided at all stations in secure, well-lit and convenient locations. Details to be agreed with Dublin City Council at detailed design stage. Principles of universal design shall be adhered to, and accessibility requirements shall be met throughout the project.
 - 'Condition' 24, Item 3: Universal Design Principles shall be applied to all aspects of MetroLink with access for all passengers treated with equal importance. Passenger lifts should be given equal priority to entrance canopies and integrated into the public realm accordingly in line with Universal Design Principles and equal access for all.

9.4.64. Subject to incorporation of the agreements into the Thirteenth Schedule of the RO and a condition requiring implementation of the SAEC commitments, I do not consider that a separate condition is required regarding this matter.

9.5. The Board's Climate Duties

9.5.1. The Board will be aware of its duties under section 15 of the Climate Action and Low Carbon Development Act 2015, as amended ('the Climate Act') to perform its functions, in so far as practicable, in a manner consistent with:

- (a) the most recent approved climate action plan,
- (b) the most recent approved national long term climate action strategy,

- (c) the most recent approved national adaptation framework and approved sectoral adaptation plans,
- (d) the furtherance of the national climate objective, and
- (e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.

9.5.2. The abovementioned ‘national climate objective’ is defined in the Climate Act as follows:

“The State shall, so as to reduce the extent of further global warming, pursue and achieve, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy.”

9.5.3. The applicant’s position with regard to section 15 of the Climate Act is set out in Dr Avril Challoner’s submission to the oral hearing (Ref. OH30) and in the legal submission by Declan McGrath SC (Ref. OH39). Dr Challoner stated that the EIAR climate chapter, together with the updated assessment presented at the oral hearing, demonstrates how the project is consistent with section 15 of the Act. She contended that the GHG assessment considers emissions and compares them to relevant carbon budgets, targets and policy, thus covering subsections (a), (b), and (d) of section 15, while the climate change vulnerability assessment, which considers the project’s vulnerability to climate change and identifies adaptation measures to increase resilience is contended to cover subsections (c) and (e) of section 15. In his legal submission, Mr McGrath stated that “it is clear that, by approving the Railway Order, the Board would be performing its functions in a manner which is consistent with the 2023 CAP, the 2024 CAP and the other specified climate strategies, plans and objectives”.

9.5.4. As outlined in Section 9.2 above, I consider that the proposed development is supported by and consistent with all relevant climate policy, including the CAP 2025, CAP 2024, the National Adaptation Framework 2024, Sectoral Adaptation Plan for Transport and the Long-Term Strategy on GHGs. The proposed development will comprise an electrified high capacity, high frequency segregated public transport rail corridor between Swords, Dublin Airport and the City Centre. As outlined elsewhere in this report I consider that it will support and encourage a modal shift from the

private car to public transport with a consequent reduction in GHG emissions for the transport sector and will assist in facilitating more sustainable patterns of land use and development along the alignment.

- 9.5.5. Also, as per my assessment of climate impacts in the EIA section of this report (refer to Section 11.15 below), while the construction of the proposed development will result in large carbon emissions due to its extent and scale and the embodied carbon associated with concrete and steel etc., I consider that the proposed development would not have a significant adverse impact on climate when considered on a whole-life basis (80+ years operational life), due to its positive impacts in the operational phase as a result of encouraging a modal shift to sustainable transport modes and having regard to the commitments to use renewable energy, low carbon concrete and other mitigating factors. Notwithstanding the construction phase carbon, I am satisfied that the proposed development will assist Ireland's trajectory towards net zero.
- 9.5.6. Therefore, having considered the matters set out in section 15 of the Climate Act, I consider that a decision by the Board to grant the Railway Order would be consistent with its duties under the Climate Act and would assist the State in meeting its national climate objective.
- 9.5.7. In coming to this conclusion, I have had regard to the most recent approved CAP, long-term climate action strategy, national adaptation framework and sectoral adaptation plan that were in place at the time of completing this report.

9.6. Public Consultation

- 9.6.1. General Approach
- 9.6.2. Many of the written and oral submissions contended that there was inadequate public consultation undertaken, or that the engagement with stakeholders, including local residents and businesses was perfunctory, inadequate or that issues raised during consultation were not addressed satisfactorily.
- 9.6.3. Chapter 8 of the EIAR details the consultation and engagement process undertaken by the applicant and details are also provided in Section 5.3 of the applicant's Planning Report. I note that the consultation process throughout the preparation of the application included:

- Pre-application consultation (November 2018 – October 2021): 9 No. meetings with the Board.
- Emerging Preferred Route (EPR) consultation (March 2018 – May 2018): 7,591 submissions received.
- Preferred Route (PR) consultation (March 2019 – May 2019): 2,132 submissions received.
- EIA Scoping consultation (May 2019): 22 submissions received from stakeholders.
- Albert College Park consultation (February – March 2020): 195 submissions received.

9.6.4. In addition to these public consultation periods, the following stakeholder engagement is also detailed in the application:

- 1,331 meetings¹⁴ with more than 107 organisations over a four-year period from 2018.
- Regular meetings with FCC and DCC.
- Ongoing landowner and property owner engagement.
- Appointment of Independent Engineering Expert (RINA), to provide advice to affected stakeholder groups.
- Development of Property Owner Protection Scheme.

9.6.5. The various appendices to Chapter 8 provide further information regarding the consultation process, public open days, communications and reports on the submissions made during the consultation periods. In addition to the required Railway Order application website (www.metrolinkro.ie), I note that a dedicated website (www.metrolink.ie) has been in operation for some time and has clearly been regularly updated.

9.6.6. This project has had a very long gestation period and – as detailed above – the design development has been accompanied by numerous rounds of consultations

¹⁴ This included 121 meetings with FCC, 88 with DCC, 49 with DAA and 249 with potentially impacted land and property owners.

and meetings over many years. I consider that the applicant has provided sufficient evidence that they have engaged in comprehensive, detailed and meaningful consultation and engagement with the public and other stakeholders, including prescribed bodies, local authorities, local businesses and others. In particular, I note that substantial changes were made to the MetroLink proposal between the EPR stage and the PR stage, on foot of public and stakeholder consultation, including aspects of the alignment, station locations and other elements of the design. This strongly indicates that the consultation undertaken by the applicant was meaningful and not a perfunctory or box-ticking exercise.

9.6.7. I also note that the Railway Order application process included a number of opportunities for written and oral submissions. This included an extended initial period for the making of written submissions (due to the omission of certain documents), oral submissions at the oral hearing held over six weeks, where questioning of the applicant was also facilitated, a further opportunity to make written submissions in relation to the information submitted by TII at the oral hearing and in relation to the updated RO Book of Reference and finally an opportunity for observers to comment on the applicant's response to the Wild Ireland Defence CLG oral hearing submission and the updated cumulative impact assessment etc. I am satisfied that the statutory consenting process has provided many opportunities for full participation.

9.6.8. Albert College Intervention Shaft

9.6.9. The proposed Albert College Intervention Shaft was introduced at Preferred Route stage as a result of the change from twin bore to single bore tunnel and the relocation of the station originally proposed on Na Fianna's GAA grounds on St Mobhi Road. It was the subject of a separate focussed public consultation exercise in 2020. A number of written and oral submissions, such as GADRA (S99) and Hampstead Residents CLG (S111), raised concerns regarding this consultation, contending that it was an inadequate box-ticking exercise, focused on the aesthetics of the shaft and construction phase park amenity, rather than other alternative options. Hampstead Residents CLG, in their initial written submission, include a copy of TII's consultation leaflet and the subsequent results, with a pie chart claiming that 62% of residents were positive towards the shaft proposal at Albert College Park.

The submission contends that this misrepresents the views of local residents and is due to the format of the consultation leaflet.

- 9.6.10. Hampstead Residents CLG also raised these consultation issues at the oral hearing (Ref. OH61) and the applicant submitted a response document (Ref. OH148) on 4th March 2024. The applicant notes that the shaft was indicatively shown on page 61 of the Preferred Route Public Consultation Report as being located within the park. The applicant again noted that 195 No. submissions were made in relation to the shaft consultation and they restated the claim that 62% of responses were positive. The applicant provided a link to the survey results report, which includes examples of positive and negative comments as an appendix. The further submissions by GADRA (1FS25) and Hampstead Residents CLG (1FS27) reiterated the same issues and TII's response submission providing a similar response to that given at the oral hearing.
- 9.6.11. It is debatable whether anyone living close to the proposed Intervention Shaft would particularly welcome it being built in a public park near their house, given the potential for construction phase disruption and the temporary and permanent landtake within the park. However, 4,250 consultation brochures were distributed, and I find it reasonable that submissions would be made from people in the wider area who are positively disposed towards the shaft for the reason that it is required for the MetroLink project, which they may wish to see delivered.
- 9.6.12. Having identified a need to build a shaft in Albert College Park as part of their Preferred Route design development, TII sought the views of local residents on this feature of the development. There was no requirement for TII to ask the public if they wanted a shaft in Albert College Park or to provide a list of potential alternatives to the shaft as part of a consultation exercise. For this reason, I am satisfied that the consultation process with regard to the Intervention Shaft, while limited, was adequate.
- 9.6.13. I have addressed the substantive issue of the need, location and design of the Intervention Shaft in Section 10.5 below.
- 9.6.14. Ongoing Engagement During the RO Process
- 9.6.15. With reference to individual submissions made at the oral hearing, and a number of the further submissions made following the hearing, it is clear that the applicant has

held meetings with many observers prior to, during and following the oral hearing. As noted in Section 4.3 above, a considerable number of observers also informed the Board during the course of the oral hearing that their concerns had been addressed and that they now supported the project. Similarly, copies of agreements with public bodies such as DCC, FCC and OPW were submitted at the oral hearing. I consider that this proactive approach to engaging in discussion on matters of concern and seeking to resolve them reflects positively on the applicant's approach to the RO process for such a potentially impactful development.

9.6.16. While a substantial amount of public and stakeholder consultation has clearly taken place up to and during the RO process, I consider that the success of the construction phase, and the minimisation of disruption and negative impacts on sensitive receptors will be dependent on continuous and ongoing public engagement and the implementation of effective and meaningful communications with local residents, businesses and other stakeholders. This issue is addressed in Section 9.15 below.

9.6.17. Conclusion on Consultation

9.6.18. In conclusion, I am satisfied that the proposed development has been the subject of thorough and meaningful public and stakeholder consultation and engagement. Given the scale, extent and nature of the proposed development, the extent of land/property acquisition proposed and the prolonged construction period and associated disruption, it is understandable that some observers consider that their concerns were not listened to or taken on board in the final design proposal. The planning and environmental issues arising from these submissions will be addressed throughout this report, but I am satisfied that the applicant has adequately discharged their responsibilities with regard to consultation and that this, combined with the provision for written submissions and participation in an oral hearing by the Board, is in accordance with all statutory obligations and the requirements of the Aarhus Convention.

9.7. MetroLink Extension / Realignment to South West Dublin

9.7.1. A considerable number of written and oral submissions from individuals, residents' groups and other groups contend that south west Dublin is underserved by public

transport and that the MetroLink project should either be realigned to run in a south west direction, or that it should terminate at a city centre location and alignment that would facilitate a future extension to south west Dublin. A related issue, made in a large number of submissions, is that Charlemont is not an appropriate terminus and that it will prejudice future extensions. The Charlemont issue is considered separately in Section 10.12.

- 9.7.2. Many cogent arguments were made in relation to this matter, particularly with reference to the need for improved public transport options for south west Dublin to meet climate change obligations, to promote modal shift and sustainable transport modes, to improve journey times and quality of life. Refer, for example, to the submissions made by St Anne's Residents Association (S284), Butterfield District Residents' Association (S31), Terenure West Residents Association (S289), WORK Residents Association (S316), Knocklyon Network CLG (S163), Lower Kimmage Road Residents Association (S170), Rethink MetroLink (S264) and Orwell Park (Templeogue) Residents Association (S241), among others.
- 9.7.3. In particular, I note the detailed submission made at the oral hearing on behalf of Metro South West Group by Professor Austin Smyth (Transport Analysis & Advocacy Ltd.) on 25th March 2024 (Ref. OH305 and OH306). This submission critiqued the NTA's Metro to Knocklyon Feasibility Study 2021 and Professor Smyth outlined what he considered to be methodological issues, errors and faulty reasoning in the Study which he believes undermine its conclusions. He recommended that the NTA commission an updated Study taking the issues raised in his review into account and asked that the Board defer any decision on the MetroLink application until such time as the new Study has been undertaken.
- 9.7.4. In response, the applicant noted that the Feasibility Study is an NTA publication, not a TII publication. Having reviewed the submission, I consider that the issues raised by Professor Smyth would be more appropriately addressed to the NTA within the wider context of transport policy, rather than in this Railway Order application for the MetroLink project.
- 9.7.5. Ultimately, what is proposed in this application is not a city-wide metro system but rather 1 No. linear metro line. It is simply not possible for one metro line to serve all areas of the city, and as detailed in Sections 9.3, 9.2 and 11.4, respectively, I

consider that the need for the line, as proposed, has been adequately justified by the applicant, that the proposed route – including the termination point at Charlemont – is strongly supported by policy and that it has been the subject of extensive public and stakeholder consultation, design development and consideration of alternatives over many years.

- 9.7.6. This is not to discount the need for improved public transport in Dublin generally, and to the fast-growing and underserved south western suburbs, more particularly. I note in this regard that the Board has recently approved numerous BusConnects projects that will serve this area, including routes from the city centre to Tallaght/Clondalkin, Kimmage and Templeogue/Rathfarnham.
- 9.7.7. I note from my review of the GDATS, that one of the main issues arising from the public consultation for the Strategy was “Metro to South West Dublin”. Furthermore, I note that the GDATS identifies that a number of corridors in the GDA will, in the longer term, generate travel demand that are likely to require upgrading to light rail in the period after 2042. These potential post-2042 Luas lines include reconfiguration of both the Red and Green Luas lines to serve Clondalkin, Kimmage, Knocklyon and UCD.
- 9.7.8. Measure LRT2 of the GDATS also states that, in future reviews of the Strategy, the NTA will assess the requirement to provide additional Metro lines based on updated demand forecasts and land use changes, and that this will include previously considered options to extend MetroLink southwards towards UCD, or along the existing Luas Green Line, or towards South West Dublin.
- 9.7.9. I also note that the latest Programme for Government contains a commitment that the Government will “commission an independent feasibility study into continuing MetroLink from the city to South West Dublin”. It is of note that this feasibility study will relate to a continuation of MetroLink to the south west, rather than a rerouting to the south west.
- 9.7.10. I do not consider that the design of the proposed MetroLink would fundamentally prejudice any future expansion in a south western direction, albeit that some inner suburban areas already well-served by public transport. such as Portobello and possibly Lower Rathmines, would potentially be missed. Alternatively, I do not

consider that the proposed development would prejudice the delivery of a separate metro line to the south west, should that be proposed and granted in the future.

- 9.7.11. As I have mentioned with regard to Prof. Smyth's submission above, I consider that concerns raised by many individuals and residents groups regarding the existing shortfall in public transport provision in south west Dublin, as contended in the submissions, would be more appropriately addressed to the transport planning arena, in the context of the feasibility study committed to in the Programme for Government or in the next review of the GDATS, for example. The Board can either grant (with or without modifications) or refuse to grant the application before it. It is not an option for the Board to direct the realignment of MetroLink to serve south west Dublin.
- 9.7.12. In conclusion, having established that the principle of the proposed development is acceptable, that the route is strongly supported by relevant policy, and that the applicant has outlined the reasonable alternatives that they considered and the basis and justification for choosing the final alignment now proposed, I am satisfied that there is no reasonable basis for concluding that the proposed development before the Board would preclude a future metro line to south west Dublin, either by means of an extension to the line now proposed, or as a standalone line. Any such extension or standalone alignment would likely be subject to feasibility studies, design development, public consultation and a Railway Order application, if considered viable.

9.8. Alternatives

- 9.8.1. Many of the written and oral submissions raised the issues of alternatives. This included alternatives to MetroLink, alternative alignments, alternative station and intervention shaft locations, alternative station and tunnel typologies, alternative depot locations and alternative technologies.
- 9.8.2. I have addressed these issues in detail in Section 11.4 of this report.
- 9.8.3. One of the main alternatives raised by observers was an extension or diversion of MetroLink to serve south west Dublin, or the truncating of the alignment at St Stephen's Green or another city centre location to allow for such expansion. I have addressed this issue in Section 9.7 above.

9.8.4. In general, I am satisfied that the development, as proposed, has been the subject of a comprehensive and iterative design development process, which included extensive consideration of reasonable alternatives and a number of rounds of public and stakeholder consultation. I am satisfied that the applicant made appropriate use of Multi-Criteria Analysis for this process, and that they have clearly set out their rationale for the chosen options with regard to project objectives, constraints and the planning and environmental factors that influenced their choices.

9.9. General Station and Tunnel Construction Issues

9.9.1. Sections 9 and 10 of the Tyréns report relates to the applicant's approach to station and tunnel design and construction.

9.9.2. Surface and 'Shallow' Station Construction Methodology

9.9.3. With regard to the surface station at Estuary and the retained cut 'shallow' stations in areas AZ1 (Seatown, Swords Central, Fosterstown) and AZ3 (Dardistown), Tyréns advise that the construction methods proposed are common practice for metro construction. In the case of the retained cut sections of the alignment and the retained cut stations, they advise that the use of secant piles is a common method for such excavations due to their advantages in terms of: groundwater control; structural integrity, allowing them to serve a dual purpose of temporary excavation support and providing a permanent structural wall; minimisation of vibration compared to driven piles; and adaptability in constrained urban areas with versatile soil/rock conditions. They advise that similar secant pile wall construction was used at most of the locations for the comparable Copenhagen Metro.

9.9.4. The construction method for the shallow stations via 'top-down' construction involves constructing the secant pile retaining walls to support the surrounding soil and ground water, followed by the casting of the permanent roof slab connecting the retaining walls, with excavation proceeding beneath the roof slab in stages, with support systems added as needed. Tyréns note that the advantage of this method is the ability to utilise the station surface at ground level during construction and advise that it is commonly used in urban areas with limited space or significant surface constraints in order to minimise disruption while ensuring structural stability during

excavation and reducing noise and dust. It also keeps surface settlements due to horizontal deformations to a minimum.

- 9.9.5. Tyréns advise that the use of top-down construction and secant piles as retaining walls to construct the retained cut stations are considered suitable solutions.
- 9.9.6. Underground Station Construction Methodology
- 9.9.7. Tyréns note that the underground stations, which are located in the more sensitive, constrained urban areas, are the generators of much of the construction impacts.
- 9.9.8. The underground stations are generally similar in size and depth, with the exception of Glasnevin, due to its interchange with the existing Iarnród Éireann heavy rail network. The typical station is a simple box structure, formed by diaphragm retaining walls (D-walls) below a roof slab. Stations will be constructed using the ‘top-down’ construction method and some external more shallow structures will be constructed using secant piled walls.
- 9.9.9. The typical station box ‘top down’ construction entails the installation of D-walls around the perimeter of the box, grouting of the subsoil below the stations to control groundwater ingress, excavation to the underside of the roof slab and the casting of the roof slab connecting to the D-walls. Excavation will then continue below the roof slab, with spoil removed through openings left in the slab and temporary props or permanent concrete intermediate slabs will be used to minimise the horizontal deformation of the D-walls and ground movement outside the station box. Depending on the advancement of the TBM tunnelling, there are two scenarios for the construction of the bottom of the station box. In some stations, the full excavation will occur and the base slab will be cast before the TBM arrives (known as ‘station first’), whereas in other stations, the TBM will be driven through the station before final excavation and casting of base slab (known as ‘TBM first’). Following base slab construction, the internal concrete and civil works and track bed will be installed, followed by architectural finishes and mechanical and electrical fit-out and commissioning.
- 9.9.10. Tyréns note the benefits of the ‘top down’ construction method, in terms of reduced dust dispersion due to excavation occurring beneath the installed top slab and reduced noise due to the top slab acting as a barrier. They advise that this construction methodology is particularly beneficial in densely populated urban

environments and that it also minimises traffic disruptions and enables a more efficient construction process, reducing the environmental footprint of the project. Conversely, however, they advise that it is a slower construction method compared to an open excavation pit, i.e. 'bottom up' construction.

- 9.9.11. With regard to the abovementioned 'TBM first' and 'station first' construction scenarios, Tyréns advise that both methods are established engineering practice in metro construction. The 'TBM first' scenario is more complicated, as it requires the constructed tunnel lining within the station box to be safely dismantled and Tyréns questioned the applicant at the oral hearing regarding how would be achieved. They consider that the applicant's proposed approach (Ref. OH120) is normal practice for such a situation.
- 9.9.12. They note the applicant's proposal to supply the TBM from the Northwood Portal and to remove the tunnel spoil via the Northwood Portal with no tunnel supply or tunnel spoil removal from the intermediate stations. They advise that this is a standard approach and that supply through any of the intermediate stations should not be carried out.
- 9.9.13. Two of the most challenging stations to construct and which were the subject of a considerable number of submissions, are Charlemont and Glasnevin Stations. I refer to the hydrogeology, soils and geology and settlement and property damage sections of this report, where I address the issues arising and Tyréns advice and recommended conditions. In particular, this includes conditions to ensure that there is no groundwater drawdown outside the station boxes outside of normal seasonal variation, as committed to by the applicant.
- 9.9.14. Tyréns consider that the applicant has responded to the settlement, building risk and groundwater issues at these locations and advise, with the additional conditions that they recommend regarding groundwater, settlement, building risk and monitoring, that the proposals are satisfactory and the risks to the surrounding properties are properly managed.
- 9.9.15. Tyréns consider that the general approach to the underground station construction is acceptable and that a robust construction sequence has been proposed with deep diaphragm walls and a 'top down' methodology which reduces settlement. Noting the proposed design and build (D&B) contracting approach, Tyréns advise that the D&B

Contractor should be prevented from changing the construction sequence, such as changing from 'top down' to 'bottom up', in order to minimise settlement impacts. They also recommend that a condition be included to ensure that the D&B Contractor cannot attempt acceleration measures by omitting planned mitigation measures and commitments made by the applicant. I consider that these issues can be addressed with the Board's 'standard' conditions requiring that development be carried out and completed in accordance with the submitted plans and particulars and that all mitigation measures be implemented.

9.9.16. Use of Blasting for Excavation

9.9.17. With regard to the potential use of blasting for station excavation and for the smaller Sprayed Concrete Lining (SCL) tunnelling excavation, as described in Appendix A5.20 'Blasting Strategy' of the EIAR, Tyréns consider that this is unnecessary, having reviewed the rock strength data. They note that if the rock strengths were so high as to necessitate excavation by blasting, then the rock strengths would not be compatible with the use of diaphragm walls as the main retaining wall and groundwater cut-off solution, as the common D-wall equipment such as the hydro-fraise would not be effective given high rock strengths and specialist types of D-wall equipment would be required.

9.9.18. Tyréns advise that it is normal in urban metro construction to forbid the use of blasting unless it is absolutely necessary, for instance for hard rock excavations, due to disturbance and its potential to generate vibrations that can induce damage to adjacent buildings, utilities and infrastructure. They note that the limestone in Dublin can be categorized as weak rock, similar to Copenhagen and Malmö, where drill and blast is not allowed, with metro stations and underground railway stations in those cities excavated by mechanical breakers or road header.

9.9.19. Tyréns questioned the applicant at the oral hearing regarding the need for blasting and the applicant stated that they wished to maintain the option of using it at the deep station locations but agreed that blasting would not be used for the SCL construction of the Charlemont Intervention tunnel and that blasting vibrations would be limited to the area covered by the POPS Scheme.

9.9.20. Tyréns consider that this restriction on blasting should apply to all the SCL works sites and they therefore recommend that a condition should be included requiring

that no blasting should take place for the construction of the Albert College Park Intervention Shaft and intervention tunnels, the SCL pumping sumps, and SCL works at Dublin Airport in addition to the Applicant's commitment to not use blasting for the Charlemont Intervention Tunnel.

9.9.21. Tyréns also advise that the use of blasting for the deep station construction at the more sensitive locations should also be prohibited by way of condition, despite the applicant's undertakings regarding limiting the effects of blasting. The sensitive locations they identify are as follows:

- Charlemont Station.
- St. Stephens Green Station.
- Tara Station.
- O'Connell St. Station.
- Mater Station.

9.9.22. In other areas where blasting is allowable, Tyréns recommend a condition requiring that the applicant must ensure that the effects from blasting would not extend beyond the zone covered by the POPS Scheme.

9.9.23. I agree with Tyréns assessment of this issue and I consider that the use of blasting introduces unnecessary construction risks and potential impacts at the deep stations in the city centre, which are generally in close proximity to sensitive receptors. I do not consider that the applicant has provided adequate justification of the need for blasting in these areas, particularly given the proximity of residential receptors and the vulnerable buildings of significant heritage value.

9.9.24. There are multiple alternatives to the use of blasting as identified in the EIAR, including various non-percussive methods such as expansive chemicals, rock sawing or road headers.

9.9.25. I therefore recommend that a condition as recommended by Tyréns be imposed, should the Board decide to grant the Railway Order.

9.9.26. Tunnelling Methodology

9.9.27. Tyréns advise that there is always a significant risk associated with the construction of tunnel structures, often associated with unforeseen ground conditions, and they

note that these matters are addressed in various parts of the EIAR. They consider that the tunnel works are the part of the construction project with the greatest potential impact on surrounding buildings, in terms of ground displacement, settlement, groundwater and building damage. They also note the potential for the tunnelling works to induce groundborne vibrations, either from the TBM or from the conventionally mined tunnels.

- 9.9.28. With regard to the two main TBM-bored tunnels below Dublin Airport (AZ2) and from Northwood to Charlemont (AZ4), Tyréns advise that TBMs are suitable for such tunnels in urban areas, that the evaluation of the TBM type performed as part of the EIAR is acceptable, and that the proposed choice of a Variable Density Slurry TBM is suitable for the variable ground conditions along the alignment since it only allows for closed-mode operation, thus mitigating the risk of loss of face-pressure and consequent risk of settlement or sinkholes. It also assists in controlling groundwater to prevent dewatering related settlement.
- 9.9.29. Tyréns advise that Variable Density Slurry TBMs are not a common TBM type, due to complexity and costs, and due to a lack of experience they consider that some contractors may wish to specify a more common Earth Pressure Balance TBM or Slurry TBM. Tyréns consider it important, from a technical point of view, that the requirements and evaluation criteria for the TBM choice undertaken for the EIAR is carried forward into the tender process to ensure that there is a clear understanding of issues and that the measures, mitigations and commitments in the EIAR are carried forward into the construction phase. In particular, they note that the recovery and re-use of bentonite slurry, when operating in slurry mode, can be challenging in certain ground conditions and that this will affect the bentonite consumption rate. They note that bentonite slurry issues will need to be evaluated further by the applicant during the procurement process with regard to the contractor's proposed TBM type. Tyréns also note that the past experience and competence of the contractor in using a particular construction technique is an important consideration when assessing risks associated with TBM construction work and that they must document their experience under similar geological and geotechnical conditions. I consider that such matters are best addressed through the procurement process and detailed design phases and that suitable conditions can be attached by the Board to

ensure that all proposed mitigation measures and commitments are required to be implemented.

9.9.30. Based on the EIAR and their recommended conditions regarding monitoring and oversight, particularly with regard to settlement and building damage, Tyréns conclude that the applicant has presented an acceptable evaluation for the chosen TBM type for the two main bored tunnel stretches.

9.9.31. TBM Interventions

9.9.32. As part of the TBM tunnelling process, regular procedures known as ‘interventions’ will be required to replace the cutters at the face of the TBM and also to inspect/repair the cutter head. Tyréns note that this work would generally be carried out during station crossing but will also be needed between stations, which will require the use of compressed air to balance the groundwater head, i.e. hyperbaric working by highly trained staff with decompression facilities and provision of emergency medical hyperbaric facilities at the Northwood Portal.

9.9.33. Tyréns advise that there is an increased risk of settlement during interventions and during the subsequent TBM restart, as well as risks such as the loss of compressed air into basements or escaping to the surface, causing damage.

9.9.34. The EIAR specifies, in Appendix A5.13, that an Intervention Strategy is to be prepared. While Tyréns note the importance of including this requirement as part of the procurement process in order to limit the project risk, they consider it acceptable that the Intervention Strategy is not defined in the EIAR. They note the intention to define ‘fixed’ locations for interventions and to provide the necessary information for unplanned interventions, to include identification of prohibited areas (e.g. beneath sensitive structures) and possible intervention zones.

9.9.35. I consider that this is a matter best addressed in detailed design and procurement and I am satisfied that the submitted information adequately outlines the requirement for interventions and the risks and requirements associated with it.

9.9.36. TBM Launching and Reception

9.9.37. Tyréns advise that the launching of the TBM from the station boxes is always associated with increased settlement and groundwater ingress risk, but they note that this is only relevant for the ‘station first’ scenario. Essentially, appropriate

measures must be put in place to enable full pressure to be achieved in the cutter head before it enters in-situ soil conditions outside the retaining walls of a station box.

- 9.9.38. Tyréns advise that this issue is most critical when launching in soft ground or mixed face and where there are nearby structures, for example at Mater Station box, where immediately after launch from the south headwall the TBM drives beneath the nave of St Joseph's Carmelite Church.
- 9.9.39. Section 19.6.2.1.1 of the EIAR notes the issue and proposes to address it with a 20m x 20m x 15m ground treated zone adjacent to each station box for both launching and reception as well as a dedicated survey/monitoring scheme.
- 9.9.40. Tyréns questioned the applicant regarding TBM launch and reception at the oral hearing, and the applicant subsequently submitted a technical note entitled 'Provisions for Control of TBM Launch and Reception at Station Boxes' (Ref. OH116). Tyréns note that the additional mitigation and monitoring contained in the document are not replicated in the Final Schedule of Additional Environmental Commitments (Ref. OH376) and recommend that the Board impose additional requirements to ensure that the measures described in the Technical Note are implemented. I note that the document is listed in the Final Schedule of Updates (Ref. OH375) and consider that this can be captured in a general condition requiring the development to be undertaken in accordance with, inter alia, the final Schedule of Updates.
- 9.9.41. TBM Monitoring and Settlement
- 9.9.42. Tyréns note the importance of setting up and implementing a strict quality management and control system, as they advise that problems during TBM tunnelling (e.g. property damage) are usually caused by "unforeseen events", unexpected geological conditions, poor workmanship and lack of quality control.
- 9.9.43. They recommend that the applicant should identify critical stretches where they will have external supervision of the TBM drive parameters and the ground level monitoring data. They advise that on recent metro projects this has been carried out with the development of a document called the 'Plan for the Advancement of the

Tunnel' (PAT¹⁵), which defines the TBM operating parameters and the anticipated geology and hydrogeological conditions.

- 9.9.44. Tyréns advise that evaluating ground level monitoring data versus the TBM parameters allows the risk of ground movement to be reduced, since settlement can be caused by the quality of the annulus grouting as well as by the face pressure. They therefore recommend that the applicant or its Delivery Partner and the Independent Monitoring Engineer should have real-time access to the TBM data together with the settlement data in order to be able to perform this external qualified supervision of the tunnelling works.
- 9.9.45. Tyréns recommend that the Board impose conditions requiring the development of a PAT for each stretch of tunnel and to ensure that appropriate systems are put in place to ensure real-time integration of the TBM parameters and monitoring data.
- 9.9.46. Given the need for and importance of adequate monitoring and oversight of tunnelling works which will be undertaken by a contractor under a D&B contract, I agree with Tyréns regarding the need for these proposed conditions in the interests of avoiding settlement impacts.
- 9.9.47. Tunnel Outfitting
- 9.9.48. The tunnel outfitting works include the following main elements:
- Installation of the first stage concrete track bed and track bed drainage system.
 - Installation of the second stage concrete track bed track slab system (either a normal track slab or a floating track slab), rails and switches.
 - Installation of walkway and electromechanical systems.
- 9.9.49. The tunnel outfitting works are intended to be carried out 24 hours per day and 7 days per week. Tyréns advise, based on their experience, that the noise and vibration impacts from these outfitting works will be limited and are not foreseen to create any problematic impacts.

¹⁵ Tyréns advise that the PAT is described in "Mechanized Tunnelling in Urban Areas Design methodology and construction control" by Guglielmetti et. al.

9.10. Settlement and Property Damage

- 9.10.1. A considerable number of written and oral submissions raised the issue of settlement and associated property damage as a result of the MetroLink construction works. This included submissions by people living above or close to the tunnel alignment or in the vicinity of station boxes, many of whom expressed concerns due to the age of their houses and their shallow/minimal foundations (especially in the Glasnevin area). Other key areas where this issue was raised were at Charlemont, where the large period houses on Dartmouth Square West, Dartmouth Road and the surrounding area, many of which are protected structures, were contended to be at particular risk. The issue was also raised by the OPW in relation to a large number of State properties along the alignment and by owners and occupiers of commercial buildings, including offices, hotels, and various buildings of heritage value. In some cases, it was contended that the tunnel was excessively close to piled foundations, would clash with piles/tension anchors or that settlement would damage sensitive facades and the integrity of basement waterproofing systems.
- 9.10.2. Related to this issue were concerns regarding the resolution pathways and processes, should damage occur, and concerns regarding adequate and independent property condition surveys and monitoring. The methodology for assessing potential settlement impacts and the appropriate level of assessment for the purposes of the Railway Order application process were also topics of discussion and disagreement at the oral hearing.
- 9.10.3. Section 6 of the Tyréns Report relates to building damage and settlement, while Sections 9 and 10 of their report also contain relevant commentary. They advise that the impact from and the risk of damage to buildings from settlement due to the station, shaft and tunnel construction is one of the largest potential impacts from the construction of the MetroLink.
- 9.10.4. The submitted application primarily addresses issues of settlement and property damage in Appendix A5.17 of the EIAR, 'Building Damage Report' ('BDR'). This was supplemented by a large number of documents over the course of the oral hearing, including errata, updated assessments and information in relation to monitoring and construction methodologies. This followed questioning by the Inspectors, Tyréns and

observers. Some of the relevant additional documents submitted during the oral hearing include:

- Ground Movement Monitoring Information Paper (Ref. OH26).
- Provisions for Control of TBM Launch and Reception at Station Boxes (Ref. OH116).
- MetroLink- Follow Up to Inspectorate Questions 22nd February 2024: Monitoring during Construction (Ref. OH173).
- Risk Management Plan – Trigger Action Plan (TAP) (Ref. OH175).
- Methodology used for assessment of the likely significant effects on building from ground movement and settlement (Ref. OH183).
- Working Draft / Process for the oversight and implementation of Phase 3 assessments (Ref. OH192).
- Arthur Cox Enhanced Building Damage Assessment Report (Ref. OH273).
- Cadenza Building Enhanced Building Damage Assessment Report (Ref. OH274).
- AerCap House Enhanced Building Damage Assessment Report (Ref. OH275).
- Draft Trigger Action Plan (Ref. OH276).
- Enhanced Assessment Overview (OH288).
- Building Desk Study (Ref. OH289).
- Building Desk Study (Ref. OH316).
- Final Schedule of Additional Environmental Commitments (Ref. OH376).

9.10.5. Tyréns advise that the risk of damage to properties arises from settlement caused by ground relaxation and ground loss from the construction activities. For tunnelling, excavation can cause the volume of material removed from the excavation to be greater than the theoretical volume. For the deep stations, cut and cover tunnels and retained cut areas, settlement can arise from the retaining wall installation works if excess soil is removed or vibration may lead to settlement. It can also arise due to deflection of the retaining walls from earth and soil loads and displacement of the toe of the wall. For the deep stations, Tyréns advise that settlements will be small due to

the 'top down' construction sequence that the applicant has committed to, whereby the permanent roof slab of the station is constructed prior to excavation, resulting in a very stiff retaining wall system. There is no such commitment in the cut & cover and retained cut sections of the alignment which, Tyréns advise, may result in larger excavation induced settlements in these areas, although I note that the shallow stations and cut areas of the alignment are generally at a greater remove from nearby properties.

- 9.10.6. Tyréns note that a further potential cause of settlement is groundwater lowering, due to the effective stress being increased due to the groundwater lowering or settlements induced by the compression of organic soils. I have addressed the issue of dewatering related settlement briefly below and in more detail in the Hydrogeology section of this report (Section 11.13).
- 9.10.7. Tyréns confirm that the three phase approach used by the applicant for assessing settlement and building damage risk, as outlined in the BDR, is in line with normal practice for such a metro project and they advise that it has been used in international projects such as the construction of the Jubilee Line Extension and Crossrail projects in London and on all phases of the Copenhagen Metro. The applicant notes that it was also used in the Dublin Port Tunnel project.
- 9.10.8. The Board should note that Tyréns outline their experience with regard to the Copenhagen Metro, where they state that the settlement experience through the various phases of metro construction over a period of decades has been good, with relatively few problems with building damage, other than where secant pile walls were constructed very close to shallow founded buildings with excess soil removed during the pile construction.
- 9.10.9. The three phases of the building damage assessment process can be summarised as follows:
- **Phase 1:** Defines the buildings that could be potentially impacted by the project. This involves calculating 'greenfield' settlement contours using ground model parameters derived from published case history data and ground investigations and the identification of buildings that are:
 - a) enclosed within the 10mm contour or with a ground settlement slope > 1 in 500.

b) enclosed within the 1mm contour and subject to 'special' considerations (e.g. Protected Structures or prominent or sensitive buildings).

- **Phase 2:** Classification of the buildings into one of five pre-defined risk categories, based on the predicted maximum tensile strain that would be experienced by the building if it deformed to the predicted greenfield settlement profile. This approach is stated to be highly conservative since it ignores the inherent stiffness of buildings. Buildings that fall into a damage category of '3' or greater, and those subject to 'special' considerations are carried through to Phase 3.
- **Phase 3:** Individual detailed assessment of each building to determine its behaviour using detailed information and sophisticated assessment methods, including a refined ground model, detailed structural surveys, and finite element modelling. Based on the findings of the assessment, protection measures will be designed to protect the building from unacceptable level of damage if necessary.

9.10.10. The submitted BDR comprises a Phase 1 and an initial Phase 2 (referred to as Phase 2a) assessment. It is intended that the Detailed Designer for the Design & Build Contractor will review and update the Phase 2a assessment, at which stage it will be known as a Phase 2b assessment, taking account of the finalisation of the construction methodology, greater design maturity and refined geotechnical parameters. The Phase 2b assessment will identify which buildings should be progressed to Phase 3. The applicant contends that with the greater design maturity and information available at that stage, the Phase 3 assessed damage category for buildings is likely to improve upon the results of the Phase 2 assessment.

9.10.11. Tyréns confirm the applicant's position, i.e. that the three phases are normally split across the project life cycle and between the parties, particularly in circumstances such as this where a D&B contractor will undertake the detailed design.

9.10.12. For the purposes of the RO application, the applicant identified 219 'representative' buildings, 30m either side of the proposed tunnel alignment and a further 40 'additional' buildings. Some of these buildings have been designated as 'special' (e.g. protected structures, sensitive buildings or buildings with deep basements) and will be taken through to the Phase 3 assessment regardless of their Phase 2

assessment results. The predicted settlement and associated damage category for these ‘representative’ buildings are set out in Appendix A5.17.

- 9.10.13. The errata submitted on the first day of the oral hearing identified that 10 No. buildings had incorrect settlement results in Table 5.2 of A5.17 (see Schedule of Errata submitted on the first day of the oral hearing, Ref. OH9). The corrected building damage categories for the 10 No. buildings ranged from Very Slight (Category 1) to Slight (Category 2).
- 9.10.14. On the basis of the Phase 2 assessment, only 2 No. buildings were identified as falling into the categories above Slight, both falling into the Moderate category. These are both terraced properties, south of Griffith Park. All other buildings along the alignment fall into categories Negligible, Very Slight or Slight.
- 9.10.15. The settlement contours are shown in the figures included in Appendix A5.17. It was noted by the OPW, in their initial written submissions, that the MetroLink alignment is incorrectly shown on a number of the figures in that appendix. This was accepted by the applicant, however they stated that the contours are correctly located on the figures. Updated settlement figures were submitted by the applicant at the oral hearing on the 26th February 2024 (Ref. OH78) and further updated on the 21st March 2024 (Ref. OH300) to correct further errors.
- 9.10.16. The various damage/risk categories were the subject of much discussion at the oral hearing and in the submissions, so I consider it useful to replicate the building risk and damage categories from Table 4-4 of Appendix A5.17 which, as noted above, is a standard approach utilised in such assessments.

Building and Structure Damage Classification (after Burland et al (1977) and Boscarding and Cording (1989))					Approximately Equivalent Ground Settlements and Slopes (after Rankin 1988)	
Risk Category	Degree of Damage	Description of Typical Damage and Likely Forms of Repair for Typical Masonry Buildings	Approx. Crack Width (mm)	Limiting Max Tensile Strength (%)	Max. Slope of Ground	Max. Settlement of Building (mm)
0	Negligible	Hairline cracks	<0.1	Less than 0.05		
1	Very Slight	Fine cracks easily treated during normal redecoration.	0.1 to 1	0.05 to 0.075	Less than 1:500	Less than 10

		Perhaps isolated slight fracture in building Cracks in exterior brickwork visible upon close inspection				
2	Slight	Cracks easily filled. Redecoration probably required. Several slight fractures inside building. Exterior cracks visible some repointing may be required for weather tightness. Doors and windows may stick slightly	1 to 5	0.075 to 0.15	1:500 to 1:200	10 to 50
3	Moderate	Cracks may require cutting out and patching. Recurrent cracks can be masked by suitable linings. Re-pointing and possibly replacement of a small amount of extent brickwork may be required. Doors and windows sticking. Utility services may be interrupted. Weather tightness often impaired	5 to 15 or a number of cracks greater than 3	0.15 to 0.3	1:200 to 1:50	50 to 75
4	Severe	Extensive repair involving removal and replacement of sections of walls, especially over doors and windows required. Windows and frames distorted. Floor slopes noticeably. Walls lean or bulge noticeably, Some loss of bearing in beams. Utility services disrupted.	15 to 25 but also depends on number of cracks	Greater than 0.3	1:200 to 1:50	Greater than 75
5	Very Severe	Major repair required involving partial or complete reconstruction. Beams lose bearing, walls lean badly and require shoring. Windows broken by distortion Danger of instability	Greater than 25 but also depends on number of cracks	Greater than 0.3	Greater than 1:50	Greater than 75

9.10.17. Tyréns note that the typical predicted settlements in the settlement contour maps are c. 30 mm above the main tunnel and c. 40mm at the ends of deep stations. They note the applicant's statements regarding the conservative nature of the 'greenfield' assessment and the conservative assumptions of volume loss from the tunnelling

and advise that this is standard engineering practice and that settlements achieved in practice can be expected to be significantly less than the 'greenfield' predictions.

9.10.18. Tyréns do, however, advise that if the settlements are of the magnitude predicted at this stage in the BDR, then it is likely that damage beyond the cosmetic/aesthetic category (i.e. Damage Category 1) will be caused and that this magnitude of settlement will pose a challenge for the protection of sensitive buildings. They therefore note the need for the applicant to ensure that their D&B contractor carries out the tunnelling operations to create significantly less settlement than predicted in the BDR.

9.10.19. **OPW Properties**

9.10.20. Settlement and property damage was a particular concern of the OPW in their many submissions (S213-240) relating to important State properties and institutions along the alignment, including numerous particularly sensitive heritage buildings. The OPW's initial submissions were supported by input from Gall Zeidler Consultants an Austrian tunnelling consultant.

9.10.21. As noted elsewhere, the applicant subsequently reached agreement with the OPW in the course of the oral hearing (other than in relation to St Stephen's Green) and a copy of the agreement was submitted for proposed inclusion in the Thirteenth Schedule of the RO (Ref. OH73). The agreement contains a list of 'conditions' and commitments agreed between the parties in relation to settlement and building damage, including for TII to agree the criteria and methodologies they will use for the Building Damage Assessments with OPW and to provide two additional phases of the assessment: a Phase 4 where all surveys, monitoring and mitigation measures to be adopted are agreed with the OPW and a close out Phase 5, where all data is reported together with any repairs which are to be carried out to the satisfaction of OPW. The Applicant is also required to agree the instrumentation and monitoring with the OPW.

9.10.22. Tyréns advise that the agreement reached between TII and the OPW is considered to represent normal best practice in dealing with heritage buildings. However, given the importance and sensitivity of many of the OPW properties, they recommend that the Expert Panel (addressed below) should provide scrutiny of the building risk

measures and monitoring for all OPW heritage buildings and should 'sign off' on such measures.

9.10.23. I consider that the agreement with OPW is comprehensive and subject to Expert Panel oversight and a condition requiring the damage category to be limited to Category 1 (addressed below), I am satisfied that there is not likely to be any unacceptable level of settlement or property damage to these particularly important and sensitive buildings.

9.10.24. ***Charlemont Station***

9.10.25. As noted above, settlement and related property damage was an issue raised by many observers living in the vicinity of Charlemont Station, as detailed in the many submissions from individual observers on Dartmouth Road, Dartmouth Square West and Cambridge Terrace and the submissions made on behalf of the Charlemont and Dartmouth Community Group (CDCG; S40-S42, 1FS8-1FS11, OH151-OH153, OH158, OH307-OH309).

9.10.26. In particular, I note the submissions made at the oral hearing on 4th March 2024 by CDCG and their specialist consultants covering soils and hydrogeology, settlement and noise & vibration (Ref. OH151-153), including McCabe Durney Barnes Planning Consultants (Jerry Barnes), Garland Consulting Engineers (Brian Kavanagh), Gavin and Doherty Geotech Solutions (Paul Quigley) and Malone O'Regan Consulting Engineers (Kenneth Goodwin).

9.10.27. The greenfield settlement prediction (Ref. OH300) indicates predicted settlement at the residential properties on Dartmouth Square West closest to the station box of c. 20-30 mm, which Tyréns advise may cause some damage beyond cosmetic damage.

9.10.28. In his submission on behalf of CDCG, Mr Quigley expressed the view that the applicant's strategy for handling geotechnical risks was inadequate given the stage of the project, that excessively high settlements are predicted and that these are not adequately mitigated. He also expressed concern regarding the timing for the Phase 3 assessment by the D&B Contractor.

- 9.10.29. Technical concerns were also expressed regarding the methods used in the Phase 1 and Phase 2a assessments documented in the BDR and the potential for dewatering induced settlement impacts on the buildings.
- 9.10.30. One of the main concerns expressed by Mr Quigley was essentially that, if the Board approves the Railway Order on the present basis (i.e. on the basis of the predicted settlements), it will allow the applicant and their contractors to cause significant damage to buildings on Dartmouth Square West and Dartmouth Road, which would be unacceptable to the owners of the properties.
- 9.10.31. In responding to Mr Quigley, the applicant essentially restated their approach as detailed in the application documentation, noting that detailed Phase 3 assessments would be undertaken by the D&B Contractor since these properties are protected structures.
- 9.10.32. In responding to further submissions on this matter, following the oral hearing, the applicant restated that their Phase 2a assessment utilises conservative parameters and that the expected damage at Dartmouth Square West falls into the 'Slight' category, with cracks of 1 to 5 mm width being cosmetic and not structural.
- 9.10.33. Having considered the CDCG submissions and the applicant's responses, Tyréns note that the 'Slight' damage category is Damage Category 2 and they advise that this is higher than would normally be accepted, with many projects making provisions to keep damage to Category 1 or less, i.e. 'Very Slight' and they recommend that the Board impose conditions accordingly.
- 9.10.34. With regard to the Carroll's Building, located immediately next to Charlemont Station, and the associated 2 Grand Parade development which is constructed partially over the station site, the building owner Union Investment Real Estate GmbH made a submission regarding the impact of the Charlemont Station construction on the building (S305), including in relation to settlement, and the consultants for the building owner state that protection measures may need to be put in place for the Carrolls Building, which is a protected structure.
- 9.10.35. Tyréns advise that, whilst the new 2 Grand Parade building should not be affected significantly by settlement, the older Carroll's Building will need careful consideration during the Phase 3 Building Assessment and that it may need protection works to be

put in place. They recommend that the assessment should be reviewed and ‘signed off’ by the Expert Panel.

9.10.36. ***Glasnevin and Other Areas***

9.10.37. In the Glasnevin area, as noted above, many submissions were made regarding settlement in the area surrounding Glasnevin Station and the tunnel passing through the Glasnevin area. These included Anne Confrey (S12), Anne G Meehan (S13, OH83), Lesley Hewson (S168, OH81), Dympna Rooney (S75, OH82), Lorraine Rooney (S171, OH82), Marie McMahon (S180) and the Prospect Architectural Conservation Area (S260). The submissions are quite general and non-technical, with the main concern being that the houses in the area are mid-Victorian and may be poorly founded and thus more prone to settlement induced building damage than modern houses. Similar concerns were raised with regard to numerous properties throughout area AZ4.

9.10.38. Tyréns note that the applicant identified only a small number of buildings in the BDR that will fall into the ‘Slight’ Building Damage category (i.e. Category 2). As with Charlemont, they recommend that conditions should be put in place to ensure that building damage does not exceed Category 1, with oversight by the Expert Panel.

9.10.39. ***TBM Break-In / Break-out Zones***

9.10.40. Tyréns advise that there is an increased settlement risk associated with the TBM entering and exiting the deep stations and when interventions are carried out on the TBM to maintain its cutting face. In the case of Mater Station, for example, they note that the BDR indicates settlement of c. 40mm for St Joseph’s Church at the southern end of the station box and c. 30 mm at the corner of the Mater Hospital building at the northern end of the station box. They note the document submitted by the applicant at the oral hearing on 29th February 2024 in relation to this matter, entitled ‘Provisions for Control of TBM Launch and Reception at Station Boxes’ (Ref. OH116). This sets out general measures, including ground treatment zones, to be put in place for the break-in and break-out of the TBM through the deep stations. St Joseph’s Church, which is a sensitive building in any event, is directly above the break-out zone from the Mater Station box and thus will need careful consideration to avoid excessive settlement. Tyréns consider it likely that tailored mitigation

measures will need to be put into place to ensure that no building damage beyond Category 1 is caused to the church.

9.10.41. ***'Special' Buildings***

9.10.42. As noted above, the applicant commits to taking all 'special' buildings forward for Phase 3 Building Damage Assessment. There is also a commitment requiring that the contractor verify any other new buildings that will require a Phase 3 assessment. While this will allow for newly constructed 'special' buildings to be identified and assessed (e.g. new buildings with deep basements), there is no commitment to update the preliminary surveys to identify buildings that are newly added to the Register of Protected Structures ('RPS'). I note, for example, that buildings on Moore Street have been added to the RPS since lodgement of the application. Given the large number of buildings that the city tunnel passes under, other buildings may likewise be added to the RPS before the development is completed and these should be identified, assessed and monitored as appropriate. This issue is also identified in the cultural heritage section of this report, and a condition is recommended in relation to this.

9.10.43. ***Property Owners' Protection Scheme (POPS)***

9.10.44. I have addressed the proposed POPS scheme and issues arising in detail in Section 9.11 of this report. In brief, while the preference should of course be to avoid any non-negligible damage, I consider that the voluntary POPS scheme will be a valuable element of the project in terms of the reassurances it will provide to affected property owners through the pre-construction and post-construction surveys and quick repair of any minor damage up to a value of €75,000, with provision for arbitration in the event of disputes. Should any greater level of damage occur, affected parties will have recourse to MetroLink project insurances.

9.10.45. As detailed in Section 9.11, and regardless of whether a POPS Scheme is in place, it is important to note that the granting of a Railway Order does not provide TII with a carte blanche to damage properties in the course of construction. They are also liable, under section 48(3)(a) of the 2001 Act, for compensation for damage or loss caused by their undertaking of the railway works.

9.10.46. ***City Centre Commercial Office Buildings***

- 9.10.47. A number of submissions were received from the owners of commercial office buildings in the vicinity of St Stephen's Green and Earlsfort Terrace regarding potential impacts due to the TBM tunnelling under their properties. The issues raised in the submissions related to settlement, property damage and conflict between the tunnel and their piled foundations or tension anchors.
- 9.10.48. In particular, I note the submissions from Hines Real Estate Ireland (HRE) in relation to AerCap House (S117) and from Irish Life Assurance plc (ILA) in relation to the Cadenza Building (S129). Similar written and oral submissions were made on behalf of Earldev PUC and Jerdip PUC in relation to the 'Arthur Cox Building', however letters were subsequently submitted at the oral hearing confirming that their concerns had been addressed and that they supported the project.
- 9.10.49. AerCap House (65-68 St Stephens Green) is a 6 storey concrete framed building, with two basement levels directly over the proposed tunnel alignment. Detailed written and oral submissions were made in relation to this building on behalf of HRE, including legal and engineering submissions by Eamon Galligan SC (Ref. OH136) and Waterman Moylan Consulting Engineers (Ref. OH137 and OH138), respectively, on 4th March 2024.
- 9.10.50. The Cadenza Building (19-20 Earlsfort Terrace on the corner with Adelaide Road) has a 7 storey concrete framed building with a deep two level basement and extensive glazing. It is immediately above the tunnel alignment. Detailed written and oral submissions were made in relation to this building on behalf of ILA, including legal and engineering and related submissions by Conor Sheehan BL (Ref. OH139), Waterman Moylan Consulting Engineers (Ref. OH141), BDA Façade Consultants (OH143 and OH144) and AGL (OH145 and OH146), respectively, on 4th March 2024.
- 9.10.51. Both building owners identified their buildings as being particularly sensitive to settlement damage due to their high quality façade systems with extensive glazing and basement waterproofing with a very low tolerance for cracking without compromising its function.
- 9.10.52. The applicant's initial response to the written submissions made by these building owners repeated the standard approach that the buildings that been assessed using a Phase 1 and Phase 2a building damage assessment, that the Cadenza Building

and AerCap House fell into a 'Slight/Very Slight' and 'Negligible' damage category, respectively, and that a Phase 3 assessment would be carried out during the detailed design phase.

9.10.53. It emerged during the subsequent oral hearing submissions that the applicant had assessed buildings on the sites of AerCap House and the Cadenza Building which were long since demolished, instead of the office buildings now existing on the sites. Tyréns note, as an aside, that this does not provide confidence in the applicant's processes for the identification of the buildings that need to be assessed for building damage.

9.10.54. HRE's specialists undertook their own assessment of building damage and submitted it at the oral hearing (Ref. OH137 & OH138). They contend that:

"The level of damage AerCap House could reasonably accommodate is Negligible (cracks less than 0.1mm). Even at this level, there are still concerns the Basement waterproofing System is going to be compromised and require remedial works to an occupied building."

9.10.55. ILA's specialists likewise produced their own Phase 2a BDA for the Cadenza Building (Ref. OH145 and OH146).

9.10.56. As a result of assessing the incorrect buildings, the applicant had failed to identify the presence of deep secant pile walls and anti-flotation anchors below these buildings, resulting in clashes with the proposed tunnel vertical alignment. Consequently, the applicant proposed lowering the vertical alignment of the tunnel between St Stephens Green and Charlemont by up to c. 5m (while staying within the LoD). The lowering of the tunnel introduces a new low point in the tunnel, necessitating the addition of an additional SCL-constructed pumping sump in this section under Hatch Street (refer to drawings submitted on 6th March 2024, OH185 and OH186). An EIAR Addendum relating to the tunnel lowering was submitted on the same day (Ref. OH193).

9.10.57. The applicant also subsequently submitted 'Enhanced Building Damage Assessment Reports' for both AerCap House (Ref. OH275) and the Cadenza Building (Ref. OH274) at the oral hearing on 21st March 2024. A similar report was also submitted in relation to the Arthur Cox Building (Ref. OH273), although as noted above they subsequently confirmed that their concerns had been addressed. Another document

entitled 'Working Draft / Process for the oversight and implementation of Phase 3 assessments' (Ref. OH192) was also submitted, which describes the proposed process for the preparation of the Phase 3 Assessments during the main Civil Works tender process and after award of the main Civil Works contract. The document 'Enhanced Assessment Overview' (Ref. OH288) outlines the approach used for these enhanced assessments, which is based on CIRIA Guide C796, used for reinforced concrete framed building. The assessment again repeats the applicant's position that the detailed Phase 3 assessment will not be undertaken until the detailed design stage by the D&B Contractor.

- 9.10.58. Tyréns note that the Enhanced Assessment uses a combination of empirical and frame analysis to consider the behaviour of the buildings to the tunnel induced settlement, which they state as being c. 11mm after taking the building's stiffness into account and the lowered tunnel alignment. They advise that this still induces significant distortion and strains in the buildings which may cause damage to the basement waterproofing and façade system. They advise that these 'Enhanced Building Damage Assessments' are not at the level that a Phase 3 Building Assessment would be expected to be for such sensitive buildings.
- 9.10.59. Also on the 21st March 2024, the applicant submitted a 'Draft Trigger Action Plan' ('TAP'; Ref. OH276), which they stated covered AerCap House and the Cadenza Building. The Draft TAP sets out the commitments and processes that the applicant will implement in developing the Phase 3 assessments and managing building damage risk on such special buildings as these.
- 9.10.60. Further legal, engineering and other specialist submissions were made at the oral hearing on 21st March 2024 on behalf of HRE (Refs. OH279 – OH282) and on behalf of ILA (Refs. OH283 – OH287) regarding the impacts on the buildings, the particular sensitivities of their facades, and their future development potential. The observers continued to contend that the proposed development will have an unacceptable impact on their buildings and these matters were not resolved by the end of the oral hearing.
- 9.10.61. I note that HRE and ILA had an opportunity to make further submissions following the oral hearing in relation to the documentation submitted by TII (refer to my 'fair procedures' discussion in Section 9.17), however no further submissions were made.

- 9.10.62. Tyréns advise that, while the applicant has come some way to addressing concerns of these observers by lowering the alignment between St Stephens Green and Charlemont and by submitting the Enhanced Phase 2a Assessments and associated documents, they consider the concerns of the observers to be understandable given the sensitive nature of the buildings. They consider that similar issues may arise with regard to other sensitive and heritage buildings along the alignment, although not necessarily raised in submissions.
- 9.10.63. Tyréns note the applicant's proposed process for the Phase 3 assessments by the D&B Contractor, as described in documents OH192 and OH276, and the respective roles of the Independent Monitoring Engineer (IME) and Expert Panel (EP) in this process. They consider that, whilst the IME's role strengthens the governance over the Building Damage Assessments developed by the Contractor, the role of the Expert Panel is limited essentially to advice.
- 9.10.64. Tyréns advise that their experience from the Copenhagen Metro is that for such sensitive structures the equivalent of a Phase 3 assessment would be prepared by the applicant at the preliminary design stage and for the EIAR assessments to ensure that the project can be built without unacceptable damage being caused and to determine what mitigation measures were needed. They note that such an assessment may not be called a Phase 3 assessment (as that would be carried out during detailed design by the D&B Contractor), but that it would provide a good basis for project approval and procurement, to ensure that tenderers include the necessary mitigation measures in their tender.
- 9.10.65. Since the applicant has not provided the equivalent of a Phase 3 Building Assessment, Tyréns identify a risk that during the procurement process any required mitigation measures may not be included. They note that the Final Schedule of Additional Environmental Commitments (Ref. OH376) does not commit to implement the processes set out in the abovementioned documents OH192 and OH276. Nor does it provide clear commitments regarding the role of the Expert Panel in verifying the building risk assessment process.
- 9.10.66. Should the Board decide to grant the Railway Order, Tyréns recommend that a number of conditions be imposed to strengthen the role of the Expert Panel so that it has a role to review and verify the Phase 3 assessments, i.e. a 'sign-off' or approval

role. They also recommend that the applicant be required to engage the Expert Panel prior to procuring the IME and the Main Civil Works contract and that the EP verify the scope of the IME and the Contract requirements for building damage risk assessments. They also recommend that the applicant be required to implement the commitments made in the 'Working Draft / Process for the oversight and implementation of Phase 3 assessments' document (Ref. OH192).

9.10.67. As detailed in Section 9.9 of this report, Tyréns also recommend that the applicant's contractor be required to prepare a 'Plan for the Advancement of the Tunnel' (PAT) for each tunnel section, to be reviewed and signed off by the IME and Expert Panel and that provision be made to ensure that the applicant and IME have access to real time data from the contractor's tunnelling operations to allow it to be correlated against settlement monitoring data.

9.10.68. Tyréns has recommended a number of conditions regarding settlement, building damage and monitoring, should the Board decide to grant the Railway Order.

9.10.69. Given that the project is envisaged to be delivered by a design and built contractor, I consider that the observers' apprehensions around the issue of settlement and building damage are reasonable. It is important that there is appropriate oversight of the Phase 3 Building Damage Assessments and any measures that might be required to ensure that potential property damage is minimised. For this reason, I agree with Tyréns recommendations regarding enhancing the role of the applicant's proposed Expert Panel, so that it has an oversight and approval function for particularly sensitive aspects of the project with the potential to impact on surrounding receptors. I also agree with Tyréns recommendation that the applicant be required to ensure that building damage does not exceed Category 1, Very Slight. I note from Appendix A5.17, that a relatively small number of buildings are predicted to exceed that Category, even with the conservative assumptions built into Phase 1 and 2 assessment. Detailed Phase 3 assessment should reduce the damage levels further, even before additional measures are considered.

9.10.70. ***Dewatering Related Settlement***

9.10.71. I note that the Executive Summary of the BDR, Appendix A5.17, states that the methodology utilised assumes that dewatering of the ground outside of the site boundary is controlled during construction to prevent any adverse impacts. Similar

statements are made in Sections 4.2.5 and 4.7 of the document, while Appendix E 'Key Assumption Register', which sets out the various assumptions forming the basis of the assessment, includes "no dewatering outside the boundaries of the site during construction".

9.10.72. However, the hydrogeology section of the EIAR does indicate dewatering and a substantial Zol in many cases, until the bottom slab of the station box is cast. In many cases the Zols would extend well beyond the POPS boundary. There was much discussion at the oral hearing between Tyréns and the applicant's specialists regarding how groundwater would be controlled such that dewatering related settlement does not occur. The applicant has proposed extensive grouting measures and there were discussions regarding the type of grouting and the appropriate parameters.

9.10.73. In the document 'Supplemental Note: Dewatering Assessment in Station Boxes and SCL Tunnels (Version 2)' (Ref. OH189) which was submitted at the oral hearing, the applicant categorically stated that "lowering of the water table will not take place outside of the station boxes" [applicant's emphasis].

9.10.74. These hydrogeological issues are discussed in detail in the Hydrogeology section of this report (see Section 11.13). Given the inconsistencies in the applicant's documentation, Tyréns recommend that the applicant's commitments regarding dewatering should be formalised by way of a condition, requiring that there shall be no groundwater lowering outside of the station boxes, beyond normal seasonal variations. In order to ensure that dewatering related settlement and associated property damage beyond that assessed in the EIAR does not arise, I agree with the imposition of the recommended condition.

9.10.75. ***Timing of the Phase 3 Assessment***

9.10.76. As detailed above, the approach utilised by the applicant for the assessment of potential settlement and building damage impacts is in accordance with standard industry practice for such projects. It also includes various conservative assumptions that are appropriate at this stage.

9.10.77. It does appear that there may be some circumstances where the settlement assessment methodology, while standard, is not ideally suited to certain building

types, particularly large modern office developments with very low tolerance façade treatments, curtain glazing and extensive basements or piled foundations.

9.10.78. While a number of observers have sought that Phase 3 assessments be undertaken in advance of a decision by the Board, I consider it reasonable and appropriate that these be undertaken by the contractor, at detailed design stage, when there is full clarity on the exact tunnel position and depth, TBM specification and operating parameters and further ground investigations and design development. What is important is that the applicant identify likely impacts using a conservative approach, in order to identify the buildings that will need Phase 3 assessment and detailed monitoring etc.

9.10.79. Once the Phase 3 assessment is undertaken it may indicate that mitigation is required to avoid damage. This could include ground strengthening works, such as grouting, or works to strengthen buildings, such as underpinning, propping of openings, temporary removal of sensitive elements, or other interventions. Such works would clearly require extensive engagement with the building owner and occupier, which would be more appropriately addressed at the detailed design stage.

9.10.80. Given that underground metro lines have been built in historic and modern cities throughout the world, there is no fundamental reason why unacceptable levels of settlement or building damage would occur in this instance, particularly given advances in TBM design and greater industry understanding of settlement mechanisms and geological/hydrogeological issues (see for example the discussion regarding Dublin Port Tunnel below).

9.10.81. As detailed above, given the D&B nature of the project, it is appropriate, in my opinion, that a strong level of oversight be exercised through the IME and the Expert Panel and conditions are recommended accordingly. Subject to such oversight and appropriate conditions, I do not consider that unacceptable levels of settlement or property damage are likely to occur.

9.10.82. Dublin Port Tunnel Experience

9.10.83. I consider that the concerns of observers regarding settlement and potential property damage are reasonable given the nature of the project and the fact that it is a relatively novel form of development in an Irish context. It is notable that the only other large tunnel project in Dublin in living memory was the Dublin Port Tunnel, the

construction of which did result in some property damage in the Marino area. This experience was raised in a number of submissions and at the oral hearing and therefore the applicant was asked to comment on what had occurred during the Port Tunnel construction and how the Board could be assured that similar damage would not occur in this instance.

9.10.84. On 28th February 2024, the applicant submitted a copy of a 2014 paper by Andrea Gillarduzzi entitled 'Investigating property damage along Dublin Port tunnel Alignment' from the Institution of Civil Engineering's 'Forensic Engineering', Volume 167 Issue FE3 (Ref. OH113; 'the Gillarduzzi Paper'). A presentation summarising the key points of the Gillarduzzi Paper and comparing it against the MetroLink proposal was made on the same day (Ref. OH114). A further paper relating to the Dublin Port Tunnel, prepared by Nishimatsu Corporation Co. Ltd. was submitted on 5th March 2024 (Ref. OH156).

9.10.85. The nature of the property damage in the Marino paper is described in the Gillarduzzi Paper as follows:

"During 2002–2003, Dublin City Council received over 40 complaints concerning property damage and disturbance in the area of Marino, which were allegedly caused by rock-tunnelling operations of the southwards tunnel-boring machine in the northbound tunnel. The most frequent complaints included: hairline cracks in plasterworks; cracks in ceilings, external and internal walls and ceramic tiles; hairline and shrinkage cracking of soft wood timbers and doors; pointing and grouting losses; doors not closing properly; and leaks through roof tiles and from water tanks and gutters. Other complaints related to cracks in garden walls and gas escapes, twisted floor boards, shaking fridges, noise and vibrations.

A further survey, carried out following the complaints, indicated that effectively 32 properties presented noticeable (i.e. aesthetic) defects and three serviceability damages limiting some functions of the building."

9.10.86. The key findings of the Gillarduzzi Paper and the applicant's position with regard to their relevance to the MetroLink project can be summarised as follows:

- **Deformation and volume loss:** Settlement was caused by local failure and deformation of the tunnel excavation and was greater where the tunnel

alignment intersected: faults, chevron folds, difficult ground conditions, thinly bedded plastic mudstone, and areas with thin and fractured rock cover above the tunnel crown (e.g. where the axis of a buried valley intersected the tunnel alignment). In the case of MetroLink, extensive GI has identified faults and the variable density TBM enables pressures to be maintained at all times when faults are encountered.

- **Dewatering deposits and bedrock:** Subordinated dewatering caused removal of 'fines' and consequent volume loss of the ground located above the tunnel excavation. In the case of MetroLink, the closed face TBM will prevent groundwater entering the tunnel.
- **Vibro-densification:** Densification of the soil with reduction of porosity and consequently of volume due to combined action of dewatering, with loss of fines and groundborne vibrations from the TBM. In the case of MetroLink, dewatering is eliminated using the variable density TBM.
- **Consolidation due to dewatering:** Consolidation of pond and rivulet strata is more likely to have occurred where settlement, due to tunnelling works, had already occurred, triggering the dewatering of strata close to ground level. In the case of MetroLink, the closed face tunnelling method will not drain the strata.
- **Reduced Working Hours:** When the TBM approached Marino, working hours were reduced down to 13 hours per day, in order to limit noise and disturbance to residents. As a result, the tunnel front face remained unsupported for longer periods. This allowed greater relaxation and more intense dewatering of the ground, leading to greater settlement at ground level. In contrast, MetroLink is proposing 24/7 working hours for tunnelling with a TBM which will have a pressurised face.

9.10.87. It is clear from a review of the Gillarduzzi Paper that there is now a good understanding of what happened during the Dublin Port Tunnel construction and how the particular ground conditions in the Marino area and the tunnelling methodology led to property damage.

9.10.88. The Dublin Port Tunnel, while a similar diameter to the proposed MetroLink tunnels, was built using an entirely different type of TBM than is proposed in this instance.

While it is clearly a valuable learning experience for tunnelling in Dublin, there is no compelling reason to believe that the same issues will arise in the MetroLink project, with the key differences being the use of a closed-face variable density TBM operating 24/7, the pressurised nature of which will militate against groundwater inflow and the various consequences of such dewatering, as detailed in the Gillarduzzi Paper.

9.10.89. I refer also, to Section 6.4 of the Tyréns report, where the Board's consultants accept the applicant's responses regarding the Port Tunnel and note that the tunnelling industry has moved on significantly from when the Port Tunnel was constructed. However, to avoid the problems experienced on the Port Tunnel, they note that the applicant must procure and manage the execution of the tunnel works in the manner described in the EIAR and in the supplemental oral hearing information to ensure that best practice is followed.

9.11. Property Owners' Protection Scheme

9.11.1. While the Property Owners' Protection Scheme (POPS) is referenced in various parts of the EIAR, it was not submitted with the application. In order to understand what the scheme entailed, the applicant was therefore requested to present the POPS in their opening submission to the oral hearing. This was done by the applicant on 19th February 2024 (Ref. OH5). The POPS was the subject of much discussion at the oral hearing, with numerous observers contending that the financial limit was inadequate (particularly for period properties and protected structures), that its duration post-construction was insufficiently long, or that commercial properties should be included. In seeking to address some of these matters, the applicant submitted an updated POPS at the oral hearing on 6th March 2024 (Ref. OH187) together with POPs boundary drawings (Ref. OH188).

9.11.2. The POPS, as updated, is stated to be a voluntary, non-binding, free-of-charge Scheme for owners of residential property and owner management companies (in relation to residential common areas). Access to the Scheme is available to homeowners, where their property is:

- 30m outside the edge of the tunnel alignment.
- 30m outside the edge of open cut or cut and cover structures.

- within 50m of station underground structures.

9.11.3. Properties that are attached to a house that is eligible for POPS will also be eligible for POPS (e.g. semi-detached houses or an immediately adjacent house in a terrace). This additional commitment arose following questioning at the oral hearing regarding the potential for differential settlement in physically connected buildings leading to propagation of damage outside the settlement zone of influence. I consider this to be a welcome and important addition to the scheme given the form of residential development in Dublin, comprising mainly semi-detached and terraced dwellings.

9.11.4. It is important to note that the POPS is a voluntary and supplemental scheme that seeks to resolve relatively minor damage quickly. Participation in POPS is not mandatory and it does not undermine property owners' legal rights to pursue TII for property damage through normal legal routes.

9.11.5. Further to this, I note that section 48(3)(a) of the 2001 Act states that:

“Where an owner or occupier of land (other than a person whose land is acquired under section 45) suffers loss, injury or damage or incurs expenditure in consequence of the exercise by the railway undertaking of a power conferred on it by this section, the railway undertaking shall pay to him or her compensation in respect of the loss, injury, damage or expenditure and the amount of the compensation shall, in default of agreement, be determined by arbitration under and in accordance with the Lands Clauses Acts (other than sections 38 to 67 of the Lands Clauses Consolidation Act, 1845) and, for the purposes of those Acts, the railway undertaking shall be deemed to be the promoter of the undertaking and this Part and the railway order concerned shall be deemed to be the special Act; and, for the purposes of such determination, those Acts shall apply with any other necessary modifications and are incorporated (except insofar as they are inconsistent with and subject to any amendments or modifications, express or implied, thereof effected by this Act) with this Part.”

9.11.6. Regardless, therefore, of whether a property is within the POPS boundary, or whether the owner has chosen to join the scheme, TII will remain liable for

compensation in respect of any loss, injury or damage caused by MetroLink construction or operation, on foot of a Railway Order granted by the Board.

- 9.11.7. The concerns of property owners about potential damage to properties above or adjacent to tunnels and stations are entirely understandable, given that metro construction is a novel form of development in Dublin and given the inherent risks associated with tunnelling in a historic and densely developed city environment. For that reason, I consider the POPS scheme to be a welcome additional commitment that will provide a degree of reassurance to property owners through both the pre-construction and post-construction surveying of properties, and the repair of damage by contractors appointed by TII.
- 9.11.8. A number of observers queried the maximum ceiling for repairs. This was initially €45,000 but was increased to €75,000 in the revised POPS, with future adjustments in line with the Consumer Price Index. A number of residents of Dartmouth Square noted that their properties are large Protected Structures with minimal foundations, and that the repair of damage to such structures is likely to significantly exceed the POPS limit. I do not dispute that position, but again note that the scheme is intended to quickly address minor damage. Where the POPS surveys find that property damage caused by MetroLink works exceeds €75,000, the Scheme states that the property will have recourse to MetroLink project insurances.
- 9.11.9. In the event of substantial damage caused to a property as a result of MetroLink construction works, normal legal routes could also be pursued for damage in excess of that covered by the scheme, as provided for under the 2001 Act.
- 9.11.10. In the event of disputes, the POPS Scheme states that TII will establish an independent Dispute Resolution Process, with an independent expert appointed by Engineers Ireland as an expert adjudicator, who will make a determination on the homeowner's entitlements under POPS. This will be binding on TII but not on the homeowner and homeowners can pursue the matter through normal legal routes rather than the Dispute Resolution Process if they prefer.
- 9.11.11. The POPS Scheme states that it will remain in place for 12 months after the opening of the MetroLink line to passengers. It was contended by a number of observers that this was insufficient, given that settlement may continue for a period after construction is completed. It is important to note, however, that the heavy

engineering aspect of station excavation and construction and tunnelling will occur in the first 4-5 years of construction. After this, there will be several years of works generally relating to fit-out, M&E works, landscaping and aboveground elements etc. There is therefore a period of years that will pass after the works with the potential to cause settlement are completed, but before the project becomes operational. There is then a further 1 year period in the operational phase during which the POPS scheme will remain in place. On this basis, I consider that the proposed duration of the POPS scheme is adequate and sufficient.

9.11.12. With regard to the property condition surveys, this is stated in the POPS to be undertaken by a panel of building surveyors. In the case of protected structures, an additional commitment was made in the revised POPS Scheme, that the surveys would be undertaken by a Conservation Specialist.

9.11.13. While the property condition surveys are clearly intended to act as an impartial survey, it emerged at the oral hearing that draft surveys had been issued to TII for review prior to being issued to property owners and that changes had been made to some of these at TII's request. Clearly this undermines what is supposed to be an independent survey process. Once the standard methodology and format for the building condition surveys has been established by TII with the panel of building surveyors, the completed surveys should be issued to both the property owner and TII at the same time.

9.11.14. While the POPS Scheme is generally limited to residential properties, two additional clarification commitments were made in the revised Scheme. Firstly, if there is a commercial entity that is part of the residential property this will now also be surveyed as part of the Scheme (e.g. a property that has residential use upstairs and a retail unit at ground level). Secondly, in response to queries that arose at the oral hearing with regard to common areas in apartment blocks and whether these would be included in the Scheme, the revised POPS Scheme now also includes residential common areas managed by a management company. I consider this to be a welcome additional commitment that removes an element of uncertainty for apartment buildings.

9.11.15. A number of commercial property owners queried their exclusion from the POPS Scheme. I consider the exclusion of commercial properties from the Scheme to be

reasonable, given its intended function as a quick resolution pathway for minor damage to residential properties. Damages to commercial properties, should they occur, are likely to exceed the scheme limit or the commercial property may have different damage sensitivities to a residential receptor. TII has committed to undertake precondition surveys of commercial properties, where the owner agrees, and should damage occur, they state that the property will have recourse to MetroLink project insurances and normal legal avenues.

9.11.16. In conclusion, I consider the revised POPS Scheme to be a well-considered and positive aspect of the project, which will serve a dual function of reassuring residential property owners through pre- and post-construction surveys of their properties and allowing for any minor damage to be repaired at TII's expense. Given the purpose of the Scheme, I consider that the €75,000 limit and the 12 month cut-off point to be adequate, noting the broader requirement under section 48(3)(a) of the 2001 Act for TII to compensate property owners for any damage caused.

9.12. Construction Programme

- 9.12.1. There was a general misapprehension in many written and oral submissions that the worst construction impacts would last for the full 9.25 year duration of the construction phase and this was a significant cause of concern along the alignment. This was understandable, given that the issue was not well communicated or explained by the applicant in their application (see, for example, the not particularly detailed construction programme contained in Appendix A5.2).
- 9.12.2. The heavy engineering works, such as the station box construction and excavation, which will generally be the most potentially impactful elements, will be undertaken in the first 4-5 years, with the works after this primarily comprising underground fit-out works, construction of the aboveground architectural elements such as canopies, buildings, lifts, and landscaping etc. In the northern part of the alignment (i.e. north of Dublin Airport), where cut-and-cover / retained cut and shallow stations are proposed, the overall construction phase is shorter in duration (c. 5.5 years) with the exception of the Estuary Railhead.
- 9.12.3. In the tunnelled sections of the route, many of the construction compounds and associated temporary traffic management measures around station sites will be in

place for much or all of the full construction phase, although in more constrained areas they may be reconfigured for different work stages. Details of the construction sequencing and temporary traffic measures are contained in Appendices A5.3, A5.5 and A9.5, while the compound footprints are also shown in Figure 5.1.

9.12.4. In relation to the tunnelling works between stations, the impacts on any one receptor in terms of groundborne noise and vibration as the TBM approaches, passes under the property and continues away from the property will be inherently limited in duration, peaking over a 2-3 day period as it passes directly under.

9.12.5. The applicant stated at the oral hearing that the construction programme set out in the EIAR is conservative, in the interests of undertaking a robust assessment, and that the contractors will be incentivised through contract mechanisms to reduce the programme. I consider that any such incentivisation is to be welcomed, given the number of works sites, the extent of temporary land take for compounds and the volumes of traffic and general disruption that the proposed development will inherently and unavoidably involve in a city environment.

9.12.6. The Board's consultant Tyréns AB, in their report, note several programme risks associated with the TBM drives and arising to some extent from the decision to utilise a single bore system driven by one TBM. This includes the need for the City Tunnel TBM drive from Northwood Portal to Charlemont to pass through 9 No. deep stations, with the tunnel construction supported from the Northwood Portal through the full tunnel and through these stations, all of which will be under construction at the same time.

9.12.7. There are also risks associated with a major TBM break-down, with the critical path for the whole project being dependent on one TBM. Other risks include the potential need for major grouting works at any of the deep stations to control groundwater ingress which could impact on tunnelling progression, if this has not been incorporated into the programme.

9.12.8. I note that Article 17 of the Draft Railway Order states that:

“Subject to paragraph (2) and so far as is reasonably practicable, execution of the authorised works shall be substantially completed by the end of the period of **10 years**, or such further period as the Board may allow, beginning on the

date on which this Order comes into operation pursuant to section 43(4) of the Principal Act.” [emphasis added.]

- 9.12.9. These programme risks identified by Tyréns demonstrate why the use of a conservative construction programme for the purposes of the Railway Order application was appropriate. The identified risks are ultimately matters that the applicant will need to manage and address with their contractors in order to complete construction within the 10 year period sought.

9.13. Hours of Construction

- 9.13.1. Many submissions, from observers located across the proposed alignment, contend that the applicant’s proposed hours of construction are excessive and should be further limited, particularly with regard to night-time working. This is primarily due to concerns regarding noise, vibration, sleep disturbance and health impacts.
- 9.13.2. The applicant’s proposed construction phase working hours are set out in Section 5.2.4 of the EIAR. Following Inspectorate questioning at the oral hearing regarding the timing of rock excavation at stations, the applicant subsequently sought to clarify their proposals by providing an updated version of Section 5.2.4 (Ref. OH110, subsequently updated by OH117).
- 9.13.3. The proposed construction working hours are far more complex than a typical construction site, given the nature, scale, variety and extent of works associated with the project. They are divided into ‘Standard Working Hours’ (i.e. when most construction activities will be undertaken) and ‘Additional Working Hours’. ‘Additional Working Hours’ are further divided into ‘Regular Hours’ (i.e. regular hours worked outside of the Standard Working Hours for certain sites and activities) and ‘Occasional Hours’. Given this complexity, I consider it useful to summarise the proposed working hours here for the Board’s benefit:

Working Hours Scenarios		Days and Hours	Activities
Standard Working Hours		07:00 – 19:00 on weekdays (excl. Bank/Public Holidays) 07:00 – 13:00 on Saturdays (This includes a ½ hour 'shoulder' period at each end of the day to prepare the sites)	Piling, concreting and excavation of the stations and alignment structures. Vast majority of deliveries. Some 'exceptional deliveries' will occur outside of Standard Hours.
Additional Working Hours	Regular Works	24 hours per day, 7 days per week	Tunnelling works and associated activities (e.g. removal of excavated material, supply of materials to the workface and maintenance of tunnelling equipment) will be undertaken from each of the tunnel portal launch compounds. Excavated material will be stockpiled within the tunnel portal launch compound and disposed of during standard working hours. Passage of the TBM through the station and associated activities. Low impact MEP (Mechanical Electrical & Plumbing) fit out at the stations. Dewatering of excavations (continuous pumping of groundwater for the duration required for water tightness of structures). Track bed and track laying and associated concrete batching. Construction of intervention tunnels (SCL activities).

	Regular Works Below Ground	07:00 – 19:00, 7 days per week	Following the completion of excavation works, works will be undertaken on a 7-day (day shift) at some deep stations to avail of TBM. Final minor civil, building, and architectural finishing works.
	Occasional Hours	Working hours outside of the standard working hours required on an occasional basis for certain activities	Completion of large concrete pours. Night-time rail possession activities at Glasnevin, subject to agreement with Irish Rail. Utilities, traffic management, and roadworks. Night-time works for major road work, e.g. M50 works, pedestrian bridge removal on R132, with durations and timings agreed with the NTA and FCC. Other specific activities, such as local traffic management and special/ abnormal deliveries.

9.13.4. It is stated that the proposed construction working hours for each site will be detailed in the CEMP¹⁶, a draft of which is contained in the EIAR (Appendix A5.1), to reflect the most up-to-date design and construction proposals and that it will be submitted to the relevant local authority for approval prior to commencing the works. The CEMP will also set out the process for applying for any required Occasional Working Hours (i.e. night works) and a Noise and Vibration Management and Control Plan contained therein will set out any restrictions to working hours at sensitive locations, such as works outside churches or where marches or public demonstrations are anticipated.

9.13.5. While the proposed construction hours arrangements are complicated, essentially station excavation and construction will primarily be undertaken during Standard Working Hours, i.e. 5.5 days per week, with the exception of Glasnevin Station where extended construction hours are required due to the complexity of the station and the interchange with the railway lines. The majority of 'normal' construction traffic will also occur during this period. In contrast, the tunnelling and related

¹⁶ Draft CEMP included at Appendix A5.1 of EIAR. Updated CEMP subsequently submitted at oral hearing (Ref. OH320), with 'redline' version also submitted (Ref. OH348).

activities will occur on a 24 hour, 7 days per week basis. This is stated to be due to both impact mitigation and programme reasons. 24/7 working is also proposed for MEP fit-out works underground within deep stations, once the concrete roof slab is in place. I consider the Standard Working Hours to be reasonable, given the scale and nature of the proposed development and I note that the 12 hour working day includes 30 minutes either side for site preparation, meaning that the substantive (i.e. more potentially disruptive) works occur over an 11 hour period.

- 9.13.6. Given the scale of the construction phase, with concurrent large-scale construction works at multiple sites along the alignment there is, in my opinion, considerable benefit in extending working hours where possible to shorten the overall construction phase. As noted in the preceding section, the overall construction programme is c. 9.25 years (albeit that it varies by site and the heavy civil engineering works will take place over 4 to 5 years) and the construction phase has the potential to impact on a very large number of receptors, given its urban/suburban location and physical extent. I consider it reasonable that every effort be made to expedite the programme where feasible, which has the potential to shorten the duration of impacts, and to make use of the shielded underground nature of many of the required construction activities. This is obviously subject to consideration of the potential impacts on nearby sensitive receptors.
- 9.13.7. Section 12 of the Tyréns report (included at Appendix 1) considers the proposed working hours. They note that while working hours need to be restricted for activities with impacts in terms of airborne noise, vibration, traffic etc. other activities need to be carried out 24 hours per day for safety and productivity reasons. They also advise that unduly restricting the construction working hours will extend the duration of the construction works, increase project costs and that, for the main TBM tunnel operations, are essentially impracticable.
- 9.13.8. Tyréns confirm that it is normal tunnelling practice to operate the TBMs on a 24-hour, 7-day per week basis, which helps to ensure that pressure is maintained in the TBM's front cutting chamber, preventing groundwater inflow and maintaining the stability of the tunnel face, thus minimising ground movement, settlement and the risk of building damage. Tyréns note, as detailed in Section 9.10 of this report, that a decision not to run the Dublin Port Tunnel TBMs on a 24-hour/7-days per week basis was found to have been one of several reasons for building damage which occurred

in that project. They agree with the applicant that the same issues should not occur on the MetroLink project but advise that the working hours for the TBM operations should not be restricted.

- 9.13.9. I concur with Tyréns' assessment and consider that 24-hour per day, 7-day per week TBM tunnelling operations are appropriate, for the reasons outlined above. I note that these tunnelling works are obviously mobile and that facilitating continuous tunnelling will limit the duration of tunnelling-related impacts under any individual property. I note that the tunnelling spoil arising will be transferred by conveyor to the remote tunnel portal locations for removal during Standard Working Hours, reducing the potential for impacts.
- 9.13.10. Tyréns noted some ambiguous wording regarding working hours in the original CEMP but consider that the revised CEMP submitted at the oral hearing tightens up the text to be less ambiguous.
- 9.13.11. With regard to the Sprayed Concrete Lining (SCL) works, such as proposed at the Charlemont Intervention Tunnel, pumping sumps and some other areas where connections are to be made to the main tunnel such as at Dublin Airport and Albert College Park, Tyréns note that SCL works differ from the TBM works, in that they can be temporarily paused, with the tunnel face secured by sprayed concrete and rock reinforcement measures. Therefore, while Tyréns agree with the applicant that these SCL works should be undertaken 24 hours per day to maintain the stability of the tunnel excavation, they do not agree that 7-day per week working is required for this activity. They advise that weekend working for SCL works (i.e. later than 13:00 on Saturdays with no work on Sundays and public holidays) close to residential receptors should be avoided, due to the inevitable disturbance to residents above the tunnel.
- 9.13.12. The SCL works locations where Tyréns recommend that no weekend working should be allowed are the Charlemont intervention tunnel, the pumping sumps in area AZ4 and the SCL works at Albert College Park Intervention Shaft.
- 9.13.13. At the SCL works sites in Dublin Airport, given the lack of sensitive receptors in the vicinity, Tyréns advise that 24/7 SCL works should be allowed, as sought by the applicant.

- 9.13.14. I agree with Tyréns proposed restriction on SCL works. As detailed in their report, their experience is that these works can be temporarily paused in a safe manner, and given the construction phase impacts on sensitive receptors, a degree of weekend respite from the SCL works is reasonable. As the SCL works are discrete elements of work separate from the main stations and tunnels, the proposed weekend restriction should not have significant impacts on the overall programme.
- 9.13.15. The track laying, deep station and tunnel fitout works, M&E installation etc. will occur underground and after the concrete roof slabs are in place in deep stations. I also note the proposed use of acoustic housing around openings and support activities. I consider that the nature of those underground tunnel and station fitout works will result in these works not being unduly disruptive or impactful on nearby receptors. Given the benefits to both local receptors and the wider City of a shortened construction phase, and the bringing into operation of the MetroLink on a shorter timeframe, I consider it appropriate that these works occur on a 24 hour basis. Similarly, with regard to Occasional Works, these are generally discrete works activities where temporary road/rail possession is required or where large concrete pours need to be completed. The nature of these occasional works is such that they will be limited in number and duration.
- 9.13.16. At Glasnevin Station, which is particularly complex and constrained and includes interfaces with the two existing rail lines, an adjacent canal, a major road and where residential properties are situated close to the site Tyréns consider that it will be challenging for the applicant to construct these works within the proposed construction programme and they consider it likely that the applicant will seek relaxations to construction working hours at this site.
- 9.13.17. Further to this point, I note the applicant's commitment to obtain the local authorities' agreement for occasional night-time and other out-of-hours works. While this will enable the local authorities to exercise control over out-of-hours working, I recommend, given the complexity of the proposed construction working hours, that the applicant's Stakeholder Communication Plan should include measures for the communication of working hours, including the need for night-time working activities as and when they arise, to residents and businesses in the vicinity of each works site.

- 9.13.18. In conclusion, subject to the additional restriction on SCL works, Tyréns advise that the proposed construction working hours are reasonable and are consistent with normal working practices for such large-scale construction projects. I agree with Tyréns' assessment and consider the proposed hours of construction, subject to the restriction on SCL works in certain areas, to be acceptable and justified.
- 9.13.19. The Table below sets out the recommended hours of construction, incorporating the restriction on SCL activities at certain locations.

Working Hours Scenarios		Days and Hours	Activities
Standard Working Hours		07:00 – 19:00 on weekdays (excl. Bank/Public Holidays) 07:00 – 13:00 on Saturdays Note 1	Piling, concreting and excavation of the stations and alignment structures. Vast majority of deliveries. Some 'exceptional deliveries' will occur outside of Standard Hours.
Additional Working Hours	Regular Works	24 hours per day, 7 days per week Notes 2, 3, 4	Tunnelling works and associated activities which will be undertaken from each of the tunnel portal launch compounds. Passage of the TBM through the station and associated activities. Low impact MEP (Mechanical Electrical & Plumbing) fit out at the stations. Dewatering of excavations. Track bed and track laying and associated concrete batching. Construction of intervention tunnels and other Sprayed Concrete Lining activities, subject to Note 3.
	Regular Works	07:00 – 19:00, 7 days per week	Following the completion of excavation works, works will be undertaken on a 7-day (day shift)

	Below Ground	Notes 4, 5	at some deep stations to avail of TBM stoppages. Final minor civil, building, and architectural finishing works.
	Occasional Hours	Working hours outside of the standard working hours required on an occasional basis for certain activities Note 6	Completion of large concrete pours. Night-time rail possession activities at Glasnevin, subject to agreement with Irish Rail. Utilities, traffic management, and roadworks. Night-time works for major road work, with durations and timings agreed with the NTA and FCC/DCC. Other specific activities, such as local traffic management and special/ abnormal deliveries.
Notes: 1. Includes a ½ hour ‘shoulder’ period at each end of the day to prepare the sites. 2. Excavated material will be stockpiled within the tunnel portal launch compound and disposed of during standard working hours 3. With the exception of the SCL works for the Intervention Tunnels at Charlemont, Albert College Park and the pumping sumps in area AZ4 which shall be undertaken on a 24 hours per day, 5.5 day per week basis, with no weekend working later than 13:00 on Saturdays with no work on Sundays and public holidays. 4. Associated delivery activities will be undertaken during standard working hours. 5. Where the station construction is top-down and after the top slab has been constructed 6. To be agreed with the local authorities			

9.14. Hours of Operation

- 9.14.1. The proposed operational hours for the metro, as detailed in the EIAR, are 05:30 – 00:30. A number of submissions contend that the metro should operate 24 hours per day, particularly given that it serves Dublin Airport. Other submissions express concerns around anti-social behaviour in the vicinity of stations at night-time.

- 9.14.2. Dublin Commuter Coalition, for example, in their submission at the oral hearing (Ref. OH358) noted that an average of 65 flights land at Dublin Airport between 11pm and 7am and, noting both this and plans to extend licensing hours in the City Centre, contended that 24-hour operation would benefit the night-time economy and give people a safe and reliable mode of transportation to get them home.
- 9.14.3. The applicant, in their written response to the submissions, contended that there is no economic justification at this time for a service running 24 hours day, 7 days a week. They went on to state that, as with any transport system, the future development and needs for serving the Dublin population may change in time, and this would be considered if such a situation arose requiring extended MetroLink operating hours.
- 9.14.4. I note that it is proposed to undertake maintenance works during the period outside of the operational hours. I consider this to be reasonable, although I note that certain key bus routes in Dublin are being extended on a 24-hour basis as part of the roll-out of the BusConnects project.
- 9.14.5. The GDATS is also noteworthy in this regard. At section 9.3 it states that Dublin Airport requires bespoke transport solutions including, inter alia, out-of-hours and late night services for passengers and staff. Section 9.11.4 of GDATS states that night transport is critical to meet the travel needs of late-night/early-morning commuters, to serve the night-time economy of Dublin City, major suburban centres and to provide a reliable transport alternative to the private car. This is supported by Measure INT18 'Late Night Transport' which states that:
- “In order to serve those who travel to work outside the AM and PM peaks; to support the night-time economy of Dublin City and the wider GDA; and to generally broaden access to public transport at all times for all trip purposes, the NTA will expand a range of public transport services to run on a 24-hour basis as appropriate.”
- 9.14.6. Given the importance of the Dublin Airport – City Centre connection, it may, perhaps, have been prudent for the applicant to seek “up to 24-hour operation”, to allow them flexibility to provide extended services at certain times of year and to allow for variable maintenance and cleaning periods. However, given that the assessment of the operational phase environmental impacts contained in the EIAR are based on

the applicant's proposed restricted hours of operation, I do not consider that it would be appropriate for the Board to require 24-hour operation by way of condition.

- 9.14.7. In terms of the application before the Board, other than night-time flights at Dublin Airport, there is no reason to believe that there is substantial demand for a high capacity metro service between 00:30 and 05:30 and the applicant has stated that there is currently no economic justification for this. However, having reviewed the drawings and application documentation, there does not appear to be any functional reason why the metro could not operate on a 24-hour basis in the future, if deemed necessary and appropriate. Ultimately, I consider that this a matter best considered at a future point in time, if and when such a mode of operation is deemed to be justified and with due consideration at that stage of any related operational impacts.

9.15. Monitoring and Communications

- 9.15.1. As addressed throughout this report, there will be negative impacts on a large number of residential and commercial receptors during the construction phase. While many of these impacts are capable of being mitigated, this will be an unavoidably disruptive and impactful development for periods of the overall 9.25 year construction phase.
- 9.15.2. In order to construct the development with the minimum of disruption and the maximum of public acceptance, the issues of monitoring and communications/stakeholder engagement are critical.
- 9.15.3. Communications/Engagement Strategy
- 9.15.4. Chapter 5 of the EIAR states that a Stakeholder and Community Engagement Plan had been prepared, but it was not included in the application. A copy of a document entitled 'Stakeholder Communication Plan' was submitted on the first day of the oral hearing (Reg. OH3) and an updated version, with the title changed to 'Stakeholder Engagement Plan', was submitted on 29th February 2024 (Ref. OH124).
- 9.15.5. The MetroLink Project Director, in his initial submission at the oral hearing (Ref. OH2), outlined TII's communications experience with Luas construction and the lessons learnt from that project. I note, however, that a number of observers, including city centre businesses, were critical of the approach taken in the most

recent Luas Cross City works which it is contended caused major disruption and consequent loss of earnings.

- 9.15.6. One of the most important elements of the stakeholder engagement will be the proposed Traffic Forum, which will follow the Luas Cross City model. The primary objective of the forum is to ensure that the city is kept open to traffic movements as far as possible and it will meet on a weekly basis and include the local authority traffic specialists, NTA, transport operators and other service providers as appropriate.
- 9.15.7. Separately, it is envisaged that a Communications Forum will be set up, again similar to Luas Cross City, bringing together business, transport, public representatives and other stakeholders. The intended purpose of this Forum is solving problems, providing impetus, and underlining the key strategic importance of the project to the city.
- 9.15.8. The Plan outlines the process by which stakeholders will be identified, mapped and captured in a matrix for engagement purposes. It notes that stakeholders near construction sites must be given a particular priority, with continuous, reliable, and personal management throughout the construction phase. With reference to noise and vibration it is stated that, as occurred with Luas Cross City, a notification system will be established with Dublin City Council's and Fingal County Council's Environmental Health Units to keep them informed of all potentially noisy and out-of-hours working.
- 9.15.9. With regard to businesses, the Plan states that it is intended to hold a monthly meeting with local business interests along the route to allow them an opportunity to raise issues and get updates on upcoming activities.
- 9.15.10. The communications and stakeholder engagement will be managed by a dedicated team, including a Director of Communications and several Local Liaison Officers (LLO) who will be TII staff members. Each LLO will be assigned a particular local area and will be the "go to" person in that area, acting as the interface between MetroLink and the local community. They will also implement location specific construction plans and engagement plans that will be developed and updated as the works move through the various phases.

- 9.15.11. A number of Visitor Information Centres, staffed by LLOs, will also be opened in Swords, Glasnevin/Ballymun, O'Connell Street and Charlemont for the duration of the construction phase. These Centres will offer various services including monthly business and local traders' "drop-in" meetings, ability to meet or speak with the team, webinars with experts, general project information and updates, traffic diversion information, quarterly community forums, and meetings with residents' associations, schools, community groups, disability groups, sports and cycling groups etc.
- 9.15.12. Given the scale, magnitude and potential construction phase impacts associated with the proposed development, a very detailed and comprehensive Stakeholder Engagement Plan will be necessary. I note, however, that the Plan submitted at the oral hearing, while generally acceptable in terms of a high-level approach, was relatively sparse in terms of detail. A small degree of further detail is provided in Section 3.3 of the CEMP (see updated version submitted to oral hearing on 26th March 2024, OH348).
- 9.15.13. A number of observers at various locations along the proposed alignment raised concerns around the issue of stakeholder consultation, essentially seeking that it be genuine and meaningful engagement and communication rather than a public relations exercise.
- 9.15.14. In terms of who will prepare the final Stakeholder Communication Plan, the Plan submitted at the oral hearing states that this will be developed by the contractor under the control of TII's Director of Communications.
- 9.15.15. While that is consistent with the CEMP, it is contrary to what is stated in Section 5.12.4.5 of the EIAR, which says that the Plan will be further developed by TII. In my opinion, given the importance of this issue for affected communities and businesses, it would be more appropriate for TII to retain 'ownership' of this process, with the Plan to be developed and implemented by TII, in consultation with the contractor.
- 9.15.16. Part of the communications process will be the sharing of real-time monitoring data with the public, where possible, and relevant information such as the current location of the TBM, upcoming works notifications etc. I have addressed monitoring separately below, but the communications strategy and the monitoring strategy for the project should essentially be seen as two prongs of a joined-up public engagement strategy, which should be overseen by TII.

9.15.17. I note the following additional commitment contained in the final SAEC:

“During the construction phase environmental monitoring will be shared with the public in real time, where possible. Where this is not possible, data will be shared publicly as soon as the data is available.”

9.15.18. This commitment to transparency and the open sharing of monitoring data is an extremely important and welcome additional commitment by the applicant. As outlined throughout this report, effective monitoring and dissemination of results and effective complaints and communications procedures will be key to effectively mitigating impacts as far as possible and alleviating public concerns.

9.15.19. An issue which is not addressed in the submitted Plan is the issue of business disruption due to hoardings, some of which will be in place for 8-9 years, blocking visibility of premises. If the Board is minded to grant the Railway Order, I therefore recommend that provision should be made for the inclusion of temporary signage on hoardings for businesses whose visibility is obstructed.

9.15.20. Proposed Approach to Monitoring

9.15.21. Further to what is set out in the EIAR, the applicant set out their approach to monitoring, communications and risk management in an oral hearing submission by Paul Brown on the 19th February 2024 (Ref. OH33). A ‘Ground Movement Monitoring Information Paper’ was also submitted (Ref. OH26).

9.15.22. Following monitoring related questioning, a further document entitled ‘MetroLink Follow-Up to Inspectorate Questions 22nd February 2024: Monitoring during Construction’ was submitted to the oral hearing on 5th March 2024 (Ref. OH173). Other additional monitoring related submissions by the applicant included the settlement related ‘Working Draft / Process for the oversight and implementation of Phase 3 assessments’ submitted on 6th March 2024 (Ref. OH192).

9.15.23. The Property Owners Protection Scheme (POPS), which again was revised over the course of the oral hearing, is related to the issue of monitoring and engagement, but I have addressed it separately in Section 9.11, as it was the subject of a large number of written and oral submissions.

9.15.24. Tyréns, in Section 7 of their report note the importance of monitoring in urban metro construction, particularly with regard to noise, vibration, groundwater, settlement,

deformation and stress / strain in critical structures. They advise that modern monitoring methods allow much of the monitoring to be carried out automatically and uploaded into a database for visualisation on an almost real-time basis.

- 9.15.25. With regard to settlement, this automated monitoring can be combined with the operational parameters from the TBM (e.g. pressure at the TBM face, speed and torque of the cutter head and the density of the excavated material) to ensure that it is being operated within the required parameters. Tyréns advise that on recent large projects such as Crossrail in the UK, settlement monitoring has been carried out using satellite methods, known as Interferometric Synthetic Aperture Radar (InSAR). The applicant also referenced InSAR in the document 'Ground Movement Monitoring Information Paper' (Ref. OH26) submitted on the first day of the oral hearing.
- 9.15.26. Tyréns advise that InSAR provides a very useful independent measurement method which can give further confidence to all parties and they recommend that the Board require this form of monitoring by way of condition.
- 9.15.27. Noting the various documents submitted by the applicant over the course of the oral hearing, Tyréns advise that the technical aspects of the monitoring proposal appear to be in line with normal practice for such a large infrastructure project, if properly implemented and managed by the applicant.
- 9.15.28. Independent Monitoring Engineer and Expert Panel
- 9.15.29. As noted in the settlement and building damage Section 9.10 above, the applicant, at the oral hearing, proposed to put in place an Independent Monitoring Engineer (IME) and an Expert Panel (EP).
- 9.15.30. Initially it was proposed that the IME would be appointed by the contractor, but subsequently the applicant proposed that they would be directly appointed by TII to ensure their independence from the contractor.
- 9.15.31. As detailed in Section 9.10, Tyréns recommend that the role of the Expert Panel should be expanded from an advisory role as proposed by the applicant to also provide them with an oversight and 'sign off' role with regard to certain particularly sensitive aspects of the proposed development, given the Design & Build nature of the project, with many of the assessments and design decisions being made by the contractor. I agreed with Tyréns recommendations in this regard.

- 9.15.32. Tyréns note the importance of engaging the Expert Panel sufficiently early in the procurement process for both the IME and the Main Civil Works contracts to ensure that the relevant provisions for management of the building damage risks, groundwater and monitoring are included in the procurement and final contracts.
- 9.15.33. Subject to the incorporation of their recommended conditions, Tyréns conclude that the applicant's proposals with regard to monitoring are acceptable.
- 9.15.34. Independent Engineer
- 9.15.35. The applicant made the services of an independent engineering consultancy available to the public prior to and during the RO application process. This company, RINA, provided advice to residents, assisted in interpreting and explaining technical information for residents and acted as an intermediary between residents and TII in seeking to obtain information. A considerable number of written and oral submissions expressed gratitude to RINA for their assistance and outlined the benefits of this independent advice to their understanding of the proposal and its associated impacts. Many of these submissions sought that this independent expert role be carried forward into the construction phase.
- 9.15.36. The commitments that TII has made towards transparency in providing monitoring data and project information to the public are laudable and welcome. However, given the very complex nature of the proposed development and the vast quantity and highly technical nature of monitoring data that will be generated in relation to topics such as noise, vibration, settlement, dust etc. there is clearly a need for some degree of 'hand holding' in communicating this information to the general public in an easy to understand format, in explaining construction methodologies, or seeking information from TII and its contractors.
- 9.15.37. While the applicant has made commitments in relation to communications and public engagement, as addressed below, there is a particular benefit to independent advice that will be both useful and reassuring for the public generally and - more particularly - for those directly affected by the proposed development. I therefore note and welcome the additional commitment made by the applicant at the oral hearing in relation to this matter. The commitment, which is reflected in the final SAEC (Ref. OH376) submitted at the oral hearing on 27th March 2024, is that:

“An independent engineer will be engaged throughout the contracting and construction phase of the project in order to provide technical advice to residents and resident groups.”

9.15.38. Given the complexity of the project and the highly technical nature of the impacts and mitigation and monitoring measures, I consider this to be a positive additional commitment that will benefit the local communities in the vicinity of the MetroLink works.

9.15.39. For the avoidance of doubt, it should be noted that this Independent Engineer role is separate to the Independent Monitoring Engineer role that I have addressed above.

9.16. Operational Fire Safety, Emergency and Evacuation Approach

9.16.1. A number of submissions expressed concerns regarding fire safety and evacuation issues associated with a single bore tunnel, such as Rail Users Ireland (S261) and GADRA (S99).

9.16.2. The decision to pursue a single bore tunnel approach, rather than the more commonly used twin bore tunnel approach, has a number of operational phase implications such as fire safety management and evacuation protocols. Given the absence of cross-tunnel escape passages, as would be used in twin bore metro systems, the single bore design is the reason for the proposed intervention tunnels at Dublin Airport and Charlemont and the large intervention shaft at Albert College Park (which is due to the distance between stations exceeding a certain distance).

9.16.3. A submission was made on behalf of the applicant on the first day of the oral hearing (19th February 2024) by Sandeep Upadhya, a fire safety specialist, providing an overview of the proposed fire safety, emergency and evacuation strategies (Ref. OH38).

9.16.4. A submission was subsequently made on behalf of Senator Michael McDowell by Gerry Duggan, an engineer stated to have been involved in the original Luas development, at the oral hearing on 20th February 2024 (Ref. OH44). Mr Duggan expressed fire safety concerns arising from the change from a twin bore to a single bore tunnel design, querying whether Dublin Fire Brigade had confirmed they have the capability to deal with a tunnel fire and passenger evacuation in a single bore tunnel.

- 9.16.5. Following a request I made, the applicant's legal representatives made a legal submission at the oral hearing on 28th February 2024 in relation to the respective roles of Dublin Fire Brigade (DFB) and the Commission for Railway Regulation (CRR) in relation to fire safety in railway infrastructure (Ref. OH105).
- 9.16.6. The submission stated that design requirements in the context of fire safety are governed by the Building Control Act 1990, as amended (BCA), the Fire Services Act 1981, as amended (FSA) and the Railway Safety Act 2005, as amended (RSA). DFB's role arises under the BCA and FSA, while the CRR's role is provided for under the RSA.
- 9.16.7. It is stated that the issuance of a fire safety certificate by DFB will be a legal prerequisite to the construction of all buildings forming part of MetroLink and that fire safety certificates are issued after the development consent process is complete.
- 9.16.8. With regard to the FSA, this confers extensive powers on fire authorities in the area of fire prevention and extinguishment, including the power to serve fire safety notices to prevent the use of buildings that are considered potentially dangerous. The submission notes that the functions of DFB under the FSA are not concerned with the design of buildings or other infrastructure.
- 9.16.9. The RSA established the CRR and invested it with powers and functions in relation to railway safety. The submission notes that s.42 prohibits the construction, installation or assembly of new railway works until a safety assessment has been submitted to, and accepted by, the CRR. The CRR must be satisfied that the proposed method of construction, installation or assembly is adequate to ensure, in so far as reasonably practicable, the safety of persons during that construction, installation or assembly, and as to the expected operational safety of the new works. The consent of the CRR must be obtained before bringing into operation the completed new works.
- 9.16.10. The submission notes that CRR's guidelines 'CRR-G-033-D Guideline for Application for Acceptance of New Light Rail Works' include an application form at Annex 1 setting out the information required in the approval process, which includes "fire safety and evacuation concept for tunnels and underground structures (fire performance test reports on combustible material (including e.g. electrical equipment), fire protection of fitted powered systems, cross-links between parallel

tunnels, emergency access and egress, emergency power supply, emergency water supply, emergency communication between control and persons in tunnel/underground structure, ventilation management, smoke extraction, fire detection/ suppression systems, etc.).”

9.16.11. Part 20 of Annex 1 of those CRR guidelines relates to “Requirements for Safety in Tunnels” and states that: “The safety in railway tunnels TSI (EU) 1303/2014¹⁷ is not mandated for Light Rail/Metrolink systems. However, the CRR see it as good industry practice and apply a similar approach to both Heavy Rail and Light Rail/Metrolink systems. Applicants may choose an alternative approach for requirements for safety in railway tunnels but applicants must demonstrate that this alternative approach will result in providing evidence that the topics listed in this section 20 are adequately captured and safety requirements fulfilled.” Part 20 goes on to require detailed information in relation to of tunnel lengths, evacuation and rescue measures and other safety related aspects.

9.16.12. The applicant’s legal submission concludes that the DFB and CRR have extensive and defined roles in the regulation of the design, construction and operation of railway infrastructure, and in particular in ensuring that tunnel infrastructure and stations achieve the requisite performance criteria to ensure safe evacuation in the event of fire and that this includes distances within tunnels to evacuation shafts.

9.16.13. The submission states that these functions are completed after the grant of a railway order and are independent of that development consent process. In support of this position, that the CRR acceptance process cannot be concluded until after the railway works have been authorised by a railway order, the applicant notes s.4(2) of the RSA:

“Notwithstanding section 69 of the Transport (Railway Infrastructure) Act 2001, this Act applies to any railway works authorised by a railway order under section 43 of that Act.”

9.16.14. The submission states that TII has and is liaising extensively with DFB and CRR in the development of the design, but that the process of confirming compliance with

¹⁷ This is a reference to Commission Regulation (EU) No 1303/2014 of 18 November 2014, concerning the technical specification for interoperability relating to safety in railway tunnels of the rail system of the European Union (as amended). This European Regulation establishes various safety parameters for rail tunnels, including in relation to evacuation in the event of emergency.

the requirements of those bodies must occur separately and subsequently to the railway order process.

- 9.16.15. The applicant's legal submission considers that this position reflects the conclusion reached by the Board's Inspector in respect of similar issues on the previous Metro North application.
- 9.16.16. I note that DCC's initial written submission (S71)) included an email from the DFB Chief Fire Officer, stating that DFB have been liaising with TII, that they have been presented with the fire safety strategy for the design of the tunnel and prototype station and that further analysis is being undertaken by TII to support key queries raised about the fire safety strategy.
- 9.16.17. At the oral hearing, on 29th February 2024, the applicant also submitted a copy of a letter from the DFB Chief Fire Officer to TII, dated 28th February 2024 (Ref. OH123). This letter states that DFB "continue to fully support the development of a Metro System for Dublin and that its liaison with TII since before the lodging of the application has been constructive and DFB continues to be available to work in the immediate future and following the making of the railway order".
- 9.16.18. The CRR's written submission was brief and did not raise any safety concerns. They did not appear at the oral hearing.
- 9.16.19. The applicant made a further submission at the oral hearing on 28th February 2024, entitled 'Fire Strategy – Supporting Documentation for Oral Hearing' (Ref. OH106). This provided further details on the respective roles of the DFB and CRR and set out the applicant's rationale for evacuation and intervention distance spacing.
- 9.16.20. In summary, therefore, in addition to the Railway Order, the applicant will be required to obtain relevant consents from the Commission for Railway Regulation and Dublin Fire Brigade under separate legislative codes. I consider that those bodies are the competent authorities for matters relating to fire safety, evacuation protocols and the necessary distances between evacuation points, ventilation arrangements etc.
- 9.16.21. I am satisfied that matters relating to fire safety, evacuation protocols, distances to escape points, etc. are matters outside of the railway order consenting process for which the Board is the competent authority and are matters for DFB and CRR to consider, subsequent to a grant of a railway order.

9.16.22. I note that while twin bore tunnels are the most commonly utilised metro design, single bore tunnels are used in many metro systems around the world, and the applicant has identified a number of such systems. I have addressed the pros and cons of single bore versus twin bore tunnels in the consideration of alternatives section of this report (Section 11.4).

9.16.23. Finally, planning issues associated with the proposed dedicated firefighting lifts at underground stations, the Albert College Intervention Shaft and the intervention tunnels at Dublin Airport and south of Charlemont are addressed in Sections 9.4, 10.5, 10.2 and 10.12, respectively.

9.16.24. In conclusion, subject to approval by the relevant competent authorities, there is no fundamental reason to conclude that the proposed MetroLink design would be unsafe or prejudicial to public health and safety.

9.17. Legal and Procedural Matters

9.17.1. Status of Agreements

9.17.2. As noted in Section 4.3 above, copies of agreements with the following public bodies were submitted over the course of the oral hearing:

- DAA (Ref. OH77).
- Dublin City Council (Ref. OH76).
- Fingal County Council (Ref. OH147).
- OPW, excluding St Stephen's Green (Ref. OH73, OH73A).

9.17.3. The applicant has proposed that these agreements be included in the Thirteenth Schedule of the Railway Order. Having reviewed the agreements, I consider that their inclusion in the Thirteenth Schedule would be appropriate, given the extensive nature of the agreements, the likely public interest in the content of these agreements and the fact that they generally relate to complex fine-grained matters that require continued detailed engagement with each public body. Therefore, if the Board is minded to grant the Railway Order, I recommend that the abovementioned agreements be included in the Thirteenth Schedule.

- 9.17.4. With regard to the agreement with the OPW, the Board should note that it relates to all of the OPW properties referenced in their 28 No. submissions, with the exception of St Stephen's Green Park (S239). The applicant has proposed a similar list of 'conditions' for St Stephen's Green Park (Ref. OH74) but these are not agreed with the OPW.
- 9.17.5. In addition to the abovementioned agreements, a number of letters, emails and oral statements were received from observers over the course of the oral hearing, which typically stated that agreement had been reached with TII in relation to the issues of concern to the observer and that they support the project. The applicant refers to these as private agreements with third parties and submitted a final list of both public and private agreements in a Schedule of Third Party Agreements (Ref. OH381) on 27th March 2024.
- 9.17.6. Details of these private agreements were not submitted to the Board (with the partial exception of Our Lady of Victories Schools (Ref. OH246)), and they instead form bilateral private agreements between TII and the various observers. Therefore, I do not recommend that any reference should be made to these private agreements in the final Railway Order and its Schedules, should the Board decide to grant it.
- 9.17.7. The Board will note s. 43(1)(e) of the 2001 Act, which requires that it consider any submission made to it and not withdrawn. In relation to the private agreements and correspondence received from these observers confirming that matters of concern had been addressed to their satisfaction and that they support the project, I consider that these supersede the original written submissions from those observers and those original submissions are not addressed in this report, except where considered necessary.
- 9.17.8. In addition to the public and private agreements identified to the Board, a number of observers withdrew their submissions, as noted in Section 4.3 and identified in Appendix 2.
- 9.17.9. Oral Hearing Documentation and Fair Procedures
- 9.17.10. The applicant submitted a very large amount of documentation over the course of the oral hearing, as detailed in Appendix 4. The majority of these documents and drawings were submitted in response to queries from the Inspectors, the Board's consultants and observers over the course of the hearing or to address errata, but

some were unsolicited. In addition, numerous versions of some documents were submitted on different days, as errors were identified or to provide additional detail or clarity on various matters arising.

9.17.11. Clearly this is a somewhat unsatisfactory situation, given the sheer volume of the documentation originally lodged with the application and the need for both the Board's representatives and observers to consider these additional documents at short notice in the middle of an oral hearing for what is a particularly complex project.

9.17.12. A number of observers criticised the applicant's approach to the oral hearing, referring to this process as the applicant undertaking a "document dump" or strategically "drip-feeding" documents, and frustration was expressed at the volume of documentation that was being submitted on a daily basis, implying that it pointed to underlying flaws in the project as submitted to the Board. Legal representatives for a number of observers, such as Eamon Galligan SC for Lidl GmbH, Fergal Ruane for Earldev Properties Unlimited Company¹⁸ and Damien Keaney BL for Charlemont & Dartmouth Community Group (CDCG) raised the issue of fair procedures, expressing concern regarding a lack of time to consider the applicant's submitted documentation in advance of their submissions to the hearing. I note that Mr Galligan, in his legal submission for Lidl GmbH (Ref. OH57), referenced the Board's powers to invite submissions under section 47D(1) of the 2001 Act, and stated that the issue of fair procedures must be read into those provisions, from the perspective of constitutional justice and access to justice requirements of Article 9 of the Aarhus Convention.

9.17.13. Given the extensive scale and complex nature of the project and the very large number of discrete issues raised across the written and oral submissions, I consider that the volume of documentation submitted at the oral hearing, while challenging to digest, was ultimately justifiable, given the need to properly consider matters arising from the submissions and Inspectorate/observer questioning.

¹⁸ A letter was subsequently submitted confirming that agreement had been reached on the issues of concern to Earldev Properties UC and that they support the project (OH278).

9.17.14. Further to this point, the applicant, in their initial legal submission (Ref. OH39) noted the iterative and interactive nature of the EIA process, with reference to the well-known High Court Judgment in *Klohn v. An Bord Pleanála*¹⁹ which stated that:

“[...] the environmental impact statement is a document submitted by the developer, the terms of which are set when it is submitted. In contrast, the environmental impact assessment is a process which is an ongoing exercise undertaken by the decision maker. A great deal can happen, and a great deal of information can be accumulated, between the lodging of the environmental impact statement by a developer and the final decision by the planning authority or by An Bord Pleanála [...]”

9.17.15. I agree with the applicant’s position that the EIA process is not a static one. The submitted EIAR is essentially the kick-off point for the EIA process and all of the information submitted by the applicant over the course of the application process, including the extensive documentation submitted at the oral hearing, and all of the written and oral submissions made by observers in relation to environmental impacts form inputs to the EIA process that the Board must undertake.

9.17.16. Notwithstanding this, however, the frustration expressed by observers regarding the documentation submitted by the applicant was understandable, given its substantial volume. Whilst I had requested that copies of all documentation submitted by the applicant be made available at the oral hearing venue and placed on the project website each day, I shared the observers’ concerns regarding the issue of natural justice and the need for fair procedures to be followed. I therefore informed the applicant and the oral hearing on 21st March 2024 that, following the oral hearing, the Board would be requesting that the applicant publish new public notices inviting additional written submissions in response to the documentation submitted at the oral hearing within an appropriate period.

9.17.17. A letter was subsequently sent to the applicant on 1st July 2024, under the provisions of section 47D(1)(b) of the 2001 Act, requesting them to make all additional information relating to the application (i.e. the oral hearing documentation and the further information submitted to the Board) available for inspection and to invite further submissions in relation to it. The closing date for these further submissions

¹⁹ [2008] IEHC 111.

was 8th October 2024. A total of 42 No. further submissions were received (2 No. of which were subsequently withdrawn). The issues raised in those further submissions are addressed in the relevant sections of this report.

9.17.18. CDCG, in their further 'General Area' submission (1FS8), contend that the Board should have either requested that the applicant withdraw the application or adjourned the oral hearing to allow for new public notices and submissions. CDCG contend that parties were not given ample opportunity to review what was, in effect, a new application and that while they have now had an opportunity to make further submissions having reviewed the information, there is no opportunity to question the applicant in relation to matters arising.

9.17.19. In response to this I would note that under the provisions of s. 42(1) of the 2001 Act, the holding of an oral hearing in relation to Railway Order applications is at the absolute discretion of the Board, and consequently there was no obligation to hold an oral hearing. An extensive oral hearing did take place in this instance over a 6 week period and CDCG's representatives and many of its constituent members fully participated in the hearing on a number of occasions. In my view, the procedure for making written submissions on the information submitted by the applicant provided participants in the process with an adequate opportunity to comment on the further information. Having reviewed the information submitted by the applicant and the further submissions subsequently made by observers, I do not consider that the reopening of the oral hearing is necessary or warranted. Should the Board consider otherwise, it may direct me to reopen the oral hearing in advance of making a decision.

9.17.20. Furthermore, I do not agree with CDCG's assertion that the result of the documentation submitted by the applicant at the oral hearing is that it is essentially a new application. As detailed in Section 3.8 above, a number of proposed modifications to the project were introduced at the oral hearing. In my experience this is common practice when oral hearings are held for large projects, and often reflects issues raised by Inspectors or observers or the outcome of parallel discussions between the applicant and observers that may be happening outside of the oral hearing. None of the proposed modifications affect the proposed station locations or railway alignment (the Board will note that a proposed alteration to the depth of the tunnel, but not its horizontal alignment, was proposed at the oral hearing

on 4th March 2024 to address issues with regard to conflicts with commercial office buildings). That alteration remains within the Limits of Deviation that were sought. In fact, the information submitted by the applicant over the course of the oral hearing has the effect of reducing the scope for deviation, due to the proposed reductions in the LoDs, as outlined in Section 9.18 of this report. The vast majority of the documentation submitted by the applicant at the oral hearing related to clarifications, corrections and the provision of additional information and additional commitments in relation to planning and environmental matters.

9.17.21. With regard to the extensive submissions and questioning at the oral hearing between the applicant and the representatives of the owners of the office buildings in the vicinity of Earlsfort Terrace which resulted in the proposed lowering of a portion of the tunnel, it is obviously difficult, in circumstances where an observer's technical experts and the applicant's technical experts are making detailed submissions and responding submissions in relation to matters of technical complexity, to address this within the confines of an oral hearing, noting the legal obligation to undertake the hearing in an expeditious manner. I am satisfied that the inviting of additional written submissions on the oral hearing documentation, subsequent to the hearing, adequately addresses any potential fair procedures issue. I note that no further submissions were made on behalf of the owners/occupiers of these office buildings but I consider that there was adequate opportunity for any person wishing to do so.

9.17.22. In conclusion, I am satisfied that the Board's obligations with regard to the issues of fair procedures and the oral hearing documentation have been adequately addressed.

9.17.23. Material Contravention

9.17.24. The Planning Report submitted by the applicant with the application sets out their view with regard to the compliance of the proposed development with national, regional and local planning policy. While the report considered that the proposed development was generally compliant with the provisions of the Dublin City Development Plan 2016 – 2022 and the Fingal Development Plan 2017 – 2023 (both of which were since replaced), it states that:

“In two locations, the proposed Project does not comply fully with the current zoning objectives of the lands through which, or under which, it passes. The

two locations are the Intervention Shaft at Albert College Park and St. Stephen's Green, in both locations under the current DCDP 2016-2022. However, they will be compliant with the policies and objectives of the Draft DCDP 2022-2028 in principle. Both sites were selected following robust site selection processes.

In two locations, the proposed Project does not comply fully with specific local objectives of the lands through which, or under which, it passes. The two locations are at Balheary Park and at the R108 at Northwood, under the current FDP 2017-2023. However, these objectives are not proposed as part of the Draft FDP 2023-2029."

9.17.25. Section 6 of the report is entitled 'material contravention statement'. It sets out the applicant's view with regard to how the proposed development is supported by national policy, including planning, climate action and transport policy, and concludes that "there is ample justification for An Bord Pleanála to permit a Material Contravention of the relevant Development Plans".

9.17.26. The issue of material contravention was raised in a number of written submissions. For example, Smyths Toy Superstores (S283) and Tanrat Ltd. T/A Starbucks (S288), who both occupy a retail warehouse unit in Airside Retail Park that it is proposed to acquire and demolish, raised the issue with regard to Fosterstown Station, which is partially located on 'RW' Retail Warehousing zoned lands, where a 'public transportation station' is a not permitted use under the current Fingal Development Plan. The OPW also raised the issue of material contravention with respect to St Stephen's Green and various biodiversity and heritage related provisions of the Dublin City Development Plan. Charlemont & Dartmouth Community Group (CDCG) and a number of individual residents of Dartmouth Square and Road contend that the impacts on Dartmouth Square in terms of construction and operational phase impacts would be so severe that they would be in material contravention of the Z2 residential conservation area zoning for the area.

9.17.27. With regard to the issue of material contravention more generally, the applicant's response submission essentially repeated the above text, i.e. should the Board consider that it arises, that there is sufficient justification to permit a material contravention.

- 9.17.28. It is also of note that TII, in responding to submissions that sought that MetroLink terminate somewhere north of Charlemont, contended that such termination would materially contravene the GDATS.
- 9.17.29. On the first day of the oral hearing, errata with regard to the Planning Report were submitted (Reg. OH16) and an updated Planning Report²⁰ was submitted (Ref. OH22). I note that all references to material contravention were removed from the updated report.
- 9.17.30. Also on the first day of the hearing, the applicant's legal representative Declan McGrath SC made a legal submission (Ref. OH39), in which he stated that the concept of material contravention of a development plan is not one which has any application to the grant of approval under the 2001 Act. He noted that section 37(2)²¹ of the 2000 Act, which establishes the jurisdiction of the Board to grant planning permission in material contravention of a development plan, is only relevant in the context of an application for planning permission made under the 2000 Act and has no application to the consideration of an application for approval of a Railway Order under the 2001 Act. Notwithstanding this, Mr McGrath accepted, having regard to section 43(1)(h) of the 2001 Act (which requires the Board, when considering whether to grant a Railway Order, to consider the matters referred to in section 143 of the 2000 Act), that the Board is required to have regard to the applicable development plans.
- 9.17.31. It is clear from the above that the applicant's position with regard to the issue of material contravention in Railway Order applications has shifted, or perhaps evolved, since the lodgement of the application.
- 9.17.32. I am not aware of this issue having been tested through the Courts and none of the applicant's or observers' legal representatives have identified any relevant case law.
- 9.17.33. The absence of any reference to 'material contravention' in the 2001 Act would seem to me to suggest that one of three situations arises:

²⁰ A further update of elements of the Planning Report was submitted on 21st March 2024 (Ref. OH294).

²¹ The Board will be aware that section 37(2) of the 2000 Act relates to material contravention in the case of an appeal, while section 37G(6) relates to the Board's broader material contravention powers in the case of direct s. 37E applications.

1. The concept of material contravention is not one that arises in the consideration of Railway Order applications (i.e. the applicant's position outlined at the oral hearing).
2. The Board can materially contravene development plans/LAPs in the case of Railway Order applications without restrictions.
3. The Board cannot grant a Railway Order that materially contravenes a development plan/LAP.

9.17.34. I note, by way of comparison, that the Roads Act was quite recently amended by the Road Traffic and Roads Act 2023 with the insertion of section 51AA which states that the Board shall approve a proposed road development that contravenes materially a development plan or LAP only if it considers that particular circumstances apply. Prior to 2023, the Roads Act was also silent with regard to material contravention of development plans. Therefore, while the issue of material contravention is explicitly addressed in planning and roads legislation, there is no equivalent provision under railway legislation.

9.17.35. Having reviewed the relevant provisions of both the 2000 Act and the 2001 Act, and noting the submission of Mr McGrath in relation to this matter, in my view the issue of 'material contravention' is not one that arises with regard to a Railway Order application, which is not a planning application, and which is not made under the 2000 Act.

9.17.36. I concur with him that the Board is, however, required to have regard to the development plans in its determinations. In 'having regard' to the Development Plans, I would further note that the Supreme Court has referred to development plans as an environmental contract between the local authority and the people. As such, the Development Plans are an important consideration in their own right and as part of the consideration of the likely consequences for proper planning and sustainable development in the area.

9.17.37. As outlined in the policy considerations section of this report (Section 9.2), the proposed development is explicitly and overwhelmingly supported by a framework of policy from national to local level. As detailed in that section, it forms a key element of the two Development Plans, both of which were adopted following lodgement of

the RO application, and it underpins a considerable degree of the overall development planning context for the two administrative areas.

9.17.38. I note that both Dublin City Council and Fingal County Council are supportive of the project, with reference to their Development Plans. The most recent submissions on file from the two authorities (1FS20 and 1FS24, respectively), received following the oral hearing, state:

- **DCC:** “The proposed project will help to achieve the strategic objectives envisaged in the City Development Plan 2022-2028 pertaining to: compact and sustainable urban growth; sustainable mobility and permeability; and place-making, while significantly contributing towards climate action. Dublin City Council is fully supportive of the project in the context of the submissions made and to the benefits it will bring to the City and its residents, workers and visitors in terms of increased liveability and quality of life.”
- **FCC:** “The Fingal Development Plan 2023-2029 Written Statement and maps specifically identifies the route of MetroLink and its associated stations. The alignment of the Railway Order is reflective of the Development Plan maps and the principle of the route is compliant with policies, objectives and land use zoning requirements of the Fingal Development Plan.”

9.17.39. The applicant has identified a number of areas where they consider that the proposed development “is not fully consistent” with particular provisions of the Development Plans. These primarily relate to objectives relating to biodiversity, green infrastructure, built heritage and cycle parking provision. I have addressed these issues in Section 9.2, as well as the ‘RW’ land use zoning at Fosterstown Station and the ‘Z2’ zoning in the vicinity of Charlemont Station.

9.17.40. As per my conclusion in Section 9.2, I consider that the proposed development is fundamentally, explicitly and strongly supported by and supportive of the overarching vision, policy and objectives of the two Development Plans and applicable Local Area Plans and that is consistent with the principles of proper planning and sustainable development.

9.17.41. If the Board does not accept my reasoning and conclusion on this matter, and instead considers that the issue of material contravention can and does arise in respect of this Railway Order application, then it should consider whether this needs

to be identified and justified in its reasons and conclusions if it decides to grant the Railway Order.

9.17.42. Demolition of Protected Structures

9.17.43. The proposed development includes the demolition of gate lodges and removal of certain features at Santry Lodge, which were designated as protected structures following lodgement of the application. It also includes works, including temporary removal and reconfiguration of a number of elements of architectural heritage which are protected structures. Of particular note are the proposed works at Glasnevin, Mater, O'Connell Street and St Stephen's Green.

9.17.44. The Board will be aware that, under section 57(10)(b) of the 2000 Act, it "shall not grant permission for the demolition of a protected structure or proposed protected structure, save in exceptional circumstances". I note, however, that section 38(2) of the 2001 Act states that "Part IV of the Act of 2000²² does not apply and is deemed never to have applied to developments specified in subsection (1)²³".

9.17.45. I am therefore satisfied that the "exceptional circumstances" test for the demolition of a protected structure, as set out in the 2000 Act, does not apply in this instance and that the Board is not constrained by it.

9.17.46. However, while the "exceptional circumstances" test does not apply, it remains the case that potential impacts on architectural and cultural heritage are an important consideration in the context of proper planning and sustainable development and this matter will be considered in detail in the relevant sections of this report.

9.17.47. Impact on National Monuments

9.17.48. The proposed MetroLink alignment passes under or close to a number of National Monuments, including Lissenhall Bridge, Nos. 14-17 Moore Street and St Stephen's Green. In the case of St Stephen's Green, the construction of the proposed station will entail substantial works including the temporary removal of various heritage features, felling of a significant number of trees, excavation and other ancillary works. The OPW are opposed to this element of the project and their legal representative, David Browne SC, contended in his legal submission on 26th

²² i.e. the Part of the 2000 Act which relates to 'Architectural Heritage' and which includes section 57(10)(b).

²³ i.e. The carrying out of railway works authorised by the Board.

February 2024 (Ref. OH71) that it amounts to partial demolition of a National Monument. In response, TII's legal representatives rejected this assertion.

9.17.49. This section of my report is limited to legal and procedural matters and issues relating to the impacts of the proposed development at St Stephen's Green will be addressed elsewhere in the report.

9.17.50. While National Monuments have been subject to the provisions of the National Monuments Act 1930, as amended, the 1930 Act has been repealed by the Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023, only certain elements of which had been commenced at the time of completion of this report. Regardless of whether the 1930 Act or 2023 Act is applicable at the time of decision, the Board should note that prior Ministerial consent will be required by TII for any works or disturbance affecting any of these National Monuments.

9.17.51. This legal requirement to obtain the prior consent of the Minister exists outside of the Railway Order consenting process, and the applicant's position, as outlined in the abovementioned legal submission, is that they will make an application to the Minister for the necessary consent and it is not necessary or appropriate for the Board to determine whether an application for any particular consent is required, or for the Board to direct that such an application be made by way of condition.

9.17.52. I agree with the position articulated in the applicant's legal submission. If the Board is minded to grant the Railway Order, it is not necessary to impose conditions requiring that the applicant comply with legal obligations that exist under separate and independent legislation, outside of this process.

9.17.53. Legal Status of St Stephen's Green Park

9.17.54. The Board should note that St Stephen's Green has a particular legal status, which sets it apart from other city parks and which must be given due consideration, due to the proposal to locate a MetroLink station within the park.

9.17.55. Section 15 of the St. Stephen's Green (Dublin) Act, 1877, provides that the Commissioner of Public Works shall maintain St. Stephens Green as an ornamental park or pleasure ground for the recreation of enjoyment of the public.

9.17.56. However, section 116 of the Dublin Transport Act, 2008 provides that section 15 of the 1877 Act does not apply:

- (a) to anything done for the purposes of surveys and inspections under section 36 of the Act of 2001,
- (b) to any railway works (within the meaning of section 2 of the Act of 2001) carried out on or under St Stephen's Green pursuant to a railway order under section 43 (inserted by section 49 of the Planning and Development (Strategic Infrastructure Act, 2006) of the Act of 2001, or
- (c) to restrict the operation of a railway, light railway or metro (within the meaning of section 2 of the Act of 2001) on or under St Stephen's Green.

9.17.57. St Stephen's Green is also a National Monument, as addressed above.

9.17.58. The applicant's position, as outlined in the legal submission made by Declan McGrath SC (Ref. OH39) is that the railway works to be carried out on foot of the Railway Order come within s.116(b) and (c) of the 2008 Act and, consequently, s.15 of the 1877 Act is disapplied for the purposes of this application.

9.17.59. David Browne SC appeared at the oral hearing on behalf of the OPW. In his legal submission on 26th February 2024 (Ref. OH71), he confirmed that the Commissioners are of the view that s. 116 is broad enough to capture the elements of construction and operation of the MetroLink project, insofar as it potentially affects or impacts on St Stephen's Green, and that they agree that it disapplied s. 15 of the 1877 Act.

9.17.60. Therefore, while the use of St Stephen's Green as a public park is subject to legal protection under the 1877 Act, I am satisfied that TII is not precluded from seeking approval for a metro station and tunnel alignment on and under the park, noting that explicit provision is made for such railway works at St Stephen's Green under the 2008 Act.

9.17.61. Implications of Planning and Development Act 2024

9.17.62. The legislative basis underpinning railway works applications is unusual and somewhat circular, with the application being made as a railway order application under the 2001 Act, rather than as a planning application under the 2000 Act. However, the definition of 'Strategic Infrastructure Development' contained in s. 2 of

the 2000 Act states that it includes any proposed railway works referred to in s. 37(3) of the 2001 Act. Conversely, s. 38(1) of the 2001 Act states that development on foot of a railway order is exempted development for the purposes of the 2000 Act. Notwithstanding this, s. 146D of the 2000 Act states that the provisions of s.146A – 146C of that Act (i.e. amendments and alterations) apply to railway orders made under the 2001 Act.

9.17.63. Given this complicated relationship between the 2000 Act and the 2001 Act, I consider it important to consider any potential implications arising from the Planning and Development Act 2024 ('2024 Act').

9.17.64. At the time of completion of this report, the majority of the provisions of the 2024 Act had not yet commenced and the majority of the 2000 Act had not been repealed. Should this situation change before the Board makes its decision, I note that the 2024 Act will also amend aspects of the 2001 Act.

9.17.65. I note that 'transitional and saving provisions' have been inserted in the 2001 Act via a new section 47G, which was commenced under the Planning and Development Act 2024 (Commencement) (No. 2) Order 2025²⁴. It states that:

"47G. (1) Notwithstanding the repeal of sections 135, **143** or 146 of the Act of 2000 effected by section 6 of the Act of 2024, those sections of the Act of 2000 shall continue to apply and have effect on and after that repeal in relation to an oral hearing referred to in section 42 in respect of an application for a railway order made under section 37 but not determined before the repeal." [emphasis added.]

9.17.66. Section 143 of the 2000 Act, as I have identified in Section 8.2 above, sets out certain policies and objectives that the Board shall have regard to in the performance of its functions. This new section 47G only relates to oral hearings for railway order applications made but not decided. As an oral hearing has been completed for this case, this new section is not relevant. Should the Board consider it necessary to undertake a further oral hearing, it appears that s. 143 of the 2000 Act would continue to apply in relation to any such hearing.

²⁴ S.I. No. 256 of 2025.

- 9.17.67. I note that the abovementioned Commencement Order also commences the insertion of a reference to s. 376 of the 2024 Act and deletion of a reference to s. 146 of the 2000 Act in s. 42(2) of the 2001 Act. With the abovementioned s. 47G provisions, this would not appear to affect this application.
- 9.17.68. The Commencement Order also commences other amending provisions of the 2001 Act under the 2024 Act that are not relevant to the Board's determination of this case.
- 9.17.69. Other provisions of the 2024 Act, which do not appear to have commenced at the time of completion of this report²⁵, include the following:
- 9.17.70. Section 629 of the 2024 Act states that Parts X (i.e. EIA) and XAB (i.e. AA) of the 2000 Act "shall, on and after the repeal of those Parts by section 6, continue to apply and have effect in relation to [...] development requiring approval under section 43 of the Transport (Railway Infrastructure) Act 2001". This therefore has no material bearing on this application.
- 9.17.71. Various other changes will be made to the 2001 Act, to reference the 2024 Act, setting out procedures under a new section 46A for the alteration of a railway order and changes to judicial review provisions. None of these other changes appear to have any bearing on this application.
- 9.17.72. In conclusion, should the entire 2024 Act be commenced before the Board makes its decision, I do not consider that the Act would have any significant bearing on the Board's deliberations.
- 9.17.73. Status of Extant Subsurface Works at Charlemont
- 9.17.74. Many of the submissions made by or on behalf of observers living in the vicinity of the proposed Charlemont Station raised the issue of certain subsurface works that have already been undertaken at the location of the station.
- 9.17.75. These works, which were undertaken as part of the permitted Carroll's Building²⁶ redevelopment and extension (Ref. ABP-300873-18; DCC Reg. Ref. 2373/17), comprised the installation of two rows of secant pile walls and the construction of a

²⁵ With the caveat that the Department has not been updating the website they set up to communicate such commencements (<https://www.gov.ie/en/department-of-housing-local-government-and-heritage/campaigns/planning-and-development-act-2024/>).

²⁶ Also referred to in places as the 2 Grand Parade development, or the Hines development.

concrete transfer slab structure, which were undertaken by the developer of the commercial development effectively as accommodation works or enabling works to allow the commercial development to proceed, while facilitating the future construction of the MetroLink station underneath.

9.17.76. In order to better understand these issues, I refer the Board to the Charlemont Station structures drawings which illustrate the interface between these elements (e.g. drawing Nos. ML-ST 307 O-A3, ML-ST 307 O-A7 and ML-ST- 307 O-A8).

9.17.77. It was contended by numerous observers (see for example the ‘general area’ submission from the Charlemont and Dartmouth Community Group (CDCG; S42) that the subsurface works, which the observers often describe as a ‘station box’ do not have the benefit of planning permission, were not subject to EIA and do not form part of the MetroLink EIAR. It is contended that this constitutes project splitting for EIA purposes and that it would be legally unsafe for the Board to grant the Railway Order. It is also contended that these works have resulted in the alignment being fixed, undermining the consideration of alternatives and the direction of any future extension of MetroLink.

9.17.78. The abovementioned CDCG submission included a detailed legal opinion by Conor Power SC in relation to this issue. I note that Mr Power is a resident of Dartmouth Square and an observer in his own right, as well as being part of CDCG. Mr Power reiterates and builds upon the points above, contending that the partial construction of the ‘station box’ comprises ‘railway works’, was not authorised under the 2001 Act, was not subject to EIA, comprises unauthorised development and cannot be regularised by way of retention permission. He states that the Board is not empowered or competent to make a Railway Order which gives permission for works already carried out without a valid permission and without a prior and proper EIA process.

9.17.79. The applicant responded to this matter in their initial written response to the submission, but in more detail in the legal submission made by Declan McGrath SC on the first day of the oral hearing (Ref. OH39). Mr McGrath contended that the observers’ assertions that no consent has been granted for those enabling works is incorrect, as the planning permission granted by the Board authorised those works. He stated that the planning permission granted by the Board in respect of the

development at the Carroll's Building is valid and cannot be challenged as part of the approval process for the MetroLink Railway Order. He stated that any such challenge is out of time and it is not now open to members of the public to seek to mount a collateral attack on the validity of that permission at this remove.

9.17.80. Mr McGrath went on to state that the Board is not constrained by the earlier grant of planning permission for the enabling works in its consideration of the Railway Order and that the location of the station box has not been pre-empted by said works and that any decision on that location is wholly within the jurisdiction of the Board in the context of this RO application.

9.17.81. Mr McGrath noted that the Board has no role to play in the assessment of whether unauthorised development has occurred, stating that any such allegation would have to be addressed to the developers of 2 Grand Parade and is not relevant to the decision to be made by the Board in respect of this application.

9.17.82. Mr McGrath concluded that there is no impediment to the Board granting approval for the Railway Order by reason of a structural deck having been the subject of an earlier grant of planning permission in respect of the development of lands over the location of the proposed Charlemont Station.

9.17.83. In order to better understand the issue, I have reviewed the planning history file for ABP-300873-18. It is clear to me that the enabling or accommodation works necessary to facilitate a future metro station at this location were introduced at Clarification of Further Information (CFI) stage, prior to Dublin City Council's decision to grant permission. I note that the subsurface enabling works were shown on the basement drawings submitted with the CFI response and that the associated cover letter, dated 12th December 2017, stated that:

"The engineering documentation submitted includes updated/additional engineering reports and structural drawings, following consultation with the NTA and TII, indicating how the development / basement levels will be constructed to their satisfaction in the context of the site's location adjacent to the Green Luas Line and Charlemont Luas Stop and the potential interfaces between the development site and the proposals for connection of New Metro North to the existing Luas Green Line."

- 9.17.84. A letter from the NTA, dated 24th November 2017, accompanied the CFI response and confirmed their engagement with the applicant in relation to the interface with the New Metro North and supported the granting of permission, subject to a condition regarding the entering into agreement with TII/NTA, as was ultimately attached.
- 9.17.85. Having reviewed the appeals and the oral hearing documentation submitted with that case, I note that the works to accommodate MetroLink were also ventilated in detail at the oral hearing held in that case. I note, for example, the DBFL Engineers report submitted on behalf of that applicant entitled 'Brief of Evidence on MetroLink/Luas Interaction' which contains considerable detail on this matter, including drawings and discussion on the secant pile walls and transfer slab and the document submitted by MacCabe Durney Barnes Planning Consultants on behalf of the owners of Nos. 1-17 Dartmouth Square West, which primarily relates to this metro interface issue. The NTA's submission at the oral hearing on that case is also of note. They outline that extensive discussions had been had with the applicant in relation to the interface between the development proposals and the planned MetroLink scheme. They supported the granting of permission subject to a condition, similar to that ultimately attached by the Board. Dublin City Council's submission at that oral hearing also referenced the MetroLink interface works introduced at CFI stage and that they had granted permission on that basis. Finally, I note Section 10.6 of the Inspector's Report which provides detailed assessment of the impact of the development on the proposed metro route.
- 9.17.86. I note from the CDCG submissions on this application that judicial review proceedings were taken by residents of Dartmouth Square West against the Board's decision to grant permission in ABP-300873-18 but subsequently resolved out of court. It is stated in the CDCG 'Dartmouth Square West' submission (S41) that a number of parties to the submission were party to a legal agreement between the NTA, TII and residents in relation to certain matters. Details of this agreement and any relevance it may have for the Board's determinations in this case were not provided.
- 9.17.87. I am not aware of any enforcement action in relation to the now-completed sub-surface works and while CDCG referenced an enforcement complaint having been made in January 2023, I note that none of the observers who raised this issue, nor

Dublin City Council, identified any enforcement action relating to the site in their subsequent written or oral submissions.

- 9.17.88. Further legal submissions relating to this matter were made at the oral hearing by Damien Keaney BL on behalf of CDCG (Ref. OH309) on 25th March 2024 and by Conor Power SC on 26th March 2024 (Ref. OH336), with Mr McGrath providing a verbal response to both submissions.
- 9.17.89. Both the submissions and responses essentially repeated the key issues as set out above, with the observers' legal representatives arguing that the works undertaken comprise 'railway works', should have been subject to EIA and that the Board has a remedial obligation to rectify this matter. In response, Mr McGrath again repeated that impugning the validity of the 2 Grand Parade permission is not permissible at this stage, that the works are not 'railway works' and that no project splitting – i.e. the splitting of projects to avoid EIA – occurred. He rejected Mr Keaney's arguments regarding 'remedial obligation' as not supported by the quoted authority and that Mr Keaney is asking the Board to engage a remedial obligation in respect of the wrong case (i.e. if it applied, it would arise in respect of the Hines development, not MetroLink).
- 9.17.90. Following the applicant's response to Mr Power's submission, I asked Mr McGrath if the applicant's view was that the work constituted 'railway works' and I noted that similar enabling/accommodation works were proposed at the Dublin Central site to allow for construction of the O'Connell Street Station independent of the overhead commercial development, but in that case the drawings indicate that the station box roof slab will be structurally and functionally independent of the transfer slab above.
- 9.17.91. Mr McGrath responded that the works were not 'railway works', that the application had been made by a private developer and that TII were just a statutory consultee on that application, not a 'co-applicant'. He stated that the MetroLink interface had been raised by the Planning Authority, with the permitted works then undertaken by Hines. In relation to my query on the O'Connell Street comparison, he acknowledged the different structural approach but stated that the key point was that the slab at Charlemont was currently holding up and providing structural support to the Hines building. He stated that, with the station box constructed underneath, functional interdependence is not created between the Hines building and the station box.

- 9.17.92. Having considered the submissions made and the applicant's responses thereto, I consider that there is no legal basis for the Board to determine, within the confines of assessing and determining this Railway Order application, whether those subsurface works, which were undertaken by a private developer and not TII under a permission granted by the Board, comprise unauthorised development. I concur with the applicant's legal representative that this is effectively a collateral attack on the validity of an implemented planning permission.
- 9.17.93. With regard to the argument that the existing concrete slab, which will be utilised as part of the station box roof, represents 'railway works', I consider that the slab is simply that, a concrete slab. It is currently serving a primary structural function in supporting the overhead Hines development, transferring the load from that building to the secant pile walls. I do not consider that the future secondary use of this slab as part of the station box roof constitutes railway works.
- 9.17.94. Given that the works have a functional purpose in supporting the Hines building, while enabling the future MetroLink construction underneath, I do not consider that any EIA issues arise. The works are completed and are described in various parts of the MetroLink in connection with Charlemont Station. The MetroLink project is the subject of a voluminous EIAR, as supplemented by the information submitted at the oral hearing, and I do not consider that any project splitting issue arise.
- 9.17.95. While the applicant has used inconsistent terminology in terms of how they have referred to these works, including a statement in Section 7.7.10.11 of the EIAR that "the developer of the oversite development has carried out some advanced station box works on TII's behalf", I am satisfied that the extant subsurface works undertaken by the developer of the 2 Grand Parade development can be reasonably described as enabling or accommodation works, rather than 'railway works'. They essentially comprise a 'goalpost' arrangement of vertical secant piles and a horizontal transfer slab which supports the load of part of the overhead development, transferring it to the secant piles walls instead of directly downwards. This 'goalpost' load transfer arrangement allowed for the overhead development to be completed and occupied, while allowing for the future excavation of the area underneath and the construction of the MetroLink station. The fact that the proposed station will make use of the transfer slab as part of the station roof structure does not change my conclusion on this matter, since the primary purpose of the slab is to support the load

from the building, while also transferring it to enable the future MetroLink excavation and construction works underneath without impacting on the overhead building.

9.17.96. Wild Ireland Defence CLG Submission

9.17.97. A submission was made on the second last day of the oral hearing, 27th March 2024, by Sabrina Joyce-Kemper, on behalf of herself and Wild Ireland Defence CLG (WID; Ref. OH369). Ms Joyce-Kemper and WID were new observers at the oral hearing, who had not previously made written submissions. The issues raised by Ms Joyce-Kemper included relatively complex issues relating to EIA/AA legal matters, ecology and PFAS contamination at Dublin Airport. As these issues were raised at the end of the oral hearing by new observers, the applicant did not have their relevant consultants available to respond. In the interests of fair procedures, the applicant was subsequently invited to provide a written response to this submission under section 47D(1)(a) of the 2001 Act. This was received in January 2025 and was circulated to all observers and the EPA, inviting further submissions. A total of 12 No. further submissions were received, and I note that neither WID nor Ms Joyce-Kemper made a further submission.

9.17.98. ***Fair Procedures***

9.17.99. It is a feature of the Irish planning system that new observers may participate in an oral hearing, at the Inspector's discretion. While this is a worthy provision from a public participation perspective, it can obviously create challenges where potentially complex new issues are raised that an applicant may not be in a position to address on the day. The matters arising from the WID oral hearing submission and the responses thereto are addressed below and in the relevant sections of this report, but I am satisfied that the issue of fair procedures has been adequately addressed in relation to this submission.

9.17.100. ***Project Splitting***

9.17.101. WID raised concerns, with reference to the separate applications for MetroLink and the MetroLink cables, regarding potential project splitting or a danger that a complete and precise EIA and AA would be carried out, without conflicts or lacunae.

- 9.17.102. In response, TII noted that the reason for the separate applications was because two separate consents were required, a RO under the 2001 Act and an approval under s.182A of the 2000 Act. They contend that the issue of ‘project splitting’ does not arise, as both applications were accompanied by an EIAR and an NIS (i.e. there was no attempt to ‘salami slice’ to avoid the requirement for EIA).
- 9.17.103. They state that the impacts of the proposed project (i.e. the railway works and the grid connection works) and the mitigation measures proposed to address them are identified, described and evaluated in the EIAR and NIS submitted for each application. Table 2.1 of the applicant’s response to the WID submission provides an overview of how the MetroLink EIAR includes an assessment of the grid connection works under each environmental discipline.
- 9.17.104. I agree with the applicant’s position that no ‘project splitting’ issue arises with regard to the separate MetroLink cables application. It is clear from the MetroLink EIAR that the cables element of the overall project was considered and assessed, and matters arising will be addressed, where necessary, in the EIA section of this report.
- 9.17.105. With regard to AA, again both applications were accompanied by a NIS. The applicant notes that both NISs include an assessment of the in-combination effects of both the railway works and the grid connections works and that the Board therefore has the necessary information to undertake a full and robust AA. They also note the updated AA information submitted at the oral hearing and they include a further update with their response to WID, which addresses potential in-combination effects with the grid connection works in light of the PFAS issue.
- 9.17.106. The issue of AA and in-combination effects are dealt with in the Appropriate Assessment Section of this report, but I am satisfied that both elements of the overall project have been considered, that project splitting does not arise, and that the Board has sufficient information in relation to potential cumulative impacts / in-combination effects between the two elements.
- 9.17.107. ***Approach to In-Combination Assessment***
- 9.17.108. WID contend that the applicant’s approach to assessment of in-combination effects is legally unsafe with reference to a legal opinion by Advocate General Sharpston in Sweetman and Others C258-/11, where the term “death by a thousand

cuts” was used in relation to the methodology used to come to a finding of no in-combination effects. They contend that there should be a layering of impacts with other developments to see if the individual cuts that are not significant add up to a thousand cuts which would be.

9.17.109. The applicant rejects this contention, stating that the in-combination effects of all projects were considered and that the NIS concluded that, given the absence of any measurable residual effects on the receiving environment, that “there will be no adverse effects on the integrity of any European sites as a consequence of the proposed Project acting in combination with any, some, or indeed all taken together, of these plans or projects”.

9.17.110. With reference to the AA updates submitted at the oral hearing and in response to WID (including consideration of the PFAS issue), the applicant contends that this conclusion remains unchanged and that, therefore, the “death by a thousand cuts” concern does not arise.

9.17.111. The WID submission also refers to three other decisions of the CJEU, namely: C-127/02²⁷, C-304/05²⁸ and C-43/10²⁹ and states that appropriate assessment should contain complete, precise and definitive findings and conclusions capable of removing all scientific doubt as to the effects of the works proposed on the site concerned. It cannot be held that an assessment is appropriate where information and reliable updated data concerning the habitats and species in the site are lacking.

9.17.112. The applicant’s response was essentially to agree with the requirements for AA as outlined by WID and to detail why they believe that the NIS (as supplemented) for the RO application and that submitted in the cables application, is sufficiently robust, complete and compliant with these requirements and best practise guidance. They contend that the NISs contain information which ABP, as competent authority, may consider in making its own complete, precise and definitive findings and conclusions that the proposed Project as a whole will not adversely affect the integrity of any of the European sites concerned, whether alone or in combination with any other plan or project. They also state that WID has failed to identify or

²⁷ Waddenvereniging and Vogelbeschermingvereniging.

²⁸ Commission v Italy.

²⁹ Nomarchiaki Aftodioikisi Aitolioakarnanias and Others.

provide any evidence to support the assertion that the in-combination assessment of the two projects is legally unsafe.

9.17.113. The adequacy of the NIS and the consideration of in-combination effects will be addressed in the AA section of this report, however I am satisfied for the purposes of this legal and procedural issues section that the observer has not identified any substantive issues with the NIS on the basis of in-combination effects with the cables application or other projects that would prevent the Board from carrying out a lawful appropriate assessment.

9.17.114. WID also contend, with regard to in-combination effects, that the NIS improperly references elements of the EIAR, rather than containing all necessary information itself. They contend that an Addendum to the NIS may be required and that the Board should request this. This appears to relate to a reference in the NIS to an 'in combination assessment' as described in Chapter 15 of the EIAR. However, I am satisfied that the submitted NIS, while it does cross-reference the EIAR, is a standalone document and that it includes the full in-combination assessment, as supplemented at the oral hearing and in the update submitted with the response to WID.

9.17.115. ***Approach to Cumulative Impact Assessment***

9.17.116. WID contend that, since the EIAR does not provide a detailed layered analysis using matrices to compare and accumulate the impacts of different developments, it is not possible to understand if the combined effects of multiple projects could lead to significant environmental harm.

9.17.117. In response to this, TII note there is no prescribed format within the EIA Directive or the EPA's EIAR Guidance for the presentation of Cumulative Impact Assessment (CIA) data. They have therefore used the template provided in the UK Planning Inspectorate Advice on Cumulative Effects Assessment for Nationally Significant Infrastructure Projects, which they consider to comprise best practice, i.e. a 'Long List to Short List' exercise, followed by a 'Short List' assessment. While TII contend that their CIA was thorough and allows for the understanding of cumulative impacts, their response to WID included a re-presentation of the CIA data on an environmental thematic basis, providing a summary of the potential cumulative effects under each environmental discipline. They contend that this additional

assessment supports the conclusions reached in the EIAR, that the implementation of the proposed mitigation measures will ensure that there is no potential for significant environmental effects arising from the proposed project, either alone or cumulatively with other plans or projects.

9.17.118. Cumulative impacts will be addressed in the relevant sections of the EIA section of this report, but I am satisfied that, in the absence of Irish guidance on this matter, the approach followed by TII is consistent with that commonly used for other linear infrastructure applications in an Irish context.

9.17.119. ***Other Issues***

9.17.120. Other issues raised by WID, including the PFAS issue, the Greater Dublin Drainage sludge hub centre, interactions with utilities and the requirements of the Water Framework Directive, will be addressed where necessary in the relevant sections of this report.

9.17.121. Request for Experts

9.17.122. Several observers have requested that the Board commission expert opinions or reports on various specific issues such as legal matters relating to Charlemont Station, a city centre terminus study, optimal rail alignment and station locations etc. As detailed in Section 8.1, the Board has retained Tyréns Group AB to advise in relation to certain matters. Whilst it is open to the Board to seek the input/opinion of further experts in relation to other matters, I am satisfied on the basis of the documentation before the Board and noting the powers and remit of the Board under the 2001 Act, that such inputs are not necessary for the determination of this application.

9.18. **Limits of Deviation**

9.18.1. The applicant has sought allowance for a certain amount of deviation in the location of the proposed railway works, effectively allowing for a degree of 'micro-siting'. The initially proposed Limits of Deviation (LoDs) are set out in Section 3.5 above.

9.18.2. Appendix A5.19 ('Wider Effects Report') of the EIAR states that any amendments to the alignment are expected to generally occur within construction tolerances in the order of 200mm, i.e. much lower than the LoDs sought. The stated rationale for the

proposed LoDs is to accommodate any unknowns that might be encountered during the construction phase.

9.18.3. At the oral hearing, the applicant proposed various reductions to the allowable LoDs on foot of submissions made. This included a general restriction on upward deviation to 1 metre and further restrictions in particular locations. The table below³⁰ summarises the general proposed LoDs, with the restrictions on upward deviation presented at the oral hearing. The Board should note that these restrictions are reflected in Article 6 of the revised Railway Order submitted at the oral hearing on 26th March 2024 (Ref. OH343).

9.18.4. The substratum acquisition for the tunnel, including the LoDs, is described in a legal submission made by the applicant at the oral hearing (Ref. OH293) as a continuous tube with a rectangular face of 30m in width and 20.2m in height, within which the tunnel will be located.

Project Element	Vertically (m)		Horizontally (in all directions) (m)
	Upwards	Downwards	
Surface works (not impacting on public roadways)	~~2~~ 1	2	5
Surface works (impacting on public roadways)	1	1	2.5
Tunnel alignment	~~5~~ 1	10	15
Retained cut and cover and cover alignment	1	2	2.5
Station box locations	~~5~~ 1	10	2

9.18.5. Additional constraints are proposed to the LODs in certain locations, and I note that these are reflected in the final Schedule of Additional Environmental Commitments (Ref. OH376) submitted at the oral hearing on 27th March 2024. The locations are as follows:

³⁰ The crossed-out text in the table is the original proposed upwards LoD. The bold text is the revised proposal.

- At the Cut and Cover adjacent to Estuary Court, there will be no lateral deviation.
- At the retained cut alignment section adjacent to Woodie's Seatown, there will be no lateral deviation.
- At Seatown Station adjacent to Hertz Europe Head Office, there will be no lateral deviation.
- At the retained cut alignment adjacent to Ashley Avenue, there will be no lateral deviation.
- At the retained cut alignment section adjacent to Fujitsu Ireland Limited, there will be no lateral deviation.
- At the retained cut alignment section adjacent to Swords Veterinary Hospital, there will be no lateral deviation.
- At the underground tunnel section under Trinity College Dublin, there will be no vertical deviation upwards beyond construction tolerances and no lateral deviation to the east.
- The MetroLink tunnel located under the Cadenza Building located at Earlsfort Terrace, Dublin 2 will not move vertically upwards or horizontally west.
- In the section of the alignment between [chainage] 18+640 and 19+035, there will be no deviation upwards.

9.18.6. I note that the above constraints on LoDs generally, but not entirely, incorporate the constraints set out in Section 1.4 of Appendix A5.19 of the EIAR. The omitted constraints that are contained in Appendix A5.19 but not in the SAEC include:

- Glasnevin Station and interchange – no scope for lateral deviation due to the existing infrastructure at this location including Iarnród Éireann, the Royal Canal, adjacent residential buildings and roadway.
- O'Connell Street Station – no scope for lateral deviation due to level of existing infrastructure here and the possibility of interfaces with oversite development.
- St Stephen's Green Station – no scope for vertical deviation upwards due to restrictions on tree roots in St Stephen's Green.

- Charlemont Station – no scope for lateral deviation due to interfaces with oversite development and adjacent residential properties located on Dartmouth Square.

- 9.18.7. I do not consider that there is a need to attach a specific condition regarding these constraints that are omitted from the SAEC list, as the SAEC is intended to list additional commitments beyond those already in the EIAR (albeit that there is some overlap). While the unnecessary repetition of parts of Appendix A5.19 in the SAEC is unhelpful, I do not consider that a lack of clarity arises.
- 9.18.8. The Board should note that the use of limits of deviation is a long-established practice in railway consenting in Ireland and that, in granting the Railway Orders for Metro North and DART Underground, the Board made provision for similar LoDs to those proposed in this instance.
- 9.18.9. Given the scale of the project, the complex and varied receiving environment (particularly the subsurface environment), and the associated potential for both 'known unknowns' and 'unknown unknowns' to arise during the detailed design and construction phase that may require localised adjustments to tunnel or station alignment, I consider that provision for LoDs is reasonable and prudent at this stage of the project, particularly given the need to ensure that sufficient land is acquired to construct the project.
- 9.18.10. A number of submissions raised the issue of LoDs in the context of compulsory land acquisition. Those matters are considered in the CPO Section of this report, however, subject to the various constraints in particular locations, as listed above, I consider that the extent of the revised LoDs are acceptable and that they are not excessive.

9.19. **Excavated Material and Waste Management**

- 9.19.1. Approximately 3 million m³ (c. 5.45 million tonnes) of excavated material is forecast to be generated during the construction phase of the proposed development from earthworks, excavations and tunnel construction. Waste will also be generated, including construction and demolition waste and waste generated by workers at site compound facilities.

- 9.19.2. It is stated in the EIAR that waste management will be based on the principles of the waste hierarchy (prevention, reuse, recycling and recovery), with disposal to landfill only as a last resort. This matter is also addressed in the CEMP and it is stated that the contractor will be required to develop a Construction and Demolition Waste Management Plan.
- 9.19.3. The EIAR predicts that c.89.6% of the total material arisings would be classified as a by-product under Article 27 of the European Communities (Waste Directive) Regulations 2011, as amended. Of the remaining 310,317m³ (558,571 tonnes), it is predicted that c. 99,931m³ (176,876 tonnes) will be used for backfilling and landscaping purposes, leaving c. 210,386m³ (378,695 tonnes) of material that would be managed as a waste. The EIAR states that an Article 27 Notification to the EPA in relation to the excavated material has been made on behalf of TII.
- 9.19.4. Roadstone's Huntstown Quarry, which is located c.5.5km from the Northwood Portal location and near Junction 5 of the M50 Motorway, is identified in the EIAR as the preferred location to accept Article 27 compliant material, due to its capacity. The EIAR states that, should there be any issues with the use of Huntstown Quarry by the time construction commences, suitable alternatives will be found. The contractor will also be required to prepare an Excavated Materials Management Strategy.
- 9.19.5. A copy of a letter from Roadstone to TII was submitted at the oral hearing on 22nd February 2024 (Ref. OH70). This stated that Article 27 compliant material will be accepted at the Huntstown South quarry facility and that sufficient capacity will be retained at the facility for the maximum volume of Art. 27 material that may arise over the projected timelines.
- 9.19.6. Subsequently, a copy of a letter from the EPA to TII was submitted at the oral hearing on 21st March 2024 (Ref. OH297). This letter, dated 19th March 2024, related to the Article 27 Notification. It states that the EPA supports the efforts by developers of large-scale projects, such as MetroLink, to maximise the volume of excess material beneficially reused as by-product. With reference to TII's Notification, the EPA note that their 2019 guidance on soil and stone by-products requires demonstration that the notified soil and stone is uncontaminated and is, or is equivalent to, virgin soil and stone.

- 9.19.7. Given the scale of the material notified by TII, the EPA state that it cannot be stated with a sufficient degree of certainty that the sample data is representative of the entire volume. They note that contamination occurs in some areas with the notification and identify certain issues with TII's proposed "environmental acceptance criteria" or limits for determining whether material is suitable for use as by-product. They conclude that they are not satisfied that the risk assessment presented is sufficiently robust and provides the necessary assurances that the entire quantity of notified material is uncontaminated. In order to ensure that the maximum amount of suitable material is reused, the EPA recommend that TII should withdraw their notification and make separate notifications for suitable uncontaminated subsets of material, demonstrating compliance of these discrete batches with specified requirements for by-products.
- 9.19.8. The EPA did not attend the oral hearing and did not make a submission to the Board.
- 9.19.9. On foot of the abovementioned EPA letter, TII provided a document 'Technical Note on Excavated Material' (Ref. OH94) to the oral hearing on 27th February 2024, which outlines that 80% of excavated material could be classed as suitable for a Soil Recovery Facility (SRF) in the event that the Article 27 Notification is unsuccessful.
- 9.19.10. The issue of impacts on landfill is discussed in detail in Section 11.19 of my report and is thus discussed in summary here.
- 9.19.11. From the EPA correspondence, it seems to me that their issue is primarily with the use of a single notification for all material, and that they would prefer the use of subsets of materials, to ensure that only uncontaminated material is treated as a by-product. Establishing the exact quantum that can be disposed of via the Article 27 process therefore requires further ground investigations to be undertaken but, I consider it likely that the majority of the excavated material will be suitable for re-use as a by-product, since a considerable portion of the alignment is in greenfield areas or will comprise excavated bedrock. I note in this respect that the EPA letter offers stated support for the applicant's efforts to maximise beneficial reuse of excess materials.
- 9.19.12. TII's approach to dealing with excavation arisings is supported by national, regional and local policies and either of the proposed disposal methods (Article 27 or SRF)

would substantially reduce the quantum of material requiring disposal to landfill.

Whilst the developments at the oral hearing point to ongoing uncertainty with regard to the large volume of excavated material arisings, I consider this is acceptable in the circumstances. I would also point out that, given the likely significant cost differential between removal of a 'waste' and removal of a 'by-product', there will clearly be a considerable incentive for TII to maximise the beneficial re-use of excavated material.

9.19.13. The issue of PFAS contamination at Dublin Airport, as raised at the oral hearing by Sabrina Joyce-Kemper and Wild Ireland Defence CLG (Ref. OH369) is also relevant to this matter. It is discussed in detail in Section 10.2 and in the relevant sections of the EIA and AA sections of my report and is thus discussed in summary here.

9.19.14. The full extent of PFAS contamination at Dublin Airport is unknown and TII has provided a PFAS Management Strategy that applies a worst-case assumption whereby 100% of excavated material (both soils and water) from the Dublin Airport sites will be considered to be contaminated and require management. All excavated material will be tested for contamination and a segregated bunded storage facility has been identified at Dardistown, within the project boundary. Material that is found to be contaminated will thereafter be exported to Europe for either treatment for reuse or disposal to landfill. Material that is not contaminated will be treated as 'normal' excavated material.

9.19.15. I accept that there is some uncertainty as to the precise extent of PFAS contamination at the Airport and in this context, I consider the application of a worst-case scenario to be appropriate, with testing of all excavated material proposed. Testing of all excavated material is likely to be effective in identifying and appropriately dealing with any encountered contamination in this material. The issue of water contamination is addressed in the Hydrogeology section of this report.

9.19.16. In conclusion, I consider the applicant's approach to dealing with the disposal of excavated material to be reasonable, consistent with the circular economy model, and likely to be effective in ensuring that significant impacts on national landfill capacity do not arise.

9.20. Over-Site Development

- 9.20.1. A number of submissions raise the issue of future development over the underground portions of the MetroLink development. This issue was raised both by individual landowners affected by the proposed land acquisition and more generally, from a sustainable development and urban design perspective, in the context of certain stations.
- 9.20.2. While there are clearly substantial sustainable development benefits to over-tunnel and over-station development in terms of making efficient use of zoned lands above or adjacent to a high capacity metro, there is also the potential for potentially complex construction and operational issues around protection of tunnels and other infrastructure, access to stations for maintenance/replacement of equipment, structural issues with regard to station design and interactions of services etc.
- 9.20.3. The proposed O'Connell Street Station is a good example of a metro station incorporated into an over-station development (the permitted Dublin Central development), maintaining the streetscape and urban form of the area. However, in the majority of cases, no over-station development is proposed along the MetroLink alignment. Instead, the above-station areas are typically utilised as public plazas, circulation areas, cycle parking, landscaping etc. This creates positive urban design impacts from a placemaking perspective and facilitates large movements of pedestrian in and out of the metro stations. In particular, I note the Tara Station proposals, where an urban plaza will be created in what is currently a somewhat uninviting urban environment with a notable lack of public open space. Residual lands around the plaza, outside the Tara Station box footprint, are identified for future development which strikes an appropriate balance between making efficient use of zoned and accessible city centre land and improving public realm. In some other stations, such as Griffith Park, Mater and St Stephen's Green, existing pitches / parks will be reinstated above the stations, which is appropriate to the context of those stations.
- 9.20.4. With regard to the proposed Northwood Station, Lidl Ireland GmbH, who own some of the lands on which it is proposed to construct the station, made extensive written and oral submissions regarding over-site development. I have addressed these issues in Section 10.3 and in the CPO section.

- 9.20.5. At Glasnevin Station, due to the highly accessible location served by MetroLink, two commuter rail lines and a BusConnects route, there would be potential for significant over-station development, beyond the scale of the proposed station building, subject to planning permission. The original written submission from Dublin City Council (S71) sought that the station be designed to accommodate future over-site development, with reference to the Z3 zoning objective for the lands. It is important to note, however, that Glasnevin Station is a particularly constrained station involving an extremely complex interface of the metro line and the two railway lines at different depths, immediately adjacent to the Royal Canal and the busy R108 road. I have addressed over-site development at Glasnevin in Section 10.7.
- 9.20.6. At Dublin Airport Station, the initial failure to provide for oversite development is more problematic, since the proposed station is located within an area designated as a Ground Transportation Centre in the Dublin Airport LAP and a failure to provide for potential oversite development at this stage may have future implications with regard to airport operational matters, including the potential provision of automated people movers or other transport modes as the airport develops. The central airport campus is also a strategic but quite physically constrained area. Given the importance of Dublin Airport to Fingal and the State from a socio-economic perspective, as recognised in policy, it is appropriate that suitable provision should be made in such an area for efficient land use. I note, therefore, the agreement reached between TII and DAA, a copy of which was submitted at the oral hearing (Ref. OH77), which states that the MetroLink structures shall be constructed so as to accommodate future development above the station and tunnels.
- 9.20.7. I consider that this aspect of the agreement is to be welcomed and as addressed elsewhere, I have recommended that the agreement be included in the Thirteenth Schedule of the Railway Order, if the Board is minded to grant it.
- 9.20.8. Separate to the issue of over-station development is the issue of development over the metro tunnel or in close proximity to the metro tunnels and stations. In the EIAR, the applicant had referred to an Asset Protection Policy that would be put in place to guide over-site development. As no details were provided of how this would operate, the applicant was requested to address this matter in their submissions at the start of the oral hearing. The applicant subsequently submitted a 'Draft Guidance Note for Developers' to the oral hearing on the first day (Ref. OH7). This document outlined

protection zones and exclusion zones that will apply for the various types of structures, loading limits that will be in place for over-site development and information that TII will require from developers to demonstrate that their development does not obstruct or interfere with MetroLink infrastructure.

9.20.9. Exclusion and protection zones are defined as follows:

- **Exclusion Zone** is the volume of subsoil along the bored tunnel, cut and cover tunnel and retained cut alignment in which no future works or developments are allowed to encroach. Future surface works or developments are allowed above a subsurface Exclusion Zone, provided the foundation of the proposed development does not intrude into the Exclusion Zone and the MetroLink structures are not adversely affected.
- **Protection Zone** is the volume of subsoil and the area on the ground surface along the bored tunnel, cut-and-cover tunnel and retained cut alignment in which future works or developments could impact the MetroLink structures. Future works or developments are allowed in the Protection Zone with any depth of foundation, provided it does not adversely affect the MetroLink structures and is subject to written agreement with TII.

9.20.10. I note that the diagrams included in the Guidance Note for Developers include the LoDs, with the protection and exclusion zones outside of the LoDs. Once the tunnel/station position is fixed, there is no reason why the LoDs are required in the Guidance Note. If the Board is minded to grant the RO, I therefore recommend that a condition be included, requiring that prior to the coming into operation of MetroLink, the applicant shall publish on their website and submit to the two local authorities, an updated Guidance Note for Developers which will identify exclusion and protection zones around stations and tunnels in accordance with the document submitted at the oral hearing on 27th March 2024, but omitting the Limits of Deviation.

9.20.11. In the interests of public safety and protection of public infrastructure, it is entirely reasonable in my opinion that a loading limit would be placed upon future structures overlying the MetroLink tunnels and that suitable protection zones, exclusion zones and consultation requirements with TII would apply.

9.20.12. The issue of future development is addressed in Section 8 of the Tyréns report. They state that it is normal practice that an exclusion zone is defined around the tunnel

where no future construction may take place and that loading above the tunnel is limited and that a zone is defined where future developments need to engage in a dialogue with the metro tunnel Operator/Owner with detailed assessments being made of the influence from any proposed construction. They state that it is usual that such a dialogue can solve the issues without undue restraint on development, however they note that it does limit to some extent future development and may make the development more expensive if, for instance, a load distributing raft needs to be incorporated into the development to limit loads on the tunnels. They also note that unloading of the ground above the tunnel, for instance during the construction of a deep basement, can cause uplift of the tunnel and that future deep excavations need to be considered and to some extent limited.

9.20.13. There was a considerable degree of discussion and questioning at the oral hearing regarding over-site development and the guidance note, particularly with regard to loading limits, which were presented in an unclear format by the applicant, leading to much back-and-forth discussion and questioning between the applicant's engineers, observers' engineers and the Board's consultants. This resulted in three versions of the guidance note being submitted over the course of the oral hearing (Refs. OH7, OH50 and OH378). The final version, called an 'Outline Guidance Note for Developers' was submitted on 27th March 2024.

9.20.14. The applicant is proposing an allowable loading surcharge of 75kN/m² above the tunnels. There was confusion at the oral hearing regarding where this figure was to be applied – i.e. at ground level, at base of foundations or at tunnel level. This is an important consideration, as load spreads out with increasing depth, meaning that the position at which the loading limit is being set will determine the allowable loading from the overhead development and possibly the form and height of the development. On questioning, the applicant's representatives stated that the 75kN/m² surcharge is applied at the crown of the tunnel. I note, however, that their subsequent response to the further submission made by Lidl Ireland GmbH after the oral hearing (1FS30) is still somewhat unclear. They state that:

"The surcharge load is defined as a surface load extended infinitely in all directions. For developments within the protection zone, and subject to consultation with TII, the surface load at the base of their foundations is not

limited to the defined surcharge load value of 75 kN/m² where the following conditions are met:

- The developments are built in a specific area, such that the development does not extend over an infinite surface in all directions. Therefore, the development loads are concentrated in these areas and are distributed so that The loads on any part of the tunnel lining are lower than the surface loads applied and do not exceed 75kn/m². (Development loads are distributed in all directions and so the load exerted by the development on any part of the tunnel at the base of their foundations will in all cases always be less than the load at the base of their foundations exerted by the development on any part of the tunnel).
- Future works or developments are may be [sic] allowed in the Protection Zone with any depth of foundation. For this, it must be verified that the solutions proposed do not adversely affect the MetroLink structures. To this end, TII must be consulted and agree on the loading effect and foundation conditions of the development that are compatible with the MetroLink infrastructure.

In conclusion, MetroLink does not limit future developments to maximum surcharge loads of 75 kN/m² at the base of their foundations, but only requires that developments ensure the distributed load over the whole footprint of the development on any part of the tunnel does not exceed 75 kN/m². MetroLink is compatible with a wide variety of developments and structural and construction solutions in the Protection Zones, which will need to be coordinated with TII.”

9.20.15. In their response to Lidl’s further submission, TII also note that the Thames Tideway Tunnel has a maximum development surcharge load of 75 kN/m², that Crossrail/ Elizabeth Line has a surcharge load of 50 kN/m² and that the Dublin Port Tunnel has a maximum acceptable developer surcharge load of 22.5 kN/m². They note that these cities have allowed ambitious developments compatible with tunnel infrastructure with the same or even more restrictive baseline conditions than proposed in this instance.

- 9.20.16. Tyréns also note their understanding that the allowable 75 kN/m² surcharge load is defined at tunnel level, based on the applicant's oral hearing statements, and that this value is understood to represent the combined permanent and temporary loads. They note the further clarification and reference to the Crossrail requirements, as set out above but also note, by way of comparison, that the Copenhagen Metro uses surcharge loads of 120 kN/m² or 200 kN/m² at ground level to ensure adequate flexibility for future development scenarios.
- 9.20.17. Given the unclear statements by the applicant regarding the level at which the allowable 75 kN/m² load is applied, Tyréns recommend that the 'Outline Guidance Note for Developers' be developed further to clearly identify the level at which the allowable load is applied and that it be 'signed off' by the Expert panel. I agree with that recommendation, noting that the proposed loading limits are comparable or greater than those applied in similar modern tunnels in Dublin and London but that certainty is required on the level that the allowable load is applied.
- 9.20.18. Tyréns also recommend that suitable provisions be included in the D&B tender documents to ensure the tunnel design has suitable robustness to cope with the anticipated loading from adjacent developments and not unduly constrain future development. The reason for this, is to ensure that the tunnel can facilitate overlapping (superimposed) loads from adjacent properties to ensure flexibility for developers (i.e. the spreading of load from adjacent properties may use some of the loading allowance for a development directly above the tunnel). I agree with Tyréns recommendation and consider this to be a reasonable measure to facilitate over-site development.
- 9.20.19. On top of the underground stations, cut and cover sections, portals and shafts, Tyréns note that the applicant has proposed allowable surcharge loading of 20 kN/m² at the surface for these structures. Tyréns consider this loading to be reasonable for these shallow structures but note that there may be the need for larger loadings to be incorporated in certain structures during detailed design. I consider that such matters can be addressed in terms of accommodation works agreements with affected landowners who may, for example, require HGV access over cut and cover sections.

- 9.20.20. Tyréns note that developments near the MetroLink alignment currently carry inherent risks for developers and therefore recommend that the applicant's requirements are clearly defined to enable developers to assess potential impacts on their projects. They consider that the requirements in the Guidance Note that: "any developer ... will need to demonstrate that the integrity of the MetroLink infrastructure is not adversely impacted" and "works in the protection zone... is subject to written agreement with TII" are insufficiently specific. They recommend that the Guidance Note establish explicit, pre-approved criteria for permissible works. For deviations from these requirements, evaluations should proceed on a case-by-case basis.
- 9.20.21. I agree with this assessment and note that, in the case of the deep bored tunnels, the protection zone extends to ground level. In order to avoid overly onerous requirements or restrictions on minor works above the tunnel, and noting the considerable depth of the tunnel, I recommend that the updated Guidance Note should include pre-approved guidance criteria for minor works (e.g. shallow excavation works, construction of domestic extensions or boundary walls) that have no reasonable likelihood of impacting the MetroLink infrastructure.
- 9.20.22. Another issue raised with regard to future development was the potential for very high point loading from foundation piles in the vicinity of the tunnel lining in the case of large-scale development. I do not consider that the proposed MetroLink development will inherently prevent any such large-scale development, noting that there are engineering methods that would allow load to be transferred away from the tunnel, subject to engagement and agreement with TII.
- 9.20.23. The OPW, in their further submissions following the oral hearing (1FS36 and 2FS11) seek that the Board ensure that the MetroLink tunnel would not limit the State's capacity to develop its property particularly around or below Leinster House, Government Buildings, the National Gallery, the National Museum, and the National Concert Hall complexes. They note that planning permission is in place for some extensive developments at some of these locations, including lower levels of buildings that may affect the MetroLink tunnel. They request that the Board attach a condition to the RO that acknowledges and mitigates any restrictions on future development of their properties. They also query the implications of the guidance note for future development they may wish to undertake.

9.20.24. In response, TII noted the agreement with the OPW submitted at the oral hearing (Ref. OH73), in which they commit to engaging constructively with the OPW in the event of any plans for future development at all OPW properties with a view to ensuring that any such plans can proceed in a manner compatible with the MetroLink project. They also state that TII has agreed to enter into property-specific bilateral legal agreements with the OPW to ensure the protection of key State properties and that a draft agreement is currently being negotiated. Based on the available information and the submitted agreement between TII and the OPW, I am satisfied that there is no reason to form the view that the proposed development is likely to prevent future development at State properties and that matters of co-ordination can be addressed directly between the parties.

9.20.25. Finally, and with regard to submissions contending that the capacity for over-site development would be restricted by a loading limit, I consider that any impacts that substratum land acquisition has on development potential and value of land overhead is ultimately a matter for property arbitration and the compensation process if deemed appropriate.

9.21. Construction Worker Travel to Site

9.21.1. A number of observers at locations along the alignment expressed concerns regarding the potential for uncontrolled MetroLink construction worker parking in residential areas to lead to congestion, disruption or public safety issues.

9.21.2. The Outline CEMP (Appendix A5.1 of EIAR) stated that a Construction Mobility Plan will be prepared by the contractor(s) to outline access arrangements to construction sites by sustainable travel modes and that each site will need a specific plan for project personnel mobility.

9.21.3. The applicant subsequently submitted an Outline Mobility Management Plan (MMP) on the first day of the oral hearing (Ref. OH27). The Outline MMP states that it will be used to provide guidance to future Mobility Managers (MM) to develop site-specific MMPs which will feed into the overall Construction Mobility Plan.

9.21.4. The Outline MMP notes that the volume of workers expected on various sites across the construction stage is such that transportation of workers to site needs to be undertaken in an efficient and sustainable manner to alleviate pressure on the local

network and minimise disruption for local residents. It notes that limited or no parking will be available on site and that the volume of workers is such that it could cause increased congestion if a modal shift to sustainable travel modes is not encouraged.

- 9.21.5. Table 5.1 of the Outline MMP lists all the main compounds along the route together with the maximum number of staff and the opportunities and challenges each faces from a sustainable transport perspective. I note that the number of staff ranges from 72 in the case of Dublin Airport North Portal to 1,500 in the case of Dardistown but is typically in the range of 200 – 500 staff per site.
- 9.21.6. It will be a requirement that each construction site has an assigned MM, who will be a representative of the relevant contractor(s) in charge of the site and their responsibilities will include co-ordination of travel to site, promotion of sustainable transport opportunities, implementing measures to promote sustainable transport, and monitoring the MMP to consider how successful interventions have been and whether interventions should be removed/enhanced. A Steering Group will be put in place to provide guidance to MMs and oversight of MMPs.
- 9.21.7. The Outline MMP is quite high level, with the detailed MMPs to be developed by the contractors' designated MMs. Its language is generally around 'encouraging' employees to use car sharing and sustainable transport modes rather than firm commitments. Some of the sites are highly accessible by existing public transport modes while some are relatively inaccessible and in the case of inaccessible locations, the Outline MMP states that MMs should consider feeder buses to public transport hubs.
- 9.21.8. I note that an additional commitment was made in relation to this matter at the oral hearing and is contained in the final SAEC:
- “During the construction phase, workers will be transported to site via mini-buses from designated collection points (such as Luas and DART stations or other appropriate locations) in line with the mobility management plan.”
- 9.21.9. I note that the Outline MMP includes provisions in relation to assisting schools in the vicinity of construction sites to ensure a travel plan is put in place for safe transport of students, workers and visitors to schools. In the case of Our Lady of Victories Schools, directly opposite the proposed Collins Avenue Station on the Ballymun

Road, additional commitments have been made, which are addressed in Section 10.5 below.

- 9.21.10. I consider the Outline MMP to have been prepared in accordance with relevant Policy and guidance documents, as detailed in Section 3 of the plan and I am satisfied that it is acceptable in principle as a framework for the more detailed site-specific MMPs that will be put in place by the contractors' MMs with oversight from the Steering Group. However, given the numbers of staff at many locations, I consider that the provision of shuttle bus connections, as outlined in the additional commitment made by TII, will be of critical importance, rather than just encouraging workers to use more sustainable options.
- 9.21.11. Subject to conditions requiring implementation of the CEMP and MMPs and the additional commitments made in the final SAEC, I consider that construction worker travel to site can be effectively managed without resulting in undue levels of disruption or congestion in residential areas.

9.22. Cycle Issues

9.22.1. Bicycles on MetroLink Trains

- 9.22.2. A number of observers sought that MetroLink be required to accommodate bicycles on trains. The applicant's response to this issue was that MetroLink will be designed to accommodate folding/commuter type bikes and micro mobility devices, however access for these devices will be dependent on the establishment of a city-wide public transport policy regarding their use by the Department of Transport and the NTA.
- 9.22.3. While the carriage of bicycles would be beneficial in encouraging sustainable transport patterns and modal shift, their presence in the carriage would have the potential to form an obstruction during an emergency evacuation, which I note would require people to pass through the train carriages to access the front or rear ramp. I note that bicycles are allowed on DART and commuter rail services in off-peak periods, so there does not appear to be any fundamental reason why this could not be achieved on the MetroLink, should it meet appropriate safety and operational requirements. I do note, however, that Irish Rail recently banned e-scooters from their services due to lithium battery fire risks.

9.22.4. For these reasons, I consider that this matter is more appropriately dealt with through railway safety consenting and as an operational matter for TII, NTA and the Department. I do not consider it appropriate that this matter be dealt with by way of condition.

9.22.5. Cycle Parking Provision

9.22.6. A number of observers contend that the proposed provision of cycle parking at the MetroLink stations is inadequate. Refer, for example, to the written and oral submissions made by Dublin Commuter Coalition (S72, 1FS21, OH358) and Dublin Cycling Campaign (S73, 1FS22, OH359) where these issues are well articulated. It should be noted that other observers contend that there is potential for conflict between cyclists and people with mobility or visual impairments on the plaza areas surrounding the proposed stations (refer for example to the submissions by National Disability Authority (S198) and Voice of Vision Impairment (S311)).

9.22.7. The applicant's methodology for the proposed provision of cycle parking is contained in Appendix A4.1 of the EIAR and the applicant's Traffic consultant, Matthew Foy, made a detailed Cycle Parking Overview submission and presentation at the oral hearing on 27th March 2024 (Ref. OH352 and OH357). The submission included a copy of a letter from the NTA to TII, dated 23rd January 2024, confirming that the NTA had agreed the approach utilised in Appendix A4.1 and that additional cycle parking will be delivered by the NTA as part of wider strategies, taking account of wider transport needs. They state that the level of cycle parking proposed is appropriate and that supporting measures will be implemented in line with the GDATS, to ensure adequate provision of cycle parking to meet demand.

9.22.8. Mr Foy noted the following measures in the GDATS:

- **CYC5 – Cycle Parking:** It is the intention of the NTA to deliver, through the statutory planning process and liaison with relevant stakeholders, high quality cycle parking at origins and destinations, serving the full spectrum of cyclists including users of non-standard cycles.
- **CYC6 – Cycle Parking Strategies:** Local authorities will prepare public cycle parking strategies in order to ensure that there is sufficient short-stay safe and secure cycle parking available on-street and/or off-street, including spaces for

cargo bikes and other non-standard bike designs, in city, town and village centres.

- **INT5 – Major Interchanges and Mobility Hubs:** It is the intention of the NTA, in conjunction with TII, Irish Rail, local authorities, and landowners to deliver high quality major interchange facilities or Mobility Hubs at appropriate locations served by high capacity public transport services.

These will be designed to be as seamless as possible and will incorporate a wide range of facilities as appropriate such as cycle parking, seating, shelter, kiosks selling refreshments plus the provision of travel information in printed and digital formats.

- 9.22.9. In his oral hearing submission and associated presentation, Mr Foy outlined the various possible approaches to calculating cycle parking demand and the demand-led approach used for the Railway Order application. This calculated demand for the 2035 Opening Year and the Opening Year + 5 years. The approach had regard to catchments and the different characteristics of stations with regard to boarding and alighting passenger numbers (i.e. in the outer stations, demand is driven by boarding numbers while in the city centre stations it is driven by alighting numbers).
- 9.22.10. As can be seen in Table 4.1 of Mr Foy's submission (Ref. OH352), there is a substantial shortfall in cycle parking provision at all stations based on the demand-led approach. This shortfall reduces when the impact of shared mobility (i.e. bike sharing schemes) is considered, which results in spaces turning over more frequently. While this reduces the shortfall, it does not meet forecast demand.
- 9.22.11. An alternative approach of dynamic analysis was also undertaken and is presented in Mr Foy's submission. This approach seeks to identify when the peak demand for cycle parking occurs with consideration of the ongoing arrival and departure of passengers. It found that the peak demand occurs in the AM peak period only, with demand decreasing for the remainder of the day. Table 5.3 of Mr Foy's submission sets out the demand based on dynamic analysis and again indicates that there is a substantial shortfall compared to the peak hour demand at many of the stations, particularly in the city centre.

9.22.12. The table below combines various tables from Mr Foy's submission to compare cycle parking provision against potential demand based on the demand-led approach and the alternative dynamic analysis approach.

Station	Cycle Parking Provision	Potential Demand 2035 Opening Year	Potential Demand Opening Year + 5 Years	Peak Demand (Dynamic Analysis)
Estuary	254	-	-	-
Seatown	480	765	819	363
Swords Central	942	1,233	1,320	749
Fosterstown	422	788	843	553
Dublin Airport	72	-	-	-
Dardistown (not open to public in opening year)	-	-	-	-
Northwood	204	686	734	393
Ballymun	292	973	1,042	570
Collins Avenue	370	1,157	1,238	276
Griffith Park	176	411	440	119
Glasnevin	120	496	531	264
Mater	70	164	175	59
O'Connell Street	0	236	253	121
Tara Street	256	973	1,041	705
St Stephen's Green	82	871	932	745
Charlemont	162	808	865	446

9.22.13. The applicant acknowledges the shortfall in cycle parking provision regardless of which assessment method is used but contends that, as per the GDATS measures,

this is a wider issue that will require co-ordination between the NTA, transport operators and the local authorities to ensure that there is sufficient cycle parking provision to meet the needs of MetroLink and the wider city requirements.

9.22.14. I consider the applicant's approach to the issue of cycle parking to be reasonable.

What is proposed in this application is a new public transport corridor, retrofitted into what are primarily already developed areas. In my opinion it is not feasible to fully meet cycle parking demand within the application boundary, particularly given the need to compulsorily acquire private lands to deliver the project.

9.22.15. It can be seen from the street level layout or landscaping drawings that areas for proposed cycle parking in the vicinity of the station entrances are generally quite extensive. There is a balance to be struck, in my opinion, between the provision of cycle parking and the visual amenity of the plazas to be created and issues of accessibility, visual amenity and pedestrian circulation. In the case of St Stephen's Green, for example, the provision of c. 900 cycle parking spaces would potentially have further significant impacts on this important heritage asset, while in the case of Tara Station, the provision of c. 1,000 cycle parking spaces would potentially visually overwhelm the urban plaza to be created.

9.22.16. Given the interactions with other transport modes and the likely future transformative effects of the proposed development on urban development of lands in the vicinity of stations, it is appropriate that a multi-agency approach be adopted to meet cycle parking demand which will provide a more holistic approach to cycle parking provision. This approach would be consistent with the GDATS measures CYC5, CYC6 and INT5. Given the duration of the construction phase, it is also important to note that shared mobility services are becoming increasingly prevalent and that the roll out of 'mobility hubs' under the GDATS by the NTA in conjunction with the local authorities, TII and landowners will be a further mechanism by which enhanced cycle parking can be achieved in the operational phase. The recent National Policy Statement on Shared Mobility and the Provision of Hubs 2025 also supports shared mobility and mobility hubs and notes how they can complement public transport services.

9.22.17. I note in this regard that the agreements with the two local authorities submitted at the oral hearing both include a 'condition' requiring cycle parking details to be agreed

with the authority (see 'Condition' 12, item 8 of the DCC agreement (OH76) and 'Condition' 14 of the FCC agreement (OH147)).

9.22.18. While the Dublin City Development Plan is not prescriptive with regard to cycle parking provision for public transport station, I note that Table 14.17 of the Fingal Development Plan 2023-2029, which was adopted post-lodgement of this application, does set out cycle parking standards. In relation to 'rail, metro, light rail stations and stops' it states that cycle parking provision should be:

"Sufficient to meet the anticipated demand for cycling when planned cycling and active travel infrastructure is in place. Where the anticipated demand for cycling to a metro/heavy rail/light rail station hasn't been estimated, a norm of 10 to 30% of trips to rail stations being made by bicycle will be used for the provision of bicycle parking."

9.22.19. The following Objectives are noted:

- **DMSO109 – Bicycle Parking:** Ensure that all new development provides high quality, secure and innovative bicycle parking provision in accordance with the bicycle parking standards set out in Table 14.17 and the associated design criteria for bicycle parking provision set out in this Plan, where feasible, practical and appropriate, having regard to local, national and international best practice.
- **DMSO110– Provision of Bicycle Parking at Public Transport Stations / Stops:** Ensure that all new and renovated public transport stations/stops provide appropriate levels of cycle parking provision based on the existing and proposed passenger levels, surrounding environments and future transportation infrastructure.

9.22.20. The applicant's position as outlined at the oral hearing is that the project is not fully in accord with Objective DMSO109, but that the number of cycle parking spaces to be provided preserves the capacity of the NTA and planning authorities to determine appropriate bike parking standards and objectives with public input in future strategic land use plans as use of MetroLink grows. As I have addressed in Section 9.2 above, I accept the applicant's position that this amounts to an inconsistency with the Development Plan, rather than a material contravention, given that this is not a

planning application, is not made under the 2000 Act and noting the multi-level policy support for the project, including in the two Development Plans.

9.22.21. Given the physical constraints in attempting to meet projected cycle demand within the confines of this project and noting that the project will encourage a modal shift from private car to public transport and mixed modes (i.e. cycling + MetroLink) and noting the positions of the NTA, DCC and FCC with regard to working with TII as part of a multi-agency approach to cycle parking and mobility hub development, as envisaged by the GDATS, I consider that the provision of cycle parking is adequate. If the Board is minded to grant the Railway Order, however, I recommend that a condition be included requiring that a survey of cycle parking usage and demand in the opening year and 5 years after the opening year be undertaken and submitted to the two local authorities and the NTA.

9.22.22. Secure Cycle Parking

9.22.23. Dublin Commuter Coalition noted that over 26,000 bicycles were reported stolen in Dublin between 2021 and 2023 and outlined the need for secure bicycle storage. They contended that CCTV and open sight-lines of cycle parking is not sufficient to stop thieves and that lockers and security staff are required. They reiterated these points in their further submission.

9.22.24. TII, in their response submission, noted the operational phase security measures outlined in Chapter 6 of the EIAR, including the design of public realm to discourage anti-social behaviour, CCTV provision, and the role of the Operational Control Centre in monitoring and managing security and anti-social behaviour. They state that bicycle lockers and/or cycle parking garages are not included in the RO on the basis that they would further reduce the capacity of bicycle parking at the already constrained station locations.

9.22.25. As with cycle parking provision more generally, there is a balance to be struck in my opinion between providing reasonable levels of cycle parking and not overwhelming constrained station locations with overly extensive areas of bicycle lockers or storage buildings. I note that in the less physically constrained stations north of Dublin Airport, cycle storage buildings are proposed at the station locations.

9.22.26. Bicycle theft is endemic in Dublin and is a particular worry when bicycles are parked at a public transport station for the entire day during a daily commute. I consider that

robust operational phase security measures and protocols, as outlined by the applicant, are the appropriate way of addressing this issue, which will ultimately be part of a larger approach to managing anti-social behaviour at the stations.

9.22.27. As part of the abovementioned recommended condition regarding operational phase review of cycle parking provision, I recommend that it include a review of bicycle theft at MetroLink stations to determine if further secure parking or other measures are required in the operational phase.

9.22.28. HGVs and Vulnerable Road Users

9.22.29. Dublin Cycling Campaign noted the risks to vulnerable road users in urban areas due to poor visibility from HGVs. They recommended that the Direct Vision Standard used by Transport for London in recent projects be used. TII's response was that the main works contractor will be required to comply with the Direct Vision Standard and safety permit for HGVs. Dublin Cycling Campaign, at the oral hearing, considered that inadequate detail has been provided by TII and that it is unclear what commitments are being made (e.g. additional mirrors, camera monitoring, sensors etc.).

9.22.30. This is an important issue given the volume of HGV traffic that the proposed development will generate on city streets over an extended period of time. I note that there are various ways in which HGV blind spots can be eliminated, either through the selection of newer models of HGVs which address this issue through the design of the driver's cab, or through the retrofitting of HGVs with mirrors and/or cameras. Once the issue is addressed, I do not consider it necessary for the Board to dictate how it is to be addressed.

9.22.31. Chapter 28 of the EIAR includes a mitigation measure that "blind spot detection will be compulsory for HGVs in order to identify vulnerable road users". While neither the updated CEMP nor the SAEC submitted at the oral hearing include the enhanced commitment made by TII in their written response, I consider that the written response of the applicant together with the mitigation measure contained in the EIAR will be sufficient to address this matter.

9.23. Biodiversity Provisions of the Fingal County and Dublin City Development Plans

- 9.23.1. TII acknowledges that the proposed development is inconsistent with a number of policies of both the Fingal County Development Plan and the Dublin City Development Plan in relation to biodiversity protection and/or enhancement. A document 'Note on Plan Level Biodiversity Policy Compliance' (Ref. OH319) was submitted at to the oral hearing on 25th March 2024, which discusses relevant policy inconsistencies.
- 9.23.2. With regard to the Dublin City Development Plan, inconsistency is identified with Policies GI16, GI29, GI41 and GIO23. With regard to the Fingal County Development Plan, inconsistency is identified with Policies GINHP2, GINHP10, GINHP20, GINHP21, GINHO2, GINHO4, GINHO21, GINHO30, GINHO41, GINHO44, DMS0125, DMS0140, DMS0154, DMS0155, DMS0156, DMS0159 and DMS0160.
- 9.23.3. The requirements of these policies can be grouped under the following headings: biodiversity net gain; protection from encroachment onto rivers and their banks; protection of waterbodies, green infrastructure and trees; and incorporation of and protection of ecological corridors.
- 9.23.4. The following is a brief summary of the performance of the MetroLink project in relation these policies and objectives and, at the outset, I would bring to the Board's attention that neither DCC nor FCC has expressed any concern in relation to these policies/objectives in their submissions.
- 9.23.5. Protection of Parks
- 9.23.6. DCC Objective **GIO23** states that the Council will continue to manage and protect and enhance the city's parks and public open spaces to meet the social, recreational, conservation and ecological needs of the city and to consider the development of appropriate complementary facilities which do not detract from the amenities of spaces.
- 9.23.7. TII point out that objective pertains to DCC's role as a parks manager rather than a specific restriction being imposed on development projects. With reference to the combination of landscaping proposals and a number of the 'conditions' that have

been agreed with DCC, it is submitted that the ecological functioning of the city's parks will be protected and enhanced, in line with the objective. The referenced 'conditions' relate to:

- Incorporation of SuDS.
- Minimisation of tree loss and replacement of all trees removed as part of the project.
- Provision of a landscape plan that includes reinstatement works, hard and soft works and boundary designs.
- Bat mitigation through a programme of replacing hedges and trees years in advance of construction, allowing for maturation and impact reduction ahead of construction.

9.23.8. I am inclined to agree with TII's submission that the objective does not impose a restriction on development proposals and would note, in this respect, that DCC has not raised any concerns in respect of compliance with its provisions.

9.23.9. The development will have unavoidable impacts on Albert College Park, Four Masters Park and St. Stephen's Green and these impacts will significantly affect amenity for the duration of construction. I consider TII's mitigation proposals, which form part of an agreement with DCC, represent a reasonable attempt to limit and mitigate impacts arising from construction.

9.23.10. Biodiversity Net Gain

9.23.11. FCC Objective **GINHO30** states that all greenway and infrastructure projects are to have a biodiversity net gain (BNG) and this principle shall be incorporated from the start of the project.

9.23.12. In acknowledging that MetroLink does not achieve BNG, TII point out that the 2023-2029 CDP was adopted following submission of the application and that BNG principles have not, and could not have, been incorporated from the start of the project.

9.23.13. Notwithstanding TII's point that the CDP requirement for BNG followed submission of the application, the 2023-2029 CDP is the operative Development Plan and its requirements are not achieved as part of the project. I note, as TII states, that the

landscape design proposals will introduce greater habitat and structural diversity locally.

9.23.14. Protection of Rivers

9.23.15. Objective **GINHO41** seeks to protect rivers, streams and other watercourses and maintain them in an open state capable of providing suitable habitat for fauna and flora, including fish.

9.23.16. The project requires the construction/modification of watercourse crossings over each of the Santry, Mayne, Sluice, Ward and Broadmeadow rivers. TII point out that the Broadmeadow and Ward rivers viaduct maintains each river in an open state and whilst they acknowledge that habitat loss will occur at each of the Santry, Mayne and Sluice, resulting in inconsistency with the objective, TII point out crossing structures have been designed in consultation with IFI and will remain capable of providing suitable habitat for flora, fauna and fish in the context of the wider catchment of affected watercourses.

9.23.17. In view of the linear nature of the project, there are unavoidable interactions with several watercourses and I accept as reasonable that TII has consulted with IFI regarding culvert designs.

9.23.18. Protection of Trees and Hedgerows and Landscape Features

9.23.19. Each of DCC Policy **GI41** and FCC Policy **GINHP21** and Objective **DMSO125** seek the protection of existing trees/woodlands as part of new developments and I note that Policy GINHP21 additionally seeks the protection of hedgerows. The proposed development requires the loss of a substantial number of trees and substantial hedgerow clearance (2,753 trees and c.6.43km of hedgerow within Fingal and 392 trees in Dublin City, according to document Ref. OH319) and thus can be seen as inconsistent with both policies.

9.23.20. The scale of clearance will be particularly evident in area AZ1, where the alignment routes through suburban and greenfield lands, and in sensitive areas of the City. These areas include the Albert College Park Intervention Shaft, Griffith Park Station, Mater Station and St. Stephen's Green Station. However, I accept that a large linear infrastructure project such as this will inevitably require tree loss and hedgerow removal, particularly as it routes through both suburban and rural areas.

- 9.23.21. By way of compensation³¹, Section 15.8 of the EIAR points out new habitat will be provided as part of the project, in the form of woodland, grassland, hedgerows, trees, river/riparian habitat and scattered trees and parkland and in each instance the EIAR outlines that the replacement quantum exceeds the existing quantum that will be lost. I also note that the 'agreed conditions' between FCC and TII (Ref. OH147) contains a commitment to engage regarding both landscape clearance and replacement landscaping/habitat provision. In view of the unavoidable nature of tree loss and hedgerow removal, I consider TII's compensation proposals are acceptable.
- 9.23.22. Objective **DMSO140** seeks the protection of landscape features of biodiversity or amenity value and/or contribute to landscape character. In addition to tree and hedgerow loss (discussed above), TII states that MetroLink will give rise to habitat loss and is thus not fully consistent with the objective and, in particular, refers to the loss of 2.32km of drainage ditch habitat.
- 9.23.23. TII submit that newly created wetland habitats at Lissenhall, Balheary Park and along the R132 will contribute to the biodiversity value of these areas although, in saying this, they acknowledge that the new habitat types are not a like-for-like compensation for the habitat loss identified.
- 9.23.24. Again, in view of the linear nature of the project, there are unavoidable interactions with multiple habitat types. I consider TII's proposals are reasonable.
- 9.23.25. The 'Note on Plan Level Biodiversity Policy Compliance' refers to inconsistency with FCC objective **DMSO155** (ecological corridors in urban areas) but I do not consider the objective applies to MetroLink, which is not a redevelopment of an existing property or a brownfield site. In any case, I note TII's comment that multi-functional green space is provided across the alignment, including swales and attenuation ponds that will intercept and filter surface water.
- 9.23.26. Provision of Mammal Ledges and Protection of River Corridors
- 9.23.27. FCC Policy **GINHP20** and Objective **DMSO159** together promote the provision of mammal ledges as part of new bridges over the county's 'main rivers'. TII proposes to provide a mammal ledge as part of a culvert of the Sluice River, in accordance

³¹ For the avoidance of doubt, references to compensation in this section do not refer to compensatory measures under the Habitats Directive.

with the requirements of the policy, but does not propose ledges as part of crossings of the Ward/Broadmeadow, Mayne or Santry rivers.

- 9.23.28. I accept as reasonable, TII's submission that there is no need for a mammal ledge as part of the Ward/Broadmeadow River viaduct in order to maintain ecological functioning, as it is a clearspan structure, and I also accept that in the case of the Santry River culvert, the provision of a mammal ledge would not achieve its purpose as TII does not own the existing culvert, which does not contain a ledge, and TII has no powers to undertake works to it.
- 9.23.29. Regarding the culvert of the River Mayne, TII points out the crossing point is at the upper end of the catchment, with the watercourse terminating c. 500m upstream, and that impacts on ecological corridor function are minimal. From the information provided, I am inclined to agree that the benefits of provision of a mammal ledge at this crossing would be of limited value and I thus consider the policy inconsistency is acceptable.
- 9.23.30. DCC Policy **GI29** and FCC Objective **DMSO154** seek to protect and enhance river corridors, whilst FCC Objective **DMSO156** requires that no development, including clearance and storage of materials, takes place within 10m from a riverbank.
- 9.23.31. In respect of GI29, TII points out that the MetroLink alignment directly interacts with 2 No. watercourses or river corridors in Dublin City: The Royal Canal and the River Tolka. In both instances, they submit that the alignment interacts with man-made elements (i.e. the Royal Canal is an artificial channel and the area of interaction at the Tolka comprises a retaining wall and railing which separates the river from a narrow amenity grassland strip, paved pathway and linear band of mixed broadleaved woodland).
- 9.23.32. I accept TII's point that the north bank of the River Tolka is not 'natural' and that the policy can be considered as not relevant.
- 9.23.33. In the case of the Royal Canal, there is direct interaction with this waterbody but I accept that this is necessary in view of the constrained nature of the Glasnevin Station site and the complex nature of the construction programme for the site. TII proposes to restore the canal to its current state following the completion of construction, which I consider is acceptable.

- 9.23.34. In respect of DMS0154, I note that the objective requires that no development shall take place within 48m of the riverbank of specified rivers and for lands within development boundaries it requires maintenance of a 10m riparian strip.
- 9.23.35. TII identifies that no chemicals storage or refuelling locations will come within 10m of any watercourse, in accordance with DMSO156, but identifies that development and clearance are required along river banks and within 10m of the Broadmeadow, Ward, Sluice and unnamed tributary and River Mayne and the project is therefore not fully consistent with the requirements of Objective DMSO154.
- 9.23.36. Close interactions with each of these watercourses, including in-water works at the Broadmeadow are necessary as part of this linear project and I accept TII's point, that mitigation proposals will protect water quality.
- 9.23.37. Riparian Corridors
- 9.23.38. FCC Objective **DMSO160** requires that development proposals that are within riparian corridors shall demonstrate how the integrity of the riparian corridor can be maintained and enhanced. In responding to this, TII point out that the ecological functioning of the Broadmeadow and Ward Rivers, the Sluice River, River Mayne and Santry River are maintained but in each instance it is acknowledged that works are required within the 10m and 25m riparian buffer zones identified within the CDP and that the new surface water outfalls are not set back from the main river channel.
- 9.23.39. As I have outlined previously, interactions with watercourses are required as part of MetroLink and I accept as reasonable, in the circumstances, that the ecological functioning of each watercourse is maintained.
- 9.23.40. Green Infrastructure
- 9.23.41. FCC Policy **GINHP2** and Objectives **GINHO2**, **GINHO4** and **GINHO21** together seek to protect green infrastructure/spaces. Policy **GINHP10** seeks a net gain in green infrastructure through protection of existing assets and provision of new areas.
- 9.23.42. In acknowledging inconsistency with each policy and objective, TII points out that MetroLink does not achieve a net gain in green infrastructure extent and that linear infrastructure projects such as MetroLink will inevitably result in some degree of unavoidable green infrastructure loss and fragmentation.

9.23.43. The 'Note on Plan Level Biodiversity Policy Compliance' identifies instances of likely fragmentation, for example at Estuary, Balheary Park and at Dardistown, but in doing so points to the benefits of landscaping proposals, in terms of increasing habitat and structural diversity, through the creation of multiple habitat types, and in providing connections to the surrounding green infrastructure network. TII also point out MetroLink does not have any significant residual effects on areas that comprise FCC's aims under Policy GINHP2, having regard to the definition of green infrastructure provided at Section 9.6.1 of the CDP.

9.23.44. I agree that a project such as this, which traverses multiple landscape types and which will bisect multiple green infrastructure sites/spaces, will lead to inevitable habitat fragmentation. I note and accept TII's point that priority green infrastructure spaces are unaffected by the development and that landscaping proposals include new and varied habitat types, which will go some way to mitigating the impact of fragmentation.

9.24. Lighting

9.24.1. A number of submissions raised the issue of lighting, particularly with regard to the construction phase. Concerns are expressed regarding lightspill, light pollution and potential nuisance, health impacts and impacts on residential amenity. In the operational phase, concerns are raised regarding 24/7 lighting of stations and the impacts on surrounding residents.

9.24.2. Construction Phase

9.24.3. With regard to the construction phase, the applicant's proposed approach is set out in Section 5.12.9 of the EIAR and the related Appendix A5.18, 'Construction Lighting'. The Outline CEMP also addressed site lighting at Section 5.7.

9.24.4. The applicant notes that adequate lighting is necessary for the safety of workers and proper execution of work and proposes that the appointed contactors for each site will prepare a Site Lighting Plan (SLP) to detail how health and safety and security requirements will be met and that the Plans will provide lighting layouts and measures to control light pollution/light spill effects on surrounding land users and biodiversity. At the works sites in the vicinity of Dublin Airport (i.e. DANP, Dublin

Airport Station and DASP) the risk of glare at the airport and any necessary measures to prevent this will be addressed within the relevant SLPs.

- 9.24.5. Where required, and in agreement with the Local Authority, it is stated that semi-permanent lighting will be provided at site boundaries, temporary bridges, haul routes, site entrances and exits to create a safe route for passing members of the public and road users.
- 9.24.6. The EIAR acknowledges the potential issue of light pollution on construction sites associated with over-illumination and nuisance. It is stated that lighting will therefore be designed to ensure that it does not prejudice health or create a nuisance for surrounding receptors or impact on biodiversity.
- 9.24.7. Monitoring, using lux meters, is proposed to ensure that light levels on construction sites are appropriate with reference to relevant guidance, and to ensure that light pollution is mitigated whilst providing a safe level of lighting for workers.
- 9.24.8. The appropriate lighting of construction sites is clearly an important requirement from a health and safety perspective but there is a balance to be struck, as acknowledged in the EIAR, between adequate site lighting and the avoidance of undue impacts on surrounding receptors. This is particularly important in this case, where extended hours of construction are proposed at many works sites.
- 9.24.9. It is appropriate in my view that the contractor, rather than TII, should prepare the SLPs, as these will be dependent on the final layout of each construction site compound in terms of site offices, plant and machinery requirements etc. These matters cannot be completely defined at this stage in the project, but I consider that the principles to be followed in the preparation of the SLP are adequately set out in Appendix A5.18, including the relevant guidance to be followed, the differing lux levels to be achieved for various purposes, appropriate lighting types, and the measures to avoid lightspill, glare and nuisance. The principles are also comprehensively set out in the Outline CEMP.
- 9.24.10. Subject to this, and the inclusion of site lighting in the monitoring regime to ensure the effectiveness of the SLPs, I am satisfied that the proposed lighting of the construction sites will not significantly affect public health or residential amenity by means of light pollution or nuisance.

9.24.11. Operational Phase

9.24.12. The proposed approach to operational phase lighting is addressed in Sections 4.12.8 and 6.6.6 of the EIAR, under the headings of external lighting, station lighting and lighting along the alignment.

9.24.13. For external areas, such as public roads, station entrances and plazas, lighting levels will be provided in accordance with BS5489-1:2020 (Design of road lighting – Lighting of roads and public amenity areas). Where existing lighting standards are replaced, this will be with columns of equal or lesser height, with LED lamps replacing any discharge type lamps. In terms of new lighting, various heights of lighting columns are proposed, ranging from 8m columns on residential roads, to 12m on dual carriageways. For plazas and station access areas, columns will be 6 – 9m, with 8 – 10m columns for bus stop and drop-off areas. It is stated that the lighting design will reduce light spill wherever possible, with zero upward light.

9.24.14. Within stations, relevant European Standards and Irish Rail guidance will be utilised, with variable lighting provision for different areas of the stations. It is stated that the lighting provision goes beyond health and safety requirements and has been incorporated into the architectural design strategy.

9.24.15. Along the alignment, a minimum level of emergency lighting is proposed at 1m height along evacuation routes, with reinforcement lighting at a higher level for maintenance purposes. It is stated that neither emergency nor reinforcement lighting will be on during normal operation.

9.24.16. The provision of adequate operational lighting is an important consideration in terms of discouraging anti-social behaviour and with regard to the real and perceived safety of stations. It can also contribute greatly to the attractiveness of amenity areas and the enhancement of station architecture. It is clear that the applicant has given considerable thought to the appropriate lighting of stations, both internally and externally, and that a cohesive vision for scheme lighting has been developed with due consideration to safety, relevant guidance, protection of residential amenity and biodiversity and environmental sustainability.

9.24.17. I consider that the proposed operational phase lighting proposals are adequate but given the need to co-ordinate external lighting types and locations with DCC and FCC public lighting, it is clear that further engagement with the local authorities

during the detailed design will be necessary. I note in this regard that items 21-23 of the applicant's agreement with DCC (Ref. OH76) and item 14 of the agreement with FCC (Ref. OH147), both submitted at the oral hearing, provide for lighting arrangements to be the subject of approval by the local authorities. Given that I have recommended the inclusion of the agreements in the Thirteenth Schedule of the Railway Order, I therefore do not consider that a specific condition is required.

- 9.24.18. With regard to Glasnevin Station, it was noted by an observer that there was a conflict in the proposed location of certain proposed lighting columns, which blocked vehicular access to the Royal Canal towpath. Revised drawings were submitted at the oral hearing to address this issue through the relocation of the offending columns (Ref. OH323).
- 9.24.19. At St Stephen's Green, the OPW queried the proposed 'contemporary standard lighting' as not in keeping with St Stephen's Green. I consider that this is a matter best addressed through the applicant's agreement with DCC on public lighting matters, as detailed above.
- 9.24.20. With regard to lighting within stations, I consider that this is ultimately an operational matter for TII, noting the commitments to comply with relevant guidance but I am satisfied that the principles and approach as outlined in the EIAR are acceptable. It is also proposed to provide natural light into a number of stations by means of skylights and I have addressed the skylights separately in Section 9.4.
- 9.24.21. With regard to alignment lighting, this is primarily a railway health and safety matter outside the Board's remit. Where there is potential for planning and environmental impacts, for example with the 5m high maintenance lighting in areas of shallow retained cut, I note that the lighting will not be on during normal operation. The automated nature of the MetroLink also negates the need for extensive alignment lighting.
- 9.24.22. In conclusion, I am satisfied that the proposals for both construction phase and operational phase lighting have been adequately addressed in the application and I am satisfied, subject to the implementation of the agreements between TII and the two Local Authorities, that lighting arrangements will be adequate for health and safety and operational requirements without having undue impacts on nearby receptors.

9.25. Proposed Substations

- 9.25.1. The electrical power for the operation of the MetroLink will be provided from the national grid via 2 No. 110kV substations, located at Dardistown and Dublin Airport North Portal (DANP). As noted elsewhere, the 110kV underground cable connections required to connect the substations to the national grid are part of a separate planning application made by ESBN (Ref. ABP-317831-23) but are assessed within the relevant sections of the EIAR.
- 9.25.2. The proposed substations are Gas Insulated Switchgear (GIS) type substations, which I note are substantially more compact in footprint compared with the alternative Air Insulated Switchgear substations. I note that the design of the substations incorporates various layers of redundancy, includes the facility to connect two power supplies, two transformers, and that each substation will be capable of operating the metro in the event that the other fails. The high voltage (110kV) power taken from the national grid will be stepped down to medium voltage (20kV) within the substations and distributed along the MetroLink alignment via a MV ring system. The traction power for the trains will be provided at 1,500V DC, while auxiliary power for heating, ventilation, communications etc. will be provided at 400V AC.
- 9.25.3. Within the substation sites, the compound is divided into an ESBN area incorporating a two-storey building (up to c. 48m x 15m and c. 15m in height) and a MetroLink area, divided into HV and MV areas and including elements such as busbars, circuit breakers, earth isolators, transformers and a building of c. 30m x 10m³².
- 9.25.4. The design of the 100kV substations is relatively standard for such facilities, with a palisade fenced compound enclosing industrial style steel frame structures with profiled metal wall and roof cladding, hardstanding areas, transformers and associated plant and equipment. The buildings will be connected to the public water supply and sewerage networks.
- 9.25.5. Both of the 110kV substations are set back from the public road, with the DANP facility accessed via a new access road off the Naul Road and the Dardistown facility

³² Chapter 4 of the EIAR appears to erroneously refer to 35m x 15m, while the drawings show the building as 30m x 10m.

located adjacent to the Dardistown Depot site and accessed from the same new access road, off Collinstown Lane. Landscaping is proposed around the facilities.

9.25.6. Having regard to the design and scale of the substations, which are relatively standard for such facilities and noting that they have an industrial character consistent with similar developments (and proposed MetroLink elements) in the vicinity of the two sites and that there are no residential or other sensitive receptors in the immediate vicinity, I do not consider that any particular visual, environmental or other planning concerns arise. In particular I note the proposed incorporation of SuDS measures for drainage, the connection to public water supply and sewers and the high quality road access proposed.

9.25.7. As well as the 110kV substations, 8 No. traction substations are proposed along the alignment, supplied from the MV ring system. These are relatively small compared to the HV substations and are generally incorporated within station designs. Further auxiliary power substations will be located in back-of-house areas in the stations with uninterrupted power sources (UPS) to ensure constant supply of electrical power for station operation. Given the incorporation of these smaller substations within the station designs, they will not be readily visible to the public and no planning issues arise.

9.25.8. I consider that the proposed substations are acceptable from a planning and environmental perspective. Potential issues with regard to the 110kV cables will be addressed where relevant in the EIA section of this report.

9.26. Other Issues

9.26.1. Project Cost

9.26.2. Many of the written and oral submissions raised the potential cost of the proposed development, generally querying whether it was desirable from a cost/benefit analysis perspective or whether public monies could be better used for other public transport projects, with references variously made to Luas expansion, DART expansion (including DART Underground) and bus route expansion. A related point made in submissions was that the high cost of MetroLink would use up all available funding and prevent other public transport schemes from proceeding.

- 9.26.3. In particular, I refer the Board to the oral submission by economist Colm McCarthy on behalf of Senator McDowell at the oral hearing on 20th February 2024. Mr McCarthy contended that the costs of the project were excessive and disproportionate to the benefits, which he considered to be overstated and exaggerated.
- 9.26.4. The applicant's response to the written submissions that raised this issue, was that the Government had granted approval in principle for the making of the railway order application, on foot on a Preliminary Business Case that had been reviewed by DoT and DPER (including an independent review by JASPERS and the Major Projects Advisory Group) with regard to costs, benefits and timeline.
- 9.26.5. Other cost related issues included a contended waste of public money as a result of property acquisition associated with the previous Metro North project and that the cost of the alignment from St Stephen's Green to Charlemont is a wasteful €650m duplication of the Luas Green Line. With regard to this latter point, a number of observers reference the JASPERS review, which stated that the connection to Charlemont is one of the elements that appears to make the project expensive and that this element could feasibly be deferred until there is clarity on the future of the Luas Green Line. The applicant's response was that the Government decision to grant approval in principle for the MetroLink project was informed by the various reviews, including the JASPERS review. With regard to the deferral comment, I note that the subsequent publication of the GDATS provides more clarity on the future Metro and Luas scenarios. I have addressed the Charlemont station issues in detail in Section 10.12.
- 9.26.6. While cost was one of the criteria utilised in Multi-Criteria Analysis for the consideration of alternatives and scheme development, I consider that the overall financial viability of the proposed development and the cost/benefit analysis are not matters that the Board has to concern itself with. As outlined in Section 9.3, I consider that TII has adequately demonstrated the planning and environmental need for the proposed development and has adequately addressed the matter of alternatives. I consider that there is a strong planning rationale for the proposed development both in terms of policy support and wider proper planning, sustainable development and climate action considerations and that it is acceptable in principle,

subject to consideration of the planning, environmental and land acquisition issues raised in the submissions.

- 9.26.7. Other observers raising this issue included Dr Nicholas Mansergh, a former Senior Planner in Cork County Council, who queried the design development and examination of alternatives from a cost perspective. Having reviewed Dr Mansergh's written and oral submissions (S205, OH341), I consider that his core point is the cost of the MetroLink is excessive relative to other lower cost options, that the multi-criteria analysis was flawed, and that MetroLink would absorb all available funds, slowing the implementation of other elements of GDATS which are behind MetroLink in the queue, leading to unbalanced regional development by further promoting growth in Dublin. As addressed elsewhere in this report, I am satisfied that a robust and comprehensive examination of alternatives took place and that the applicant's reasons for choosing the final project, as presented to the Board, are clearly explained with reference to the environmental and other factors that influenced each decision.
- 9.26.8. Should the Board grant the Railway Order, TII will have to satisfy the Government and relevant Departments and stakeholders that the business case for the project is viable with reference to the Public Spending Code, and that sufficient socio-economic benefits will be delivered to justify what is stated in the previous National Development Plan to be likely the largest ever public investment project in the history of the State.
- 9.26.9. Related to the issue of cost, was an uncertainty expressed in a number of submissions about whether the proposed development would proceed, if a Railway Order was granted, particularly by reason of its likely high cost. Given the history of the previous Metro North proposal and the 'planning blight' that can arise in circumstances where affected landowners are placed in an uncertain situation by the approval of a CPO that does not proceed in a reasonable timeframe, these concerns are reasonable.
- 9.26.10. However, as noted elsewhere in this report, the proposed development is explicitly supported in relevant policy, including the National Development Plan, National Planning Framework, GDATS, CAP and the two development plans. The Preliminary Business Case is also stated to have been approved by the Government and the

most recent Programme for Government also commits to progressing all key public transport infrastructure in the NDP and to commissioning a feasibility study for the continuation of MetroLink to the south west.

9.26.11. The final decision to fund this project, if granted, will be subject to substantial further design, financial analysis and tendering etc. and consideration by the relevant Government stakeholders. Given the multi-level policy scaffolding that supports this project, there is no compelling reason for the Board to form the view that it is unlikely to proceed, if granted.

9.26.12. Finally, another issue raised with regard to cost, was section 143 of the 2000 Act (which is referenced in section 43 of the 2001 Act) which states that the Board, in the performance of its functions, shall have regard to, inter alia, any effect the performance of its functions may have on issues of strategic economic importance to the State. As noted above, the Government has approved the making of the Railway Order application on foot of a Preliminary Business Case and has recently committed to the delivery of the project in the Programme for Government. I do not consider that this legislative provision creates any requirement for the Board to undertake a cost/benefit analysis of a development proposal and I am satisfied that the need for the development has been established.

9.26.13. **Community Fund / Community Gain**

9.26.14. A number of submissions contend that a community fund should be put in place or that other elements of community gain should be provided. Fingal County Council, in their initial written submission, also recommended that community gain conditions be included and including a suggested condition in their submission. TII's response to this issue was that their community liaison officers will work with community groups to identify local projects that would involve the community in the delivery of the project, and that such projects could include a local school learning programme, enhancement of community amenity, and engagement with final landscape and finishing options. They also stated that they are willing to explore mechanisms for investing in local initiatives to support affected communities during the works, subject to funding being made available.

9.26.15. I note that the item No. 29 of the agreement with DCC (Ref. OH76) states that the project shall incorporate public art in accordance with the provisions of the 'Per Cent

for Art Scheme' and that the process of commissioning public art will be managed by the DCC Arts Office. Item No. 3 of the agreement with FCC (Ref. OH147) essentially restates the abovementioned position of TII with regard to community gain. I note that it also commits to the establishment of a community liaison committee to liaise between TII and the local community.

9.26.16. There is provision under section 44(2)(g) of the 2001 Act, as amended, for the Board to include requirements in a Railway Order for (i) the construction or the financing, in whole or in part, of the provision of a facility, or (ii) the provision or the financing, in whole or in part, of the provision of a service, in the area in which the railway works are to be constructed, being a facility or service that, in the opinion of the Board, would constitute a gain to the community.

9.26.17. As the proposed development is itself a piece of public transport infrastructure, that will contribute to more sustainable modes of transport, compact growth and the transition to a carbon neutral economy, and noting that the areas in the vicinity of the proposed stations will benefit from landscaping proposals and access to the metro, I do not consider it necessary for the Board to attach conditions requiring the setting up of community funds or other elements of community gain beyond those contained in the agreements with the two local Planning Authorities.

9.26.18. With reference to the loss of Markievicz Leisure Centre and any replacement facility, I have addressed this in Section 10.10.

9.26.19. **Devaluation of Property**

9.26.20. A number of observers at locations along the proposed MetroLink alignment contend that the project will result in a devaluation of their property due to substratum land take, construction phase impacts resulting in property damage or general disruption, making the property less desirable due to the prolonged construction phase, and long-term impacts in the operational phase.

9.26.21. The applicant's response to this matter is that "there is evidence to suggest that property values will in fact increase in close proximity to public transport infrastructure and that local residents will greatly benefit from having a world class Metro system providing access to the city centre, airport and north city at their door step".

9.26.22. Of the remaining submissions, I note that no supporting evidence was produced regarding the issue of property devaluation. While the proposed development will be inherently disruptive and impactful during the construction phase, these impacts will be temporary and are primarily capable of being mitigated to an acceptable level. Where damage occurs, it is likely to be minimal (subject to conditions and monitoring) and capable of being repaired via the POPS Scheme. In the operational phase, I agree with the applicant's position that the proposed development is more likely to result in an increase to property values along the alignment, due to proximity to a high quality segregated metro line and the easy access it will provide to the city centre and airport.

9.26.23. The implications of compulsory land acquisition for particular landholdings are addressed separately in the CPO section of this report.

9.26.24. **Welfare Facilities**

9.26.25. A number of observers raised the issue of welfare facilities at stations, including the National Disability Authority (S198) and Dublin Commuter Coalition (S72). Dublin Commuter Coalition, in their submission to the oral hearing (Ref. OH358) asked for toilet facilities to be installed at all stations, not just main interchange stations. They contended that these are essential features from an accessibility perspective for women and people with medical issues or disabilities. They noted in this regard that toilet facilities are being retrofitted into some London tube stations. They reiterated these points in their subsequent further submission (1FS21).

9.26.26. At the oral hearing I queried the proposed location of public toilet facilities within the interchange stations, noting that any toilets shown on the station floor plan drawings appeared to be 'back-of-house' facilities for staff use, rather than public use.

9.26.27. TII subsequently submitted a Technical Note on public welfare facilities provision at Stations at the oral hearing on 21st March 2024 (Ref. OH295). The Technical Note contends that the ungated open nature of the MetroLink system means that any welfare facilities, other than the back-of-house staff facilities, will be accessible to both passengers and the general public, creating a risk of misuse, anti-social behaviour and increased maintenance and security supervision. A review of international practice undertaken by TII found that many newer metro systems, and particularly those with a high level of automation, do not include public welfare

facilities. While London Underground does have a policy to include welfare facilities in new or refurbished stations, it is stated that these are located after the ticket gate line, ensuring they are for passenger use only.

9.26.28. Due to the relatively short journey times on the MetroLink and the service frequency, waiting times will generally be short, and on this basis TII do not consider that public welfare facilities are warranted at the majority of stations. However, at interchange stations where the MetroLink journey may be part of a longer overall journey TII proposes to provide welfare facilities, including appropriate facilities for PRM users. The relevant stations are Estuary, Dublin Airport, Glasnevin, Tara, and Charlemont Stations. The Technical Note also notes an error in the EIAR, which referred to welfare facilities being provided at O'Connell Street but not at Estuary or Dublin Airport. The commitment to provide welfare facilities at the abovementioned stations is included in the Schedule of Additional Environmental Commitments (see final version, Ref. OH376).

9.26.29. In considering this issue, it is important to distinguish between metro stations and mainline rail stations. As noted by the applicant, the metro trains will run at very short intervals, ensuring that prolonged waiting times at any station should not be necessary. The distances between stations is also short and the journey time from Swords to the city centre is stated to be c. 25 minutes. I note, in this regard, that suburban DART stations do not generally have public toilet facilities, nor do Luas stops. Given the automated and barrier-free nature of the system, I consider the applicant's concerns with regard to general public accessibility of any welfare facilities to be reasonable. I also consider it reasonable that welfare facility provision be provided at the interchange stations, as these are the stations where significantly longer waiting periods may occur or where overall journey length may be longer. In particular, I consider it important that facilities should be provided at Estuary Station, given the scale of the proposed P&R Facility and since many passengers using Estuary Station are likely to be transferring to/from private cars or buses for onward travel, even when the surrounding lands are developed.

9.26.30. Dublin Commuter Coalition, in their further submission (1FS21), note that stations may become mobility hubs in the future, as transit oriented development leads to greater density surrounding stations and contend that the failure to provide welfare facilities now will create issues for commuters in the future. As lands surrounding

stations are developed or redeveloped in the future, I consider that there will likely be opportunities to provide welfare facilities in the vicinity of stations in a controlled and secured manner and I do not consider that future development is a reason to require welfare facilities at all stations.

9.26.31. Finally, I note the applicant's additional commitment to provide for PRM welfare facilities, including the higher specification 'Changing Places' facilities, as sought by the National Disability Authority, which will be extremely beneficial from a universal accessibility perspective.

9.26.32. As the applicant has included the additional commitment in the SAEC, I do not consider that a specific condition is required in relation to this matter and I consider that the applicant's proposal, as supplemented by the additional commitments made at the oral hearing, are acceptable.

9.26.33. **Vermin Control**

9.26.34. A number of submissions from observers located at various locations along the alignment raised concerns regarding the potential for rodent and vermin infestation due to disturbance/displacement during construction works.

9.26.35. Section 10.5.1.10 of the EIAR relates to vermin (leptospirosis). It states that:

"Rodent control, good sanitation, disinfecting contaminated work areas, worker education via tool box talks and using personal protective equipment (PPE) when handling infected animals are important actions for prevention of Leptospirosis (or Weil's Disease).

While rodents will be temporarily displaced as a result of initial construction activities, there is nothing in the Construction Phase which would lead to an increase in the number of rodents. It could be argued that with the rodent control policies in place, there will be a reduction in the level of rodents and the subsequent risk associated with Leptospirosis.

Because there will be no increase in vermin numbers and more likely a decrease because of vermin control measures there will be no increase in vermin transmitted disease over and no significant adverse effect on human health."

- 9.26.36. An additional route-wide commitment was made at the oral hearing (reference 3.15 of SAEC) to engage vermin control contractors in advance and during the construction works in order to develop and implement a plan to control vermin.
- 9.26.37. While the observers' concerns are understandable, given the number and extent of construction and excavation sites and the proximity to dwellings and food-related businesses, I would agree with the applicant's position that the construction process itself is not likely to increase rodent numbers, but there is likely to be displacement of existing rodent populations during the initial site clearance, demolition and early excavation works. There is no reason to believe that this will be any more than a temporary phenomenon, which lends itself to effective mitigation through standard rodent control measures. The applicant is obligated to comply with health and safety legislation outside of this consenting process, and subject to appropriate rodent control measures, I do not consider that any significant health or nuisance impacts are likely to arise. I consider that the additional commitment to appoint a vermin control contractor for the construction works will be effective in ensuring that no significant nuisance or public health issues arise due to vermin displacement.
- 9.26.38. In the operational phase, I consider that the control of vermin can be addressed through standard operational management protocols, similar to those used in many commercial and industrial premises.
- 9.26.39. **Naming of Stations**
- 9.26.40. A number of submissions query the name of the proposed Glasnevin station, contending that it is not within Glasnevin and may cause confusion. Alternatives such as Cross Guns, Prospect or Brian Boru station are proposed.
- 9.26.41. 'Glasnevin' can have a somewhat amorphous geographical definition in many people's minds. Ultimately however, I consider that Glasnevin is a more meaningful name to people from outside of the immediate area than Cross Guns, Brian Boru or another such name.
- 9.26.42. Similarly, it was contended that Collins Avenue was not a suitable name for the station adjacent to Our Lady of Victories Church, as it is located on the Ballymun Road, not Collins Avenue. As the alignment follows a substantial portion of the Ballymun Road, naming the station 'Ballymun Road' would not be helpful for future passengers.

9.26.43. In any event, the naming of the stations does not have any material impact on planning and environmental factors in my opinion other than signage implications, and potentially cultural heritage associated with the station locations. I consider that the choice of appropriate station names is a matter best addressed in detailed design, following liaison with relevant stakeholders and I do not consider it necessary or appropriate for the Board to direct changes to the naming of any of the proposed stations.

9.26.44. **Accessibility of Documents for Visually Impaired People**

9.26.45. Issues with regard to the accessibility of the applicant's documentation and drawings for visually impaired people was raised by Voice of Vision Impairment (S311) and Aine Wellard (S4). Importantly, Ms Wellard is a tenant of the DCC housing adjacent to the proposed Tara Station, which it is proposed to demolish. In her written submission and subsequent oral hearing submission on 20th March 2024, Ms Wellard outlined the difficulties she experienced in obtaining braille versions of the relevant RO documents from TII.

9.26.46. The applicant submitted an Accessibility Statement at the oral hearing on 21st March 2024 (Ref. OH298), stating that TII is committed to making its documents accessible and outlining the various accessibility features of their documents. It would appear that there were difficulties and delays in converting relevant drawings and documents to appropriate formats, including braille and computer readable soft copies in a particular formatting style.

9.26.47. While the volume of documentation associated with the application and the detailed drawings clearly presented accessibility issues for those with visual impairments, I note that the observers who raised these concerns made substantive written submissions to the Board and also participated in the oral hearing, with reasonable accommodations made by the Board, where necessary, to assist these observers in meaningful participation. The Board also endeavoured to correspond with these observers in their preferred means of communication (i.e. braille or computer readable soft copy). The issues raised by these observers are addressed in the relevant sections of this report.

9.26.48. I am satisfied that the Board has adequately discharged its obligations as a public body in facilitating accessibility requirements. TII, as a public body, will have its own obligations to comply with.

9.26.49. **Chainage Information**

9.26.50. Several observers noted that the alignment drawings do not include chainage information, which makes it difficult to identify where references to specific chainages in the EIAR relate to. I agree that the omission of this information from the alignment drawings makes it challenging to correlate some EIAR information with the drawings, but I note that chainage information and the alignment are shown on the utilities set of drawings. I am satisfied that this enables the submitted information to be correctly understood. I note in this regard that the OPW, who raised this issue, make reference to specific chainages where they request floating track slab, demonstrating that they are aware of chainages relative to their properties.

10.0 Planning Assessment – Area-Based Issues

10.1. AZ1 Northern Section Issues (Estuary Station, Car Park and Alignment as far as Dublin Airport North Portal)

10.1.1. I consider that the main planning issues in respect of area AZ1 are as follows:

- Park & Ride Facility and Estuary Station.
- Viaduct over Broadmeadow and Ward Rivers.
- Lissenhall Bridge.
- Retained Cut Stations (Seatown, Swords Central, Fosterstown).
- Removal of existing footbridges on R132.
- Impacts on sports pitches at Balheary Park.
- Impact on residential estates Along R132.
- Increase to cut-and-cover at O'Scanail Veterinary Hospital.
- Impact on Future Nevinstown to R132 Link Road.
- Development lands at Fosterstown.
- Impact on businesses.
- Biodiversity issues.

10.1.2. Park & Ride Facility and Estuary Station

10.1.3. The proposed 3,000 space Park & Ride Multi-Storey Car Park (P&R Facility) adjacent to the proposed Estuary Station is a very substantial structure in its own right, with a footprint of c. 280m long x c. 120m wide and overall height of c. 20m. It is located at what will be a prominent location at the junction of the R132 and the future Swords Western Distributor Road, a portion of which is proposed as part of the MetroLink development. It is also close to the existing Junction 4 of the M1 Motorway, which connects to the R132.

10.1.4. The P&R Facility will be accessed via signalised junctions on the R132 and the new Swords Western Distributor Road. It will be located within a landscaped setting, with substantial SuDS attenuation storage designed into the landscaping proposals and

various internal circulation roads as well as bus, taxi and 'kiss-and-ride' set down areas.

- 10.1.5. The design approach is of reasonably high quality for what is ultimately a functional car park building, with the use of light-coloured architectural concrete on the access cores, extensive glazing to staircores and perforated metal panels and fins on the elevations of the car parking areas, which are stated to be warm in colour and angled in various directions. The 'Materials Palette' document submitted with the application gives more details regarding the applicant's approach and rationale for the proposed façade treatments and materials.
- 10.1.6. The form of the P&R Facility, while still somewhat monolithic in appearance due to its scale and elongated horizontal nature, is broken up through the use of a staggered floor plan. I consider that this has the effect of reducing the bulk and associated visual impact of the MSCP, however it will remain a very prominent structure when viewed from the R132 and the new Distributor Road. Given that the MSCP is a major Park & Ride facility which will serve a large hinterland and noting that the surrounding area, which is currently primarily in agricultural use, is zoned 'MRE' (Metro and Rail Economic Corridor) with the objective to "facilitate opportunities for high density mixed use employment and commercial development and support the provision of an appropriate quantum of residential development", I consider its scale and form to be appropriate for this strategic location. I further consider that its initial incongruous appearance is what is now a rural area will lessen over time as the surrounding MRE zoned lands are brought forward for development.
- 10.1.7. With regard to the 3,000 space capacity of the P&R Facility and how this number had been arrived at, I queried this at the oral hearing. Matthew Foy, the applicant's traffic consultant, stated that it had arisen from traffic modelling and provided further detail regarding this. Further to this, I refer the Board to Figure 9.1 of the GDATS, which provides the Park and Ride Strategy for the GDA. Lissenhall is identified as a Bus/Metro P&R facility on the A (M1/N1) Corridor, with 1000/3000 No. spaces.
- 10.1.8. This is supported by Measure INT4 of GDATS, 'Park & Ride', which states that:
- "It is the intention of the NTA to secure the development of a network of regional level bus and rail based Park and Ride facilities in the GDA at

appropriate locations where the national road network meets, or is in close proximity to, high capacity bus and rail services.”

- 10.1.9. I note that the provision of such Park & Ride facilities is also supported by the Fingal Development Plan and that there is a map-based local objective for a P&R facility in this area.
- 10.1.10. Given the very large number of car parking spaces available at the P&R Facility and the direct linkage MetroLink provides to Dublin Airport, I consider that there is a risk that the car park could become a form of satellite long-term car park for Dublin Airport, if not properly managed. This would have the potential to undermine the P&R Facility’s intended strategic function as per the GDATS. I consider that appropriate demand management measures, such as the use of a pricing structure that prohibits or applies a punitive rate for periods in excess of 24 hours, would be desirable to prevent this scenario occurring. I therefore recommend that a condition be included, requiring the implementation of demand management measures to discourage long-term car parking, with details to be submitted to Fingal County Council.
- 10.1.11. In addition to the MSCP and Estuary Station (which is addressed below), the proposed development at this location also includes extensive roadworks. This includes a one-way two-lane perimeter road around the MSCP and the delivery of a key c. 700m portion of the Swords Western Distributor Road (SWDR). The proposed section of the SWDR will extend from a new signalised junction with the R132 to a signalised junction onto the one-way perimeter road around the MSCP and onwards to a second junction providing access to Ennis Lane on the western side of the station and railway. The SWDR section comprises a single carriageway with grass verge, cycle lanes and footpaths and crossing arrangements at the abovementioned junctions. Other portions of the SWDR have already been delivered and its future completion is likely to occur in tandem with future development in the western Swords area, which will improve the accessibility of the P&R Facility from the west.
- 10.1.12. The existing Ennis Lane to the south of the MSCP will also be modified and diverted, including the upgrading of the existing uncontrolled junction with the R132 to a signalised junction with pedestrian crossing. A section of the existing Ennis Lane will be permanently closed to vehicular traffic where it intersects the MetroLink alignment

to the south of Estuary Station, although pedestrian/cyclist access will be retained via a new underpass under the railway.

- 10.1.13. As a result of these changes to the road network, vehicular access to the facility will be possible from the south via the R132 and Ennis Lane, from the north via the R132 and the SWDR, and from the west via the SWDR and Ennis Lane. A considerable number of users of the MSCP are also likely to be travelling from the northern parts of County Dublin, travelling southbound on the M1, which as noted above has a junction with the R132 a short distance to the north east of the proposed P&R Facility. I consider that the proposed road design surrounding the P&R Facility will significantly improve the accessibility of the site from north, south and west, as befitting its proposed use, and improve road safety on the local road network.
- 10.1.14. In conclusion, I consider that the principle, capacity, design and location of the proposed P&R Facility is appropriate, and that it will provide an opportunity to capture and divert a large number of private car trips from the surrounding hinterlands of Swords and towns and rural villages in the wider Fingal area. I note that provision is also made for more sustainable transport interchange and connections, through the provision of bus, taxi and cycle parking areas adjacent to the P&R Facility.
- 10.1.15. Estuary Station, located immediately to the west of the proposed P&R Facility, is the only surface level station proposed in the MetroLink project and will provide for a very good level of interchange with other transport modes, with the P&R Facility, bus, taxi, cycle parking and drop-off facilities all adjacent to the station.
- 10.1.16. The station would be connected into the P&R Facility via a covered overbridge over the tracks and circulation road, with lift and stair access. Access across the tracks can also be achieved via a pedestrian underpass between the platforms. The underpass would only have stair access, which was raised as an accessibility issue by the National Disability Authority, but I note the lift access to the overbridge will allow for universal access and that the split-level plaza leading down to the underpass has ramped access.
- 10.1.17. The station will be fully protected from the weather by means of a canopy with a green roof supported on columns which branch into two angled columns c. 6m above the ground. The dimensions of the canopy are c. 85m long x c. 12m high at the

northern end, reducing to c. 7m at the southern end. The proposed design, while unique to this surface level station, is consistent with the design approach across the alignment, including the abovementioned canopy and angled columns, dark metal cladding, timber soffits, platform screen doors, and black metal framed glazing providing weather protection. The platforms are the standard length of c. 65m, with a typical width of 8m.

- 10.1.18. The back-of-house area for the station, together with a back-up Operation Control Centre building and traction substation are located in a separate single storey building to the north of Estuary Station, while the rail extends a short distance beyond Estuary Station to provide a turnback facility and overnight stabling.
- 10.1.19. Extensive hard and soft landscaping is proposed around the Estuary Station and P&R Facility, incorporating various SuDS measures, including a large detention basin to the south, close to the proposed viaduct and Lissenhall Bridge. Pedestrian footpaths through this landscaped area will connect to the surrounding area, including Balheary Park. A notable aspect of the landscaping proposals is a split-level plaza to the west of the station, leading down to the diverted Ennis Lane, which runs through the proposed underpass, for pedestrian and cycle use.
- 10.1.20. I consider the design of the Estuary Station, which makes use of MetroLink's common palette of materials and design approach, to be acceptable, and of suitably high quality for what will be a busy interchange station. The facilities provided for interchange are well integrated into the design and the surface location of the station will facilitate quick and seamless interchange with other modes of transport. While construction of the P&R Facility and station will result in the loss of trees and hedgerows, the extensive landscaping proposed is of high quality and makes use of native species and the integration with SuDS measures to provide what should be a mix of biodiversity rich habitats, including wetlands, ponds and tree planting and which will connect to the Water and Broadmeadow River corridors to the south.
- 10.1.21. Viaduct over Broadmeadow and Ward Rivers
- 10.1.22. Immediately south of the Estuary P&R Facility, the proposed alignment will need to cross the Broadmeadow and Ward Rivers, which converge on the eastern side of the R132 before flowing into the Broadmeadow Estuary.

10.1.23. This is clearly an environmentally and ecologically sensitive location, and in order to avoid impacts on hydrology, biodiversity and flood risk, the applicant has proposed a c. 261m long viaduct carrying the MetroLink alignment over the two rivers, supported on piers that raise the infrastructure out of the flood zone and allow clearance for pedestrian/cycle access under the alignment in line with FCC proposals for pedestrian/cycle routes along the Broadmeadow valley.

10.1.24. I consider that the design of the proposed viaduct has been well considered. It is gently curved in plan view, with a low-lying and simple design that is appropriate to its setting. The piers are generally regularly spaced, but the spans are increased at the two watercourses to avoid the need for in-stream piers, which is an important design feature. Precast concrete beam sections will be placed on the piers to reduce the amount of construction work in the vicinity of the watercourses, although temporary 'bailey' type bridges will also be utilised during construction. I note that the spans between piers have been kept intentionally short, to allow for the thickness of the deck to be minimised, which assists in reducing the visual mass of the structure, as does the use of open parapet railings rather than a solid parapet. Landscaped embankments at either end of the viaduct structure will tie in with the existing landform.

10.1.25. Overall, I consider the design of the bridge to be of reasonably high quality and appropriate for its receiving environment. The potential impacts on hydrology, biodiversity, cultural heritage and landscape are addressed in the relevant sections of this report.

10.1.26. Lissenhall Bridge

10.1.27. Lissenhall Bridge is a late medieval stone bridge, traversing the River Broadmeadow close to the location of the proposed viaduct and the Estuary P&R Facility. It is a National Monument and a Protected Structure. The potential impacts on this bridge in terms of cultural heritage and landscape and visual impacts are addressed in Sections 11.21 and 11.22 of this report, but I am satisfied that there will be no direct impact on the integrity of the bridge and that it will be adequately protected from indirect impacts during the construction phase, in particular through the use of a buffer zone. I note the further submission from the Dept. of Housing, Local Government and Heritage (1FS17) which states that the information submitted by

the applicant in response to their original submission resolves their previous queries in relation to this site.

10.1.28. Retained Cut Stations (Seatown, Swords Central, Fosterstown)

10.1.29. The remaining 3 No. stations in area AZ1, at Seatown, Swords Central and Fosterstown are located along the retained cut/cut-and-cover sections of the alignment adjacent to the R132 and are all are retained cut stations of almost identical design.

10.1.30. The design features for these retained cut stations include covered station entrances and an elongated shallow monopitch canopy roof with a green roof build-up that provides shelter over the full length of the platforms, with the typical MetroLink design approach of dark metal cladding, timber soffits, glazing, angled steel columns etc. The design of the station is such that the width of both the platforms and the canopies tapers from the busiest areas adjacent to the lifts and stairs to the end of the platforms. As with the deep stations, platform screen doors will be provided along the platform edges. The canopies above the stations, which are the largest aboveground element, are c. 87m long x c. 24m wide, with c. 65m long platforms below.

10.1.31. Access from street level to platform level will via stairs and lifts (1 per platform), with the exception of Fosterstown where escalators will be provided due to forecast passenger demand. Back of house facilities (M&E equipment, storage, pump rooms etc.) will be provided at platform level under the concourse slab.

10.1.32. At street level, each station will be set within a landscaped plaza area with a mix of hard and soft landscaping, lighting and HVM bollards. Notably, these three stations feature standalone single storey bicycle hub buildings as well as separate cycle stands in the case of Swords Central and Fosterstown.

10.1.33. The bicycle hub buildings are flat roofed glulam timber structures enclosed with glazed panels with key fob access. The bicycle hubs at Seatown and Fosterstown have dimensions of c. 25.4m x 14m, while Swords Central is c. 36m x 19.2m. I have addressed the issue of cycle parking in Section 9.22.

10.1.34. Each of the three stations includes signalised pedestrian crossings across the R132 and provide interchange with the bus network on the R132 which will be enhanced

as part of the permitted R132 Connectivity Project and the Swords BusConnects project.

10.1.35. I am satisfied that the designs of these three stations are well-considered and of suitably high quality for their purpose and their receiving environment. The design, while different from the other forms of station, utilises the common palette of materials and design elements found across the scheme and I consider that the extensive green roofed canopy structure is an appropriate means of establishing a strong visual identity for MetroLink and in providing clear visual identification of the presence of a metro station from surrounding areas. Unlike most heavy rail stations, the extension of the canopy along the full length of the platforms will also be of benefit in providing shelter to passengers and a high level of amenity.

10.1.36. Removal of Existing Footbridges on R132

10.1.37. The proposed development includes the demolition of 4 No. existing pedestrian footbridges over the R132, which will be replaced by signalised pedestrian crossings as part of the separate R132 Connectivity Project for which the Board has already granted permission.

10.1.38. A number of submissions from local residents and residents' groups in the area oppose the removal of the footbridges on safety grounds, given the current nature of the R132 with regard to vehicular traffic volumes and speeds.

10.1.39. The permitted R132 Connectivity Project is intended to result in a traffic calmed urban road or street, more in keeping with its location bisecting the town of Swords, rather than the current dual carriageway arrangement. The project will include the replacement of roundabouts with signalised junctions, the installation of signalised at-grade pedestrian crossings and the provision of improved pedestrian, cycle and bus infrastructure along and across the R132.

10.1.40. The pedestrian safety concerns of local residents are noted and I accept that the footbridges are currently vital pieces of pedestrian infrastructure, given the nature of traffic on the R132. However, they are reflective of a past prioritisation of vehicular traffic over pedestrians and cyclists which the R132 Connectivity Project is intended to address.

- 10.1.41. In the context of MetroLink being delivered subsequent to the R132 Connectivity Project, I consider that the removal of the footbridges is to be welcomed in terms of improving permeability and accessibility between the eastern and western parts of Swords and in the interests of sustainable development. The provision of signalised pedestrian crossings on what will be a more traffic calmed urban road will provide a safe and more accessible alternative to the elevated footbridges.
- 10.1.42. On the opening day of the oral hearing, on questioning by the Inspectors, Fingal County Council provided an update on the status of the R132 Connectivity Project, providing an estimated completion date of Q2 2027.
- 10.1.43. Noting that the R132 Connectivity Project is a separate project to be delivered by FCC I recommend, if the Board is minded to grant the RO, that a condition should be included in the interests of pedestrian safety to ensure that the existing footbridges are not removed until the R132 Connectivity project has been completed and is operational.
- 10.1.44. Impacts on Sports Pitches at Balheary Park
- 10.1.45. The applicant proposes to permanently acquire a strip of land adjacent to Estuary Roundabout and on the north side the R125, for the purposes of providing an attenuation pond. It is also proposed to temporarily acquire the sports pitches within Balheary Park, to facilitate their relocation and realignment to allow the MetroLink construction along the western side of the park.
- 10.1.46. Fingallians GAA Club made a written submission (S95) and also appeared at the oral hearing on 7th March 2024 (Refs. OH200, OH200A), regarding their playing facilities at Balheary Park, and each submission expressed concern that the club will be significantly worse off arising from the proposed development, in terms of available playing facilities. They seek that, at a minimum, MetroLink has no impact on existing facilities as a result of MetroLink (i.e. that 2 full sized pitches are retained) and they also seek a guarantee that alternative facilities will be provided for the duration of construction, where the pitches are to be temporarily acquired.
- 10.1.47. In their Response to Submissions document, TII point out that there is only 1 full-size playing pitch at Balheary Park and that works within Balheary Park will be undertaken with due regard to the requirement for ongoing usage of the pitch. It is also noteworthy that the applicant commits to this pitch at all times complying with

the minimum dimensions for a football pitch. With regard to the second pitch, this is identified by TII as slightly below full size (144m x 75m) and is primarily used for training of juvenile groups and I note that this point was not subsequently disputed by Fingallians GAA, at the oral hearing.

10.1.48. In respect of restoration, TII outlines that the restored pitch will have a reduced width of 60m and that it will be restored as an artificial pitch, following requests by both Fingallians GAA and Fingal County Council. In acknowledging that this pitch will be unusable during construction, TII states that it will identify suitable alternative training facilities which will be in place in advance of the commencement of works to this pitch.

10.1.49. TII submitted revised proposals to the oral hearing, in respect of floodlighting and boundary arrangements, for the Balheary Park playing pitches on 19th March 2024 (Ref. OH253) and 25th March 2024 (Ref. OH323). These revisions relate to the relocation of proposed floodlighting to the southern-most, full-sized, playing pitch and the provision of ball stop netting adjacent to the R132 and were stated to arise from agreement reached with Fingallians GAA.

10.1.50. I agree with TII's submission that subject to the above, Fingallians GAA will not be significantly worse off in terms of playing facilities. However, I would highlight to the Board that an unresolved issue relates to the alternative training facilities that TII intends to provide prior to commencement of works on the second pitch. At the oral hearing TII reiterated that no such pitch had been identified, and, in this context, I consider it reasonable that a condition should be attached requiring that a temporary alternative training facility shall be made available to Fingallians GAA prior to the commencement of works at the existing training pitch within Balheary Park.

10.1.51. Impact on Residential Estates Along R132

10.1.52. Submissions were made by three residents' associations and a number of individuals in relation to impacts on three residential estates located along the R132 in the Swords area, namely Seatown Villas, Estuary Court and Ashley Avenue. All three estates have public open space alongside the R132 and they are generally separated from the R132 by boundary walls and/or planting. TII had originally proposed to permanently acquire and landscape these open space areas, as part of

the provision of a new linear park and that would include greater connectivity and permeability.

- 10.1.53. The thrust of the residents' submissions is that the open space layouts should be reinstated, including reconstructing of existing boundary walls and with the open spaces returned to simple grassed areas for children to play football etc. The observers express concerns regarding anti-social behaviour, child safety and impact on the mature character of the estate, should the linear park proposal be implemented.
- 10.1.54. On the first day of the oral hearing, TII proposed modifications in this area, in order to address the residents' concerns. These are detailed in the document 'R132 Landscape Amendments' (Ref. OH28) and essentially comprise a proposal to reinstate the affected green spaces to their existing condition.
- 10.1.55. I consider that the originally proposed linear park along the R132 and the opening up of the housing estates by means of high quality landscaped parkland to what will be a traffic-calmed R132 was a positive aspect of the proposed development. It would improve residential amenity, permeability and assist in creating a more active travel friendly environment, in accordance with Map Based Objective GIM17 of the development plan which seeks the development of a 'green necklace' of open spaces that, amongst other things, links housing to both the town centre and to MetroLink stops. However, it is clear from the submissions that residents were vehemently opposed to this aspect of the proposed development and in view of this TII has now proposed to omit this aspect of the development.
- 10.1.56. Following submission of the amended landscaping proposals to the oral hearing, Fingal County Council were asked to comment on their compatibility with the overarching aims of the R132 Connectivity Project and they reiterated a desire to maintain permeability and connectivity for active travel users. TII acknowledged these comments and outlined that the amended proposals try to strike a balance between providing permeability and acknowledging a desire from affected residents for privacy.
- 10.1.57. Ultimately, the linear park is not a fundamental part of what is primarily a public transport development proposal. While it would have been a welcome element of planning gain that would assist in knitting together the somewhat fragmented urban

form in this part of Swords, I consider the residents' concerns to be understandable and reasonable. The applicant will now reinstate the areas generally to their existing condition with walls reinstated. Importantly, MetroLink will not undermine the overarching intent of the aforementioned Objective GIM17 and will not impede further connectivity and permeability improvements in this area in the future, should FCC wish to pursue this.

- 10.1.58. Should the Board disagree with this conclusion, they should note that TII has proposed to change the duration of land acquisition for parts of these public open spaces from permanent to temporary, since they will be reinstated to existing conditions. As the applicant has now indicated that the lands are not required permanently for the MetroLink development, the Board, if it wishes to direct the applicant to deliver the original landscaping proposal, will have to consider the implications in terms of the standard CPO 'tests' and the issue of proportionality.
- 10.1.59. With particular reference to Objective GIM17, I note that it does not obligate TII, or any other project developer, to provide specific permeability or connectivity improvements as part of proposed developments and it does not identify any specific delivery mechanisms. I am therefore of the view that there is no issue of inconsistency with this Development Plan Objective.
- 10.1.60. Estuary Court Residents also objected to acquisition of the northern-most open space area, on the basis that there is no construction required in this area. It should be noted that the open space in question is vested in the ownership of Fingal County Council.
- 10.1.61. The issue was discussed at the oral hearing, on both 21st February and 7th March 2024, and TII advised that the open space will be used as a construction compound, with the northern open space area in particular providing a support site for the main construction site that will be located on the southern open space area and which is itself constrained. They further stated that the northern open space area would be occupied for a period of c. 40 months and that its omission from the project would delay the overall construction programme
- 10.1.62. In the second Response to Submissions Received document, TII again stated that they cannot agree to withdraw the proposal to occupy the north open space due to

construction sequencing requirements and they reiterated that withdrawing from this area would prolong the overall project duration at this location.

10.1.63. I acknowledge the observers' concerns in relation to the temporary loss of public open space. However, I accept that construction of the proposed development requires the development of numerous construction compounds, including the one proposed at Estuary Court. The compound is directly associated with a main construction site for the alignment section on approach to Fosterstown Station and I accept, in view of the constrained nature of the main construction site, that a support site is necessary. I note in this respect TII's commentary, that withdrawing from this area would prolong the overall project duration at this location.

10.1.64. In the case of Seatown Villas, the proposed development includes an area of retained cut through public open space within the estate. Either side of this, the alignment changes to cut-and-cover to pass under public roads. At the oral hearing, both the Board's representatives and Thomas Lowndes (on behalf of Seatown Villas residents) queried the rationale for the retained cut in this area, noting the proximity to existing houses and the impact on usable public open space. This included discussion and questioning around any technical requirements for access at this location, such as ventilation and emergency access, and the resultant effects if the extent of cut-and-cover were to be increased.

10.1.65. Following this discussion, on 28th February and 5th March 2024 the applicant submitted two versions of a document 'R132 Seatown Villas Retained Cut Section' (Refs. OH107 and OH169), which outlines TII's rationale for maintaining this retained cut section. Of particular note, the reports outline that TII has provided a series of access points in the open sections of retained cut, at intervals of 300m-600m, and that facilitating a request from Seatown Villas residents to replace the retained cut section with a section of cut and cover would require redesign of this section of the alignment and remove a natural ventilation point between tunnel sections. As an alternative to the residents' request, TII suggested that the southern tunnel section could be extended by 30m. This is reflected in reference 2.5 of the Final Schedule of Additional Environmental Commitments (Ref. OH376) and drawing No. ML-RO 301 H-J (Ref. OH323). In effect, this 30m extension allows for the existing extent of open space to be reinstated in a usable condition, with the retained cut section maintained in the vicinity of the proposed Seatown pumping station.

- 10.1.66. While it would appear to be technically feasible to entirely cover the alignment in this area, while still retaining emergency/maintenance access, I consider that the proposed modification strikes a reasonable compromise, in increasing the distance from the retained cut to the existing houses and reinstating almost the entirety of the existing open space in Seatown Villas post-construction. I therefore consider it is acceptable.
- 10.1.67. The residents of these estates all expressed concerns regarding the removal of the existing footbridges and the provision of at-grade crossings of the R132. The concerns of residents in relation to this matter are understandable, given the hostile environment for pedestrians and cyclists that currently exists on the R132 due to traffic speeds and the lack of adequate footpaths and cycle paths. However, as addressed above, the permitted R132 Connectivity Project will change the character of the R132 from a busy traffic artery to a more urban road, through the replacement of a number of roundabouts with signalised junctions and improved provision for active travel. TII has proposed the demolition of the existing elevated footbridges along the R132 with their replacement with a series of signalised pedestrian crossings. As detailed above, I am of the view that the combination of changes proposed for the R132 will have a transformative effect on the character of the road, in terms of providing an environment that gives greater consideration and priority to pedestrian movement and I consider the removal of the overbridges is to be welcomed where it forms part of a wider reconsideration of the layout and functioning of the R132.
- 10.1.68. Increase to Cut-and-Cover at O'Scanaill Veterinary Hospital
- 10.1.69. In addition to the proposed increase in the extent of cut-and-cover at Seatown Villas, a similar modification was also proposed at the oral hearing in the vicinity of the O'Scanaill Veterinary Hospital to the south of what is currently Pinnockhill roundabout. This roundabout is to be converted to a signalised junction under the permitted Swords BusConnects project (which is currently the subject of judicial review proceedings, including by O'Scanaill Veterinary Hospital).
- 10.1.70. This proposed modification arose from engagement between TII and O'Scanaill's Veterinary Hospital during the oral hearing, with their observation subsequently being withdrawn. Drawings of the change from retained cut to cut-and-cover over a

c. 50m length of alignment are shown on Drawing No. ML-RO-301 S-T included in the drawing pack submitted by the applicant on 25th March 2024 (Ref. OH323). This section is immediately west of the veterinary facility, which includes equine treatment with associated sensitivities. It is proposed to provide landscaping and tree planting on this cut-and-cover area, as per the updated Landscape Layout drawing ML1-JAI-ARL-SC03_XX-DR-Y-00006 submitted as part of the same drawing pack.

- 10.1.71. The increased cut-and-cover provision at this location also provided an opportunity for TII to address a matter arising with regard to access to retained lands owned by separate observers, John McGreevy / McGreevy and Taylor families (S152 and 1FS31, respectively), to the south of the veterinary facility, by providing a new permanent access to those lands over the extended cut-and-cover section. That matter is addressed in the CPO section of this report.
- 10.1.72. An LVIA assessment of this modification was presented on 22nd March 2024 (Ref OH383), which concluded that it represented a positive change in respect of Landscape and Visual Impact, but was not substantial enough to warrant any change in the significance of impacts in the LVIA undertaken.
- 10.1.73. Given the proximity of the MetroLink alignment to the veterinary facility and noting the sensitivity of this receptor, I consider that this proposed modification is acceptable.
- 10.1.74. Impact on Future Nevinstown to R132 Link Road
- 10.1.75. There is a Roads Objective in the Fingal Development Plan 2023-2029 for the southern arm of the Swords Outer Relief Road, which is indicatively shown on the relevant zoning map as connecting to the R132 at Nevinstown, immediately to the south of the point at which the MetroLink alignment passes under the R132 via cut-and-cover after leaving Fosterstown Station. The road would pass over a portion of the MetroLink alignment as it transitions from cut-and-cover to open cut. At the oral hearing, on 19th February 2024, I queried whether the road objective could be delivered in the future with MetroLink in place, or whether it would be compromised? In response, the applicant submitted a document entitled 'Note on Nevinstown to R132 Link Road' (Ref. OH90) on 27th February 2024.
- 10.1.76. The applicant contends that the MetroLink alignment can facilitate the proposed road objective, due to the depth of the alignment in this location. While MetroLink requires

a minimum 5m headroom from Top of Rail and a further minimum of 800mm for a slab overhead, it is in open cut with a depth of c. 7.5m - 8m below ground level at the intersection location. TII state that construction of the future road infrastructure would require c. 1.5-2.0m of depth and that there is also scope to raise the vertical alignment of the future road as it crosses the MetroLink alignment to achieve further clearance while still being capable of a tie-in to the R132 at the indicative location shown on the zoning map.

- 10.1.77. TII also note that the road objective has not yet gone through a design, options selection or consenting process, and as such, there is flexibility in how it can be delivered by FCC in the future. Further to this, TII noted that alternative alignments for the road would also be possible, such as to the north (making use of the MetroLink cut-and-cover section) or south (likely to necessitate a bridge over the MetroLink alignment due to it rising towards at-grade).
- 10.1.78. Having reviewed the submitted drawings and the relevant zoning map, I am satisfied that the MetroLink alignment, as proposed, would not compromise or undermine the ability of FCC to progress the road objective in the location and indicative alignment shown on the zoning map, or an alternative alignment to the north or south, should that ultimately be preferred following analysis of options and designs.
- 10.1.79. Development Lands at Fosterstown
- 10.1.80. A submission was made on behalf of J Murphy (Developments) Ltd. in relation to lands at Fosterstown, Swords, located on the western side of the R132, opposite the proposed Fosterstown Station. At the time the submission was made, there was a decision pending on an SHD application on the site for 645 No. residential units (ABP-313331-22). The SHD application included a temporary left-in/left-out access arrangement onto the R132, close to the MetroLink pedestrian crossing, pending delivery of the Fosterstown Link Road. They sought that a condition be attached to the RO for the pedestrian crossing arrangements to be agreed to ensure consistency between MetroLink and their development.
- 10.1.81. I noted that permission was subsequently refused for a number of reasons, including that the left-in/left-out arrangement would give rise to significant negative impacts on the R132, would be in conflict with the Swords BusConnects project and would be

premature pending delivery of the Fosterstown Link Road. No further planning applications appear to have been made on the site and thus no further issues arise.

10.1.82. Impact on Businesses

10.1.83. Submissions were received from a number of commercial / retail businesses in area AZ1, generally located close to the R132, that would be directly affected by the proposed development. This included: Woodies DIY (S315) and Hertz (S115) at Seatown; Travelodge (S64) and Smokin' Bones restaurant (S282; located within the Travelodge site) adjacent to the Pinnockhill roundabout; and Smyths Toys (S283) and Starbucks (S288; located in the Smyths premises) at Airside Retail Park.

10.1.84. Each of these commercial operators is affected by the proposed CPO and this issue is addressed in Section 12 of this report. However, many of the operators also express concern regarding the impact of the proposed development on their business operations, for example through the loss of car parking, impacts on site access, noise and dust and also due to the prolonged nature of the construction phase. In the case of Smyths Toys and Starbucks, where the retail unit in which both operate is to be demolished in order to facilitate construction of Fosterstown Station, both operators highlight the difficulty they will have in finding a suitable alternative site in the area.

10.1.85. In their response to each of these submissions, TII point out that they have taken a considered approach to mitigating impacts on business operations. Further, the Scheme Traffic Management Plan contained at Appendix A9.5 of the EIAR states that construction works will be phased, with the aim of avoiding simultaneous road diversions and/or closures at the 4 major junctions along the R132, namely the Estuary, Seatown Road, Malahide Road and Pinnockhill junctions.

10.1.86. There will undoubtedly be impacts on each of these businesses during construction, primarily related to impacts on access and disturbance and TII acknowledges as much. I note that TII proposes to maintain access to each property and I accept that this will involve a flexible approach on all sides.

10.1.87. Regarding noise and vibration and other construction disturbance, whilst the proposed development will undoubtedly have an effect on business operations for a temporary period, these uses are less sensitive than residential properties. For the Travelodge, I accept that noise disturbance and visual impacts will impact on hotel

operations and I note that TII, in its response to their submission, commits to engagement with the hotel operator to find ways of maintaining guest experience during construction. This includes a commitment to explore local mitigation that will reduce construction noise. I also note that TII proposes extensive dust mitigation, which I consider is likely to be effective in ensuring there is no significant impact at particularly sensitive locations such as the Travelodge site.

10.1.88. Ultimately, the impact on these businesses, whilst regrettable, needs to be balanced against the significant benefits that will accrue to the Swords community arising from the provision of a high-frequency, high-quality rail service. In my view, the wider benefits outweigh the localised impacts discussed above and the businesses may benefit in the operational phase from increased footfall in the area.

10.1.89. In the case of the Smyths Toys and Starbucks unit that it is proposed to acquire and demolish, the loss of this retail unit will undoubtedly have a significant impact for the occupiers and the points raised with regard to the difficulties finding a suitable alternative site in the area are valid. However, I consider that the public benefits of constructing a metro station and alignment in this location outweigh the disbenefits to the observers. TII states that it will assist with the identification of suitable alternative sites and that it undertakes to provide as much notice as possible in relation to proposed acquisition. Compensation will be payable for the acquisition of the property under various headings, in accordance with established CPO practice and, ultimately, I consider that this is the only form of mitigation available in this instance.

10.1.90. Biodiversity Impacts

10.1.91. TII proposes to culvert the Sluice River and Forrest Little Stream, where they interface with the proposed alignment. In line with the requirements of Fingal County Development Plan Policy DMS0159 TII proposes the incorporation of mammal ledges in order to allow for mammal passage. Policy DMS0159 seeks the inclusion of such ledges in tunnels or bridges over the rivers Liffey, Tolka, Pinkeen, Mayne, Sluice, Ward, Broadmeadow, Ballyboghil, Corduff, Matt and Delvin.

10.1.92. In its further submission on the application, the Department (1FS17) recommends that consideration should be given to installation of a mammal ledge as part of the proposed Santry River culvert and installation of a similar ledge in an existing culvert

over the river, representing ecological enhancements provided by the applicant, in view of recent survey results that indicate the continued presence of otter in the river.

10.1.93. In the response to this further submission, TII submit that the requested ledge will not achieve more effective otter passage as the existing culvert, which it adjoins under the R108 roadway, does not have a mammal ledge and, further, that TII cannot install a ledge in the existing culvert as it does not own or operate it.

10.1.94. I accept TII's point that it has no powers to install a mammal ledge in the existing culvert, which it does not own, and that the absence of a ledge in this existing culvert would undermine any ledge incorporated within the proposed culvert. In this context, I consider it would not be appropriate for the Board to require that a mammal ledge be incorporated as part of the proposed Santry River culvert.

10.1.95. The Broadmeadow and Ward River viaduct also does not contain any mammal ledge and this was not raised in the submissions by either FCC or the Department. However, I am aware that the viaduct is suspended above both rivers and is very unlikely to interfere with or impede mammal passage. Further, and as can be seen from drawing No. ML-VR 301 C-E, the viaduct contains multiple elements of electrical infrastructure and I do not consider it would be prudent to encourage mammal interaction with it.

10.1.96. Other Issues

10.1.97. Other issues raised in the submissions relating to this area included:

- Flooding and drainage concerns, including 'barrier effect': Addressed in Sections 11.12 and 11.13.
- Noise and vibration: Addressed in Sections 11.16 and 11.17.
- Alternative alignment along R132 (in median or to side): Addressed in Section 11.4.

10.2. **AZ2 Airport Section Issues**

10.2.1. I consider that the main planning issues in respect of area AZ2 are as follows:

- Dublin Airport Station.
- Impact on Dublin Airport operations.

- Impact on future Airport development.
- Over-station development.
- Dublin Airport North Portal.
- PFAS Management Strategy
- Ventilation and evacuation tunnels.
- Impact on Our Lady Queen of Heaven Church.

10.2.2. Dublin Airport Station

10.2.3. The proposed Dublin Airport Station will be located on what is currently the Terminal 2 surface car park. It is at a slight remove from the two airport terminals, and it is somewhat unfortunate that the proposed station does not provide a direct seamless interchange with the terminals. Instead, passengers will be required to exit the MetroLink station, walk along partially covered paths and cross airport circulation roads (via signalised pedestrian crossing) to reach the terminals (or vice versa). This issue regarding the quality of the interchange and the lack of an underground or elevated link was raised in a number of submissions (see for example that from Rail Users Ireland S261). It was also raised in the original submission by DAA, but as detailed in the following section, they have subsequently reached agreement with TII and expressed their support for the project.

10.2.4. The retrofitting of a station immediately under or adjacent to the Terminals would clearly create a significant logistical and construction challenge. It is also important to note that the proposed location of the station within the airport campus is strongly supported by policy, including the Fingal Development Plan and the Dublin Airport LAP. The station is located within an area designated as a Ground Transportation Centre (GTC), which forms a key element of the airport infrastructure, as set out in the Dublin Airport LAP. The LAP states that the GTC “functions as the key public transport focal point for bus set down and pick up associated with numerous public and private bus operators that operate across local, regional and national areas within the Country. It is envisaged that the future Metrolink station to serve the Airport will be integrated with the GTC to form a public transport interchange”.

10.2.5. The following public transport objectives contained in the LAP are noted:

- **PT02:** Require the development of a transport interchange including a MetroLink station at the centre of the Dublin Airport campus, in accordance with the implementation of MetroLink by 2027 by the National Transport Authority and Transport Infrastructure Ireland.
- **PT03:** Ensure that the proposed MetroLink station and interchange in Dublin Airport campus is undertaken to best international standards for public transport interchanges.

10.2.6. While the station will be at a slight remove from the terminals, it will be well-located adjacent to existing bus and coach parking areas which will assist in achieving this high quality public transport interchange, and I note that the layout of the area surrounding the station building includes extensive plaza circulation areas with additional bus and coach parking bays and cycle parking.

10.2.7. In their response to Rail Users Ireland, TII state that the micro-simulation VisWalk modelling of the Airport Station, based on the 2035 future year scenario, with forecast pedestrian demand based on ERM and vehicle demand based on daa projections, indicates that the airport road network will operate with adequate capacity for vehicles and pedestrians, even with the addition of MetroLink passengers. All the crossings in the immediate vicinity of MetroLink and the GTC operate efficiently for both pedestrians and vehicles, with no excessive vehicle queuing or pedestrian crowding evident. TII therefore consider that the pedestrian modelling does not justify the need for an additional walkway, either above or underground.

10.2.8. With the provision of clear wayfinding routes to the terminals, as per TII's agreement with DAA detailed below, I concur with the applicant's assessment and consider that the location of the station within the airport is appropriate.

10.2.9. The design of the station building is consistent with the scheme-wide architectural principles and materials usage. Rather than the standard MetroLink canopy entrance, the station entrance comprises a larger single storey building, which is relatively similar to Glasnevin Station in architectural design, with extensive glazing, dark cladding, black angled steel columns, flat roof etc. The dimensions of the station entrance building are c. 45m x 38m x 7m high and I note that a green roof is proposed on this station. It is notable that the station includes 6 No. escalators and 6

No. public lifts from street level, more than any other station, which is appropriate given passenger numbers and that many passengers will be carrying luggage. The remainder of the space with the station building will be given over to passenger circulation, which is again justified with regard to its airport location.

10.2.10. Externally, the plaza area adjacent to the station features hard and soft landscaping, standard MetroLink skylights, cycle parking and various ventilation/exhaust grills and hatches.

10.2.11. I consider the design of the station to be well-considered and appropriate to its high profile location within the airport campus and that it is well integrated into the ground transportation area, which will assist in facilitating interchange with other modes of transport.

10.2.12. Impact on Dublin Airport Operations

10.2.13. Following the initial written submission of DAA (S68) and their submission at the oral hearing on 20th February 2024, a copy of an agreement between TII and DAA was submitted to the hearing on 26th February (Ref. OH77). This includes a schedule of proposed 'conditions', agreed by both parties, that they request be included in the Thirteenth Schedule of the Railway Order. The proposed 'conditions' are as follows:

1. **Aviation Security:** Prior to construction and operation of the Metrolink TII shall agree security measures with DAA as the responsible organisation for Aerodrome Security provisions.
2. **Future potential development:** The Metrolink structures shall be constructed so as to accommodate future development above the station and tunnels.
3. **Aeronautical Safeguarding:**
 - 3.1 Crane Use: Prior to the commencement of development TII shall agree proposals for crane operations (whether mobile or tower crane) and demonstrate there are no Hazardous, Confusing or Misleading Lights during construction or operation or any potential impacts to Instrument Flight Procedures at Dublin Airport, with DAA and with AirNav Ireland.
 - 3.2 Electromagnetic Fields: Prior to the commencement of development TII shall agree the EMI mitigation measures with DAA & IAA as the responsible organisations for Aerodrome Security & Safety provisions at Dublin Airport

4. **Construction Phase:** Prior to commencement of the development all detailed construction plans, with particular reference to construction traffic, utilities, alterations to tunnel alignment, wastewater discharge and airport security must be developed in consultation with and approved by DAA as the landowner and the responsible organisation for Aerodrome Security provisions. TII will consult and agree with DAA prior to commencement of the development an agreed instrumentation and monitoring plan as it relates to the control of vibration impacts.
5. **Design:** The architectural form (internal and external) of all stations will be in accordance with the MetroLink Architectural Vision and Strategy. TII will have regard to Dublin Airport Architectural Design framework in so far as it relates to consistency of passenger wayfinding from the station to terminal building and the general presentation of the urban realm, but not to conflict with any security requirements as required to comply with Aerodrome Security provisions.
6. **Landscaping:** Prior to commencement of development detailed landscape plans including plant and tree species must be developed in consultation with and approved by DAA as the landowner and airport operator.
7. **Wayfinding:** Prior to operation all new and alterations to existing wayfinding signage must be agreed with DAA.
8. **MetroLink Tickets:** Prior to operation the location of ticket machine locations shall be agreed with DAA, as the responsible organisation for Aerodrome Security provisions.
9. **Luggage and Trolleys:** Prior to operation the management, provision and location of trolleys must be agreed with DAA.
10. **Sculpture:** Prior to operation the details of the sculpture to be provided at Dublin Airport Station must be agreed with DAA.
11. **Areas constructed by MetroLink that will be operated and maintained by Dublin Airport:** Prior to construction the details of areas constructed by MetroLink and operated and maintained by DAA must be agreed with DAA as the landowner.

12. Washroom facilities: TII shall ensure that, in common with all other interchange stations, washroom facilities will be provided at the Airport Station.

- 10.2.14. Given the location of the proposed MetroLink station and associated development in the heart of the busy airport campus and having regard to aeronautical safety and airport operational considerations, including security, wayfinding, luggage trolley management and maintenance, I consider that the proposed 'conditions' are all reasonable and represent a clearly necessary degree of engagement and consultation between the two parties during the detailed design, construction and operational phases.
- 10.2.15. If the Board is minded to grant the Railway Order, I recommend that the agreement be included in the Thirteenth Schedule.
- 10.2.16. Several submissions raise queries around potential increases in Dublin Airport passenger capacity into the future and whether the MetroLink project, as designed, can accommodate this.
- 10.2.17. The DAA is the body responsible for the continued successful operation of the airport and they have not expressed any concern regarding the capacity of the MetroLink proposal. As detailed above, they have expressed support for the proposed development and have reached an agreement with the applicant which was submitted at the oral hearing.
- 10.2.18. While the continued increase in passenger numbers and the desire by the airport and airlines to increase/remove the current passenger 'cap' is noted, the passenger numbers – in the absence of any planning or regulatory restriction – are likely to be ultimately controlled by the capacity of the two runways and the processing capacity of the terminals, rather than the means of access to the airport. The proposed development has a peak capacity of 20,000 ppdp, which is far in excess of the capacity of existing bus routes serving the airport. There is no information before the Board that would allow it to form the view that the proposed development is not adequately sized to cater for airport passengers. Furthermore, as detailed above, the Dublin Airport Station design differs from the other deep stations, with greater provision of lift and escalator access from street level and greater circulation space

within the station entrance building, in recognition of the different passenger profile at this station, with far greater use of luggage etc.

10.2.19. Subject to the inclusion of the agreement in the Railway Order, I am satisfied that the proposed development will support and complement the operation of the airport and its accessibility by sustainable public transport modes.

10.2.20. Impact on Future Airport Development

10.2.21. The written submission from the Irish Airline Pilots Association (IALPA; S127) contends that there is a failure to future proof connectivity between the existing airport campus and a future western campus.

10.2.22. There is no reason to believe that the proposed MetroLink alignment would prevent future development at Dublin Airport, or the development of an internal transport system, such as an Automated People Mover. It is clearly not feasible to serve all areas of the large Airport campus with a single Metro line. The proposed Dublin Airport Station is centrally located within the main existing centre of ground transport activity at the Airport, adjacent to both existing Terminals, multi-storey car parks, offices, a hotel which is under construction, and bus and coach stops, in an area which is designated as a Ground Transportation Centre in the Dublin Airport Local Area Plan.

10.2.23. The abovementioned Objective PT02 of the LAP is noted with regard to the issues raised by IALPA, as is the following Objectives PT06:

- **PT06:** Investigate and provide for connections from the western parts of the airport campus to MetroLink, in the context of potential future planned development to the west of the existing terminals.

10.2.24. The location of the Station is clearly supported by the LAP, which seeks to guide the orderly planned development of the Airport. Furthermore, as noted above, TII and DAA have entered into an agreement, as have TII and FCC and both FCC and DAA have expressed their support for the development as proposed.

10.2.25. I therefore do not consider that the proposed development would prejudice future development of a western campus or dictate the form or location of any further Terminal or Pier development at the Airport.

10.2.26. Over-Station Development

- 10.2.27. I note that the agreement between TII and DAA, which they wish to include in the Schedules to the Railway Order, includes a provision relating to ‘future potential development’ and states that the MetroLink structures shall be constructed so as to accommodate future development above the station and tunnels.
- 10.2.28. Since the MetroLink station is centrally located within the designated Ground Transportation Centre, in what is an increasingly confined Airport campus, I consider it reasonable and appropriate that the structure be designed so as to accommodate potential overhead development in the future. This is particularly important in the context of any future development of the western campus and to futureproof the station’s role as a public transport interchange.
- 10.2.29. Dublin Airport North Portal (DANP)
- 10.2.30. The proposed DANP is the TBM reception site for the Airport tunnel, from where the TBM will be dismantled and removed. It will function as an intervention shaft in the operational phase, providing emergency access/escape from the Airport Tunnel. It is located north of Dublin Airport’s boundary, on greenfield land on the opposite side of the Naul Road, close to the proposed 110kV substation addressed in Section 9.25 above.
- 10.2.31. The underground elements of the DANP will comprise a concrete box c. 28m long and c. 17m wide, surrounded by concrete diaphragm walls. In the operational phase, the surface expression of the DANP will be a fenced compound containing a single storey emergency access service core and fire brigade lift and hardstanding areas, including parking for emergency vehicles and an evacuation safety area. The remainder of the construction site will be reinstated.
- 10.2.32. In the construction phase, separate access and exit points will be provided onto the Naul Road, while in the operational phase a single access point will be provided for emergency/maintenance access.
- 10.2.33. The DANP compound is relatively minor in scale and extent and is similar in design to various electrical substations and air navigation equipment compounds in and around the airport campus. I consider that no particular planning concerns arise in relation to this aspect of the project.
- 10.2.34. PFAS Management Strategy

- 10.2.35. As detailed elsewhere in this report, the applicant has submitted details of a proposed 'PFAS Management Strategy for Dublin Airport', in response to an oral hearing submission (OH369) made by Sabrina Joyce-Kemper on behalf of herself and Wild Ireland Defence CLG (WID) which raised the issue of existing per- and polyfluoroalkyl substances (PFAS) contamination at Dublin Airport.
- 10.2.36. I note from Section 1.1 of the Strategy that it has been prepared with input from a range of international PFAS specialists and that its preparation included engagement with the DAA, FCC and the EPA.
- 10.2.37. PFAS are a group of man-made chemicals, often referred to as 'forever chemicals', which are a health concern due to their persistence in the environment and human body. Certain PFAS have been classified as "carcinogenic to humans" or "possibly carcinogenic to humans" and a range of other health effects are linked to them.
- 10.2.38. The Strategy states that the full extent and variety of these effects are still being studied and that there is currently no consensus on the specific levels of exposure that result in adverse health effects.
- 10.2.39. The Strategy notes the publication by DAA of a report in April 2024 (i.e. post-oral hearing) detailing the results of environmental monitoring for PFAS undertaken between 2021 and 2023. The report identified potential sources of PFAS at the Airport, which primarily relate to historical releases of PFAS containing firefighting foams. PFAS has been identified in shallow soils and groundwater, and in the deeper groundwater within the bedrock in a number of locations.
- 10.2.40. It is important to note that the proposed development does not entail the use of PFAS and therefore the only potential PFAS issues are related to this existing historic contamination. There are essentially two goals for the PFAS Management Strategy:
- Prevent PFAS mobilisation and transfer during construction and operation of MetroLink, should it be encountered.
 - Avoid creation of preferential pathways that could facilitate the transfer or migration of PFAS.
- 10.2.41. The proposed strategy is stated to be conservative and consistent with the precautionary principle, in that – for the purposes of the Railway Order application –

it uses a worst-case scenario whereby all excavated material at Dublin Airport is assumed to be contaminated with PFAS, until proven otherwise. It states that TII has adopted this principle given the current uncertainty about the full extent of the PFAS contamination at Dublin Airport and the risk it poses to health and the wider environment. I note in this regard that both DAA and TII have been undertaking testing in recent times at the airport and that it is proposed to undertake further pre-construction ground investigation works at each works area and along the tunnel alignment under the airport to determine baseline PFAS contamination levels and further clarity on quantities of material affected. The Strategy states that it is expected, based on similar projects overseas, that there will be a significant reduction in the volume of material that ultimately requires treatment and disposal.

- 10.2.42. Where excavated material is not contaminated by PFAS, it will be reused as per the excavated material from other areas (subject to meeting Article 27 requirements). Any excavated material with levels of PFAS above the limit of detection will be exported for treatment and/or disposal. This limit of detection is assumed to be 1µg/kg for most individual PFAS and is stated to be the lowest reliable limit currently offered by analytical laboratories.
- 10.2.43. Monitoring conducted during EIAR preparation did not detect PFAS in groundwater in the area of the airport, although trace PFAS were found in the soil at very low levels, right at the detection limit and below the adopted screening values. PFAS had not, therefore, been assessed as contaminants of significant concern in the EIAR.
- 10.2.44. The abovementioned DAA Report identifies locations within Dublin Airport where PFAS are known to have been used, including current and former fire stations and fire training grounds and other areas where PFAS have been found, including areas where excavated materials had been stockpiled during construction projects or areas where PFAS may have migrated to.
- 10.2.45. Section 3.3 of the Strategy outlines these locations and their distance from the MetroLink alignment. While they are generally at a remove of greater than 100m from the MetroLink works, I note that Apron 5H at the northern side of the north apron contains PFAS in stockpiles and made ground above the MetroLink alignment. It is considered possible that PFAS impacted ground and groundwater will be

encountered during the construction works, if not mitigated. The existing presence of PFAS in watercourses in and around the airport is also noted.

10.2.46. The main risks of encountering and/or mobilising PFAS contaminated soil or groundwater arise during the construction phase, particularly with regard to:

- Construction of diaphragm walls for the station/tunnel portal structures.
- Excavation and dewatering within the D-wall structures until the structure is watertight, following completion of the base slab.
- TBM tunnelling works for the main tunnel and the two smaller tunnels.
- Crossing of water bodies or works adjacent to water bodies.
- Handling and transport of any potentially contaminated material, if not effectively managed.

10.2.47. The Strategy acknowledges that there are information gaps due to the lack of PFAS data in soil and groundwater for large areas of the DAA lands and that this uncertainty is the basis for the conservative assumptions made in the Strategy. These assumptions are contained in Table 4.1 of the Strategy but, in my view, the most important is the assumption that 100% of excavated material, groundwater and collected surface water at Dublin airport will be contaminated and will require management. The Strategy consider that this conservative 'worst case' scenario is not, however, expected to be realised.

10.2.48. Utilising this 'worst case' scenario, various management options for PFAS contaminated soil/rock were considered. These are detailed in the Strategy, but the chosen option is to export the contaminated materials for treatment overseas, due to the absence of facilities within Ireland capable of handling PFAS materials at volume. The Strategy notes that DAA have already adopted this approach for the remediation of stockpiles of PFAS contaminated soil.

10.2.49. With regard to PFAS contaminated water, a range of management/treatment technologies and options were again considered, including granular activated carbon, ion exchange and foam fractionation. These technologies do not destroy PFAS, but instead effectively concentrate it in a form which can then be destroyed, likely following export. It is intended that a treatment train comprising a combination of one or more of these technologies will be deployed.

- 10.2.50. The estimated quantum of excavated material to be managed at Dublin Airport is c. 304,000m³ and this will entail the use of a Triage and Material Management Centre (see details in Figure F-4 in Annex F of the Strategy) which it is intended to locate at Dardistown, within the project boundary on lands that are to be temporarily acquired for the Dardistown Depot construction. The site is between the M50 Motorway and the Depot works site and has a good level of accessibility by road from the airport MetroLink works sites.
- 10.2.51. The transport of excavated materials from the airport works sites will utilise sealed and covered trucks and plant and vehicles exiting the sites will be washed within a washing plant, with the water collected and treated prior to reuse or disposal.
- 10.2.52. I note that the Centre comprises a surface sealed hardstanding area with material storage in segregated cells, with each stockpile covered to reduce dust and leachate run-off from water ingress. Sealed drainage channels and perimeter bunding will be used to collect any run-off and prevent it from reaching surface or groundwater.
- 10.2.53. The Centre comprises an area of c. 25,000m² within a site of 44,000m². The size of the site is related to the conservative assumptions that 100% of material from Dublin Airport will be sent there and that material will have to be held for 28 days pending receipt of testing results. Material in each stockpile will be tested and either diverted to an approved site for re-use if within PFAS acceptance limits or exported from Dublin Port via covered barge/ship to an approved treatment facility in Europe for treatment and disposal if outside of PFAS acceptance limits.
- 10.2.54. Following completion of excavation activities at the sites where PFAS mobilisation is a potential risk, each site will undergo a clearance process, returning each site to its preconstruction condition, with certification of site clearance by a MetroLink Authorised person. A similar process will take place at the Triage and Material Management Centre (see Annex F.7 of Strategy). This is an important consideration from both an environmental protection perspective but also given that the lands where it is proposed to place the Centre are only to be temporarily acquired and will revert to their owner post-construction.
- 10.2.55. With regard to the known presence of PFAS in the Sluice River, Mayne River and Santry River near Dublin Airport, the Strategy outlines protocols for works in proximity to these streams. This includes delineation and segregation of works site,

dedicated access routes, transport of all excavated material to the PFAS management site and undertaking of in-stream works in dry or very low flow conditions to minimise the risk of contamination. Any potentially contaminated water will be treated according to methods outlined in the report. Diversion works and changes in flow will be monitored for PFAS levels and barriers will be installed to limit PFAS migration downstream. Clean fill material will be used for backfilling to ensure no further contamination.

10.2.56. In the operational phase, the Strategy states that no disturbance of PFAS containing material will occur as the watertight tunnels, tunnel portals, and station will prevent groundwater ingress and potential PFAS contamination/mobilisation.

Notwithstanding this, the Strategy outlines operational phase leak management and water testing to ensure that any unforeseen groundwater ingress is effectively managed and treated.

10.2.57. Having reviewed the PFAS Management Strategy, I am satisfied that it is sufficiently comprehensive and robust and that it adopts a suitably conservative 'belt and braces' approach to the management of PFAS. While the worst case scenario utilised in the Strategy is clearly highly unlikely to arise, given the scattered nature of the recorded PFAS contamination, I consider it appropriate, given the potential health and environmental effects of PFAS and the degree of unavoidable and inherent uncertainty at this stage regarding the exact extent and level of contamination, that such an approach be taken.

10.2.58. The various PFAS management protocols are incorporated into an addendum to the CEMP, which is included in Annex F.8 of the Strategy. An EIAR Addendum, assessing additional environmental impacts associated with the proposed PFAS management is included as Annex H of the Strategy and will be addressed in the relevant sections of the EIA Section of this report.

10.2.59. If the Board is minded to grant the Railway Order, I recommend that the CEMP should be updated to incorporate the PFAS Management Strategy. Subject to this and the consideration of environmental impacts in the EIA section of this report, I am satisfied that the PFAS issue has been adequately addressed and that the applicant's proposals are acceptable.

10.2.60. Ventilation and Evacuation Tunnels

- 10.2.61. Due to the length of the MetroLink Airport tunnel, which runs under the airside area of Dublin Airport for a considerable length, there are requirements for ventilation and provision of adequate passenger evacuation/emergency services access. It is proposed to achieve this with two smaller ventilation and evacuation tunnels located either side of the main Airport tunnel and connecting to the Dublin Airport South Portal. The evacuation tunnel is west of the main tunnel and extends for c. 315m from the DASP, while the ventilation tunnel is east of the main tunnel and extends c. 600m from the DASP. This approach negates the need for any surface access within the high security airside area. I am satisfied that the need for and extent of these two additional tunnels is thus clearly justified.
- 10.2.62. The submitted EIAR and drawings contained conflicting information on whether these two smaller tunnels were intended to be constructed with a smaller TBM or via other methods such as Sprayed Concrete Lining (SCL) tunnelling (as per Charlemont Intervention tunnel). I note in this regard that the alignment drawings for this section (Drawing Nos. ML-RO 302 F-G and ML-RO 302 G-O) show a non-circular cross-section for these tunnels, which would indicate that they could not be TBM-driven, with a differing width for the two tunnels. A number of questions were asked of the applicant at the oral hearing in relation to this matter and revised versions of the abovementioned alignment drawings were subsequently submitted at the oral hearing on 27th February 2024 (Ref. OH91), correcting the two smaller tunnels to circular cross-sections.
- 10.2.63. Section 10.9 of the Tyréns Report addresses these two smaller tunnels. They note the conflict between the EIAR and the submitted drawings as detailed above, and the lack of clarity in various parts of the EIAR regarding whether construction of these tunnels “is by closed face TBM” or is “likely to be built using a close-face TBM”.
- 10.2.64. Given the applicant’s conflicting statements regarding the construction methodology for these smaller tunnels and noting the potential PFAS issue detailed above (as well as other potential contaminants such as hydrocarbons etc.) and that there is far greater potential for groundwater ingress (and hence contaminant mobilisation) from a SCL tunnel, Tyréns recommend that it be clarified by way of condition that the ventilation and evacuation tunnels at Dublin Airport shall be constructed by means of

a closed-face TBM. Subject to this, they consider the construction methodology to be acceptable. I agree with this assessment and recommended condition.

10.2.65. Notwithstanding the above, I note that in order to connect the ends of the two smaller tunnels to the main Airport tunnel, it will still be necessary to undertake some relatively small SCL cavern works to achieve this connection. SCL works are also likely at DASP and DANP. Tyréns consider that groundwater induced settlement would be unlikely to be a major issue at the airport and that the principal issue is therefore the handling of groundwater from these sections of the works given the potential risks associated with mobilisation of existing contaminants.

10.2.66. This issue is addressed further in the hydrogeology section of this report and in the Tyréns Report, where the Board's consultants conclude, subject to additional conditions, that the proposals for groundwater control are acceptable.

10.2.67. Subject to these additional conditions, I agree that the proposals with regard to the ventilation and evacuation tunnels at Dublin Airport are acceptable.

10.2.68. Impact on Our Lady Queen of Heaven Church

10.2.69. The proposed Dublin Airport station lies to the east of Our Lady Queen of Heaven Church, which is a protected structure (RPS No. 0864) under the Fingal County Development Plan and is also listed on the NIAH (Ref. 11349001).

10.2.70. Fingal County Council's oral hearing opening statement (Ref. OH40) identified concerns regarding the treatment of the public realm that surrounds the station and Church, which according to drawing No. ML-ST 302 C-D1, will include the provision of bus bays. FCC state that this layout will result in the Church being surrounded by parking infrastructure on three sides.

10.2.71. In response to this concern, I note that 'condition' No. 15 of the agreement between TII and FCC (Ref. OH147) includes a commitment to agree the surface treatment and landscaping proposals for the area closest to the church. The area surrounding the Church is dominated by impermeable surfacing and the area is primarily in use for surface parking. I am satisfied that TII's proposal to agree the surface and landscape treatment of this area will be effective in ensuring there is no undue impact on the setting and character of the church arising from this aspect of the project.

10.3. **AZ3 Dardistown Section Issues (Dublin Airport South Portal, Depot and Alignment as far as Northwood Portal)**

10.3.1. I note that very few outstanding submissions (i.e. submissions not withdrawn or where agreement not reached with TII) raised issues regarding this specific section of the alignment. I consider that the main planning issues in respect of area AZ3 are as follows:

- Dublin Airport South Portal.
- Dardistown Depot.
- PV solar array: Glint and glare.
- PFAS Management Strategy.
- M50 bridge design.
- Demolition works at Santry Lodge.
- Northwood Station
- Northwood Portal.
- Lidl Ireland GmbH lands at Northwood.

10.3.2. Dublin Airport South Portal (DASP)

10.3.3. The proposed DASP is the TBM launch site for the Airport tunnel and the two smaller intervention and ventilation tunnels and it will provide emergency escape from the Airport Tunnel in the operational phase. It is located south of Dublin Airport's boundary, on what are currently agricultural lands on the opposite side of the Old Airport Road.

10.3.4. The underground elements of the DASP will comprise a concrete box c. 70m long, of variable width, surrounded by concrete diaphragm walls. The size of the DASP box is greater than the DANP, as it is dictated by the size of the main tunnel TBM that will be launched from the portal. In the operational phase, the surface expression of the DASP will be a fenced compound containing the single storey emergency access service core (c. 10m x 8m), a ventilation structure of a similar scale, hardstanding areas and parking for emergency vehicles, with the remainder of the construction

site reinstated. The hardstanding includes an evacuation safety area sufficient for 1,000 people.

- 10.3.5. In the construction phase, separate access and exit points will be provided onto the Old Airport Road, while in the operational phase a single access point will be provided for emergency/maintenance access.
- 10.3.6. DAA, in their initial written submission (S68), raised an issue regarding a potential conflict between the DASP and works required at the Airport to provide an upgraded Runway End Safety Area (RESA) to meet the Airport's aviation safety requirements. This was responded to by TII in their written response, where they stated that DASP is outside of the compliant RESA area as advised to them by DAA. Subsequently, in a submission at the oral hearing on 20th February 2024, Mark Finnegan of DAA confirmed that DAA are satisfied with TII's response to this issue.
- 10.3.7. The DASP compound is relatively minor in scale and extent and is similar in design to various electrical substations and air navigation equipment in and around the airport campus. I consider that no particular planning concerns arise in relation to this aspect of the project.
- 10.3.8. Dardistown Depot
- 10.3.9. The Dardistown Depot is the most expansive individual element of the proposed development, with an area of c. 19.5 ha. It is located between the Old Airport Road (also known as Collinstown Lane) to the north and the M50 motorway to the south.
- 10.3.10. Various options and locations for the depot were considered and I have addressed these in the alternatives section of this report (Section 11.4).
- 10.3.11. The Depot includes a number of very large buildings. Building G+G1 provides stabling for the MetroLink fleet of trains, while Building C comprises a maintenance workshop and storage area. Other structures include the main office and administration building, electrical buildings, wastewater treatment plant, security, car and lorry parking, train washing plant, tracks and sidings areas. It is also proposed to construct a MetroLink station at Dardistown, which will initially be only for staff use, with no public access until the surrounding 'High Technology' and 'General Employment' zoned lands are developed.

- 10.3.12. In order to construct the large depot compound, it is proposed to level the site utilising some of the excavated material from the project and to divert watercourses that currently traverse the site. I have addressed the diversions in the hydrology section of this report (Section 11.12).
- 10.3.13. Given the scale of the project and the number of trains required to provide the level of service frequency proposed, a very large stabling area is unavoidably necessary. The scale and extent of the associated maintenance, storage, cleaning, administrative and other facilities necessary to operate a metro system are also clearly both necessary and all benefit from being co-located within a large depot, rather than dispersed across the alignment. I consider that Dardistown is an appropriate location for such a depot having regard to the primarily undeveloped status of the lands, the proximity to the M50, the good road access available and the proximity to the alignment. I consider that the location of the depot at an intermediate point along the alignment, rather than at an end point is more efficient in terms of moving empty trains to the stabling area when service concludes each day. I note that smaller stabling areas are also provided at each of the terminating stations at Estuary Station and in the Charlemont tunnel extension to allow for efficient start-up of services in the morning.
- 10.3.14. The design of the main buildings at Dardistown is functional, as befitting their intended use and their distance from residential or other sensitive areas. Their appearance is industrial in character and will be similar to and consistent with other large industrial / logistics type buildings concentrated in various areas around the airport campus, such as the Dublin Airport Logistics Park to the west and Horizon Logistics Park to the east, albeit that the MetroLink buildings are significantly larger in scale.
- 10.3.15. As noted above, it is proposed to construct a metro station at Dardistown, but not to open it to the general public in the opening year. The station will, however, be used by MetroLink staff. Given that the surrounding lands are primarily greenfield lands that are zoned for development, I consider the applicant's approach to be reasonable and prudent. There is currently likely to be very little demand for a metro station in this area and it could be argued that the Dardistown station is premature and should be omitted. However, as the surrounding zoned lands are brought forward for development, the presence of existing metro station infrastructure is likely to facilitate

more sustainable modes of development and more sustainable access to those developments, without undue delay.

10.3.16. With regard to the design of the Dardistown Station, it is a retained cut station, very similar to the three other retained cut stations in Area AZ1, which I have addressed above. The Dardistown Station is, however, situated within a wider retained cut area in order to accommodate depot side tracks either side of the alignment. As with the other retained cut stations, I consider its design to be acceptable.

10.3.17. In conclusion, I am satisfied that the proposed Dardistown Depot location, design and layout is acceptable in terms of proper planning and sustainable development.

10.3.18. PV Solar Arrays: Glint and Glare

10.3.19. The proposed buildings at Dardistown Depot include some very sizable structures. The roof level plans for the two largest buildings, the Main Maintenance Workshop & General Storage building (Building C, c. 12,400 sq m) and the Stabling Area (Building G+G1, c. 20,450 sq m) show metal cladding panels and skylights, but a note on the drawings says that solar panels will be installed on the roof of the building. Similarly, Section 4.6.3.1 of the EIAR states that solar panels will be used in the Main Dardistown Depot Building Roof at Dardistown (subject to agreement with Dublin Airport Authority, DAA).

10.3.20. Given the proximity of the proposed Dardistown Depot to Dublin Airport and noting both the scale of the potential solar arrays and that the roof drawings do not show them, I questioned the applicant at the oral hearing as to whether glint and glare analysis had been undertaken to identify whether the proposed solar array would create an aviation hazard.

10.3.21. The applicant subsequently submitted a Glint and Glare assessment (Ref. OH109) at the oral hearing on 28th February 2024. This consisted of software outputs which did not allow for clear interpretation and the applicant subsequently submitted an explanatory cover note on the 29th February 2024 (Ref. OH134). This noted that the industry-standard SGHAT software had been utilised and that, in relation to aircraft, the US Federal Aviation Authority had issued a clarification document in relation to the SGHAT software, which essentially determined that reflectance effects for runway approaches are immaterial, on the basis that there are a multitude of reflecting surfaces encountered momentarily by aircraft approaching runways. In

relation to the Air Traffic Control Towers, the cover note stated that the analysis shows that the proposed solar arrays on the depot buildings have a 'Pass' result in respect of both ATC towers at Dublin Airport which, it states, is not surprising given that the view from them in the direction of the array is to the south and the array will be oriented generally to the south east to maximise solar gain i.e. in the opposite direction to the viewer.

10.3.22. No further submissions were made by DAA or any other person or body with regard to glint and glare at the oral hearing or following the second round of public submissions.

10.3.23. Having reviewed the submitted drawings and the glint and glare assessment, I am satisfied there is no reason for the Board to form the view that significant glint and glare issues are likely to arise as a result of the proposed development.

10.3.24. PFAS Management Strategy

10.3.25. The proposed location for the Triage and Material Management Centre (TMMC) for the management of potentially PFAS-containing material from the airport sites, pending testing results, is in Area AZ3, within the Dardistown Depot construction site. I have dealt with this issue in the Airport Section area AZ2, above. In order to avoid repetition, I refer the Board to Section 10.2 above.

10.3.26. As detailed in that Section, I am satisfied that the applicant has developed a comprehensive and suitably robust and conservative management strategy for material that may contain PFAS and that the TMMC will be developed in a manner that avoids any potential for run-off or infiltration to ground while material is being held. I also note that the applicant has included details of a demobilisation strategy that will return the TMMC to its current condition, with certification that all PFAS contamination has been removed. While this aspect of the construction process will result in increased HCV traffic on the R108 within area AZ3, I am satisfied that no significant traffic issues arise.

10.3.27. I am satisfied that the PFAS management proposals are acceptable.

10.3.28. M50 Bridge Design

10.3.29. The proposed M50 crossing (variously referred to as a bridge or viaduct) is located to the east of Junction 4 of the M50, which is the intersection of the M50 and the

R108 Ballymun Road. Due to the proximity to the junction, the bridge passes over both carriageways of the M50 and the eastbound and westbound slip roads.

Consequently, the bridge is a sizable structure, with a length of c. 99m. The design of the proposed bridge is relatively nondescript, comprising a typical concrete and steel overbridge of a typology commonly used on motorways across the country. The overhead line equipment will be the most notable aspect of the design, distinguishing the bridge from others on the M50. I consider the simple design of the proposed bridge to be appropriate to its motorway context.

10.3.30. The bridge only provides for metro use and makes no provision for pedestrian or cycle use. Dublin Cycling Campaign contend that the proposed M50 bridge should incorporate pedestrian and cycle provision in accordance with Objective MT15 of the now superseded Fingal County Development Plan.

10.3.31. Having regard to the need to ensure full segregation between relatively fast and very frequent automated trains and vulnerable road users, I do not consider that the provision of such facilities on the bridge is warranted. While safety fencing etc. could be utilised, this would have to be substantial and suitably robust and would negatively affect the design quality of the bridge. Having regard to existing land uses either side of the bridge, it is not clear that there is currently any pent-up demand for such a bridge at this location in any event.

10.3.32. The lands either side of the M50 are zoned for development, however, and in my opinion there is nothing in the proposed development that would prevent the future provision of a separate pedestrian/cycle bridge across the M50 in the vicinity by others, as lands are brought forward for development and the character of the area evolves.

10.3.33. In order to construct the bridge, temporary traffic management will be required to provide access for the construction of the north and south piers, while the installation of the steel beams and decking will require a series of phased temporary weekend night-time closures of the M50. Between 6 – 8 weekend night-time road closures are anticipated, during which the slip roads will remain open for diversion. While these closures will cause some disruption to traffic, their limited number and their timing (weekend night-time) will be sufficient to mitigate their impact to a reasonable level.

10.3.34. Demolition Works at Santry Lodge

- 10.3.35. The proposed development proposes the demolition of the gate lodge, front boundary wall and gateway associated with Santry Lodge, a second former gate lodge (described as formerly the gate lodge of Tower House) and alterations to the Old Ballymun Road alignment that includes the provision of a new access to serve Santry Lodge.
- 10.3.36. Additionally, there is substantial removal of trees proposed at this location, including numerous mature trees, and the surrounding area will experience a substantial change in character, with the introduction of the railway alignment, which gradually drops from the M50 viaduct, to an embankment to a retained cut and entering a cut-and-cover tunnel to the south of Santry Lodge. Attenuation ponds, road realignment, a pumping station and a relocated telecommunications mast are also proposed in the general vicinity of Santry Lodge.
- 10.3.37. Following submission of the RO application, Santry Lodge was designated as a Protected Structure (RPS Ref. 0953) under the Fingal County Development Plan 2023-2029. It is described by the Record of Protected Structures as follows: -
- “Mid-18th century, two-storey, eight-bay former royal charter school. Within the grounds are former outbuildings, gate lodges and entrance gates. Currently in use as homeless hostel.”
- 10.3.38. Following this designation, on the opening day of the oral hearing TII submitted an Architectural Heritage Impact Assessment (AHIA) (Ref. OH19) that describes the Protected Structure and assesses the impact of the development on it. The ‘agreed conditions’ document with FCC (Ref. OH147) also contains a commitment that TII will agree the detail of enhanced landscaping proposals with FCC, including the treatment of the front boundary and entrance layout. This document also includes a landscape design drawing for Santry Lodge that identifies planting and boundary treatment proposals.
- 10.3.39. Both FCC and the Department of Housing, Local Government and Heritage have expressed concern regarding the impact of the development on Santry Lodge. In particular, FCC state that Santry Lodge is of National Importance, is the protected structure that will be most affected by the development and that TII were advised that the building and its setting should be avoided. I note that in their response to submissions document, TII pointed out that interaction with Santry Lodge is

unavoidable in the context of junction 4 of the M50, as it would require a more elevated crossing of the M50 and the resulting increased gradient to Northwood station would then become incompatible with the metro design standards.

10.3.40. The impact of the proposed development on the Protected Structure is discussed in detail in Section 11.21 of this report and is thus discussed in summary here.

10.3.41. In view of the fact that demolition of and alterations to the character and setting of a Protected Structure are proposed, consideration should be given to relevant Development Plan provisions.

10.3.42. Policy HCAP13 requires the retention and appropriate active use of Protected Structures. In view of the direct impact of the proposed development on the Protected Structure, the development is clearly inconsistent with this policy. However, I would remind the Board that under the terms of Section 38(2) of the 2001 Act, the 'exceptional circumstances' test for the demolition of a Protected Structure, as set out in the 2000 Act, does not apply in this instance and the Board is not constrained by it.

10.3.43. I would bring to the Board's attention that TII proposes to record both of the gate lodges by written and photographic means, to English Heritage Level 2, prior to demolition. This approach is consistent with advice contained within the Architectural Heritage Protection Guidelines for Planning Authorities (2011), Section 6.7.3 of which promotes the preparation of a record in circumstances where demolition is permitted.

10.3.44. Policy HCAP12 seeks to ensure that direct or indirect interventions to Protected Structures or adjoining development affecting them are guided by architectural conservation principles so that they are sympathetic, sensitive and appropriate to the special interest, appearance, character, and setting of the Protected Structure and are sensitively scaled and designed.

10.3.45. The area is currently relatively enclosed from view by dense vegetation and the level of clearance required to facilitate the alignment on its descent from the M50 down to the Northwood Portal will give rise to a high degree of landscape change. The scale of clearance required is shown on the arboricultural impact assessment drawings (Ref. OH318) and the changed character of the landscape is depicted in photomontage images 12b.1-12b.3. I agree with TII's landscape and visual impact

assessment, that the accumulation of MetroLink infrastructure elements will have an abrupt effect on the landscape and I further consider this will impact on the setting and character of the Protected Structure, such that the development is inconsistent with policy HCAP12.

10.3.46. TII's commitment to agree the detail of enhanced landscaping proposals with FCC, including the treatment of the front boundary and entrance layout, will go some way to mitigating the impact of development on the Protected Structure but I accept that the impact cannot be fully mitigated. Ultimately, I consider that the loss of these important elements of architectural heritage, while unfortunate, is justified with regard to the constraints faced in crossing the M50 in this area and the significant positive impacts associated with the proposed development that have previously been discussed.

10.3.47. Northwood Station

10.3.48. The proposed Northwood Station is one of the more unusual stations in terms of its context, being situated diagonally under the R108 Ballymun Road, with a standard canopy entrance on both sides of the R108. The station is relatively close to Junction 4 of the M50 with the R108, and a junction with St Margaret's Road R104 is located immediately to the north. A junction with Northwood Avenue is located to the east of the station, which provides access to Gulliver's Retail Park and a large number of apartment developments at Northwood, within Santry Demesne. Lands at the location of the station entrances either side of the R108 are currently undeveloped, while existing land uses in the surrounding area include industrial, warehousing, retail (including IKEA and Decathlon) and residential uses.

10.3.49. The existing environment at this location is heavily dominated by road traffic, belying its proximity to Ballymun Town Centre and the Northwood residential area, due to the function of the R108 as a key radial traffic route into the city and due to the proximity to, and slip road access onto, the M50. The R108 southbound carriageway is a dual two-lane carriageway, with a slip road for the left turn into Gulliver's Retail Park, continuing as a three-lane carriageway south of this junction. The northbound carriageway is also a three-lane carriageway, with the inside lane providing the right turn into Gulliver's Retail Park at the junction. It then continues as a two-lane

carriageway, widening to a third lane for the slip road onto the left turn into St Margaret's Road. There is also a cycle path and footpath on both sides of the R108.

- 10.3.50. Construction of this station will result in some traffic disruption and inconvenience due to the need to temporarily divert the R108 around the station box excavation to facilitate its construction under the road. This is addressed in the Traffic section of this report.
- 10.3.51. The existing R108 road, due to its width and the traffic volumes and speeds it facilitates, has a notable severing effect on the locality and I consider that the operational phase benefits of providing MetroLink entrances either side of what is and will remain an extremely busy and important traffic artery for the City is a commendable aspect of the design that justifies the temporary traffic disruption during the construction phase. The approved Ballymun/Finglas BusConnects project will also utilise this section of the R108, with bus stops on either side of the road at the station entrances, enhancing connectivity and interchange possibilities in the operational phase.
- 10.3.52. The station itself is a relatively standard MetroLink cut and cover station, albeit that it is shallower than the other underground stations, due to its proximity to the M50 viaduct, where the alignment has to transition from elevated to sub-surface. It therefore only has two lower levels – mezzanine and platform level.
- 10.3.53. At surface level, the station has standard canopies and aboveground elements, albeit that the public and DFB lifts are situated back-to-back, rather than being separate elements. No skylights are proposed at this station, given its location under the R108, although I note that one smoke and ventilation exhaust will be located within the median of the R108.
- 10.3.54. High quality public realm is proposed on both sides of the R108, with a mix of hard and soft landscaping to provide pedestrian plazas, cycle parking and enhanced pedestrian crossing and cycle infrastructure.
- 10.3.55. This is not a visually sensitive location, however the presence of zoned undeveloped lands on either side of the R108 surrounding the station entrances will likely see the area transformed, should the MetroLink development proceed. I consider that the design of the station is acceptable and that it will support future sustainable urban development in this well-located and highly accessible area.

10.3.56. Northwood Portal

10.3.57. The proposed Northwood Portal, which is the TBM launch site for the City tunnel, is located south west of the Northwood station box.

10.3.58. During the construction phase, the Northwood Station and Portal construction compounds will be one of the main work and logistics sites for the project, as excavated material from the City tunnel boring process will be removed and temporarily held at the Northwood compound and tunnelling support activities will be based at this compound, including bentonite slurry treatment plant, storage of tunnel segments and offices, welfare facilities and workshops etc.

10.3.59. There are three main elements to the construction compounds at Northwood. These are the East Site (i.e., east of the R108) and the West Site for the Northwood Station and Portal Main Compound, and a logistics site to the north of St Margaret's Road.

10.3.60. It is stated in the EIAR that the site has been sufficiently sized to receive delivery vehicles within its boundary to minimise idling vehicles and congestion on local roads, however, a small holding bay c. 0.5km from site will be required to manage access via a booking system.

10.3.61. As noted above, the R108 will be temporarily realigned during the construction phase, with associated traffic management measures, including alteration to the junctions of the R108 with Northwood Avenue and St. Margaret's Road. The site access points for both the east and west sites will be on the R108 / St. Margaret's Road signalised junction, while a new signalised junction is also proposed on St. Margaret's Road, c. 200m west of its junction with the R108 for site access.

10.3.62. I consider that this area is well situated for what will be a major construction site for the majority of the construction phase, as it is an open greenfield site, at a considerable remove from residential and commercial development with good access onto the high capacity R108, St. Margaret's Road and it benefits from proximity to Junction 4 of the M50, which will be used for excavated material removal.

10.3.63. Issues such as material management, noise and traffic are dealt with elsewhere in this report, but I am satisfied that the Northwood Portal and its supporting

construction compounds are appropriately located for the launching and supporting of the TBM and related tunnelling activities.

10.3.64. Towards the end of the construction phase, the Northwood Portal will be backfilled and connected to Northwood Station, so that the portal would not be a visible aboveground feature in the operational phase.

10.3.65. In the operational phase, I consider that no planning issues arise with regard to the Northwood Portal.

10.3.66. Lidl Ireland GmbH Lands at Northwood

10.3.67. The Northwood Station site is partially located on lands owned by Lidl Ireland GmbH to the east of the R108 Ballymun Road and north of Northwood Avenue. Lidl's written and oral hearing submissions (S169, OH55-OH57, OH204-OH210, 1FS30) raise multiple issues regarding the site, with the main one being the potential for over-site development and the impact that MetroLink would have on this. Lidl are of the opinion that there is a planning policy imperative for high-density, mixed-use development on this site, but that adherence to the requirements of TII's 'Guidance Note for Developers' (Ref. OH378) would prevent such development on a large portion of the site.

10.3.68. Issues relating to compulsory acquisition are addressed elsewhere in this report, but I note that development will not be prohibited above the MetroLink tunnels and, TII identify that the tunnel has been designed with a load bearing capacity in excess of that commonly used for tunnels in London. Lidl will retain substantial residual lands adjacent to the Northwood Station and it is clear from the submissions from both sides that there have been multiple meetings between the two parties over a number of years in relation to how future development can be accommodated at this location. Indeed, TII stated at the oral hearing that the Northwood Station site has been developed to allow for the construction of two buildings adjacent to the station box.

10.3.69. At the oral hearing, Lidl presented an alternative form of development at the site which included substantial over-station development, rather than just development on the residual lands. TII expressed surprise at this proposal, stating that the oral hearing submission was the first they knew of it.

- 10.3.70. I note that, as TII are proposing to permanently acquire the location of the station box from Lidl, the alternative over-station development which Lidl presented to the oral hearing would not be capable of being implemented without TII's consent, should the Board confirm the CPO.
- 10.3.71. TII, in their response to Lidl's further submission, stated that they support the high density development of the Lidl retained lands and that they are willing to work with Lidl to develop a design that meets the needs of both parties.
- 10.3.72. Any matters relating to compensation and any diminution of value of Lidl's residual lands are not matters for the Board to determine, but I am satisfied that Lidl would retain lands adjacent to a metro station that are zoned and capable of development, subject to planning permission. Any such development would also clearly benefit from its immediate proximity to a metro station.
- 10.3.73. Lidl also raised the issue of waste at the oral hearing and concerns were expressed regarding contamination of their lands if spoil is stored on it. Effectively, Lidl want assurances that their temporarily acquired lands will be returned in a suitable condition and certified as being uncontaminated.
- 10.3.74. There was considerable back-and-forth at the oral hearing between the applicant and Lidl's representatives in relation to this matter, until it was established that the two parties were at cross purposes and talking about different sites on opposite sides of the R108 Ballymun Road. Importantly, and regarding Lidl's site, TII stated it will not be used for storage of excavated material and that the site will be returned to Lidl in a condition that matches its original condition.

10.4. **AZ4(a): From Northwood Portal as far as Collins Avenue Station**

- 10.4.1. I note that very few submissions raised issues regarding this specific section of the alignment. I consider that the main planning issues in respect of area AZ4(a) are as follows:
- Ballymun Station.
 - ESB Telecoms base station.
- 10.4.2. Ballymun Station

- 10.4.3. The proposed Ballymun Station is centrally located within Ballymun Town Centre, on the former Ballymun Shopping Centre site, which is now vacant, and in close proximity to a number of hotels, student housing developments, the Axis Arts Centre and Theatre and the large residential communities either side of the R108.
- 10.4.4. The location of the Station on the large former shopping centre site allows for a construction compound to be set up without any major impacts on the operation of the R108, which functions as a major traffic artery, or on the wider area. There will be no direct construction vehicle access from the R108, with access instead from Shangan Road, with a one-way system in operation through the site, exiting onto Silloge Road.
- 10.4.5. The aboveground elements of the Ballymun Station are relatively standard for the project, comprising the standard MetroLink entrance canopy, 5 No. skylights, passenger and DFB lifts and various ventilation and exhaust ducts.
- 10.4.6. The proposed station is not proposed to be built over, with the station entrance instead set within a plaza area with hard and soft landscaping and extensive cycle parking. The plaza has been designed to be sufficiently set back to accommodate the permitted BusConnects scheme, which will improve the connectivity of the MetroLink station to the wider area. An additional toucan crossing is also provided to the park area on the opposite side of the R108 Ballymun road, which will be beneficial in reducing the existing severing effect of the wide and busy R108 road on the local urban environment.
- 10.4.7. A large portion of the shopping centre site is required temporarily for construction of the station, but in the operational phase, there will be significant potential for mixed use development on the site, in accordance with its zoning objective, which will benefit from, and be of benefit to, the adjacent Metrolink station.
- 10.4.8. The delivery of the station is supported by Objective E11 of the Ballymun LAP, while the underground tunnel alignment (rather than overground) is consistent with Objective MO2 of the LAP, which seeks such an alignment in order to protect the character of Ballymun Main Street and permeability. The proposed plaza arrangement above the station box would also be consistent with Objective UD2 of the LAP, which seeks open space on the shopping centre fronting onto Main Street.

- 10.4.9. I consider that the construction of a MetroLink station at Ballymun is an extremely positive element of the proposed development, that will enhance the public transport accessibility of the area to/from the city centre and the Airport, and which is likely to provide a catalyst for redevelopment of vacant surrounding lands and contribute to economic growth in the area. In this regard I note that Ballymun is designated as a Strategic Development Regeneration Area in the Dublin City Development Plan, and MetroLink is identified as supporting infrastructure to support the delivery of residential, commercial and employment opportunities in the area.
- 10.4.10. ESB Telecoms Base Station
- 10.4.11. ESB Telecoms (ESBT) made a submission (S87) in relation to a telecommunications base station located at the ESB Ballymun 38kV substation, at the junction of the R108 Ballymun Road and the R103 Collins Avenue.
- 10.4.12. The submission expresses support for MetroLink but highlights the need to provide uninterrupted service, with a need for unrestricted access to the site and no disruption to the electricity supply. ESBT also express concern regarding potential vibration impacts on the telecommunications equipment. The site is also affected by temporary land acquisition and ESBT raise concerns in relation to impacts associated with this.
- 10.4.13. TII, in their response, stated that the potential for any service disruption is limited and that where planned service disruptions will be required, cognisance will be taken of the utility providers requirements. It is stated that in most cases the duration of disruption should be no more than a number of hours and that all impacted utilities will be reinstated in accordance with ESBT's standards and specifications.
- 10.4.14. With regard to vibration, the telecoms mast and base station are c. 60m from the edge of the tunnel and more than 150m from Collins Avenue Station excavation and I am satisfied that no significant vibration impacts on this facility are likely due to distance.
- 10.4.15. Land take related issues are addressed in the CPO section of this report. Having reviewed the information submitted, I am satisfied that the applicant has given sufficient undertakings with regard to the continuity of service and access to the ESBT site, other than minor short-term planned service interruption which will be undertaken in consultation with the service provider.

10.5. **AZ4(b) Issues: Collins Avenue Station and Tunnel as far as Griffith Park Station**

10.5.1. I consider that the main planning issues in respect of area AZ4(b) are as follows:

- Collins Avenue Station and Albert College Park Intervention Shaft locations.
- Collins Avenue Station design.
- Impact on Our Lady of Victories Schools.
- Traffic Impacts on R108 Ballymun Road and Closure of Albert College Drive during Construction.
- Albert College Park Intervention Shaft design.
- Other impacts on Albert College Park.
- Ground investigation works.
- Other issues.

10.5.2. Collins Avenue Station and Albert College Park Intervention Shaft Locations

10.5.3. The proposed Collins Avenue Station is located on the eastern side of the R108 Ballymun Road, just south of its junction with the R103 Collins Avenue, and immediately in front of Our Lady of Victories (OLV) Church. The surrounding area is primarily residential, comprising mainly semi-detached housing. Other notable land uses/receptors in the vicinity include the OLV Schools campus on the western side of the R108, almost opposite the proposed MetroLink station and a Scout Hall and housing for older people located to the south of the station site. Dublin City University (DCU) is located a short distance to the east of the proposed Station and is accessible from Collins Avenue and directly from Ballymun Road via an entrance road located c. 350m to the south of the proposed station location, which runs along the northern edge of Albert College Park (ACP). Also relevant to the issues arising at this Station are the presence of on-street parking areas to the south and rear of the church and the existing signalised pedestrian crossing adjacent to the Station location, providing access across the R108 to the OLV Schools.

10.5.4. Two of the main issues raised in submissions in respect of this section of the alignment were the proposed location of the Collins Avenue Station and the

placement of the proposed Intervention Shaft in the south western corner of Albert College Park. The two issues are related, as the requirement for an intervention shaft is a function of the single bore design of the proposed MetroLink and the distances between stations. In twin bore tunnel metro systems, connections between the tunnels are typically provided to allow for passenger escape and emergency services access via the second tunnel in an emergency situation. This is not possible in a single bore tunnel system and instead an intervention shaft is required, should the distances between stations exceed a certain distance. In this case, the proposal to place a station at OLV Church necessitates an intervention shaft somewhere along the alignment between Collins Avenue Station and Griffith Park Station, due to the distance between the two stations. The applicant has proposed Albert College Park for this shaft compound in the interests of minimising property acquisition/demolition, as it is one of the few open greenfield areas along this section of the alignment.

10.5.5. I have considered the single bore versus twin bore tunnel alternatives in Section 11.4 below, where I conclude that both options were considered in depth, that both are valid and commonly used metro design approaches, and that the applicant has provided adequate justification for the decision to choose the single bore tunnel option. Given the distance between Ballymun Station and Griffith Park Station, it must be accepted, therefore, that an intervention shaft will be required somewhere along the alignment between these two stations and that its required location is dependent on the location of the intermediate station. The station location is therefore the primary factor to be considered, since it is a key element of the MetroLink project. The location of the intervention shaft, which is an ancillary element of infrastructure, is a secondary factor, subordinate to the station location. Neither factor is entirely independent of the other, however, given the limited number of potentially suitable locations for the station and shaft along this part of the alignment.

10.5.6. It was proposed by numerous observers (including ACRA and Ballymun Road North Residents Association (S1), Griffith Avenue and District Residents Association (GADRA; S99) and Cllr Patricia Roe (S249)) that the Collins Avenue Station should be relocated southward, to a location along the western side of Albert College Park. They note, with regard to the distance to Griffith Park Station, that this location would

negate the need for the proposed intervention shaft at the south western corner of the park. However, due to the distance between Ballymun Station and their alternative Albert College Park location, they propose that an intervention shaft be located to the north of the station, on open space in the vicinity of Ballymun library.

10.5.7. It was contended that the relocation of the station would reduce impacts on surrounding residents and on OLV Church and schools and provide better access to DCU, which is clearly one of the key trip attractors/generators in this area, via the existing access road running along the northern edge of Albert College Park. They also contend that it would better integrate with existing bus routes, noting the presence of existing heavily utilised bus stops on the Ballymun Road, at the DCU entrance.

10.5.8. Conversely, the Residents of Albert College Lawn in their written submission (S295) do not object in principle to the proposed station at the church and state that they do not want the station built in Albert College Park. Similarly, a number of other residents of Ballymun Road (Kieran Smyth and Margaret McDonnell and others (S162)) state in their joint submission that, “whatever about an [Intervention Shaft] it is clear that the placement of a MetroLink Station with the ACP, were this to be proposed, would be a disaster for the continued functioning of the park and would very seriously injure its amenity”.

10.5.9. GADRA, in their initial submission referenced the ‘Collins Avenue Station: Environmental Assessment Report of the Options’ which had been prepared on behalf of TII, but which was not included in the RO application and which they had difficulty obtaining from TII. The applicant was requested to address this matter on the first day of the oral hearing and a copy of the report was submitted (Ref. OH6). This report, which is watermarked as ‘Draft’ and dated 2020, states in a preamble (which was obviously added at a later date) that:

“This report was provided to members of public, who requested it after the submission of the railway order application.

While this report was not finalised, it did inform the conclusions of the EIAR that there was no reasonable alternative to the station location identified at the Emerging Preferred Route stage, owing the lack of open space elsewhere in this area, which would constrain the provision of a station or (in the event the

Collins Avenue Station were moved to Albert College Park) the construction of an intervention shaft between Ballymun and Albert College Park.”

- 10.5.10. The applicant’s initial oral hearing presentation (Ref. OH1) referred to this report as an internal document produced for internal review purposes.
- 10.5.11. I note that the report considers 5 No. options for the Collins Avenue Station, including the ultimately chosen option and options within ACP, DCU and two other positions along the Ballymun Road. It includes Multi-Criteria Analysis of the options but I note that it does not come to a clear conclusion regarding the optimal option.
- 10.5.12. At the oral hearing, the applicant’s EIAR Co-ordinator (Dr Hallissey) noted that the report only considered environmental factors in the absence of mitigation and did not consider any of the other wider factors driving the station location. He stated that the environmental issues identified with their chosen option in the report had been mitigated in the RO application.
- 10.5.13. Paul Cusack, in his first oral hearing submission on behalf of ACRA and Ballymun Road North Residents Association on 20th February 2024 (Ref. OH45), queried the basis of the applicant’s assertions regarding greater passenger numbers at Collins Avenue versus their preferred alternative at the park. He noted the increase in student numbers in DCU, with permission granted for an additional 1,200 beds on campus. In his original written submission, he also noted previous analysis done as part of the previous Metro North proposal, which sought to serve DCU as the greatest beneficiary of the station in this area.
- 10.5.14. In response, Matt Foy, the applicant’s traffic consultant, noted that the station would not just serve DCU and stated that moving the station southward reduces the amount of people within acceptable walking distance and impacts on the catchment area. Dr Hallissey also noted that MetroLink is part of the GDATS and that while there are limited bus routes along Collins Avenue as identified by ACRA, BusConnects and MetroLink are trying to reduce traffic in the area by developing an integrated public transport network. He noted this as a distinguishing factor from the previous Metro North proposal and stated that while DCU is a significant element of passenger numbers, it is not the only element, and that the station also seeks to serve local people and interchange passengers.

- 10.5.15. I note in this regard the presentation subsequently made by the applicant at the oral hearing on 12th March 2024 (Ref. OH216), providing an overview of the Emerging Preferred Route assessment which underpinned the choice of OLV Church for the station location and comparing the two station site alternatives. This notes the large spacing between the Finglas Road corridor and the Ballymun Road corridor, with much of the Glasnevin Avenue area served by the Ballymun Road corridor. It also notes that most of the AM peak hour boarders are north of the station and along Collins Avenue and Glasnevin Avenue. Allied to this is a clearly higher population density around the Collins Avenue junction, compared with the alternative station in ACP, whose catchment would also substantially overlap with Griffith Park Station to the south. The presentation also includes walking isochrones for a 5 and 10 minute walk from both station locations, again clearly demonstrating that the OLV Church location offers substantially better coverage of residential areas, whereas the potential coverage offered by the ACP location is hamstrung to a degree by the presence of ACP to the east and DCU sports campus to the south west and the abovementioned overlap with the Griffith Park Station catchment.
- 10.5.16. Based on population forecasts up to 2065, the presentation demonstrates that the ACP option could only serve approximately half the residential population that OLV Church site can serve. With reference to deprivation index data, the OLV Church site also provides better accessibility for more deprived areas than the ACP alternative.
- 10.5.17. With regard to DCU, the applicant notes that this is the destination for most of the alighting passengers in the AM peak hour and contends that both options would give a similar level of coverage to DCU, with OLV being better for the DCU buildings along the Collins Avenue entrance, and ACP being better for the student residences.
- 10.5.18. With regard to the interchange with orbital bus routes on Collins Avenue/Glasnevin Avenue, the presentation notes the crucial role played by orbital routes in the BusConnects project and that the N4 Blanchardstown Centre to Point Village bus route, which would be connected to MetroLink at the Collins Avenue junction, connects to James Connolly Hospital, Blanchardstown, Finglas and Killester. It notes that another orbital route, the N2, would be connected to Griffith Park Station.
- 10.5.19. A document 'Educational and Jobs Forecast – Collins Avenue' was also submitted to the oral hearing by the applicant on 21st March 2024 (Ref. OH290) outlining student

and job number forecasts for 2035 around the Collins Avenue Station, based on NTA Planning Sheets (which are informed by CSO data). There are expected to be 8,523 third level students present in the DCU Glasnevin campus during the day, this figure representing the typical number of full-time students present on-site rather than the entire student body which is spread over three campuses. In addition to DCU, there are numerous schools in the area within a 15 minute walk of the Collins Avenue Station, with thousands of pupils, as well as further schools and further education facilities accessible by means of interchange with orbital bus routes. In terms of jobs, there are c. 6,000 within 15 minutes walking distance, including DCU staff, although I note that the catchment shown by the applicant would overlap with the Ballymun Station catchment.

- 10.5.20. While the alternative station location preferred by some (but not all) local observers' at the western edge of Albert College Park has a number of positive aspects, particularly the closer proximity to the DCU entrance road and the availability of the parkland area for a less constrained construction compound, I consider that the proposed location at OLV Church is preferable due to its proximity to the Ballymun Road/Collins Avenue junction.
- 10.5.21. I agree with the applicant's position that this is ultimately an inherently more strategic location for a metro station, given that Collins Avenue is an important orbital road and Ballymun Road is an important radial road and locating a station close to this junction offers superior connectivity and interchange with existing bus services, which are being enhanced as part of the BusConnects project, while also safeguarding options for future enhanced and additional bus connections in the operational phase – i.e. bus services can be added/redirected a lot more easily to reflect changes in demand than a metro can. The chosen location still offers a good level of access to DCU, as well as providing superior access for the large residential hinterland, which generally comprises relatively low density semi-detached housing which can be difficult to serve by mass transport.
- 10.5.22. I also note the further submission made by GADRA following the oral hearing (1FS25). They dispute that Bus Stop 115 (Ballymun Church) is, or has been, busier than Bus Stop 37 (Ballymun DCU) and express concern that the data used for analysis was collected during the Covid-19 lockdown period when less students were frequenting DCU. They contend that the basis for locating the station at OLV

Church is therefore flawed, with reference to more recent bus passenger data that they have since obtained from the NTA.

- 10.5.23. TII's response was that the decision to select the Collins Avenue location was not based on a population 'spider algorithm' alone, but on a wider rationale as set out in Section 7.7.10.7 of the EIAR. They dispute that the population data used is inaccurate, noting that the EPR assessment was undertaken in advance of Covid-19. They contend that the updated 2022 census data show a 15% increase in the population between 2016 and 2022, thus further illustrating the need for the project and that the proposed location will provide interconnectivity with a wide range of trip potentials beyond those noted by GADRA, which will increase as more opportunities and benefits are realised from the improved connectivity provided by the GDATS.
- 10.5.24. I don't find GADRA's data regarding higher bus passenger numbers at Ballymun DCU bus stop compared with Ballymun Church bus stop surprising. It is obvious, in my opinion, that this will be the case in the current situation where there is no metro station and the DCU stop is physically closer to DCU. That does not negate the strategic advantage of located the MetroLink station close to the junction of the busy R103 radial road and R108 orbital road, where it can be better connected and integrated with existing bus services and any future bus services. Again, DCU is not the only reason for providing a station in this area.
- 10.5.25. While I accept that the proposed station location at OLV Church is justified with reference to the project objectives to deliver a metro line that facilitates interchange with other transport modes in the interests of providing an integrated public transport network, I also accept that the construction process at this location is likely to be more impactful in some regards than the observers' alternative along the edge of Albert College Park, due to its closer proximity to the schools, church, houses and the need to close the access from the Albert College estate onto the Ballymun Road.
- 10.5.26. These issues will be addressed in the following section and elsewhere in this report, but given the long-term benefits to the local community and the city as a whole of having an integrated public transport network which will encourage modal shift from the private car, I consider that the proposed location at OLV Church is suitable for the metro station and is preferable to the observers' alternative.

- 10.5.27. Having come to this conclusion on the Collins Avenue Station, this reduces the possible options for an intervention shaft, since there are no other lands readily available for the shaft along the alignment between Collins Avenue Station and Griffith Park Station, without likely requiring property acquisition and demolition. I note that the observers' proposed alternative of placing the shaft at Ballymun Library, which would be compatible with a Station at ACP but not with the station at OLV Church (due to distances), would effectively just move the potential impacts of its construction from houses on Hampstead Avenue to houses on Glasnevin Avenue and Willow Park Avenue that would be a similar distance from the shaft construction compound.
- 10.5.28. I consider Albert College Park to be a suitable location for an intervention shaft which, as I have noted above, is a necessary ancillary element of a single bore metro tunnel design when the stations exceed a certain distance.
- 10.5.29. I note that the application documentation presented contradictory information about the maximum permissible distance between stations before an intervention shaft is required, with references in various places to both the National Fire Protection Association's 'NFPA 130' standard and the European Commission Regulation 1303/2014 'concerning the technical specification for interoperability relating to 'safety in railway tunnels' ('SRT-TSI'). I have addressed these fire safety issues relating to the design and consenting of the project in Section 9.16 above and I refer the Board to the two submissions made by the applicant in relation to this matter at the oral hearing (Ref. OH38 and OH106). The applicant's fire consultant clarified that SRT-TSI relates to heavy rail, not metro rail, but is considered by the CRR to represent good practice. It specifies evacuation spacings at maximum 1km distances. He stated that the applicant has utilised NFPA 130, which recommends spacings of 762m, but allows for this to be increased through engineering analysis. The applicant has undertaken 3-D fluid dynamics and evacuation modelling and has used this to support spacing of 1km maximum. With the intervention shaft in Albert College Park, the spacings from Collins Avenue Station to ACP is 573m and from ACP to Griffith Park Station is 928m.
- 10.5.30. I consider that the applicant has adequately justified the need for the intervention shaft and the basis for locating it within Albert College Park. I will assess the design and related issues in the following sections.

10.5.31. Collins Avenue Station Design

10.5.32. The location of Collins Avenue Station is primarily currently a landscaped area in front of OLV Church, comprising a mix of grassed areas, shrubs and trees and hard surfaced area leading to the church entrance. The existing northern entrance road to the OLV Church car park would be closed during the construction phase to remove potential conflicts between pedestrians and vehicles, with access retained to the car park via Albert College Drive to the south.

10.5.33. The proposed station is a relatively standard MetroLink cut and cover station, running parallel to the Ballymun Road, and the main surface expression of the station comprises the standard MetroLink entrance canopy, 3 No. skylights, passenger and DFB lifts and various ventilation and exhaust grilles and hatches. Notably, this includes two over track exhaust grilles located at a slight remove from the main station box, under the central median of the Ballymun Road. The existing car parking areas on Albert College Drive, which observers note are used by parents accessing the OLV schools, would be mostly replaced with further ventilation and exhaust grilles and bicycle parking. The intention is that this area will become a shared space, given the increase in pedestrian numbers. The stated reason for the remote grilles is to avoid cluttering the main entrance to OLV Church. During the construction phase, the vehicular access from Albert College Drive onto the Ballymun Road, which serves the whole Albert College estate, would be closed, with residents instead required to use the existing access onto Collins Avenue to the north.

10.5.34. The area above the station box, between the Ballymun Road and OLV Church, would be a landscaped plaza with a mix of hard and soft landscaping and pedestrian access to the church would be reinstated.

10.5.35. A toucan crossing is proposed across the R108, in the vicinity of the existing crossing point, and bicycle paths and bus stops to tie with the BusConnects project on the Ballymun Road.

10.5.36. Construction and operational phase impacts on OLV Church were raised by a number of observers including the OLV Church Parish Pastoral Council (PPC; S243), Paul McAuliffe TD (S254), ACRA and Ballymun Road North Residents Association (S1) and others.

- 10.5.37. The PPC note the importance of the church to the local community and express concern regarding the acquisition of the landscaped area fronting the church for the MetroLink plaza. They note that the space has been used for parish picnics and family days, that trees planted there mark special occasions in the history of the parish and that the first parish priest was buried in the lawn in 1987.
- 10.5.38. The PPC contend that the inaccessibility of the front entrances to the church would create issues with regard to funerals, weddings, and access by parishioners with mobility issues and groups of children, including those with additional needs.
- 10.5.39. They also express concerns regarding potential impacts on the stained glass windows in the church and that the works will result in a fragmentation of the parish community from which they will never recover.
- 10.5.40. In response, TII confirmed that access to the church will remain accessible and operational via Albert College Drive during the construction phase. They contend that the landscaping proposals will better define the public space from the garden space to the rear of the area, which is clearly related to the church and which will offer a degree of privacy for the church from the road and provide a social space into which mass and church events can spill out.
- 10.5.41. They also state that they will ensure that the abovementioned grave will be protected and undisturbed during all stages of the works.
- 10.5.42. With reference to potential damage to the church during construction, TII note that the church is included in the NIAH and state that measures, including extensive settlement, noise and vibration monitoring, will be implemented to ensure the church is not damaged and that the stained glass windows remain in situ during construction. Given the proximity of the church to the construction site, there is clearly potential for disruption to church services, particularly weekday funerals, weddings etc. This will require the implementation of comprehensive monitoring, communications and complaints protocols, as detailed elsewhere in this report.
- 10.5.43. The potential impacts on the church are further addressed in the LVIA and cultural heritage sections of this report.
- 10.5.44. While I consider the proposed Collins Avenue Station to be acceptable in terms of its design and layout, it will have a negative impact on the setting of the church and its

relationship with the Ballymun Road by virtue of the insertion of the various MetroLink elements. However, the proposed landscaping in front of the church is of high quality and I note that the MetroLink entrance canopy is orientated northwards, towards Collins Avenue, where the majority of alighting passengers will be heading towards DCU. This funnelling of MetroLink passengers away from the plaza area will contribute to its use by the church community. Subject to a reduction in the height of the skylights, as detailed in the LVIA section, I consider that the design and layout is acceptable, given the strategic nature of this location for the provision of a more integrated public transport network and the access it will provide for the surrounding community and to DCU.

10.5.45. Impacts on Our Lady of Victories Schools

10.5.46. As noted above, Our Lady of Victories Schools are located on the western side of the R108 Ballymun Road, opposite the proposed station. Submissions were made by the schools, but subsequently withdrawn during the oral hearing and the schools are listed as a private agreement in the applicant's Schedule of Third Party Agreements.

10.5.47. Notwithstanding this, the impacts on children attending the schools in terms of noise, dust, school traffic, drop-off arrangements and on the safety of children walking/cycling to school were also raised by other observers in the area (e.g. Paul Cusack (S252), Frances Maguire (S97), Jian Cheng and Family (S141) and ACRA and Ballymun Road Residents Association (S1)). I therefore asked the applicant to comment on the content of their agreement with the schools insofar as it relates to issues also raised by other observers.

10.5.48. The applicant subsequently submitted a brief document 'Environmental Commitments agreed with Our Lady of Victories Schools' on 13th March 2024 (Ref. OH246). This contained two commitments:

- TII commits to prepare a Trigger Action Plan for the Our Lady of Victories Infant School, Our Lady of Victories Boys' National School and Our Lady of Victories Girls' National School in relation to the monitoring and control of airborne noise, dust, ground borne noise and vibration during the construction of the Collins Avenue Station and the operation of the MetroLink Project.
- TII will mandate its contractors to appoint, in consultation with Our Lady of Victories Infant School, Our Lady of Victories Boys' National School and Our

Lady of Victories Girls' National School, a traffic management team for the duration of the construction works in respect of the Collins Avenue Station. The traffic management team will consult with the Schools in relation to measures to facilitate safe access to the Schools. The traffic management team will include persons who will be available during 8.30am – 3.00pm each school day to assist persons traversing the roads adjacent to the Schools.

- 10.5.49. I note that, on the first day of the oral hearing, the applicant's EIAR Co-Ordinator Dr Hallissey, in his submission (Ref. OH8) had proposed the following additional mitigation measure: "provision of temporary school bus services for Our Lady of Victories Schools'. In presenting the abovementioned commitments that were subsequently agreed with the schools to the oral hearing, the applicant's legal advisor Mr McGrath advised that they superseded that earlier commitment.
- 10.5.50. The final Schedule of Additional Environmental Commitments (Ref. OH376) reflects the above, with the school bus commitment omitted and the two other commitments included.
- 10.5.51. Issues such as dust and noise are addressed elsewhere in this report, but with regard to OLV Schools, I am satisfied that the impacts are capable of being effectively mitigated, noting that the schools are on the opposite side of the R108 from the works compound. I consider that the implementation of a Trigger Action Plan is an appropriate means of proactively managing these issues throughout the construction phase.
- 10.5.52. With regard to traffic, I note Section 7.4.6.3.4 of the STMP which relates to impacts on vulnerable users at Collins Avenue Station during construction. While the different phases of construction will result in the construction compound and traffic lanes on the R108 being modified on a number of occasions, I note that footpaths and dedicated cycle lanes will be maintained on both sides of the R108 carriageway throughout the full duration of the works. The existing signalised pedestrian crossing across the R108 in front of the school will also be retained during all construction phases and a temporary footpath will be provided from the Albert College estate to the Ballymun Road, to the side of OLV church, leading to the pedestrian crossing. The STMP notes that, due to the constrained lane capacity, temporary 'drop-off' parking on the R108 will be restricted, while 42 parking spaces on Albert College

Drive will be removed. A moderate residual impact on pedestrians is identified, with a severe impact on parking.

- 10.5.53. ACRA and Ballymun Road North Residents Association expressed concerns that school traffic will have no option but to park in the Albert College estate, blocking driveways and contributing to delays and gridlock getting out of the estate (given the proposal to close access to Albert College Drive during construction).
- 10.5.54. The issue of parking for school traffic is a perennial issue for many suburban Dublin primary schools and ultimately it is not feasible to fully cater for car-based travel to school. Once constructed, the GDATS projects, including MetroLink, BusConnects and associated active travel infrastructure improvements, will make it easier for parents to choose more sustainable transport modes for school journeys. There will be construction phase impacts due to loss of car parking spaces adjacent to OLV Church but I consider that the agreement with the schools in terms of providing a dedicated traffic management team throughout the construction phase, including ongoing engagement with the school and assisting children to cross the road during school hours is a reasonable means of ensuring that school-related traffic and child safety concerns with regard to construction traffic can be adequately addressed.
- 10.5.55. Traffic Impacts on R108 Ballymun Road and Closure of Albert College Drive during Construction
- 10.5.56. A number of observers noted the potential for traffic disruption impacts on the busy R108 Ballymun Road, including Paul McAuliffe TD (S254), ACRA and Ballymun Road North Residents Association (S1) and Paul Cusack (S252). Concerns were not just with the substantive MetroLink construction but also the enabling works which will require extensive rolling road works to divert utilities around the MetroLink sites.
- 10.5.57. GADRA also expressed safety concerns regarding construction traffic from the Intervention Shaft site performing U-turns on the Ballymun Road. The applicant responded that no u-turning of MetroLink vehicles will be permitted, with construction traffic taking a left turn out of the site, proceeding southbound on the Ballymun Road and turning right onto Griffith Avenue and right again onto the R102, travelling northbound to merge back onto the Ballymun Road, towards the M50.
- 10.5.58. As noted above, Albert College Drive, located to the south of OLV Church, provides access to/from Albert College estate onto the R108 Ballymun road. The estate also

has access onto the R103 Collins Avenue to the north. The construction of the proposed Collins Avenue Station would result in a loss of direct vehicular access to/from Albert College Drive onto the R108 Ballymun Road during the full construction phase. Pedestrian access would be provided with a temporary footpath to the side of OLV Church. The closure would result in the entire Albert College estate becoming a cul de sac, with vehicular access/egress only possible via Collins Avenue.

10.5.59. A number of submissions, including ACRA and Ballymun Road North Residents Association (S1) and The Residents of Albert College Lawn (S295) oppose this construction phase closure. The residents of Albert College Lawn seek that the access be retained, that a 'up and over' corridor be provided over the works onto the Ballymun Road or that traffic lights be installed at the entrance from the Albert College estate onto Collins Avenue to facilitate access and egress. They also contend that an earlier proposal was put forward by TII to open up their cul de sac onto the Ballymun Road, and they express their opposition to that, particularly with reference to a 250 year old beech tree at this location. TII confirmed, however, that the opening up of the Albert College Lawn onto the Ballymun Road is not proposed and that the tree will not be impacted.

10.5.60. ACRA, in their second oral hearing submission on 12th March 2024 (Ref. OH215), outlined concerns with regard to construction phase disruption. They sought that the construction period be expedited to reduce the duration of these impacts. In response, Maurice Gallagher, the applicant's Construction Tunnel Lead, made a presentation outlining the construction programme and phasing in this area (Ref. OH217). He noted that construction traffic to the Collins Avenue Station site will be travelling from the M50 southbound on the R108, and returning the same way, i.e. not heading towards the city centre. Average HGV traffic is c. 40 – 80 per day, with a maximum daily number of 118 for sixteen days. He also presented the various temporary traffic measures drawings for the various phases, including enabling works and main works. While this will involve reconfiguring traffic lanes on the R108 multiple times, and the temporary closure of parts of the road, at least one lane of general traffic will be retained in each direction at all times, as well as bus lanes, cycle lanes and footpaths. This is possible due to the wide width of the Ballymun Road at OLV Church.

- 10.5.61. In terms of the programme, he outlined that the top-down construction method involves c. 9 months for utilities diversions, 12 months for the diaphragm wall construction and 4 months for the roof slab construction. After this the bulk of the works, including excavation, would be taking place beneath the roof slab, with lessened impacts on local residents and other receptors. He stated that the programme set out in the EIAR was reasonably conservative in terms of durations and that it was intended to incentivise the contractors to minimise the durations. However, he stated that the observers desire for the works to be expedited to 3 years was not feasible.
- 10.5.62. The STMP states, at Section 7.4.5.3.2, that the most direct diversion arising from the closure of Albert College Drive is c. 750m. It states that the closure will prevent Albert College estate being used as a 'rat run' by general traffic, which may otherwise worsen during the works when lanes are closed on the Ballymun Road and the junction is over capacity at peak times.
- 10.5.63. The applicant subsequently presented an update to the STMP at the oral hearing on 12th March 2024 (refer to subsequent corrected version, Ref. OH227) addressing various matters. This included an update of the R108 Ballymun Road / Collins Avenue / Glasnevin Avenue junction assessment, based on the Finglas/Ballymun BusConnects EIAR and junction layout which was not available at the time the MetroLink application was submitted.
- 10.5.64. While the original modelling indicated that the junction would operate over capacity in the AM and PM peak periods (including evening peak delays of 218 seconds and 422 seconds on Glasnevin Avenue and Ballymun Road, respectively), the updated analysis found that the junction will operate satisfactorily during the Metrolink construction period without any significant delays, with predicted delays under 2 minutes in the AM Peak, and c. 1 minute in the PM Peak. This is assessed as a slight impact on all arms of the junction for both the AM and PM peak periods.
- 10.5.65. I consider that the closure of Albert College Drive will inconvenience residents of Albert College estate, with the diversion resulting in slightly longer journey times for some car trips, due to the need to exit the estate via Collins Avenue. This will particularly be the case for trips towards the city centre. However, the junction improvements that will be delivered by the Finglas/Ballymun BusConnects in

advance of the MetroLink construction peak will assist in mitigating these impacts. With regard to the request that the exit from Albert College estate onto Collins Avenue be signalised, I note that the junction has a yellow box, which will facilitate traffic movements. Given the general disruption that will be present along the Ballymun Road, I consider that there would be a genuine risk of Albert College Drive being used as a 'rat run' to avoid construction works, if it was kept open. I therefore consider the proposal to close Albert College Drive during construction, while inconvenient for residents, to be acceptable. In the operational phase, the residents of Albert College estate will benefit from close proximity to a metro station providing very frequent and high quality access to the city centre, Dublin Airport and the Swords area.

10.5.66. Finally, the issue of MetroLink construction worker parking in the surrounding residential area was also raised. This was an issue raised in a number of locations along the alignment, and I have addressed it in Section 9.21.

10.5.67. Albert College Park Intervention Shaft Design

10.5.68. The proposed Intervention Shaft would be located on the eastern side of the Ballymun Road, within the south western corner of Albert College Park. Hampstead Avenue, a residential street overlooking the park is located immediately to the south. The surrounding area is also generally residential, comprising a mix of detached, semi-detached and terraced housing. Other notable land uses in the vicinity include a petrol station on the western side of the R108, opposite the Shaft location, and Glasnevin Lawn Tennis Club, to the west of the petrol station.

10.5.69. The stated purpose of the shaft is to provide tunnel ventilation and to comply with tunnel fire safety requirements by providing an escape route from the tunnel and for firefighters to enter the tunnel. As detailed above, I have considered the submissions made in relation to this matter and the applicant's responses, and I accept the applicant's argument regarding the rationale for providing a shaft at this location. The nature of the public consultation exercise undertaken by TII in relation to the shaft was raised by a number of observers, including GADRA and Hampstead Residents CLG, who contend that it was inadequate. I have addressed that issue in Section 9.6 above.

- 10.5.70. The Intervention Shaft comprises a subsurface rectangular concrete box, c. 40m x 15m, housing tunnel ventilation and electric plant and equipment and sitting above a cylindrical shaft (c. 19m diameter) which extends more than 30m downwards to tunnel level. The shaft houses vertical ventilation space and evacuation stairs and lift. As the Intervention Shaft is offset from the main tunnel alignment, two short L-shaped mined SCL tunnel connections are required at the bottom of the shaft to connect to the main tunnel. One of these is for ventilation and the other is for evacuation/DFB access.
- 10.5.71. The surface level expression of the Intervention Shaft is a fenced compound with the park's perimeter footpath diverted around it. Maintenance and emergency service access to the compound will be via two gates on the R108 and the compound includes Fire Brigade and ambulance parking areas, hardstanding areas, ventilation grille and a small brick-clad single storey building sitting over the stairs and lift (c. 10m x 10m x 3m high). Landscaping is proposed around the edge of the compound to provide screening.
- 10.5.72. The Intervention Shaft construction will impinge on existing football pitches located in Albert College Park. One full-sized football pitch and 2 No. 5-a-side football pitches will be affected by permanent and temporary land take and it is therefore proposed to rotate the existing full-sized pitches 90 degrees which will create sufficient space for the 2 No. 5-a-side pitches.
- 10.5.73. The fenced compound associated with the Intervention Shaft occupies a sizable footprint with Albert College Park and a number of submissions contend that it is excessively large and that a fenced compound, parking, hardstanding etc. is not necessary with reference to similar structures in parks in other countries. It was proposed by a number of observers that, rather than providing emergency vehicle parking bays adjacent to the intervention shaft, Dublin Fire Brigade (DFB) could utilise roadside laybys on the Ballymun Road to access the shaft.
- 10.5.74. The applicant addressed this in their response to Hampstead Residents CLG (Ref. OH148) stating that it would not satisfy DFB requirements, as discussed with them. They state that the proposed access arrangement has been sized to both facilitate turning of maintenance vehicles to exit back to the Ballymun Road and in the event of a fire emergency to accommodate parking for fire appliances adjacent to the shaft

whilst maintaining space for other vehicles to pass by to reach the emergency exit. They state that this arrangement would be compliant with the Building Regulations 2006, Fire Safety Technical Guidance Document B, which requires “Fire brigade vehicle access to the exterior of a building is required to enable [...] pumping appliances to supply water and equipment for firefighting” and that “In the case of a building fitted with a wet internal fire main, access for a pump appliance should be provided to within 18m and within sight of an entrance giving access to the main and within sight of the inlet connection to the suction tank for the main”. TII contend that the bus lane, footway and hedge along the R108 would render this option non-compliant. They also note that, as well as emergency access, periodic maintenance access will be required for maintenance of the ventilation fans and DFB equipment within the shaft.

- 10.5.75. TII subsequently clarified, in response to Hampstead Residents CLG’s second oral hearing submission, that DFB had reviewed the intervention shaft design but that TII had not presented the layby option to DFB, due to its non-compliance with TGD B.
- 10.5.76. Given the very serious nature of any incident that would require the use of the shaft by the emergency services, I consider that this necessitates the need for easy, un-obstructable and immediate access to the shaft. I therefore consider the principle of providing hardstanding, vehicle parking bays and circulation areas to be justified. The applicant is engaged in a process with DFB to agree their firefighting requirements, and this is a matter subject to separate consents under a separate legislative code.
- 10.5.77. While the provision of the compound area results in a regrettable loss of part of the park, I note that it is a relatively small area, compared to the scale of the park. Perimeter planting is proposed which will also assist in reducing the visibility of the compound as it matures.
- 10.5.78. Separate to the provision of the hardstanding etc. is the need to fence the compound rather than incorporating it into the park, possibly with grasscrete and landscaping to soften its impact. A number of submissions noted that similar intervention shafts in other countries are not located within fenced off compounds and queried why similar couldn’t be provided at Albert College Park. I also raised this issue at the oral

hearing and the applicant's response was that the fencing was required for security purposes.

10.5.79. There are effectively two approaches to the issue of locating a utility building in a park. It can either be integrated into the park with a high quality architectural design and landscaping as per the examples identified by observers, or it can be essentially screened off from view with dense boundary planting and fencing. TII are proposing the second approach, which is a commonly used approach for maintenance buildings in Dublin's parks, such as at St Stephen's Green or Fairview Park. Once perimeter planting matures, the facility becomes embedded into the park and ceases to be notable. While Hampstead Residents CLG note that such structures often become unkempt and graffitied, I note that CCTV is proposed and that the access that the structure provides to the metro tunnel will ensure that it is actively monitored and maintained, in terms of ensuring the security of the metro and the need to protect the shaft's emergency role.

10.5.80. I would agree with Hampstead Residents CLG, to a degree, that the Intervention Shaft is negative for local residents, in that they will experience some disruption, noise, dust etc. during the shaft construction, but they will not benefit from immediate proximity to a station in the operational phase. However, the requirement for a shaft is an unavoidable requirement for the alignment and station locations chosen, given the single bore design. The residents of Hampstead Avenue will be within easy walking distance of the Collins Avenue Station, with Griffith Park Station also being within walking distance, albeit at a slightly greater distance.

10.5.81. With regard to the expressed preference for a station in Albert College Park, rather than the shaft, I note that the works required to construct the shaft are substantially less than the works that would be required to construct a station box, both in terms of the scale and nature of the construction. I note, with reference to this point, the aerial photograph image submitted by TII to the oral hearing on 22nd February 2025 (Ref. OH66), which overlays the footprint of the Collins Avenue Station over the intervention shaft footprint essentially to make this point, that the scale of the shaft excavation and construction is not comparable to a station box and that a station would have a much greater impact on the park. While the fundamental point was effectively made, it was somewhat disingenuously presented, in that the observers' were not proposing a station at the location of the shaft, but further northward.

- 10.5.82. Construction works for the shaft will take place generally during 'standard' day-time construction hours, as detailed in Section 9.13 above, although 24-hour working is proposed for the SCL tunnelling works required to connect the shaft to the tunnel. The duration of night-time working associated with this will be relatively short, given the limited scale of the SCL works at this location (the tunnels are c. 23m long), and I note that an acoustically clad building is proposed to enclose the surface level works required to support the SCL works. Deliveries will generally be during day-time also, other than exceptional events such as the need to complete large concrete pours or abnormal deliveries. Hampstead Residents CLG, in their second submission at the oral hearing (OH219), sought that SCL works be restricted to standard working hours, stating that in other metro projects in Europe, it is not permitted at night-time. They also seek a ban on deliveries outside of standard working hours.
- 10.5.83. In relation to this point, I note, as per Section 9.13 above, that the Tyréns Report recommends that SCL works should be limited to 24 hours per day over a 5.5 day week, rather than a 7 day week as sought by the applicant, in order to provide an appropriate balance between safe underground working and protection of residential amenity. With regard to deliveries, I accept that there will be occasions when out-of-hours deliveries may be required as detailed by the applicant. The types of circumstances that would require such deliveries (e.g. completion of large concrete pours or abnormal load delivery) are inherently limited in number and are justifiable with regard to traffic safety and construction requirements.
- 10.5.84. Concerns were also addressed with regard to construction lighting, which I have addressed in Section 9.24 above. Air quality issues were raised with regard to potential fire events resulting in toxic smoke ventilation from the intervention shaft compound. I have addressed this issue in the Air Quality section of this report, Section 11.14.
- 10.5.85. Hampstead Residents CLG have sought a condition that, once commenced, TII should be required to continue the works in Albert College Park to completion with no 'start stop' approach taken.
- 10.5.86. This 'stop-start' issue is a common concern on linear construction projects, where frustrations can arise when construction sites appear to be 'abandoned' for extended periods while works progress in other areas. Given that the project will entail

concurrent works on multiple sites across the city, there may be a natural ebb and flow to the construction work, however there is no reason to believe that the intervention shaft works would not be completed within a reasonable timeframe, given that they are far less extensive than a station construction.

10.5.87. I note the submission made by Louise Boughton and Glenn Sharpe (S173) with further submissions made by these observers at the oral hearing (Ref. OH62) on 22nd February 2024. These observers, who are also part of Hampstead Residents CLG and GADRA, are the owners of a property known as 'The White House' at the corner of Ballymun Road and Hampstead Avenue, opposite Albert College Park and the location of the proposed intervention shaft. The house, which dates from the 1930s, is a well-known landmark in north Dublin due to its prominent location and unusual art deco style design with a green tiled roof. It is also a protected structure. The house will be close to the Intervention Shaft and the proposed alignment passes along the Ballymun Road with substratum land acquisition under the front garden of the house.

10.5.88. The submission outlined the architectural importance of the house, the extensive renovation works undertaken on it in recent years and its sensitivity to damage.

10.5.89. Issues of property damage and settlement are addressed in Section 9.10 above. As this building is a protected structure it will be subject to Phase 3 assessment and it will be eligible for the POPS Scheme. Subject to appropriate conditions and monitoring as addressed elsewhere in this report, I am satisfied that no significant damage is likely to be caused to this property.

10.5.90. In conclusion, I consider the proposed design of the Albert College Park Intervention Shaft to be acceptable.

10.5.91. Other Impacts on Albert College Park

10.5.92. The proposed land take within Albert College Park includes both permanent acquisition at the location of the proposed intervention shaft and a much larger area of temporary acquisition to the east of this, covering the existing playing pitches (refer to property drawing ML-P 304 G-H). A number of observers queried the extent, duration and purpose of the proposed temporary land acquisition. Hampstead Residents CLG have sought that the Board include a condition to ensure that this area is only to be used for football field re-alignment and not as a general

construction compound or material stockpiling area. They also sought that no trees along the Hampstead Avenue boundary of the park be removed.

10.5.93. In responding to these issues at the oral hearing (Ref. OH148) and in their response to Hampstead Residents CLG's further submission, TII confirmed that the park area outside of the construction compound for the shaft will not be used as a storage/staging ground and that the compound, as shown in Figure 5.1 of the EIAR, will only be used in relation to the shaft construction. They undertook to return the temporary land take area once the pitches are realigned, with the exception of the works area for the shaft. They also confirmed that no trees would be removed along the Hampstead Avenue boundary or in the temporary land take area.

10.5.94. CLG Na Fianna (S46) expressed support for MetroLink but outlined concerns regarding disruption to certain facilities that they utilise, including at Albert College Park. In response, TII noted the proposed works to the pitches, as outlined above, but stated that the works will be carried out in agreement with the stakeholders concerned so as to minimise any disruption to sporting fixtures. While CLG Na Fianna subsequently appeared at the oral hearing on 5th March 2024, they did not raise any further specific concerns in relation to Albert College Park.

10.5.95. Noting that the temporary land take of the pitches will only be for the purposes and duration necessary to realign them clear of the intervention shaft compound, I consider that the temporary impact on the pitches is acceptable given the need for the project.

10.5.96. Ground Investigation Works

10.5.97. In their further submissions, Hampstead Residents CLG (1FS27) and GADRA (1FS25) related a recent negative experience of MetroLink ground investigation works undertaken on behalf of TII at Albert College Park. They contended that night-time works and unsatisfactory site management procedures had been utilised and that communications from TII and the contractor had been inadequate. TII, in their response, apologised for the incident.

10.5.98. While the ground investigation works do not form part of the works for which a Railway Order is sought, the incident and the upset it caused to local residents demonstrates the importance of effective monitoring, oversight and stakeholder engagement and communications, as addressed in Section 9.15.

10.5.99. Other Issues

10.5.100. Other issues raised in the submissions relating to this area included:

- Public consultation process for ACP Intervention Shaft: Addressed in Section 9.6.
- Land use zoning (Z9 and Z15 zoning): Addressed in Section 9.2.
- Property damage and settlement: Addressed in Section 9.10.
- Communications: Addressed in Section 9.15.
- Pluvial/groundwater flooding: Addressed in Sections 11.12 and 11.13.
- Dust: Addressed in Section 11.14.
- Use of blasting: Addressed in Section 9.9.
- Visual impact: Addressed in Section 11.22.
- Groundborne and Airborne Noise and vibration: Addressed in Sections 11.16 and 11.17.

10.6. **AZ4(c) Issues: Griffith Park Station and Tunnel as far as Glasnevin Station**

10.6.1. I consider that the main planning issues in respect of area AZ4(c) are as follows:

- Griffith Park Station.
- Impacts on Whitehall College of Further Education.
- CLG Na Fianna Sports Facilities.
- Impacts on historic culverted watercourses/drains.

10.6.2. Griffith Park Station

10.6.3. Griffith Park Station will be located under the football pitch used by Home Farm Football Club, on the eastern side of St Mobhi Road (R108), adjacent to Whitehall College of Further Education. In this area St Mobhi Road is tree-lined and slopes downwards towards the River Tolka to the south. As a result of the slope, the southern part of the pitch is elevated considerably above the road level with a retaining boundary wall and railings. The western side of St Mobhi Road comprises relatively low-density semi-detached houses. While the surrounding area is primarily

residential, the station is well-located for access to Glasnevin, the Bons Secours Hospital, the National Botanic Gardens and Drumcondra, via Griffith Park.

- 10.6.4. Following construction of the station, the football pitch will be reinstated above the station, with access to the station provided via a plaza and an entrance within a retaining wall at the southern end of the pitch. Underground cycle parking will also be provided under the football pitch, also accessed through an opening in the retaining wall.
- 10.6.5. The existing character of St Mobhi Road is derived primarily from the mature trees lining the street. While the removal of a number of mature trees will be required along the pitch edge to construct the station, the trees lining St Mobhi Road will be protected.
- 10.6.6. The existing entrance pillars and gates to Whitehall College of Further Education are proposed to be set back within the College's access road to provide for the plaza area in front of the station entrance and the shared surface access road to the College. On the opposite side of the shared surface are additional cycle parking spaces and steps leading down to Griffith Park which will provide a more direct pedestrian linkage to/from parts of Drumcondra north of the River Tolka.
- 10.6.7. I note that, in the agreement between DCC and TII submitted at the oral hearing (Ref. OH76), 'condition' 26, item 10 states that:
- “The treatment of the wall at Griffith Park Station shall be agreed in writing with the Planning Authority prior to the commencement of development and shall include for example, stone cladding, imprinted concrete with artistic design, planted walls, windows, sections in relief and recessed elements, greening at base of walls etc. which could provide some animation and rhythm to the wall. Lighting on the footpath along the edge of the retaining wall to the football pitch shall be agreed in writing with the planning authority prior to the commencement of development.”
- 10.6.8. This will be one of the more visually striking station entrances, and I consider that it is appropriately responsive to the existing site context and the visual and cultural heritage sensitivities of the site and surrounding area. I consider that agreement of the retaining wall treatment with DCC is a suitable means of ensuring that it is of sufficiently high quality for its prominent location.

- 10.6.9. The temporary loss of the existing playing pitch is regrettable, but I note that replacement facilities will be reinstated following station construction and will benefit from enhancements and greatly improved accessibility.
- 10.6.10. The biodiversity and architectural heritage impacts associated with the Griffith Park station are addressed in the relevant sections of this report, but in general I consider the design of the Griffith Park station to be acceptable.
- 10.6.11. Impacts on Whitehall College of Further Education
- 10.6.12. Whitehall College is a protected structure (Ref. 7746) under the Dublin City Development Plan and is listed on the NIAH (Ref. 50130149). Although the Protected Structure itself is unaffected by construction, the associated soccer pitch (Home Farm FC grounds) and the entrance gates, piers and boundary railings are directly affected by development.
- 10.6.13. The gates, piers and boundary railings are to be removed prior to commencement of construction and will be recorded by written and photographic record, prior to removal. Following the completion of construction they will be reinstated, albeit on a reconfigured layout. The soccer pitch will also be reinstated following completion of construction.
- 10.6.14. As can be seen from photomontage images 17.2 and 17.3, the graded incline that rises up from St. Mobhi Road to the soccer pitch will be replaced by the abovementioned large retaining wall which has a varying height (between c.5.5m at its highest and c.2m at its lowest) that will enclose the south and west boundaries of the restored playing field and house the entrance to the underground station as well as a public plaza. While I accept that relocation of the boundary elements is necessary in order to allow for station construction, I nevertheless consider that the character of this area will be substantially changed.
- 10.6.15. As I have noted above, TII has committed to agreeing the architectural treatment of the retaining wall with DCC to include some animation and rhythm, and I am satisfied that a considered and interesting design, including planted elements, will contribute to the assimilation of this station element into the local landscape and that the impacts on Whitehall College are acceptable.

10.6.16. Substantial tree clearance is also required along the St. Mobhi Road frontage of the Station site at pitch level. TII state, both within the EIAR and in their responses to a number of submissions, that there will no requirement to fell the on-street trees along St. Mobhi Road. However, this commitment appears to me to be contradicted by the Griffith Park Station street level drawing (No. ML-ST 304 K-L1), which identifies that 2 No. mature in-street trees are to be felled for the purpose of providing a bus stop. I welcome TII's repeated statements that there will be no tree felling along St. Mobhi Road as part of the project, as these trees contribute significantly to its mature, tree-lined character. In view of the fact that there is an inconsistency between the submitted drawings and other commitments made by TII, I consider it appropriate that a condition should be attached to the Railway Order, requiring that no tree felling shall take place along St. Mobhi Road.

10.6.17. CLG Na Fianna Sports Facilities

10.6.18. The submission from CLG Na Fianna (S46) expressed support for MetroLink but outlined concerns regarding certain sites they utilise. In relation to Griffith Park Station, they expressed concerns regarding impacts on local residents and sporting and educational institutions including Na Fianna's facilities to the north of the station³³, Scoil Mobhí, Scoil Chaitríona and Whitehall College. They sought that conditions be attached requiring that traffic and health and safety plans for this site are prepared in conjunction with these stakeholders and that suitable monitoring processes and an escalation process for adjudication is put in place. They reiterated these points in their subsequent oral hearing submission on 5th March 2024.

10.6.19. In response, the applicant noted the mitigation and monitoring measures set out in various chapters of the EIAR and in particular the proposed implementation of a CEMP, Air Quality Management Plan and STMP, to include Local Community forums where stakeholders will have an opportunity to inform the traffic management element of the project. They noted that, as stated in Chapter 8 of the EIAR, consultation will continue throughout the construction phase to inform stakeholders

³³ The Schedule of Third Party Agreements refers to an agreement with Home Farm FC (i.e. the sports club that utilise the playing pitch above the station location), however they did not make a submission. When I queried this at the oral hearing on 28th March 2024, the applicant stated that agreement had been reached prior to the RO application being submitted and hence no submission was made.

of progress and to allow for members of the public to correspond with the project team.

10.6.20. With particular regard to health and safety matters which were of concern to Na Fianna, the applicant stated that the temporary traffic management plans will be developed and reviewed by the Scheme Traffic Management Coordinator in advance of implementation and that all TTMs will be monitored on a daily basis to ensure compliance, with a suspension of works should significant non-compliance with an approved TTM arise.

10.6.21. I have addressed the issues of stakeholder communications and traffic elsewhere in this report, but with regard to the proposals at Griffith Park Station, I am satisfied that comprehensive mitigation measures and site management protocols and methodologies have been set out in the EIAR, as supplemented by the additional commitments made at the oral hearing.

10.6.22. Impacts on Historic Culverted Watercourses/Drains

10.6.23. Related to the above concerns regarding settlement and property damage, a number of submissions also raised the issue of historic culverted watercourses and drains that pass through the area and expressed concern regarding potential damage to these and resultant impacts on dwellings in the vicinity (e.g. Lesley Hewson (S168), Lorraine Rooney (S171)).

10.6.24. This issue is addressed in the Hydrology section of this report.

10.6.25. Other Issues

10.6.26. Other issues raised in the submissions relating to this area included:

- Public consultation and engagement: Addressed in Section 9.6.
- Groundborne and Airborne Noise and vibration: Addressed in Sections 11.16 and 11.17.
- Dust and air quality: Addressed in Section 11.14.
- Construction traffic management: Addressed in Section 11.20.
- Design of Glasnevin Station and the associated demolition works: Addressed in the following section relating to area AZ4(d).

- Biodiversity impacts: Loss of trees and vegetation (addressed in biodiversity section) and impacts on the Royal Canal (addressed in biodiversity section and in the following section relating to area AZ4(d)).

10.7. **AZ4(d) Issues: Glasnevin Station and Tunnel as far as Mater Station**

10.7.1. I consider that the main planning issues in respect of area AZ4(d) are as follows:

- Glasnevin Station.
- Impact on railway lines and DART+ West.
- Demolition of Hedigans / Brian Boru Pub.
- Impacts on Royal Canal.
- Impacts on The Court Apartments: residential amenity, heritage, parking.
- Access to Coke Oven Cottages and temporary bridge.
- Royal Canal Clean-Up Group Container.

10.7.2. Glasnevin Station

10.7.3. The proposed Glasnevin Station is intended to be a multi-modal interchange station, linking MetroLink, two existing Iarnród Éireann (IÉ) heavy railway lines (i.e. the Western Commuter Line, also known as the Midland Great Western Railway (MGWR), and the South-Western Commuter Line, also known as the Great Southern and Western Railway (GSWR)), BusConnects and car, walking and cycling connections.

10.7.4. The proposed station is located on the western side of the R108 Prospect Road, immediately north of Cross Guns Bridge and the Royal Canal. The station will be aligned north-south, parallel to the road, while the canal and the existing heavy railway lines run roughly east-west (i.e. perpendicular to the proposed MetroLink alignment). The existing railway lines are in deep cuttings c. 8m below the level of Prospect Road, supported by retaining walls. There is currently no railway station at this location.

10.7.5. The surrounding area is a relatively densely developed mix of residential and commercial uses.

10.7.6. With regard to Policy, I note that Objective SMTO17 of the Dublin City Development Plan 2022-2028 explicitly supports an interchange station at this location as well as the addition of new DART stations more generally:

- **SMTO17:** Additional Interchanges and Rail Stations

- (i) To promote and seek the development of a new interchange station at Cross Guns Glasnevin, subject to environmental requirements being satisfied and appropriate planning consents being obtained, as part of the DART+ and Metro link projects.
- (ii) To promote the provision of a station at Croke Park Stadium.
- (iii) To promote and seek provision of additional stations as part of the DART+ projects in consultation with Iarnród Éireann/Irish Rail.

10.7.7. The proposed Glasnevin Station is likely to be the most technically complex and challenging station to construct due to the presence of the railway lines and canal. In order to construct it, extensive engineering and earthworks will be required on what is a particularly constrained site. This includes the acquisition and demolition of all buildings overlying the station box, including the Brian Boru Pub (also known as Hedigans), Des Kelly Interiors retail unit and a short terrace of mainly 19th century buildings in office use. Permanent and temporary acquisition of lands including car parking spaces and open space within an apartment complex known as the Court, adjacent to Dalcassian Downs, to the north of the station is also proposed.

10.7.8. There are a number of key aspects to the station construction, including: the lowering of the existing heavy railway tracks by up to c. 2m to achieve flatter gradients and to provide overhead line electrical clearances under the two overbridges carrying Prospect Road; the removal of retaining walls, a short railway tunnel and earthworks between the two railway lines; the construction of new platforms for these railway lines; construction of new retaining walls; and construction of the MetroLink station box below the railway lines.

10.7.9. In order to lower the railway lines, it will be necessary to close the lines for a period of time. A phased approach is proposed to avoid closing both lines at the same time. This will involve closure of the Western Commuter Line for a period of c. 21 months,

followed by closure of the South Western Commuter Line for c. 5 months. The applicant states that these are worst case durations.

- 10.7.10. It will also be necessary to temporarily close, drain and infill a portion of the Royal Canal in order to provide a required working area. It was initially proposed to utilise sheet piles for the infill, but details of an alternative precast concrete L-shaped retaining wall units were presented at the oral hearing (refer to document Ref. OH118), which will avoid puncturing the base of the canal structure. A second closure period will also be required towards the end of the construction phase to remove this infill and reinstate the full canal width and lock gates etc.
- 10.7.11. I note that Waterways Ireland (WI) were consulted with by the applicant and in their submission (S312) WI note the importance of the canal with regard to biodiversity, heritage and recreation and its sensitivities with regard to water quality and flood risk, but they do not raise any objection to the temporary closure or emptying of a portion of the canal. They note that property, legal, operational and environmental matters will have to be addressed with them in advance of construction. The applicant stated that the proposed use of L-shaped precast walls had been agreed with WI.
- 10.7.12. A further complicating factor at the proposed Glasnevin Station is the presence of a number of cottages, known as Coke Oven Cottages, a short distance to the west, which are accessed from Prospect Road via the towpath along the northern side of the Royal Canal. Due to the temporary closure of the towpath for construction use, it is proposed install a temporary bridge over the Royal Canal, connecting to Shandon Mills on the southern side of the canal. In the operational phase, the existing access route along the towpath would be reinstated.
- 10.7.13. The proposed construction compound for the Glasnevin Station is particularly large, given the interaction with the railway lines. Of particular note is that the 4m high noise abatement hoarding will be positioned within c. 1.5m of the façade of the Court apartments to the north and a number of submissions were received from residents and the management company. At the oral hearing, the applicant proposed that the top half of this hoarding could be transparent to mitigate the impacts on the residents, while still abating noise impacts. Given the proximity of the hoarding to the apartment building and the long duration of the construction phase, there will clearly

be negative impacts on the residential amenity of residents, aside from any noise or other impacts. I note that some 24 hour working is proposed in this area in connection with the railway possessions.

- 10.7.14. This will be an impactful station to construct, given the various constraints identified above, the presence of a number of heritage features, the visual sensitivities and the close proximity to residential and ecological receptors. I refer to the assessments contained in the relevant sections of the EIAR. Impacts on the canal, railway lines, the access to Coke Oven Cottages and the Court apartments are also addressed below
- 10.7.15. The Glasnevin Station will have five levels: street level, IÉ rail platform level, concourse level, mezzanine level, and MetroLink platform level. In order to understand the proposed sequencing of construction works for this complex station, I refer the Board to Chapter 5 of the EIAR and to Appendix A5.5 'Glasnevin Construction Report'. I also refer the Board to the presentation made by the applicant at the oral hearing on 26th February 2024 (Ref. OH75) which details the various construction stages and the interface with the railway lines.
- 10.7.16. Aboveground, Glasnevin Station features a station building, rather than the standard canopy design used at many other deep stations. The building is similar in design to the Dublin Airport Station and features the standard palette of material, such as dark metal cladding, extensive glazing, overhanging green roof, DFB and passenger lifts, branching columns etc. Access to the station from street level will be from Prospect Avenue where passengers can either access either IÉ or MetroLink services.
- 10.7.17. The station building is set back from Prospect Road with an enhanced public realm area created to improve circulation and pedestrian connectivity. A single storey brick clad substation and services building is located to the north of the Station building, and an access road between the two provides a loop for a passenger drop-off and access to the proposed cycle parking area. Enhanced pedestrian and cyclist facilities and bus stop facilities are proposed along Prospect Road as well as additional pedestrian crossings across Prospect Road.
- 10.7.18. The existing car park and open space within the Court apartments which will be required during the construction phase will be reinstated in a new alignment with new

landscaping and railings along Prospect Road, which are protected structures and which are to be temporarily removed during construction, will be reinstated.

10.7.19. The submitted ground floor plan for Glasnevin Station identified a retail area within the station. It was unclear from the submitted drawings whether the station included a first floor as, while the sections drawings and some of the 3-D visualisations indicate a first floor, no access was shown on the ground floor plan and no first floor plan was submitted. It was also unclear what the use of any such first floor would be. When questioned at the oral hearing, there appeared to be some degree of confusion from the applicant on this matter. Revised drawings were subsequently submitted at the oral hearing, including a first floor plan and a revised ground floor plan to provide access (Ref. OH323). The drawings also corrected issues with regard to the placement of light standards which blocked the Royal Canal Towpath. That issue is addressed below.

10.7.20. An additional commitment was included in the final SAEC (Ref. OH376) stating that:

Tow path access onto Prospect Road modified to provide a widened entrance, an amended Prospect Road junction layout, a changed surface treatment to clearly delineate between towpath and Prospect Road footway, and relocation of two lighting columns to edge of tow path. Change of use within Glasnevin Station entrance building from previous proposed retail unit to "Retail/Cafe/Community Use" including addition of mezzanine level with associated access (lift and stairs)."

10.7.21. In addition to the submitted drawings and photomontages, I refer the Board to the presentation given at the oral hearing on 12th March 2024 (Ref. OH224) which provides further details on the architectural design approach and design intent for Glasnevin Station. This indicated a café and cycle hub at ground floor, with access from southern elevation to a community area/space located at first floor level.

10.7.22. I consider the proposed provision of a community use within the station to be welcome, noting that several submissions had sought such a facility. The incorporation of a café or retail space into the station is also a valuable aspect of the proposal, given the interchange nature of the station.

10.7.23. A number of submissions from observers in areas AZ4(c) and AZ4(d) raised issues regarding the design of the proposed Glasnevin Station. It was generally contended

that the station is out of keeping with the local architecture and does not enhance the area. A number of observers sought that the Hedigans Pub or an element of the pub be retained and incorporated into the station. I have addressed the issue of Hedigans Pub below.

- 10.7.24. I consider the design of the proposed Glasnevin Station to be of suitably high quality for this prominent location and given the importance and status of the station as a key public transport interchange. As with the other stations, I consider that the use of a standard MetroLink palette of materials and design features is a positive aspect of the design which will give a consistent line wide identity to MetroLink infrastructure.
- 10.7.25. Dublin City Council, in their initial submission (S71), consider that the potential absence of over-site development at Glasnevin Station is of concern should it not be designed in at this stage, with reference to the Z3 'Mixed Neighbourhood Facilities' zoning objective. TII's response was that the project does not preclude an over station development and that an engineering solution, structurally independent of the station, could deliver the type of over-site development envisioned by DCC as part of a separate subsequent planning application.
- 10.7.26. Given the very significant complexity of the construction required for this station, as outlined above, the interactions with commuter rail and the canal and the proximity to sensitive heritage and residential receptors, I do not consider it advisable for the Board to require that the station be designed to accommodate over-station development by way of condition. The station will be a sizable and prominent building in the streetscape in its own right, it incorporates ancillary retail/café/community use and given its location, it will support the delivery of greater densities and more compact development in the surrounding area. As noted above, it will allow deliver DCC's Objective SMT017.
- 10.7.27. In conclusion, the proposed Glasnevin Station will be challenging to construct, will entail a regrettable level of property acquisition and demolition, including a number of notable buildings, and will be unavoidably disruptive during the construction phase with regard to road, rail and canal as well as surrounding residential and commercial receptors. However, in the operational phase, the delivery of a multi-modal public transport interchange at this location, connecting MetroLink, two commuter rail lines

(both to be upgraded and electrified under the DART+ project), BusConnects and active travel modes in the heart of a densely developed area is supported by policy and will be extremely beneficial to both local communities and the wider city.

10.7.28. Impact on Railway Lines and DART+ West

10.7.29. Iarnród Éireann (IÉ) in their written submission (S121) contend that the proposed closures of the MGWR and GSWR lines for 21 and 5 months, respectively, to allow the construction of the MetroLink Station will cause significant disruption to IÉ passenger, freight and maintenance services. They contend that this closure period is excessive and that a shorter closure period should be feasible. They state that the disruptive impacts to train operations must be minimised and timed for periods of lower passenger and freight usage, e.g. summer months. They also raise various operational issues regarding the interchange station. IÉ also raised the issue of the DART+ West and South West works, which they state may be completed or underway prior to MetroLink construction commencing.

10.7.30. I note that IÉ did not participate in the oral hearing or make any further submissions and that no agreement was submitted by the applicant.

10.7.31. In responding to IÉ, TII noted the extremely complicated and physically constrained nature of the works at Glasnevin which will require a coordinated approach. They state that they have developed a plan that incorporates a possession regime based on the preliminary design and programme assumptions which were discussed in detail over a number of years with both IÉ and the NTA.

10.7.32. TII acknowledges the disruption to services and impacts on customers but state that the planned closures represent a worst case impact. They state that they have been working with IÉ and the NTA with a view to reducing the overall duration and impact of the closures on services but note that during the works on MGWR all trains will still be able to travel to Connolly Station.

10.7.33. On the first day of the oral hearing, the applicant submitted a document 'DART+ West in Advance of MetroLink' (Ref. OH28). They note that both projects, in their respective applications, have assumed that they will be on site first and that the other project will follow, and the report outlines the consequences for MetroLink, should the DART+ West works be completed in advance. I note that there would be no change in the MetroLink programme and that the main consequences include the

temporary removal of some DART+ West overhead line equipment, a reduced volume of excavation due to DART+ West having already lowered some tracks that MetroLink will further lower and various other demolition works. The document includes an environmental assessment of the implications of DART+ West proceeding in advance, and no significant additional impacts are anticipated.

10.7.34. In the event that both projects are constructed concurrently at Glasnevin then each project will occupy its own site, with DART+ West interfacing with MetroLink at its east and west site boundaries. The key cumulative effects from both projects being constructed concurrently are stated to be Airborne Noise & Vibration and Traffic & Transport, but with the EIAR mitigation measures in place, no additional potential significant effects are anticipated.

10.7.35. At the time of completion of this report, judicial review proceedings initiated against the Board's decision on DART+ West had recently been withdrawn and the respective timing for delivery of the two projects, both of which enjoy strong policy support, is still unclear. I consider that the timing and phasing of works for the two projects are best co-ordinated between TII and IÉ in the interests of efficiency, minimising impacts and avoiding the undoing of completed works insofar as possible.

10.7.36. As also arises at Tara Street, it is somewhat surprising that these two public transport bodies, who submitted overlapping RO applications for large public transport projects, have not reached an agreed position in relation to the proposed Glasnevin Station prior to their respective RO applications being made. This is intended to be an interchange station between the MetroLink and the heavy rail network, and it would have been reasonable to expect that matters relating to how the interchange would be built and operated and the amount that the railway tracks would need to be lowered would have been agreed, at least in principle, in advance of the applications being made.

10.7.37. The substantial and extensive nature of the track lowering works is such that prolonged closures are unfortunately unavoidable, as they could not be undertaken solely at night-time/weekends. This will disrupt and negatively impact rail passengers for a period, although the ability to maintain train access to Connolly Station during MGWR works will mitigate the impacts to a degree. These negative impacts must be

balanced against the very positive benefits of providing an interchange station at this location, which will be of benefit to both MetroLink and IÉ and their passengers. I consider that the short-term disruption to rail services is justified, given that it is a necessary part of delivering the interchange station.

10.7.38. The operational matters raised by IÉ in relation to the interchange station are matters best addressed directly between TII and IÉ in the context of a commercial agreement that they will need to reach.

10.7.39. Demolition of Hedigans / Brian Boru Pub

10.7.40. Hedigans Pub, also known as the Brian Boru House, is a 19th century public house on Prospect Road, Glasnevin. The pub, while not a Protected Structure, has architectural and cultural heritage value, being referenced in James Joyce's Ulysses and a song by the Chieftains. The two storey building has a traditional pub frontage of high quality and a notable aspect of the front façade is a painting of King Brian Boru. The pub, which sits within a relatively large site with car parking to the rear, is adjacent to the existing heavy railway tracks and it is proposed to demolish the pub in order to excavate and construct the proposed Glasnevin Station, which will be a key interchange station with the two existing heavy rail lines which are both to be upgraded and electrified as part of the granted DART+ West and South West projects. The approved BusConnects Core Bus Corridor which has branches to Finglas and Ballymun also passes the proposed Glasnevin station.

10.7.41. A submission was made by Hedigans Ltd. and subsequently withdrawn during the oral hearing. A number of other submissions from local residents and groups oppose the loss of the pub and either seek that it be retained or that elements of the structure be incorporated into the metro station.

10.7.42. The loss of Hedigans pub, with its architectural and cultural heritage value, is a notable and regrettable aspect of the proposed development. It is clear, however, that the opportunity to create an interchange between the metro, two commuter rail lines and a BusConnects route at this specific location is potentially transformative for the Glasnevin area and for the delivery of a more integrated public transport network in the city. Given the scale, complexity and nature of the interchange station, a sizable site is required, and the presence of the Royal Canal to the south and dense residential development in the surrounding area serves to constrain the

options available to construct the interchange station. I am satisfied that the demolition of the pub, while regrettable, is justified by the very significant public transport benefits and associated community gain associated with the interchange.

10.7.43. While I am satisfied that the loss of Hedigans Pub is both necessary and justified for the construction of the important interchange station at this location, I do consider it appropriate that some aspect of the pub be incorporated or referenced in the station. Whether this is through an artwork, information board or via the incorporation of, for example, the painting on the front façade of the building into the station, is not a matter that should be determined by the Board in my opinion, given that there may need to be engagement with the building owners. I note in this regard that the applicant proposed an additional commitment (Ref. 2.8) in their final SAEC submitted at the oral hearing (Ref. OH376) to “engage with the owners of the Brian Boru Pub to integrate or reference an element of the pub into the design of the proposed Glasnevin Station”.

10.7.44. Given that the applicant has proposed an additional commitment in this regard, I do not consider that a specific condition is required, as I propose a general condition requiring the implementation of the SAEC commitments, should the Board be minded to grant the Railway Order.

10.7.45. Impacts on Royal Canal

10.7.46. In order to construct the Glasnevin Station, and as a result of the constrained nature of the site, it is proposed to temporarily close, drain and infill a portion of the Royal Canal in order to provide a required working area. Dewatering will allow for construction of a secant pile retaining wall between the proposed Glasnevin Station and the northern wall of the canal and will allow TII to provide construction access on the north side of the canal.

10.7.47. It was initially proposed to utilise sheet piles for this purpose, but details of alternative precast concrete L-shaped retaining wall units were presented verbally at the oral hearing on 26th February 2024 and in a document entitled ‘Updated Appendix A5.5 Figures – Figure 5.15 & Figure 5.25’ (Ref. OH118) provided on 29th February 2024. Following drainage of the canal a protective layer will be applied to its base, prior to installation of precast panels and backfill, and this will avoid the need to puncture the base of the canal structure.

- 10.7.48. I note that the applicant consulted with Waterways Ireland (WI) and in their submission (S312) WI note the importance of the canal with regard to biodiversity, heritage and recreation and its sensitivities with regard to water quality and flood risk, but they do not raise any objection to the temporary closure or emptying of a portion of the canal. They note that property, legal, operational and environmental matters will have to be addressed with them in advance of construction. Impacts on the canal are addressed further in the Hydrology, Biodiversity, Cultural Heritage and AA sections of this report.
- 10.7.49. There are, of course, potential biodiversity issues associated with this temporary emptying of the canal, and I refer to the Biodiversity section of this report where the issues are discussed in detail.
- 10.7.50. Dewatering may present a barrier to otters commuting along this section of the Royal Canal. Following DHLGH's submission (S63) on the issue, TII provided an otter by-pass plan (Ref. OH198) that comprises the installation of otter fencing along the dried canal basin between the west end of Lock 5 and the western extent of the works, together with associated ledges that will allow access to the corridor. DHLGH confirmed its broad satisfaction with the mitigation proposal, subject to a minor extension of the corridor, in its oral hearing submission on 7th March 2024.
- 10.7.51. TII further acknowledge that there is localised ground contamination at a site near the proposed Glasnevin Station and to the west of Shandon Gardens, associated with the use of creosote as part of railway maintenance works. The identified location is in excess of 600m from the main Glasnevin Station construction site and on the opposite side of the canal and around 80m from nearest point on the Irish Rail line where lowering works are proposed. This is a considerable distance and I am satisfied that contamination is unlikely to be encountered during construction. I would also note, in this respect, that the application of the protective layer will avoid interaction with the base of the canal.
- 10.7.52. Given the scale, complexity and nature of the proposed Glasnevin Station, a sizable construction site is required, and the nature of the surrounding city environment serves to constrain TII's construction options. In the context of mitigating construction health and safety risks, I consider it reasonable and prudent that the

portion of the Royal Canal adjacent to the deep excavation works at the Glasnevin interchange station be temporarily drained.

- 10.7.53. In highlighting the ecological importance of the Royal Canal, the Shandon Residents Association (S279) submission advises that they commissioned an independent ecological survey of the Canal, between Lock 6 and Coke Oven Cottages, and that a rare stonewort (*Tolypella Glomerata*) and an endangered aquatic snail (*Myxas Glutinosa* or glutinous snail) were recorded. The group also expressed concern in their oral hearing submission (Ref. OH235) regarding the loss of hedgerow on the northern side of the canal and between Lock 6 and Cross Guns Bridge and requested that it should be reinstated.
- 10.7.54. The EIAR Biodiversity assessment acknowledges that glutinous snail is an endangered Red List species and is vulnerable to degraded water quality. It identifies that the species was recorded in the Grand Canal (it does not mention the Royal Canal) and states that the species is vulnerable to surface water quality degradation. I consider any glutinous snail present within the Royal Canal will be similarly vulnerable to reduced water quality and I am satisfied that TII's proposed mitigation strategy, which is discussed in detail in Section 11.8, will be effective in protecting this species.
- 10.7.55. Regarding the hedgerow reinstatement request, TII indicated a willingness to facilitate the request and in this respect I note that reference 7.2 of the Final Schedule of Additional Environmental Commitments outlines that the hedge will be replaced at a suitable location along the proposed new boundary wall. This is a small but welcome gain for the local community and I consider it appropriate that TII should have flexibility over the exact location.
- 10.7.56. Impacts on The Court Apartments: Residential Amenity, Heritage, Parking
- 10.7.57. A significant issue that requires careful consideration is the impact of development on residents at Dalcassian Downs, in particular residents of The Court apartment complex which is directly affected by construction. As is set out in Section 12, TII proposes to acquire both open space and parking spaces at The Court and the Glasnevin Construction site comes to within c.1.5m of the apartment buildings.
- 10.7.58. A number of submissions raise the issue of loss of car parking spaces, for example S175, S96 and S176, and submissions S175 and S96 additionally identify the loss of

garden space during construction. The Management Company on Behalf of The Court also appeared at the oral hearing on 27th February 2024 and 13th March 2024 (Refs. OH84 and OH232).

- 10.7.59. Residents at Dalcassian Downs and The Court are likely to be significantly affected by construction, over a prolonged period of time. As I have outlined in Section 11.16, for the duration of construction TII propose to maintain a 4m tall hoarding in front of the apartments and whilst serving an important noise attenuating function, this will heavily impede outward views from a number of apartments. Also, notwithstanding the provision of this hoarding, construction noise and vibration will be significant over a prolonged period and will include late night noise associated with certain construction stages. Chapter 13 of the EIAR, Airborne Noise & Vibration, predicts noise levels of up to 80dB $L_{aeq,T}$ in the daytime period (07.00-19.00hrs) during multiple stages of construction.
- 10.7.60. TII acknowledge the significant nature of the noise impact (as they do at multiple other locations along the alignment) and point out that notwithstanding the implementation of standard mitigation, at some locations the residual noise level will lead to disturbance and sleep interference is likely. In such circumstances, TII has developed bespoke mitigation in the form of an Airborne Noise & Groundborne Noise Mitigation Policy (Appendix A14.6 of the EIAR), whereby TII will take incremental steps to further mitigate noise impacts, including rehousing residents for a specified period of up to 4 weeks. I have addressed noise issues in detail in Section 11.16.
- 10.7.61. As is set out in Section 11.21, the boundary railings and gates to Dalcassian Downs are a protected structure (RPS Ref. 8698) and are also listed on the NIAH (Ref. 50130021). TII proposes to remove, store and reinstate these items and also proposes that they will be recorded by photographic and written record, prior to removal.
- 10.7.62. Whilst the storage and reinstatement of these items is to be welcomed, the railings will be visually and functionally connected to built elements of the station and I consider their setting will be changed. I accept, however, that this is necessary in order to facilitate station construction and I would remind the Board that the Glasnevin Station is a particularly important element of the overall project, providing interchange with Irish Rail services.

- 10.7.63. Regarding the loss of parking spaces and public open space, TII state that following the completion of construction these will be reinstated, with the parking spaces provided on a different layout. TII also commits to providing alternative temporary parking, but at the oral hearing they confirmed that no such parking location has been identified. As I have outlined in Section 12, I consider it reasonable that a condition should be attached, requiring that TII should make available alternative parking prior to the commencement of construction of the Glasnevin Station.
- 10.7.64. The Management Company on Behalf of The Court requested that the Board would attach a condition requiring that open space should be restored to a standard that is to be agreed with them. As I have outlined in Section 12, property drawing No. ML-ST 304 N-O1 identifies that the parking layout will be reconfigured and it also identifies that the garden area will be restored around this layout. I consider this proposal is acceptable and that there is no need for the requested condition.
- 10.7.65. Access to Coke Oven Cottages and Temporary Bridge
- 10.7.66. Access to Coke Oven Cottages and other lands is currently via the Royal Canal towpath (known as the Royal Canal Way). This route will be temporarily closed off during construction of the Glasnevin Station, associated with the newly provided working area discussed in the previous section, and it is proposed to provide a temporary bridge over the canal to maintain access, in the area of Lock 6, and with traffic flows routeing to/from the Shandon Mill housing estate.
- 10.7.67. According to the document 'Glasnevin Construction Report' (Appendix A5.5 of the EIAR) the bridge will be a standard bailey bridge structure, allowing for combined vehicular, pedestrian and cycling traffic, and that the final design will be completed by the appointed design and build contractor and approved by Waterways Ireland prior to installation.
- 10.7.68. Given that a Greenway is being separately developed along the Royal Canal towpath and the potential for conflicts between vehicular traffic and pedestrians either using the greenway or accessing/egressing the metro station, I asked the applicant at the oral hearing whether a permanent bridge structure had been considered, to remove any potential conflict. I note in this regard that a railway bridge over the canal was previously located in this area, suggesting that a bridge would not necessarily create canal navigation issues.

- 10.7.69. In responding to this, TII advised that they had not given consideration to the provision of a permanent bridge and, instead, focussed returning the towpath to its existing condition. They also stated that the towpath is grade separated from the station plaza and that there are items within the plaza (for example planters and trees) that provide adequate separation between the light level of traffic using the towpath and pedestrians exiting the station onto the plaza.
- 10.7.70. I also questioned TII regarding the layout of the Glasnevin Station and associated plaza submitted with the Railway Order application and indicated that there were light standards on the towpath that would impede vehicular traffic on it and I queried if compacted gravel was a suitable long-term material for a towpath that experiences vehicular traffic. TII acknowledged that these features were an error on the application drawings and revised drawings were subsequently submitted, removing the offending light standards and proposing a tarmacadam surface for the towpath (Ref. OH323).
- 10.7.71. While there would certainly be a benefit to permanently separating vehicular and pedestrian/cyclist traffic along this portion of the towpath, I note that the level of vehicular traffic is likely to be very low, given the small number of cottages and the nature of the other lands accessible from it (see estimation provided by applicant at the oral hearing on 13th March 2024 (Ref. OH237)). The provision of a permanent bridge would potentially have implications from a canal navigation perspective and would require inputs and agreements from other stakeholders, including those landowners on the other side of the canal. Ultimately this is a wider issue than the proposed MetroLink development and I do not consider that there is anything in this development, as proposed, that would preclude the future provision of such a bridge or alternative access to Coke Oven Cottages, if deemed necessary and appropriate. Importantly, however, I am satisfied that there will be no worsening of the existing access arrangements to Coke Oven Cottages in the operational phase, as a result of the proposed development.
- 10.7.72. A number of submissions raise the issue of the closure of the towpath and the provision of a temporary bridge. For example, Shandon Mill Owners Management Company CLG (S278, OH239) and Shandon Residents Association (S279, OH235) object to the routing of traffic through their community and Vincent Harrison & others (S309, S310 and OH240) raise concerns regarding the adequacy of the towpath

(both existing and proposed layouts) to accommodate traffic flows. Vincent Harrison & others (represented at the oral hearing by Nessa Winder) also submitted a number of photographs of the existing towpath, demonstrating its narrow nature and the resultant conflict between cars and pedestrians/cyclists.

10.7.73. Whilst I can understand the frustrations of residents at Shandon Mill regarding the prospect of additional vehicular, pedestrian and cycling traffic routeing through their estate during construction, ultimately the constrained nature of the Glasnevin Station construction site and the requirement to close the Royal Canal towpath during construction necessitates TII identifying and providing an alternative means of access along the route, particularly for the Coke Oven Cottages residents.

10.7.74. The thrust of the Shandon Mill Owners Management Company CLG submission in particular is that there are other, better options available to TII and I would bring to the Board's attention that they put forward a number of alternative options that they consider are better. However, having considered these alternatives, I would question the practical viability of each. This is discussed in detail in Section 12.9. Ultimately, and having considered the issue, I concur with TII that the proposed temporary bridge represents the best available option for maintaining access along the Royal Canal Towpath.

10.7.75. I consider that the temporary routing of cars and pedestrians through the Shandon Mills estate is likely to cause disruption and inconvenience to the residents of the estate, who are not used to through-traffic. However, traffic numbers will be low and given the short-term nature of the impact, this needs to be balanced against the wider benefits accruing from the delivery of a MetroLink/Irish Rail/BusConnects interchange at this strategic location which will serve the entire Glasnevin community. In my view, the wider benefits outweigh the localised impacts in this instance.

10.7.76. I accept the observers' point regarding the need to ensure an appropriate engineering standard for the temporary bridge, particularly with regard to the ramped incline. Appendix A5.5 of the EIAR, Glasnevin Construction Report, states that the detailed design of the bridge and foundations will be completed by the contractor and will be approved by Waterways Ireland prior to installation. If the Board grant the Railway Order, I recommend that a condition be included requiring that a Road

Safety Audit be prepared as part of the design process, in order to ensure an adequate level of consideration is given to road and user safety.

10.7.77. Royal Canal Clean-Up Group Container

10.7.78. The Royal Canal Clean-up Group made written submissions (S270, 1FS37) and a submission at the oral hearing on 13th March 2024. They are a local community group who – as the name suggests – clean-up along the Royal Canal on a regular basis. They keep a 20 foot storage container on the north bank of the canal which will have to be temporarily moved for the Glasnevin Station works and they seek that an alternative location be provided, with the relocation of the container at TII's expense.

10.7.79. TII, in their response, confirmed the necessity for the temporary relocation and stated that it would subsequently be reinstated to its original location. They undertook to consult with the Group regarding an alternative location and to cover the cost of this. I note that an additional commitment was made and is contained in the Final SAEC (Ref. OH376) submitted at the oral hearing, which states:

“TII will engage with the Royal Canal Clean-up Group in relation to finding an alternative location for their storage container.”

10.7.80. Given that it may be challenging to provide an alternative location in this constrained area, or that the involvement of other parties may be necessary to secure such a temporary site, I consider that this is a matter best addressed between the parties, rather than through the imposition of a condition to the RO.

10.7.81. The Group also raised ecology, access, traffic and public safety issues regarding the Royal Canal towpath, which I have addressed above.

10.7.82. Other Issues

10.7.83. Other issues raised in the submissions relating to this area included:

- Public consultation and engagement: Addressed in Section 9.6.
- Groundborne and Airborne Noise and vibration: Addressed in Sections 11.16 and 11.17.
- Human health and wellbeing: Addressed in Section 11.7.
- Dust and air quality: Addressed in Section 11.14.

- Construction traffic management: Addressed in Section 11.20.
- Vermin control: Addressed in Section 9.26
- Flood risk: Addressed in Section 11.12
- Biodiversity impacts: Addressed in Section 11.8.

10.8. **AZ4(e) Issues: Mater Station and Tunnel as far as O'Connell Street Station**

10.8.1. I consider that the main planning issues in respect of area AZ4(e) are as follows:

- Mater Station and impact on Four Masters Park.
- Ventilation shaft.
- Impact on businesses.
- Dust and aspergillus.

10.8.2. Mater Station and Impact on Four Masters Park

10.8.3. The proposed Mater Station will be primarily located beneath Four Masters Park, a relatively small triangular park, bounded by the R135 Berkeley Road, Eccles Street and St Joseph's Church to the south. The historic part of the Mater Hospital is located on the opposite, northern, side of Eccles Street and the surrounding area is a mix of residential uses, commercial uses (particularly on the opposite, western, side of Berkeley Road) and there are numerous medical facilities along Eccles Street.

10.8.4. Four Masters Park is located in a Conservation Area under the Dublin City Development Plan. The railings, gates and plinth walls that enclose the Park and also the Four Masters Cross that lies within it are designated as a protected structure (RPS Ref. 737) and TII states that, whilst there is uncertainty as to whether the Park itself is protected, it has assumed for the purposes of assessment that it is protected along with its contents. The Mater Hospital, St Joseph's Church and various buildings along Eccles Street are also all protected structures.

10.8.5. Four Masters Park is currently owned by and is historically associated with the Mater Hospital, however TII are proposing to permanently acquire it as part of the MetroLink project. While the park is a valuable visual and landscape amenity in this densely developed and traffic-heavy location, until recently it has not been open to the general public to enjoy. It was stated by observers at the oral hearing that the

park was due to be opened up and I note from my most recent site inspection that this is now the case. TII are proposing to open the park up to the public in perpetuity, which I welcome as a benefit for the surrounding community.

- 10.8.6. The construction of Mater Station via top-down construction will significantly impact on the park, requiring the temporary removal of the railings, plinths and sculptures in the park and the removal of all existing trees and vegetation. Iron railings, plinths, piers and a grotto at St Jospeh's Church will also be temporarily removed. Once construction is complete, the heritage elements will be reinstated, albeit in a slightly different layout/configuration that reflects the station's presence. Replacement landscaping will be installed in the park and the Park will be restored to a slightly different layout, with the station entrance and a new plaza provided outside of the western end of the Park and, according to the document 'Mater Railing Length and Green Space' submitted at the oral hearing (Ref. OH250), the restored park will be reduced in area by 270 sq m and the perimeter railing will be reduced by 10 linear metres.
- 10.8.7. I noted from my site inspection that the iron railings surrounding the park are currently in poor condition in places, due to corrosion. It was not clear from the EIAR whether TII proposed to restore and repair the railings when in storage, however at the oral hearing, TII confirmed on 13th March 2024 that it would repair the railings prior to reinstatement. I welcome this clarification and undertaking from TII, which will be of benefit to the surrounding community.
- 10.8.8. The proposed station is a relatively standard MetroLink cut and cover station with one entrance, situated at the tip of the triangle where Eccles Street and Berkeley Road meet. The entrance is stated to have been chosen due to its accessibility to Mater Hospital, St Joseph's Church, Berkeley Road and the bus services thereon.
- 10.8.9. The proposed canopy over the station entrance is a sizable structure, and while it features large glazed elements, there are deep panels at the sides, which together with its dark colour render it somewhat visually intrusive in this sensitive location.
- 10.8.10. A notable aspect of this station is the proposed provision of a remote ventilation grille on the footpath on the western side of Berkeley Road (i.e. across the road from the station), just north of the junction with Sarsfield Street. Some existing on-street car parking will be removed on both sides of Berkeley Road and on Eccles Street to

accommodate improved footpaths and circulation areas, including a shared space on Eccles Street between the Mater Hospital and the Mater Station.

- 10.8.11. A number of observers raise multiple concerns regarding the impact of the development on both Four Masters Park and the surrounding area. For example, DHLGH (S63) raises concerns regarding the impact of development on the park and the submission by Prospect Architectural Conservation Area (S260) submits that the Park will be obliterated. A number of submissions, including Amanda Hughes (S6), Eamonn Smyth (S76) and Dr. Jonathan Healy (S154) question the design of the station entrance and its impact on both the Conservation Area and on views of the Mater Hospital protected structure; Andrew Conlon and Maeve Fitzpatrick (Refs. S9, OH241 and 1FS4) express concern regarding the station's visual impact; and Breda Scully (S25, OH88 and OH243) spoke at the oral hearing of importance of the park for the local community and how sad it is that the park will be sacrificed for a metro station and that noise will impact on her enjoyment of the park and the surrounding area.
- 10.8.12. I consider that the proposed park layout represents a reasonable attempt to restore its existing shape and form and I am satisfied that the Park will be usable in the future. However, as I have outlined in Section 11.22, I have strong concerns regarding the impact of the multitude of station elements, which I consider will have significant adverse impacts on the park and surrounding Conservation Area. This section of the report should be read in conjunction with Section 11.22, which discusses the issue in detail.
- 10.8.13. The station canopy entrance, passenger/fire lifts and skylights are very prominent features in their proposed locations. The station entrance is a prominent feature in views from the north and west and the lift structure is a very prominent and, in my view, obtrusive feature in the view from the south. The presence of these structures within the park erodes what is described by the EIAR as a green and tranquil atmosphere and unduly impinges upon the formal relationship between the historic Mater Hospital and the park.
- 10.8.14. The station skylights were originally proposed to have maximum heights of 2.25m, which I consider to have been excessive. However, as a result of submissions and questioning at the oral hearing, TII proposed to reduce the height of these skylights

to a maximum height of 1.1m. I accept that from a purely visual impact perspective the reduced height lessens the impact of these project elements; however, I nevertheless consider they represent an unnecessary encroachment of additional built form into the park, which will reduce its usable area. Further, and by reason of their elevated nature and overall scale, I consider they contribute to the previously discussed erosion of character.

10.8.15. Policy BHA9 of the City Development Plan requires that development within or affecting a Conservation Area must contribute positively to its character and distinctiveness and take opportunities to protect and enhance the character and appearance of the area and its setting, wherever possible. In view of my assessment, I consider the development is inconsistent with policy BHA9.

10.8.16. I have recommended in the Landscape and Visual and Heritage sections of the report that a number of amendments to the proposed aboveground station design be required, in order to reduce the impact of the station on the park and surrounding area. These amendments include:

- The station entrance canopy design shall be revised, to incorporate reduced metal banding and a commensurate increase in glazing.
- The proposed skylights within the Four Masters Park shall be omitted from this station.
- The passenger and Dublin Fire Brigade lift structures at Mater Station shall comprise glazed structures.

10.8.17. These amendments would result in a more sympathetic station design that will better assimilate into this site, will preserve existing views and will respect the character and setting of the Conservation Area and the park.

10.8.18. Regarding the protected structures, TII proposes to remove and reinstate or relocate each of the Four Masters Cross and Healing Hands sculpture and the park-enclosing items. I accept that removal of these items is required in order to allow for station construction to take place and I consider TII's proposals in respect of reinstatement or relocation are appropriate. The Four Masters Cross and Healing Hands sculpture will remain visible from both Berkley Road and Eccles Street and the reinstated park-enclosing items will continue to form the Park's boundary, albeit on a revised

alignment. In this context, I do not consider there is any inconsistency with city development plan policy BHA2, which requires that any development, modification, alteration, or extension affecting a protected structure and/or its setting is sensitively sited and designed, and is appropriate in terms of the proposed scale, mass, height, density, layout and materials.

10.8.19. I note that Dublin City Council's Conservation Section does not object to the proposed relocation, subject to provision of a conservation method statement that will control the removal, restoration and reinstatement.

10.8.20. Ventilation Shaft

10.8.21. Given the placement of the Mater Station box relative to the surrounding streets, a remote ventilation shaft is proposed on the footpath on the opposite side of Berkeley Road to the station.

10.8.22. A number of observers expressed concerns regarding this shaft, including Andrew Conlon and Maeve Fitzpatrick (S9,1FS4 and OH241), who live beside the proposed shaft and Brendan Flanagan (S26, OH86 and OH244), who operates a pharmacy adjacent to the proposed shaft.

10.8.23. Noting that the shaft is located on a footpath, I queried whether an upstand was proposed around it for weathering and water ingress purposes. The applicant confirmed that it would be flush with the pavement.

10.8.24. While the placement of this ventilation shaft is unusual when compared to the other stations, it is clear that this is a constrained site, due to the confluence of various streets at the station location. The applicant explained why a ventilation grille couldn't be placed on the trafficable road surface and I consider this explanation to be reasonable and compelling. While the construction of this ventilation shaft will be impactful for residents and businesses in the immediate vicinity, this relatively discrete element of the station works will be completed in a period of 6-12 months and for the remainder of the construction phase and the operational phase I do not consider that any significant issues arise with respect to this shaft.

10.8.25. Impact on Businesses

10.8.26. Submissions were made by a number of businesses in the vicinity of the proposed Mater Station in relation to impacts on their business, particularly during

construction. This included Brendan Flanagan (S26, OH86 and OH244) who operates a pharmacy on Berkeley Road, opposite the Four Masters Park.

- 10.8.27. Mr Flanagan noted that his pharmacy benefits from its proximity to the Mater Hospital and he expressed concern that the hoardings would obstruct visibility of his premises from Eccles Street. He also raised concerns regarding the ventilation duct proposed on Berkeley Road adjacent to his premises (addressed above) and general concerns regarding business disruption.
- 10.8.28. A number of other businesses in the vicinity of the proposed Mater Station, including a florist, café and laundry also made a submission at the oral hearing on 27th February 2024 raising similar concerns, as well as noise, dust, traffic and general business disruption concerns.
- 10.8.29. TII's response to Mr. Flanagan's submission was to acknowledge concerns around short-term construction impacts and to point to proposed mitigation measures, which include traffic management (TII stated that Berkeley Road will not be closed at any point) and extensive dust management procedures. They also point out that the businesses may experience the benefits of having large numbers of construction workers present in the area during construction.
- 10.8.30. I sympathise with each of these commercial operators, who are likely to have to deal with nuisance and disturbance impacts, in particular dust and noise, during construction. Mr Flanagan's business is located immediately adjacent to the tunnel ventilation grille and owing to the fact that the grille construction site will be enclosed behind a construction hoarding, visibility (and by extension, awareness) of Mr Flanagan's shopfront is likely to be heavily impeded. TII indicated, when questioned on this at the oral hearing, that the hoarding may be in place for up to 12 months.
- 10.8.31. Notwithstanding this, I agree with TII that, in view of the scale of the MetroLink project and the developed city neighbourhoods through which it passes, it would be very difficult to avoid interactions and impacts on commercial operators, whether that is related to noise/nuisance, traffic or in this instance visual impacts.
- 10.8.32. As has been set out in Section 11.14, TII proposes an extensive dust management programme that includes real-time monitoring and I am satisfied that it will provide a high-level of protection for these businesses during construction. It must also be

borne in mind that construction sites crop up across the city and dust is an issue that is routinely managed by good housekeeping practices.

10.8.33. Regarding the issue of public/stakeholder communications and engagement, which will be a particularly important aspect of the construction phase, I have addressed this issue in Section 9.15. Noting the long duration of site hoardings in city centre locations, I have recommended that the stakeholder engagement plan should be updated to include provision for the inclusion of temporary signage on hoardings for businesses whose visibility is obstructed.

10.8.34. In the operational phase, I consider that the businesses in the vicinity of the Mater Station are likely to derive benefit from their proximity to the station and the increased footfall that it will generate in the area.

10.8.35. Dust and Aspergillus

10.8.36. A particular concern raised in submissions relating to this area was the issue of dust generation and health impacts associated with aspergillus, if made airborne during construction works. This issue is addressed in the Population and Human Health and Air Quality sections of this report. In summary, TII's health advisor advised that aspergillus is widespread in the environment and that people are exposed to it on a regular basis, with the majority of people (including the majority of people in hospital settings) being immune to potential health effects. The EIAR further advises that dust suppression techniques successfully prevent suspension of aspergillus.

10.8.37. As noted elsewhere, the Mater Hospital and Rotunda Hospital, both located in this area, submitted letters at the oral hearing confirming that agreement had been reached on the matters of concern to them and they support the project.

10.8.38. I am satisfied that concerns in relation to dust and aspergillus, which effectively requires similar mitigation measures, can be controlled with standard good construction working practices.

10.8.39. Other Issues

10.8.40. Other issues raised in the submissions relating to this area included:

- Public consultation and engagement: Addressed in Section 9.6.
- Working hours: Addressed in Section 9.13.

- Groundborne and Airborne Noise and vibration: Addressed in Section 11.16 and 11.17.
- Dust and air quality: Addressed in Section 11.14.
- Traffic management and impact on pedestrians: Addressed in Section 11.20.
- Biodiversity impacts: Addressed in Section 11.8.

10.9. **AZ4(f) Issues: O’Connell Street Station and Tunnel as far as Tara Station**

10.9.1. I consider that the main planning issues in respect of area AZ4(f) are as follows:

- O’Connell Street Station.
- Interface with Dublin Central project.
- Impacts on National Monument.
- Impacts on businesses.
- Other issues.

10.9.2. O’Connell Street Station

10.9.3. The proposed O’Connell Street Station would be located under the western side of Upper O’Connell Street, which is currently occupied by various terraced buildings and a number of vacant sites. A number of the buildings have facades that are identified as Protected Structures (i.e. not the entire building) and TII had originally proposed that only the Protected Structure facades would be retained, with the non-protected buildings entirely demolished. At the oral hearing they instead proposed that all of the existing O’Connell Street façades will be retained in circumstances where MetroLink construction precedes the permitted over site development (addressed below). TII also undertook at the oral hearing to retain all street trees along the O’Connell Street frontage, having initially outlined that trees along the O’Connell Street frontage would need to be felled in order to facilitate station construction.

10.9.4. A number of observers object to the scale of demolition proposed as part of station construction, including those by Brian McGrath (S29) and Frank McDonald (S98, OH176 and OH365).

- 10.9.5. The potential impacts of the proposed O'Connell Street Station on architectural and cultural heritage are addressed in detail in Section 11.21 of this report and are thus discussed in summary here.
- 10.9.6. The scale of demolition and clearance works required in order to facilitate station construction are substantial and, in effect comprises most of the city block between 43 and 58 O'Connell Street Upper. I consider the principle of locating the MetroLink Station within and under an urban development block to be preferable to the original EPR stage proposal for a station in the central median, given the ability to primarily limit construction to the large Dublin Central site rather than the entire street with associated disruption to general traffic, bus services, pedestrians and cyclists. O'Connell Street is also notable for the statues and monuments along its median, a number of which would likely have to be removed temporarily under the earlier EPR proposal.
- 10.9.7. The suite of Dublin City Development Plan Policies within BHA2, BHA3, BHA5, BHA7, BHA8, BHA9, BHA10, BHA11, BHA15, BHA18, BHA24, BHA26 and BHA30 provides a general presumption against the demolition or substantial loss of Protected Structures, proposed Protected Structures (including those listed on the NIAH as being Regionally important or higher), and buildings within ACAs/Conservation Areas that positively contribute to the character of these areas, except in exceptional circumstances. They also seek to ensure that works to Protected Structures, or works which might affect their curtilage or setting or adversely affect the character of an ACA/CA, would not harm the character or special interest of the PS or ACA/CA, would contribute positively to the character of the conservation area, would have regard to the Architectural Heritage Protection Guidelines (2011) and would be in accordance with best conservation practice.
- 10.9.8. In view of the fact that the Protected Structures (i.e. the facades) are being protected and retained, I am of the view that the development is consistent with Policy BHA3 (loss of protected structures). However, consideration should be given to Policies BHA2 (development of protected structures) and BHA5 (demolition of Regional rated building on NIAH).
- 10.9.9. Regarding Policy BHA5, both No. 45 and Nos. 55-56 O'Connell Street Upper have a Regional rating on the NIAH and thus the provisions of this policy are activated. The

policy provides a presumption against demolition of these structures, unless it is justified in a written statement and the building is not suitable for addition to the RPS. In this instance, these structures have been listed on the NIAH since 2011 and have not been added to the RPS through a number of successive Development Plans. Thus, whilst there will be a loss of historic fabric, I am satisfied that demolition of the building is necessary to facilitate construction of the O'Connell Street Station and that the development is consistent with Policy BHA5.

- 10.9.10. Policy BHA2 is a detailed policy that contains multiple protections for the development of Protected Structures including, importantly, that their appearance, setting and curtilage should be protected and that works should be carried out in line with best conservation practice. The removal of the buildings behind the Protected Structure facades will clearly result in the loss of historic fabric, which is integral to the character and setting of each of the Protected Structures. In this context, I am of the view that the development is inconsistent with Policy BHA2 and I note that in the Updated Planning Report (Ref. OH22) provided to the oral hearing on 19th February 2024, TII acknowledges that compliance with Policy BHA2 'is not met in full'.
- 10.9.11. Policies BHA7, BHA8, BHA9, BHA10 together relate to works (including building demolition) within ACA/CAs and their thrust is that the Council will protect the special interest and character of these designated areas, ensuring that new development contributes to the area and that features that contribute to the character of the area should be retained. I have previously outlined my view that the scale of demolition will have a substantial impact on architectural and cultural heritage and, in this context, I consider the development is inconsistent with these policies.
- 10.9.12. Policies BHA11 and BHA15 encourage retention and reuse of buildings, in particular exemplar twentieth century buildings, where appropriate. In view of the scale of demolition proposed and noting that a number of the affected buildings are recognised by the NIAH as exemplar twentieth century buildings, it could reasonably be argued that the development is inconsistent with both policies.
- 10.9.13. Whilst I have identified a number of Development Plan policy inconsistencies in the preceding sections, I consider there are a number of factors that weigh strongly in favour of the proposed development.

- 10.9.14. There is a high degree of both dereliction and vacancy at the northern end of O'Connell Street, in the area of the subject site. For example, the building at No. 41 O'Connell Street Upper, which is to the north of the station site and is visually connected to it, was demolished over 15 years ago and has remained vacant since and the building at No. 50-51 O'Connell Street Upper was demolished before this and the site has been vacant since. In this respect I accept and agree with TII's submission that the project is likely to act as a driver, enhancing the prospect of redevelopment of the site.
- 10.9.15. It is also of course an important consideration that the Board has already granted permission for these demolition works as part of the recent grant of permission for the commercial development under ABP-318316-23.
- 10.9.16. Ultimately, while the loss of the structures is regrettable, it is important to note that only the facades of these properties are protected. Given the very significant long-term positive impacts of delivering a metro station on Dublin's main thoroughfare, in an area in severe need of regeneration, I consider that the loss of the buildings and wider impacts on architectural heritage are justified.
- 10.9.17. With regard to the design of the O'Connell Street Station, in reviewing the submitted drawings and documentation, it became clear that there were a number of issues with respect to the station. With regard to the street level plan (Dwg No. ML-ST 305 F-G1), it was clear to me that this drawing was missing one or more layers. I note that Dublin City Council's Architect's Department (S71) had raised this issue in their submission, but TII's response was that urban realm and landscaping design will be provided by the over-site developer. Notwithstanding this, TII submitted a corrected drawing at the oral hearing on 25th March 2024 (OH323) that included the relevant MetroLink elements.
- 10.9.18. I also queried the proposed O'Connell Street Station entrance design, contained within No. 44 O'Connell Street, on 19th March 2024. The station entrance shown on the original application drawings and photomontages was squat, ill-proportioned and not compatible with the architectural heritage of 44 O'Connell Street and the status of the Street more generally. In responding to my questions, TII stated that this design represents a temporary arrangement, in circumstances where MetroLink

precedes over-site development, and where TII will not interfere with the building's façade.

- 10.9.19. TII also made a submission at this time (Ref. OH254), comprising a presentation on the O'Connell Street Station and which included a completely different station entrance design. This design incorporates a much larger opening and reduced proportions to the fascia. TII clarified, when questioned on this, that this revised design is the long-term station entrance design, which will be provided as part of over-site development. This revised arrangement is also shown on the updated drawings provided on 25th March 2024 (Ref. OH323).
- 10.9.20. Notwithstanding the fact that the originally proposed station entrance design is identified as a temporary measure, I am of the view that it is an inappropriate design solution for this sensitive location and that the entrance design shown within the updated drawings pack submitted on 25th March 2024 represents a significant enhancement and a more appropriate design solution. The revised proportions of the entrance are, in my view, a more considered and sympathetic response to the character of the building and also present a more welcoming entrance to the station. In this context, I recommend that regardless of the circumstances in which the station is constructed (i.e. before or after over-site development) TII should be required to provide the revised entrance design as shown on the drawings contained in OH323.
- 10.9.21. A second entrance to the O'Connell Street station is proposed on Moore Lane. In the event that MetroLink precedes the Dublin Central development, the station entrance would be a relatively utilitarian structure, surrounded by hoarding and adorned with locally relevant artwork (see photomontage image 20.11). At the oral hearing TII provided an updated photomontage of this entrance arrangement and advised that they have enhanced the site's appearance in the 'without over-site development' scenario, to include a brick treatment to the station entrance and planting in front of the site hoarding. Whilst clearly it would not be desirable that the over-site area would remain undeveloped in the long term, I accept that this is outside of TII's control, and I consider their approach to treatment of the Moore Lane station frontage in the 'without over-site development' scenario is reasonable. I note that neither of the aforementioned enhancements are shown on the updated drawings

provided and I thus recommend a condition be attached, requiring their implementation as part of the development.

10.9.22. In the longer term, I consider that a second entrance on Moore Lane within what will be a redeveloped and enlivened section of the north inner city is a particularly positive aspect of the proposed development.

10.9.23. O'Connell Street Station is the only station where no cycle parking is being provided. Given the unique circumstances of this station, entirely below the permitted commercial development, with no surface level expression other than the entrances, I consider this to be reasonable, noting that cycle parking is available in the wider area. This cycle parking issue is addressed in more detail in Section 9.22 above.

10.9.24. In conclusion, subject to the above conditions, I am satisfied that the proposed O'Connell Station location and design and the extent of demolition works required to deliver it is justified and proportionate to the scale of the required structures and the advantages of incorporating the station box within a development site in an area in need of redevelopment and rejuvenation, rather than impacting on the O'Connell Street roadway.

10.9.25. Interface with Dublin Central Project

10.9.26. As noted above, the site of the proposed O'Connell Street Station is located within a larger urban site known as Dublin Central. The Dublin Central site, which extends to c.2.2 ha, is made up of several urban blocks bounded by Upper O'Connell Street to the east, Henry Street to the south, Moore Street to the west and O'Rahilly Parade and Parnell Street to the north. The Dublin Central site has an extensive recent planning history, including 5 No. recent appeals to the Board, all of which were granted, with a number being the subject of ongoing judicial review proceedings at the time of writing³⁴. These separate applications were for various parts of the Dublin Central site, for which a Masterplan was developed.

10.9.27. In April 2025 the Board granted permission, following first and third party appeals, for development on the part of the Dublin Central site where the proposed MetroLink

³⁴ 318316 and 318268 recently granted. 312603, 312642, 313947 granted but currently the subject of judicial review.

station would be located (ABP-318316-23 refers). The development is described in the Planning Inspector's report for that case as follows:

"An 11-year permission is sought for a mixed-use scheme (c.38,479m² GFA) ranging in height from 2-8 storeys over single-level basements incorporating office, retail and café-restaurant use including a new street between O'Connell Street Upper and Moore Lane, a new controlled laneway from Moore Lane to Henry St/Moore St, the refurbishment and adaptive re-use of buildings and **Metrolink enabling works in the form of a structural box.**"

The main elements of the scheme include the following:

[...]

- The conservation, refurbishment, repair and adaptive use of the following Structures:
 - Reading Room (rear 59-60 O'Connell Street) including partial demolition, internal and external modifications and new shopfronts.
 - 57-58 O'Connell (Protected Structures – GF occupied by Carroll's Gift shop) – retention of façade.
 - 52-54 O'Connell Street (Protected Structures - Carlton cinema site) – retention of facades and reinstatement of canopies.
 - 43-44 O'Connell Street (Protected Structures occupied by Ned Kelly's Casino and the Garda Building, respectively) – retention of facades.
 - 45 O'Connell Street (Protected Structure – vacant building) – retain façade.
 - Repair/upgrade works of retained masonry, external and internal joinery, plasterwork and features of significance (where required).
 - Lightwells O'Connell St - Conservation and repair of existing lightwells.
- **Demolition of all remaining structures (22,521m²) including -**
 - **55-56 O'Connell Street (Dr. Quirkey's Emporium)**
 - **46-49 O'Connell Street (Restaurant use)**
 - **Partial demolition of Reading Room (rear 59-60 O'Connell St).**
 - **13 Moore Lane and 14 Moore Lane (aka Nos. 1-3 O'Rahilly Parade)**

- 14 Moore Lane and 15 Moore Lane (aka 1-8 O’Rahilly Parade)

- Various buildings on eastern side of Moore Lane

- Construction of the following structures

[...]

- A Structural Box (120m x 26m x 34.5m) beneath GF at O’Connell St. to accommodate the independent construction of the planned O’Connell Street Metrolink.” [Emphasis added.]

10.9.28. A written submission was made on behalf of Dublin Central GP Ltd. by Stephen Little & Associates (S69), and Brendan Slattery of McCann Fitzgerald LLP made a submission on their behalf at the oral hearing on 27th March 2024. Dublin Central GP Ltd. is stated to be a wholly owned subsidiary of Hammerson plc, and the Dublin Central site is sometimes referenced as the ‘Hammerson lands’.

10.9.29. The written submission states that Dublin Central GP Ltd. are wholly supportive of the MetroLink application and confirms its “clear and unambiguous support for the current O’Connell Street station design and the MetroLink scheme generally”. The submission goes on to state that extensive pre-planning consultation with TII has taken place and that Dublin Central will not be prejudicial to MetroLink and vice versa. A Memorandum of Understanding is stated to have been agreed with TII to construct the enabling works to accommodate the MetroLink station. Mr Slattery reiterated his client’s support for MetroLink and in particular welcomed the positive contribution that it will make toward regeneration of the area

10.9.30. It is clear, with reference to the submissions by Dublin Central GP Ltd. and the recent grant of permission by the Board, which includes for the demolition of the same buildings on O’Connell Street and Moore Lane (including façade retention of the protected facades) and which includes construction of a subsurface structural box to facilitate the MetroLink station, that either scheme could progress first and independently of the other.

10.9.31. Managing the construction and the myriad of potential interfaces and interactions between the MetroLink station and the overhead commercial development will be complex and no doubt challenging. I note, therefore, the support for MetroLink expressed by Dublin Central GP Ltd. in both written and oral submissions and it

would seem that the two parties are working in lockstep, which should allow for the construction of the two projects to proceed in a timely and orderly manner.

10.9.32. Notwithstanding this, should the MetroLink station be constructed, but the Dublin Central scheme not proceed for some reason, there is a risk that the propped facades of the structures along O'Connell Street (including Protected Structures) and the hoardings to Moore Lane could be left in place for an extended period of time. I note in this regard that various development proposals have come and gone for this site over many years, and that parts of this site, including prominent sites along O'Connell Street itself, have been vacant for decades.

10.9.33. While it is difficult to see how this risk could be entirely mitigated, other than via TII acquiring the site outright and delivering the overhead development itself, or making it available to developers post-construction of MetroLink, I note that TII and Dublin Central GP Ltd. have, or are in the process of putting agreements in place. Ultimately, I consider that the presence of a metro station at this location would greatly enhance the desirability of the site from a development perspective and that the MetroLink project is likely here, as elsewhere, to act as a significant magnet for development given the high capacity and high quality nature of the transport link that it will provide. I therefore consider the significant benefits accruing from delivery of a MetroLink station at this site outweigh the potential negative impact.

10.9.34. Impacts on National Monument

10.9.35. Whilst not directly interacting with them, the O'Connell Street Station site, is in close proximity to the National Monument at 14-17 Moore Street and 8-9 Moore Lane (Ref. DU018-390). The buildings are of considerable historical and cultural importance, where they are associated with the 1916 Rising and Stephen Troy (Troy's Butchers) made submissions (S304, 1FS41, 2FS12) objecting to the impact of the development on the National Monument. The issue is addressed in detail in Section 11.21 and is thus addressed in summary here.

10.9.36. The EIAR states that the National Monument encroaches to within c.35m of the station's deep excavation and the assessment identifies that there is potential for building damage arising from vibration and settlement during construction. In view of this, TII proposes a scheme of vibration and settlement monitoring during construction, which will include a threshold limit that will necessitate a works

cessation in the event of any exceedance. TII further proposes that the section of Moore Lane to the rear of the National Monument will not be used as a haul route and that an exclusion zone will be agreed with DHLGH, together with erection of strong hoardings that will be maintained in place throughout construction. I am satisfied that these measures will provide a high level of protection for the National Monument during construction.

10.9.37. The DHLGH submission indicates that the potential for indirect impacts on these buildings during construction requires further consideration, but having considered the submission I am unclear what aspect of the development gives rise to such concerns, particularly as the submission elsewhere identifies the potential for significant indirect impacts and describes the applicant's mitigation strategy as 'appropriate'. DHLGH also did not raise the issue in their submission at the oral hearing. As I have outlined above, I am satisfied that TII has adequately considered the National Monument within the EIAR and that proposed mitigation will be effective in ensuring that there are no significant impacts during construction.

10.9.38. Mr. Troy also argues that the area of Moore Street, Moore Lane, Henry Place and O'Rahilly Parade satisfies criteria laid down by the High Court for preservation as a National Monument. Whilst I note the observer's submission and his high level of concern for this area, this broad area is not a National Monument and it is not within the Board's remit to give consideration to such a designation. The impact of the development on the 1916 streetscape is nevertheless addressed within the EIAR and a scheme of archaeological monitoring is proposed during construction in order to mitigate any potential impacts. I am satisfied that TII's approach will be effective in protecting this area during construction.

10.9.39. Impact on Businesses

10.9.40. Mr Troy (S304, 1FS41, 2FS12) who operates Troy's Butcher shop on Moore Street, opposite the junction with O'Rahilly Parade, expressed concern regarding the impact of construction traffic and dust etc. on his business, which has particular food safety and hygiene sensitivities given the nature of the business. He contended that the Luas Cross City construction works had devastated his business and had led to the closure of many neighbouring businesses along Parnell Street. Mr Troy makes

reference to a High Court case that he says he and other businesses have taken in relation to the impact of the Luas construction works on their businesses.

10.9.41. TII's response to the further submission from Mr Troy on this matter included a statement that "TII does not have a policy of compensation for local businesses for disruption during the construction stage, however other forms of assistance for local businesses during the construction stage will be explored. As with the installation of the Luas line throughout the city, TII believes that any short-term disruption to businesses during the works is offset by the eventual benefits of owning and operating a business in close proximity to a Luas, or in this case, MetroLink."

10.9.42. Further to this, I note the submission from Dublin Town (S266), which states that:

"Based on our experience, we believe that this project can be delivered on time and within budget with minimum disruption to the commerce and use of Dublin city centre. Footfall rose in Dublin city centre during the construction phase of the Luas Cross City Project. We believe that Luas Cross City had a greater potential for disruption than the underground metro system. We believe that co-operation between TII, contractors, Dublin City Council and the business community will provide a framework which will enable the city to continue to function during the construction phase of the project."

10.9.43. Large-scale construction works in a constrained urban environment unavoidably give rise to disruption, disturbance, noise and related impacts. The control of these impacts is primarily a matter of good site management and implementation of what are relatively standard good practice construction methodologies. Subject to the implementation of the CEMP and the Scheme Traffic Management Plan, I am satisfied that the impacts to businesses in the vicinity of the O'Connell Street Station can be mitigated and managed to an acceptable level. Key to the success of these measures will be effective monitoring and communication with affected stakeholders, including the sharing of monitoring data and detailed protocols for managing complaints. I have addressed the issue of public/stakeholder engagement in Section 9.6 above. In the specific case of Troy's Butchers, and noting the high levels of turning HGV movements at this location, I have recommended that a dust monitoring station should be provided and maintained in the vicinity of the junction of Moore Street and O'Rahilly Parade.

10.9.44. Troy's Butchers, in their submissions, also raised various other issues in relation to the Dublin Central scheme and its interface with the MetroLink proposal, including in relation to procurement and tendering of the Metro enabling works, alleged conflicts of interest at government level, and matters relating to the recommendations of the Moore Street Advisory Group regarding compensation of street traders during construction of the Dublin Central project.

10.9.45. I do not consider that these are matters that are within the remit of the Board in determining this Railway Order application.

10.9.46. Finally, in their second further submission (2FS12), Troys Butchers contend that a cumulative impact assessment with the Dublin Central project has not been undertaken. That is not the case – that project is addressed within the applicant's cumulative impact assessment, as updated at the oral hearing (Ref. OH98).

10.9.47. Other Issues

10.9.48. Other issues raised in the submissions relating to this area included:

- Public consultation and engagement: Addressed in Section 9.6.
- Groundborne and Airborne Noise and vibration: Addressed in Section 11.16 and 11.17.
- Dust and air quality: Addressed in Section 11.14.
- Construction traffic management: Addressed in Section 11.20.

10.10. AZ4(g) Issues: Tara Station and Tunnel as far as St Stephen's Green Station

10.10.1. I consider that the main planning issues in respect of area AZ4(g) are as follows:

- Tara Station.
- Loss of Markievicz Leisure Centre.
- Extent of property demolition.
- Future development at Tara Street.
- Impacts on basements / piles of permitted commercial developments.
- Impact on HSE National Drug Treatment Centre.

- Impacts on Trinity College Dublin.
- Impacts on State Institutions.

10.10.2. Tara Station

10.10.3. Tara Station is located to the south of the River Liffey within a triangle created by Tara Street, Townsend Street and the curved and elevated Dart line linking Connolly and Pease Stations. The surrounding area is a mix of offices and residential development, generally six to seven storeys high.

10.10.4. The proposed Station is a relatively standard cut and cover station. However, its construction will require the demolition of nearly all of the existing buildings in this triangle over the station box, comprising Ashford House (an office building on Tara Street/Poolbeg Street), a four-storey office building on Poolbeg Street, residential properties at 22 Luke Street and Nos. 24 and 26-32 on Townsend Street, and the College Gate apartment complex, which also houses the Markievicz Leisure Centre. The only building not proposed to be demolished is the Irish Times offices on Tara Street.

10.10.5. The primary driver for the location of Tara Station is its ability to provide a multi-modal interchange with Tara Street DART station and its proximity to Trinity College to the south.

10.10.6. Two standard canopy entrances are proposed at this station to cater for the large number of commuters forecast. The area directly above the station box will be developed as a public plaza area, accommodating the usual lifts, ventilation grilles, hatches etc. as well as cycle parking. Residual lands along Tara Street and Townsend Street are identified for future development, post-construction. The EIAR also identifies the potential for future food and beverage opportunities in the existing brick arches under the elevated Irish Rail line which will front onto the proposed plaza area.

10.10.7. A revised drawing was submitted at the oral hearing on 25th March 2024 (Ref. OH323) proposing modifications to this plaza. When I queried the reason for the proposed changes, the applicant stated that the changes were as a result of further engagement with DCC. A related brief document entitled Landscape and Visual Impact of the Proposed Design Changes at Tara Street (Ref. OH384) was submitted

at the oral hearing on 28th March 2024. The proposed modifications to the design of the plaza are described as follows:

- 2 No. additional skylights between the two station entrance structures (i.e. a total of 5 No. skylights are now proposed).
- Reconfiguration and rationalisation of paving patterns and associated planting areas within the main plaza area between Townsend Street and Poolbeg Street, resulting in an overall reduction in planting area (reduction of 358 sq m) and a reduction in proposed tree numbers from the originally proposed 31 No. trees to 17 No. trees.
- Adjustments to the adjacent Luke Street and Poolbeg Street in respect of paving and bike parking layout arrangements, with an increase of 358 sq m in paved area in order to achieve envisaged desire lines.

10.10.8. The LVIA document states that the proposed changes make no difference in respect of the Construction Phase and no change to the significance categories allocated in the original LVIA.

10.10.9. This area is not particularly visually sensitive and is currently in a state of transition, with numerous buildings in the area in the process of being redeveloped or with planning permission in place for redevelopment. Having reviewed the modified plaza layout, no particular additional planning issues arise, noting that the increase in paving over planting is appropriate to what will be a particularly busy commuter interchange location, and I consider it to be of suitably high quality for this location.

10.10.10. This area of the city currently has a relatively hostile road traffic dominated environment with a notable lack of open space. The creation of a landscaped plaza area around the metro entrance will have a positive impact on the streetscape and will be a positive addition to the area for public transport users, local residents and others. I consider that the combination of the plaza and the rebuilding of urban fabric at an appropriate scale on residual lands will also allow for the creation of a high quality urban plaza at what will be a particularly accessible city centre location.

10.10.11. With regard to the surrounding streets, Tara Street is a major vehicular route through the city, while the other streets are relatively small and appear to receive relatively little vehicular use, other than acting as access or service routes. It is

proposed to enhance the pedestrian/cyclist environment in the vicinity of the station by reducing Poolbeg Street to one lane westbound, by turning Luke Street into a shared space and by reducing Townsend Street to one lane eastbound in front of the MetroLink southern entrance, although the western portion of the street will remain two-way in order to maintain access/egress to/from the Dublin Fire Brigade Headquarters on Townsend Street. I consider these elements of the proposal to be acceptable in terms of enhancing pedestrian/cyclist safety and amenity and creating a traffic calmed perimeter to the MetroLink station.

10.10.12. The issue of alternative station designs and construction methodologies, particularly a mined station alternative that could preserve the existing buildings overhead, were among the key issues at this location. I have addressed this issue in Section 11.4 where I conclude that the applicant has provided adequate justification for not pursuing the mined station option in terms of both construction and operational matters and that the need to provide a high quality metro station at this key city centre interchange location and to adequately reduce construction risk, including environmental and human health risks, is supportive of the chosen open cut station box option.

10.10.13. The Board should note that this site features a number of important constraints, including the DART line, the important role of Tara Street as a vehicular traffic route through the city and the presence of the Townsend Street Sewer, a 100-year-old, brick-lined sewer with an internal diameter of 8 foot, located c. 5.6m below ground level.

10.10.14. While the standard canopies, lifts, skylights and plaza design are all acceptable, in my opinion the quality of the proposed interchange between the MetroLink Station and the existing Tara Street DART station is somewhat poor. Rather than a direct interchange via an escalator/lift within the metro station into the DART station, it would be necessary to exit onto the street, walk across the plaza and into the DART station. Iarnród Éireann (IÉ) and CIÉ did not appear at the oral hearing and no agreement between the parties was submitted to the Board. The IÉ submission (S121) primarily sought that TII minimise impacts on their infrastructure and agree construction and operational matters with them, which TII undertook to do. In relation to the interchange issue, IÉ stated that “should any interchange connection be proposed between Metrolink and Iarnród Éireann’s Dart / commuter

rail services, the impacts of such design, construction and / or operations on Iarnród Éireann operations at Tara Street Station will require further discussion and agreement with Iarnród Éireann". TII's response was that "such an interchange does not form part of the MetroLink Railway Order Application. TII are available to discuss a future interchange connection at the appropriate time".

10.10.15. Given the extent of demolition works and site clearance proposed at this location, effectively creating a blank slate, and given the scale and ambition of the project, it is surprising that TII and IÉ have not collaborated on the development of a seamless interchange between one of the busiest railway stations in the country and what would be one of the busiest metro stations. I note in this regard that Measure INT5 of the GDATS states:

"It is the intention of the NTA, in conjunction with TII, Irish Rail, local authorities, and landowners to deliver high quality major interchange facilities or Mobility Hubs at appropriate locations served by high capacity public transport services.

These will be designed to be as seamless as possible and will incorporate a wide range of facilities as appropriate such as cycle parking, seating, shelter, kiosks selling refreshments plus the provision of travel information in printed and digital formats."

10.10.16. Having said that, it must also be accepted, given the elevated location of the Irish Rail station, that there would clearly be challenges with engineering an entirely seamless interchange. It is also of note that Section 12.4.13 of the GDATS states that:

"...a major upgrade of Tara Station will be undertaken to facilitate enhanced interchange between MetroLink and the DART network."

10.10.17. This is supported by Measure 'RAIL7 – Station Upgrades':

"The NTA, in conjunction with Irish Rail, will upgrade, refurbish and maintain train stations across the GDA to ensure that they are of an appropriate standard and provide a good quality experience for passengers."

10.10.18. While it is unfortunate that a more integrated MetroLink/DART interchange has not been proposed in this application in partnership with IÉ, as is typically found

in modern metro systems in other European cities, I am satisfied that what is proposed in this application is adequate and will allow for a reasonably high quality of interchange. I note that a micro-simulation VisWalk model has been developed for Tara Station, as detailed in Appendix A9.2-O, which indicates that the proposed design is expected to perform with an acceptable level of service, while the proposed plaza offers a high level of service regarding pedestrian routing with the widening of Townsend Street footpaths facilitating improvements to pedestrian congestion and the crossings at this location.

10.10.19. The existing Tara Street Station is currently somewhat decrepit, belying its importance as a key city centre DART and commuter rail station and I consider that its future upgrade, as per the GDATS, will provide future opportunity for enhanced connectivity to the MetroLink station and improved passenger experience.

10.10.20. In conclusion, I consider the design of Tara Station and its surrounding plaza area to be acceptable.

10.10.21. Loss of Markievicz Leisure Centre

10.10.22. As detailed above, it is proposed to acquire and demolish the Markievicz Leisure Centre, which is located within the College Gate apartment building, in order to construct the Tara Station. This leisure centre is clearly a valuable community amenity, being one of the only public leisure centre and swimming pool facilities in the city centre.

10.10.23. Dublin City Council, the owner of the leisure centre, have expressed their support for the MetroLink project. However, numerous observers, including individual users of the facility and groups such as the CMCCG Action Group (S292) and the Save Markievicz Pool & Gym Campaign (S276), have expressed their opposition to its demolition. They generally contend that the demolition is not necessary and that alternatives, such as a mined station, are available. I have addressed the issue of alternatives for Tara Station in Section 11.4.

10.10.24. While Dublin City Council are working on proposals for a replacement facility, it appears from their submission to the oral hearing on 19th February 2024 that the new facility will likely be at Irishtown Sports Centre.

10.10.25. While the EIAR stated that the loss of the leisure centre would be mitigated by the replacement facility, errata presented at the oral hearing (Refer to final Schedule of Errata OH374) state that TII has no control over the delivery of any leisure facility, that it would be brought forward and developed by DCC, and that the Board should not take it into account as a mitigation measure. Therefore, in terms of land use impact, the impact would be significant and in terms of land take, it would be a profound impact.

10.10.26. The proposed loss of the leisure centre is a particularly notable and regrettable aspect of the proposed development, given the paucity of such public facilities in the city centre. It is unfortunate that no comparable site has been identified in the city centre, and any replacement facility is likely to be at a greater remove from the city centre.

10.10.27. Ultimately, however, I consider that the negative impacts associated with the loss of this valuable community facility (and ignoring the possibility of a future replacement facility at an alternative location) are outweighed by the significant long-term positive impacts of providing a metro station at this particularly strategic city centre location which allows for interchange with DART and commuter rail at the Tara Street train station to enhance the integration of the public transport network, and which is surrounded by a rapidly evolving and relatively high density mixed use district.

10.10.28. Extent of Property Demolition

10.10.29. The most notable aspect of the proposed Tara Station is the quantum of urban fabric that will be acquired and demolished to deliver the station, as detailed above. In particular, the proposed compulsory acquisition and demolition of 78 No. housing units at this location, including the 70 No. apartments within the College Gate apartment complex in the midst of an ongoing chronic housing shortage in Dublin is particularly regrettable. Written and oral submissions were made by a number of investor-owners and owner-occupiers of the apartments within the College Gate complex (S17, S38, S61, S77, S103, S147, S158, S177, S184, S201, S206, S285, S294, S308, OH255, OH256 and OH257) as well as the management company (S302, OH255), objecting to the proposed acquisition. The issues raised

were primarily CPO related, as well as matters relating to compensation and the tax treatment for investor-owners which are outside the remit of the Board.

10.10.30. Submissions were also made by a number of residents of the DCC properties on Townsend Street, opposing the demolition (see S4, S178, S179, S195). These residents again raised the issue of alternatives that would avoid demolition, express concerns regarding the loss of community as well as the individual loss and uncertainty regarding the rehousing location. In the case of Aine Wellard (S4), who is visually impaired, in her written and subsequent oral hearing submission on 20th March 2024, she outlined the high quality of life, amenities and sense of community that she currently enjoys, having been a resident for 28 years in a DCC dwelling that she has adapted to her needs at her own expense.

10.10.31. As detailed above and in Section 11.4, I am satisfied that a considerable number of alternatives to the demolition and construction of a cut and cover station were comprehensively considered and that the applicant has adequately justified the option chosen.

10.10.32. The compulsory acquisition of properties is clearly a significant to profound negative impact for the affected owners and occupiers, and this is addressed in respect of individual owners/occupiers in the relevant sections of the EIA and CPO parts of this report. Ultimately these impacts cannot be mitigated, with private owners instead compensated for the loss of their property and tenants of the DCC properties rehoused by the local authority. I note in this regard, that 'condition' No. 2 of the agreement between TII and DCC (OH76) contains a commitment that TII will continue to liaise with DCC on all aspects of the relocation of the residents of Luke Street and Townsend Street (specifically 23 and 34 Luke Street and 25-32 Townsend Street).

10.10.33. This is a difficult case for the Board to determine, with the number of properties to be acquired likely to be unprecedented in recent times. On balance, however, I consider that the long-term benefits for the city and Greater Dublin Area of providing a metro-rail interchange station at Tara Street, which will substantially strengthen and integrate the public transport network outweighs the significant and profound impacts on individual property owners and the users of the leisure centre.

10.10.34. In relation to the housing issue more generally, the provision of a new high capacity public transport system is likely to have a significant positive impact on the ability of suitably zoned and serviced lands within a broad corridor to be brought forward for residential development and to accommodate more dense forms of development in the vicinity of MetroLink stations and thus in the operational phase it is likely to be a key tool in seeking to address Dublin's housing shortage.

10.10.35. In relation to Ashford House, the large office building at the junction of Tara Street and Poolbeg that it is proposed to acquire and demolish, I note that a detailed submission was initially made by Alstead Securities Ltd. (S5), but a letter was subsequently submitted during the oral hearing on 28th February 2024 on behalf of the observer, stating that agreement has been reached with TII in relation to the issues of concern to them and that they support the MetroLink project. While the loss of this relatively modern and high quality office building is also regrettable, I am satisfied that it is necessary to deliver the Tara Station. It is also of note that, following construction, part of the lands will be available for future redevelopment.

10.10.36. In conclusion, having regard to my consideration of the design of Tara Station and issue of alternatives, I am satisfied that the extent of property demolition proposed at this location is necessary and justified.

10.10.37. Future Development at Tara Street

10.10.38. Following completion of MetroLink construction, sizable plots of land will be left around the station plaza, which are identified for future development. The operational phase photomontages show hoardings around these future development areas.

10.10.39. A number of submissions contend that TII effectively has an ulterior motive in seeking to acquire excess lands to be resold in the operational phase, when the land value has increased. I note from the construction phasing information and structures drawings that the entirety of the lands to be acquired at this location are required for construction of the station. This necessitates their permanent acquisition and the demolition of the buildings thereon. While some of the acquired lands will subsequently be available for future redevelopment post-construction, I do not consider that there is any evidence before the Board that this is the applicant's intent in seeking to acquire the lands.

- 10.10.40. Given the location of these residual lands adjacent to MetroLink and DART stations, in what is a rapidly evolving urban environment, there is clearly significant development potential on these lands, subject to planning permission. Given the highly accessible and central location of these lands, any such development would be consistent with transport oriented development and compact growth policies.
- 10.10.41. Impacts on Basements / Piles of Permitted Commercial Developments
- 10.10.42. Esprit Investments Ltd. made a written submission (S88) and subsequently an oral hearing submission (Ref. OH97) on 28th February 2024 by John Spain Associates and Arup Engineers. The submissions relate to lands that they own south east of the proposed Tara Station, extending between Pearse Street and Townsend Street and through which the elevated Irish Rail line passes. There is extant permission on the site for an office development (Reg. Ref. 2877/21, 4778/19). During the planning process, Esprit state that they engaged with TII regarding piling proposals for their site and having agreed the piling depths, they have since constructed the piles. They express concern that the original 5m upward Limit of Deviation proposed for the tunnel could conflict with their piles, if availed of. They note the proposed reduction to 1m, as presented by TII at the oral hearing and incorporated into the updated Draft Railway Order and stated that this addressed their concerns and asked that it be required by way of condition.
- 10.10.43. In response, the applicant's legal advisor stated that there was no need for a condition, as the 1m upward limit on the LoD have been incorporated into the updated Railway Order. I agree with this, and subject to the confirmation of the Draft Railway Order as revised and updated at the oral hearing, I do not consider that a specific condition is required in relation to this matter.
- 10.10.44. A written submission was also made on behalf of Tanat Ltd. by John Spain Associates and CS Consulting (S287), in relation to a site bound by George's Quay to the north, Tara Street to the west and Poolbeg Street to the south (adjacent to Tara Street Train Station). Permission was granted on the site for a 22 storey hotel and office building (ABP-302980-18; Reg. Ref. 3794/18) with a number of subsequent amendments (Reg. Ref. 4054/19; ABP-308481-20; Reg. Ref. 4365/20). I noted from my site inspection that the site has been cleared but no aboveground

works have been undertaken. I will assume that the permission has not expired for the purposes of this assessment.

10.10.45. The proposed alignment passes under the site, adjacent to the proposed Tara Station. The submission supports MetroLink but notes the original 5m LoD sought and expressed concerns regarding potential clashes between the tunnel and their permitted basement level and concrete raft foundation, or increased groundborne noise, vibration and settlement impacts on the building, should the LoD be utilised. They sought assurances that MetroLink would not impede their ability to construct their development.

10.10.46. Tanat Ltd. and their engineers have liaised with TII and the NTA in relation to the interface between the MetroLink and their permitted development. Copies of correspondence were included in the submission, and it appears that both parties were satisfied that the construction of each project was compatible with the other.

10.10.47. In response to Tanat Ltd., TII confirmed the position outlined by Tanat, stating that “as has been discussed and documented between TII and Tanat, the two projects are compatible and hence the basement can be built, operated and maintained.”

10.10.48. No further written or oral submissions were made in relation to this site and noting the further upward restriction of 1m on the LoD as detailed above, I am satisfied that there is no reason to form a view that the MetroLink development would prejudice the delivery of the Tanat Ltd. development.

10.10.49. Impact on HSE National Drug Treatment Centre

10.10.50. A submission was made by the HSE in relation to the National Drug Treatment Centre, which is located in a five storey 1970s building at 30/31 Pearse Street and incorporates a laboratory on its third floor which is used for drugs screening for drug treatment services nationwide. The laboratory includes sensitive scientific equipment, including microscopes and a High Performance Mass Spectrometer.

10.10.51. The submission was accompanied by a report from O'Connor Sutton Cronin engineers, outlining that the MetroLink would pass under 30/31 Pearse Street at a depth of c. 15-16m to crown of tunnel and that the HSE have concerns regarding

settlement, construction and operational groundborne noise and vibration and they seek that floating track slab be provided together with a trigger action plan and monitoring. They request that conditions be attached regarding these matters.

10.10.52. TII, in response, noted that a conservative Phase 2a assessment undertaken on this building (identified as B49 in Appendix A5.17) predicts Negligible impacts due to the predicted settlement and that a Phase 3 assessment is not, therefore, required. They state that dewatering at Tara Station will be internal to the station box, minimising external drawdown and thus settlement. In relation to construction phase groundborne noise, they note that this will be related to TBM passage and will occur over c. 2 weeks. In the operational phase, they outline that no significant groundborne noise or vibration will occur at this location.

10.10.53. No further written or oral submissions were made by the HSE.

10.10.54. The issues of settlement, groundborne noise and vibration etc. are addressed elsewhere in this report. Subject to implementation of mitigation measures and appropriate monitoring and communications, I am satisfied that there is not likely to be any significant disruption or impacts on the NDTC or its operations, other than potentially for 2-3 days as the TBM passes under the building.

10.10.55. Impacts on Trinity College Dublin

10.10.56. The proposed MetroLink alignment continues southward from Tara Station under Trinity College Dublin (TCD). TCD made a very detailed initial written submission (S303) raising a wide variety of issues and seeking changes to the alignment. Subsequently, at the oral hearing on 6th March 2024, a letter was submitted from TCD confirming that agreement had been reached with TII in relation to the issues of concern to them and that they supported the project (Ref. OH184).

10.10.57. In their initial submission TCD had identified various issues regarding potential impacts on sensitive scientific equipment, due to electromagnetic interference, groundborne noise and vibration etc. Resolution of these matters may involve some technically complex mitigation at source and possibly at receptor. It is to be welcomed that TCD and TII have reached agreement on the matters of concern to the University, and I do not consider that the Board needs to involve itself in the detail of these matters. Subject to standard building damage and settlement

controls and monitoring, as addressed elsewhere, I do not consider that any other issues arise with respect to TCD.

10.10.58. Impacts on State Institutions

10.10.59. Continuing southward from TCD, the alignment passes under a large primarily State-owned block of land bound by Kildare Street to the west, Nassau Street to the north, Merrion Street to the east and extending towards St Stephen's Green north. This block of land houses a variety of important State institutions, including Leinster House, the National Gallery, the National Library, the National Museum of Archaeology, Natural History Museum, Government Buildings complex and the Department of Agriculture, Food and the Marine.

10.10.60. The OPW made detailed written submissions in relation to each of these sites and as detailed elsewhere in this report, they subsequently reached agreement (Ref. OH73) with TII in relation to matters of concern to them (with the exception of St Stephen's Green, which is addressed below).

10.10.61. The agreements provide for liaison between TII and the OPW in relation to matters of concern to them, and various commitments in relation to environmental impacts including settlement, groundborne noise and vibration, access, groundwater monitoring, provision of floating track slab in certain areas and other matters such as security and avoidance of disruption to the institutions.

10.10.62. OPW had raised concerns regarding any potential additional intervention/evacuation shafts within these State-owned lands, however TII have confirmed that none are required.

10.10.63. Subject to incorporation of the OPW agreement in the Thirteenth Schedule of the Railway Order, I do not consider that any specific issues arise with respect to these lands and the institutions and buildings thereon.

10.10.64. Other Issues

10.10.65. Other issues raised in the submissions relating to this area included:

- Public consultation and engagement: Addressed in Section 9.6.
- Need for the project: Addressed in Section 9.3.
- Alternatives and route selection: Addressed in Section 11.4.

- Settlement and property damage: Addressed in Section 9.10.
- Groundborne and Airborne Noise and vibration: Addressed in Sections 11.16 and 11.17.
- CPO issues relating to College Gate Apartments and DCC housing: Addressed in Section 12.
- Accessibility of documents for visually impaired people: Addressed in Section 9.26.

10.11. AZ4(h) Issues: St Stephen's Green Station and Tunnel as far as Charlemont Station

10.11.1. I consider that the main planning issues in respect of area AZ4(h) are as follows:

- St Stephen's Green Station and impact on the park.
- Impacts on Commercial Buildings in Vicinity of St Stephen's Green / Earlsfort Terrace
- Impact on Harcourt Terrace Properties.
- St Stephen's Green as the MetroLink Terminus.

10.11.2. The principle issues raised in this area related to the proposed St Stephen's Green Station, its impact on the park, and the issue of alternatives, including an alternative location at St Stephen's Green West, adjacent to the Luas station, an alternative entirely under the roadway of St Stephen's Green East or a mined alternative that it is contended could be less impactful on the park. Another alternative proposed at this location was that the MetroLink should terminate at St Stephen's Green, to better facilitate a future south western extension.

10.11.3. Other than St Stephen's Green Station, the remaining issues in this area primarily related to the impacts on tunnelling and construction works on a number of office buildings in the vicinity of St Stephen Green and Earlsfort Terrace and impacts on buildings at Harcourt Terrace.

10.11.4. St Stephen's Green Station and Impact on the Park

10.11.5. The proposed St Stephen's Green Station is located on the eastern side of St Stephen's Green, partially under the park and partially under the pavement and

roadway of St Stephen's Green East. The principal drivers of the locational arrangement are stated to be the desire to minimise the impact of the station on both St Stephen's Green East roadway (an important bus corridor) and the Park, while allowing Hume Street to remain open during the main construction phase and avoiding the need to divert a major foul sewer.

10.11.6. St Stephen's Green park is a Recorded Monument, a National Monument and a Protected Structure and it also contains a number of additional Protected Structures, including the perimeter railings, gates and plinth walls, surrounding bollards and lamp-posts. The Wolfe Tone monument and Famine Memorial are both listed on the NIAH and are stated to be of Regional importance. The Green is also located within a designated Conservation Area, under the Dublin City Development Plan 2022-2028.

10.11.7. In addition to these designation, St Stephen's Green has a relatively unique legal status, with its use as a public park being subject to legal protection under the St Stephen's Green (Dublin) Act 1877. I have addressed that issue in Section 9.17, 'legal and procedural matters', where I note that the relevant section of the 1877 Act has been disapplied by the Dublin Transport Act 2008 for the purposes of railway works on or under St Stephen's Green, pursuant to a Railway Order.

10.11.8. The station construction would be a standard top-down cut and cover station box, c. 115m long and 24m wide, and aligned north – south. The station box is roughly half within the park and half under the wide footpath outside the railings. It features just one entrance canopy structure, located at the northern end of the station box, within the north eastern corner of the park. Currently, this corner comprises a plaza area enclosed at the rear by a curved sculptural wall of vertical granite columns with the Wolfe Tone statue to the front and the Famine Memorial to the rear. The park is surrounded by iron railings on granite plinths with granite piers, granite perimeter bollards and the park features a range of mature trees and vegetation at the location of the proposed station.

10.11.9. The surrounding area comprises buildings from a wide range of periods, including many 18th or 19th century buildings, as well as a number of mock-Georgian 20th century buildings. The buildings are primarily in office or other commercial use and a notable receptor to the north is the Shelbourne Hotel.

- 10.11.10. Construction of St Stephen's Green Station will result in substantial excavation within the park, requiring the removal of all trees and vegetation above the station footprint and the temporary removal of various heritage items, such as the railings, plinths, granite bollards, paving, piers etc. which will generally be reinstated in their current location. An exception to this is the Wolfe Tone/famine monument, which will be relocated further into the park.
- 10.11.11. The proposed reinstatement of landscaping includes a mix of similar tree and shrub species to those existing and the use of both very large specimen trees and smaller specimen trees to re-establish the area as quickly as possible. The station will be slightly deeper than other underground stations, to allow for 2m depth of overlying soil for these replacement trees.
- 10.11.12. The surface expression of the MetroLink station is the standard entrance canopy, which will be located within the footprint of the park, along its eastern edge and angled slightly to the west. A passenger lift will also be placed within the park footprint as well as various ventilation inlets, grilles etc. Further emergency exits, vents, cycle parking and the DFB lifts will be placed on a widened St Stephen's Green East footpath. Notably, this station does not include any sky lights which I consider this to be appropriate, given the importance and sensitivity of the park and the need to minimise intrusions into the park.
- 10.11.13. A number of heritage bodies have outlined their opposition to the St Stephen's Green Station, as proposed, including DHLGH (S63), the OPW (S239, OH42, OH71) and the Heritage Council (OH249). Other relevant submissions outlining the importance of St Stephen's Green and raising concerns regarding the impacts of the MetroLink proposal on it include Frank McDonald (S99, OH365), Bernard Seymour (S20, OH269) and Colin Torpay (S47).
- 10.11.14. Conversely, in a submission to the oral hearing on behalf of An Taisce on 19th February 2024, Ian Lumley stated that "in terms of the impact on the historic city centre, at least we are not dealing with the very problematic impact on St Stephen's Green in the previous Metro North application that did not proceed".
- 10.11.15. In terms of the most recent submissions the heritage bodies, I note the further submission from the DHLGH following the oral hearing (1FS17), which states that in

regard to all other matters (i.e. with the exception of Lissenhall Bridge in Swords), the Department's original observations are unchanged.

10.11.16. The OPW, in their further submission (1FS36), state that:

"The OPW reiterates its position as set out in the submissions made to the Board in January 2023 in respect of St Stephen's Green. While the OPW supports the objective of modern Metro infrastructure for Dublin and the State, the OPW is also of the view that delivery of such infrastructure cannot be at the expense of Ireland's national heritage. St Stephen's Green is Ireland's oldest and best-known urban public park. It holds significant historical and legal status, being a National Monument protected under various acts, including the 1930 Act and the upcoming 2023 Act. The OPW acts on behalf of the relevant Minister in the operation, care and maintenance of St Stephen's Green Park. For that reason, the OPW shares the concerns of our colleagues in the Department of Housing, Local Government, and Heritage that the proposed station location would have a direct, severe, negative, profound and permanent impact on the heritage value of the Green. As presented, the proposals would not seem sufficiently sympathetic to the history and environment of the spaces within and around the Green. The OPW urges the Board, when considering any Railway Order Application, to consider also the unique, inherent importance of St Stephen's Green Park to the people of Dublin and in light of the specific legal protection identified above. Consistent with the OPW's statutory functions, it is respectfully submitted that the Board should consider whether any modifications to the railway order or conditions would reduce the environmental impacts on St Stephen's Green."

10.11.17. The OPW ask the Board to note that the 'The Unagreed proposed St Stephen's Green Railway Order Conditions' (Ref. OH74) remain not agreed. In response, TII state that "it is our understanding that An Bord Pleanála, if granting a Railway Order which consents the construction of a station at St Stephen's Green, is urged by both OPW and TII to incorporate the 'Unagreed proposed St Stephen's Green Railway Order Conditions'".

- 10.11.18. While OPW have noted that the proposed 'conditions' are not agreed, they have not stated that they do not want them attached to a RO, should the Board decide to grant it. I note that the legal submission (Ref. OH71) made on David Browne SC on the OPW's behalf at the oral hearing on 26th February 2024 stated that "it is a matter for the Board whether to attach the conditions proposed by TII in respect of St Stephen's Green".
- 10.11.19. The issue of alternative station locations (such as St Stephen's Green West or fully within the roadway of St Stephen's Green East) and alternative construction methodologies (such as a mined option to avoid the impacts on the park) were among the key issues raised in submissions with regard to this station. I have addressed these alternatives in Section 11.4, where I conclude that I am satisfied that the applicant has provided a clear and adequate justification for their chosen option at St Stephen's Green East, with reference to environmental matters.
- 10.11.20. With regard to the potential impacts of the proposed development in terms of heritage impacts and landscape and visual impacts on St Stephen's Green, I refer to my detailed assessment contained in Sections 11.21 and 11.22 of this report, respectively, which I do not propose to repeat here.
- 10.11.21. With regard to architectural and cultural heritage, I have concluded that the proposed development will result in a very significant adverse impact on the setting and character of the protected structure and National Monument at St Stephen's Green during the construction phase, arising from the scale of clearance and excavation works proposed and the required presence of construction elements within the park for prolonged periods. I also conclude that there will be a very significant adverse impact on the setting and character of the protected structure and National Monument at St Stephen's Green during the operational phase, arising from the provision of station elements within the park and the limited effectiveness of the proposed landscaping in restoring the landscaped eastern boundary of the park.
- 10.11.22. I have previously outlined the suite of Dublin City Development Plan policies that are relevant to the issue of preservation and protection of protected structures. In view of my assessment, and notwithstanding the implementation of proposed mitigation measures, I am of the view that the proposed development is inconsistent

with Policies BHA2 (development of protected structures) and BHA9 (conservation areas).

- 10.11.23. With regard to archaeological heritage of St Stephen's Green, in view of my assessment, and again notwithstanding the implementation of proposed mitigation measures, I am of the view that the proposed development is inconsistent with Policy BHA26 (archaeological heritage).
- 10.11.24. With regard to landscape and visual impacts, I have concluded that there will be significant adverse impacts at St Stephen's Green in both the construction and operational phases, due primarily to the loss of the mature planting within the park and the length of time that it will take for new landscaping to reach comparable levels of maturity to what currently exists.
- 10.11.25. The proposed St Stephen's Green Station is a particularly difficult aspect of the proposed development for the Board to determine, given the importance of St Stephen's Green park to the city in terms of architectural, social and cultural heritage as well as its amenity value.
- 10.11.26. It is clear from the submitted information that the construction of the proposed station will be extremely detrimental to the integrity, character and heritage value of the park, particularly during the lengthy construction phase. However, the damage that the construction of the station will do to the park must be balanced against the long-term strategic importance of providing a metro station at this core city centre location, which will be hugely significant for the city and which will be one of the busiest stations.
- 10.11.27. As detailed in Sections 11.21 and 11.22, it is important to note that St Stephen's Green is not frozen in time and that it has continuously evolved since it was originally set out as a public park, with additions such as the Wolfe Tone and famine sculptures and Fusiliers Arch and the construction of structures within the park such as the bandstand, park-keeper's cottage, playground and maintenance building. Similarly, the vegetation within the park is not in a state of stasis and varies with the seasons and the natural lifespan of plants and trees. I note that the historic photos submitted by the OPW and Bernard Seymour demonstrate the quite different and considerably less mature appearance and character of the Green at that time.

10.11.28. I consider that the felling of trees and removal of existing vegetation, while highly regrettable, is acceptable on balance. The proposed replacement planting is of high quality and includes both large specimen semi-mature trees as well as younger trees and under-canopy planting. While the replacement planting will take decades to reach similar levels of maturity to what currently exists, I consider that the amenity value of the park will be substantially restored and that the obvious difference in the age of the planting in this area, compared to other areas of the park, will become another part of the history of the Green and will be viewed and understood by future visitors to the park in the context of the sacrifices that were required to deliver a metro station in this central location. Over time, the impacts and scarring of the park will lessen and become less apparent. I do, however, accept Mr Seymour's point that the replacement planting may never fully reach the same level of maturity as that which exists due to the reduced soil depth above the station box.

10.11.29. While there will be significant adverse impacts on the park, among the most important considerations in my view are that the historic stonework and ironwork elements of the park will be reinstated, that extensive replacement landscaping of a high standard will be provided, and that the use of the land as a public park will continue (with the exception of the footprint of the station canopy, lift and various vents and grilles, all of which are located in what are currently relatively inaccessible areas of the park).

10.11.30. As noted above, St Stephen's Green Park is the only OPW property which is not part of the agreement between TII and OPW which was submitted at the oral hearing (Ref. OH73), although TII submitted a draft schedule of 'unagreed' proposed conditions relating to St Stephen's Green Park (Ref. OH74) with the OPW stating that it is a matter for the Board whether to attach them.

10.11.31. Having reviewed the content of the document Ref. OH74, I consider that it would be appropriate to attach it by way of condition, should the Board decide to grant the RO³⁵. The document makes various commitments regarding minimising the impacts on the operation of the park during construction and working with the OPW in relation to protection of its features and other matters. While it is not agreed with OPW, it will provide the OPW with greater input in relation to the construction and

³⁵ As it is not agreed with OPW, I recommend that it not be included in the Thirteenth Schedule.

operation of the station within this important park and in terms of ensuring that the impact on the remainder of the park is minimised.

10.11.32. It is also of note that the Board previously granted a Railway Order for the previous Metro North development, which also included a station at St Stephen's Green, albeit at the north western corner of the park, including the dismantling and temporary removal of the Fusilier's Arch entrance to the park and extensive excavation within the park. As noted above, An Taisce considered the previous Metro North proposal to be more problematic than the proposal now before the Board.

10.11.33. Finally, as St Stephen's Green is a National Monument, the Board should note that TII will be required to obtain prior Ministerial consent for any works or disturbance affecting the park, under the provisions of the National Monuments Act 1930, as amended or the Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 (whichever is applicable at the time). It is an option open to the Minister to refuse to provide such consent to TII, and while this is a matter outside the Board's remit, I consider that it provides for a welcome further layer of protection, scrutiny and oversight of the proposed works and potential impacts on the park.

10.11.34. In conclusion, while the proposed development at this location will have significant adverse impacts on St Stephen's Green with regard to heritage and landscape and visual impacts, and is inconsistent with Policies BHA2, BHA9 and BHA26 of the Development Plan, I consider that the applicant has adequately justified the proposal and that the long-term benefits to the city of providing a metro station in what is a particularly accessible and central part of the core city centre outweighs these significant impacts on the park. I consider that the amenity value of the park to the city and its residents and visitors will be reinstated in the operational phase and that the reinstatement of the heritage features such as railings and statues and the replacement planting proposed will, over time, reduce the impacts on the park.

10.11.35. I therefore, consider that the St Stephen's Green Station, as proposed, is acceptable.

10.11.36. Impacts on Commercial Buildings in Vicinity of St Stephen's Green / Earlsfort Terrace

10.11.37. A number of submissions were received regarding the potential impacts of the proposed development on large office buildings on or in the vicinity of St Stephen's Green and Earlsfort Terrace. These included Earlsfort Basin Ltd. (S80), Core Capital (S53), Hibernia Real Estate Group Ltd. (S116), Hines Real Estate Ireland Ltd. (S117) and Irish Life Assurance PLC (S129, S130, S131, S132). Similar submissions were also made on behalf of Earldev PUC (S79) and Jerdip PUC (S140) in relation to a building known as the Arthur Cox building, but these observers subsequently submitted letters at the oral hearing stating that agreement had been reached in relation to the issues of concern to them and they support the proposed development (Ref. OH277, OH278).

10.11.38. The submissions all relate primarily to groundborne noise and vibration (construction phase and operational phase), settlement and property damage, and implications for future development potential. Comprehensive oral hearing submissions, including expert legal and engineering input, were made on behalf of a number of the above observers.

10.11.39. A written submission (S165) was also made on behalf of KW Real Estate ICAV in relation to the Shelbourne Hotel, which they state that they own. The hotel, at Nos. 27-34 St Stephen's Green North, would be directly opposite the MetroLink station entrance and the tunnel would pass under the hotel. The submission states that they support the MetroLink project but seek to ensure that it is constructed within minimal disruption to their hotel and guests. The hotel's concerns primarily relate to groundborne and airborne noise and vibration, dust, temporary traffic management and accessibility of the hotel during construction and a desire that the site compound be managed and maintained in an orderly way so as not to detract from the setting of the hotel.

10.11.40. I have addressed the issue of over-site development in Section 9.20 of this report. I note that the presence of the MetroLink tunnel under a site or building would not prohibit over-site development, subject to consultation with TII and consideration of loadings and foundation details. I note that, in response to the submissions that raised this issue, TII stated that they have "successfully engaged with a number of developers over the last two years to accommodate development over and in proximity to the alignment and there have been no material restrictions on development subject to the implementation of agreed design and mitigation

measures and it is not anticipated that MetroLink will have a material impact on the development potential of sites above and in proximity to the alignment in future”.

10.11.41. Groundborne noise and vibration is addressed in detail in Section 11.17 of this report. I consider that properties directly over or close to the tunnel alignment are likely to experience significant groundborne noise arising from TBM passage for a short period of c. 2 weeks and that this impact cannot be mitigated. Advance communication will lessen the effect of the impact on the office buildings, by allowing them to plan for this period accordingly. In the operational phase, I am recommending that the same groundborne noise limit should apply for office buildings as for residential properties, on foot of advice from Tyréns. I therefore consider that there will not be a significant groundborne noise impact on any of these properties in the operational phase.

10.11.42. With regard to the issue of settlement and property damage, there was much discussion at the oral hearing regarding these matters, particularly with regard to façade treatments, glazing and basement waterproofing, with submissions made by Barristers, engineers and façade specialists on all sides.

10.11.43. These are clearly a number of high quality office buildings in the St Stephen's Green and Earlsfort Terrace area, with extremely sensitive facades with a very low tolerance for settlement including, in particular, AerCap House and the Cadenza Building.

10.11.44. It appears that there was somewhat of a failure in the baseline surveying in this area, with the applicant failing to correctly identify the buildings and their sensitivities, such as the depth of the piles, the sensitive facades and the anti-flotation ground anchors, and instead assessing the impacts on buildings long since demolishing.

10.11.45. In order to avoid a clash with these buildings and their piles/anti-flotation anchors, the applicant proposed lowering the tunnel alignment by up to 5m between St Stephen's Green Station and Charlemont Station. The lowered tunnel can be seen in the drawings submitted on 6th March 2024 (Ref. OH185 and OH186). An EIAR Addendum relating to the tunnel lowering was submitted on the same day (Ref. OH193). Importantly, I note that the proposed lowering of the vertical alignment of the tunnel remains within the Limits of Deviation set out in the Railway Order.

- 10.11.46. A consequence of the proposed localised lowering of the tunnel is that it introduces a new low point, which necessitates the provision of a sump pumping station. This comprises a chamber excavated out the side of the tunnel, which would entail the local breaking out of the tunnel lining, use of excavation machinery and sprayed concrete lining works. Such works introduce an additional settlement risk and the applicant has therefore proposed to locate this pumping station under the public road at Hatch Street, rather than under any occupied buildings.
- 10.11.47. Having reviewed the submitted information, I am satisfied that no particular additional issues arise due to the lowered tunnel, other than an additional temporary groundborne noise on the Arthur Cox building for a period of weeks, while the sump pumping station is constructed.
- 10.11.48. I have addressed the issues of settlement and property damage in Section 9.10, both generally and specifically in relation to the Cadenza Building and AerCap House. I agree with Tyréns recommendations regarding ensuring the Expert Panel has an oversight role in relation to the Phase 3 building damage assessments for these buildings and that they be subject to Trigger Action Plans and monitoring during TBM passage.
- 10.11.49. Impacts on Harcourt Terrace Properties
- 10.11.50. From Earlsfort Terrace the tunnel alignment continues southward, under the carriageway of Harcourt Terrace, before veering slightly westward under the front gardens of a number of large Regency style houses along the western side of Harcourt Terrace, which are protected structures.
- 10.11.51. Submissions were received from a number of Harcourt Terrace property owners regarding the impacts on these properties. This included 4 No. identical submissions from Sudway & Company Ltd. (S52, S167, S250, S314), Declan Ryan (S57) and RGRE Burlington Limited & RGRE Harcourt Terrace Ltd. (S265).
- 10.11.52. The Sudway & Co. submissions were primarily CPO-related and are addressed in the compulsory acquisition section of this report. They also raise concerns regarding the river Steyne, which they state flows below the Terrace and which they contend was not considered in the application (refer to Hydrology section of this report). They also contend that the architectural heritage value of the Terrace

was not considered. I am satisfied that is not the case, and that Harcourt Terrace was considered in the architectural heritage chapter of the EIAR.

10.11.53. Mr Ryan's submission related primarily to construction phase groundborne noise and vibration and property devaluation. Those issues are addressed elsewhere in this report.

10.11.54. RGRE's submission principally relates to possible impacts on the development potential of their site, due to the tunnel encroaching under the front of their site, and they did not participate at the oral hearing. I have addressed the issue of over-site development in Section 9.20. It is clear that development over the MetroLink tunnel will generally be possible, subject to engagement with TII on allowable loadings, foundation design, protection of MetroLink infrastructure etc. in accordance with the Guidance Note for Developers.

10.11.55. St Stephen's Green as the MetroLink Terminus

10.11.56. A number of submissions, particularly from residents groups and associations in south west Dublin, and residents in the vicinity of the proposed Charlemont Station, contend that MetroLink should terminate at St Stephen's Green, rather than continuing to Charlemont, as that would better facilitate a future extension to south west Dublin. I have addressed the choice of Charlemont at the terminating station in the following section and the metro to south west Dublin issue in Section 9.7 above. I consider that the choice of Charlemont at the terminating station has been adequately justified by the applicant and is supported by the GDATS and I do not consider that a future extension to south west Dublin would be prejudiced by the termination at Charlemont.

10.11.57. Other Issues

10.11.58. Other issues raised in the submissions relating to this area included:

- Alternatives at St Stephen's Green: Addressed in Section 11.4.
- Over-site development: Addressed in Section 9.20.
- Settlement and property damage: Addressed in Section 9.10.
- Groundborne and Airborne noise and vibration: Addressed in Sections 11.16 and 11.17.

- Property devaluation: Addressed in Section 9.26.

10.12. **AZ4(i) City Section: Charlemont Station and Tunnel Turnback Issues**

10.12.1. I consider that the main planning issues in respect of area AZ4(i) are as follows:

- Charlemont Station.
- Choice of Charlemont for MetroLink termination.
- Luas/Bus interchange and pedestrian issues.
- Status of extant subsurface works at Charlemont.
- Settlement and property damage.
- Station Box perimeter wall construction method.
- Residential amenity.
- PRM drop-off area.
- Drop-Off Traffic
- Closure of Dartmouth Road.
- Impact on 2 Grand Parade development and Carroll's Building.

10.12.2. Charlemont Station

10.12.3. A considerable number of written and oral submissions were made in relation to Charlemont Station, particularly from the surrounding residents of Dartmouth Square, Dartmouth Road and Cambridge Terrace, many of whom used a standard template (see S15 for an example). In addition, detailed written and oral submissions were made by the Charlemont and Dartmouth Community Group ('CDCG'), which made a number of group submissions (S40, S41, S42, 1FS8, 1FS9, 1FS10, 1FS11, OH151, OH152, OH153, OH158, OH307, OH308, OH309) and many of whose constituent members have also made their own individual submissions. The issues raised are primarily regarding the need and choice of Charlemont for a MetroLink terminus, construction impacts (particularly noise, vibration and settlement), property damage and the POPS scheme, residential amenity impacts and operational issues relating to vehicular and pedestrian traffic, drop-offs, anti-social behaviour, interchange with the Luas and bus services etc.

- 10.12.4. These issues will be addressed in the following sections and in other relevant sections of this report.
- 10.12.5. The proposed Charlemont Station is the terminating southernmost station of the MetroLink project. It will be located on the southern side of Grand Parade, opposite the Grand Canal. The station will be located between the rear gardens of the houses on Dartmouth Square West and a recently constructed office development to the rear of the Carroll's Building, a 1960s office building which is designated as a protected structure in the Dublin City Development Plan, and which was recently refurbished as part of the same development. The Board will note various names relating to this development in the file, including 'the Hines development', 'the Carroll's Building' or '2 Grand Parade'.
- 10.12.6. The station will be a top-down constructed underground station, broadly similar to the other stations in area AZ4. Two entrances are proposed, one at the northern end of the station onto Grand Parade and one at the southern end onto Dartmouth Road. The two entrances include standard passenger and DFB lifts and the standard entrance canopy design, although the Grand Parade entrance is slightly reduced in scale due to its constrained location between the private access road into the 2 Grand Parade development and a laneway to the rear of the houses on Dartmouth Square West.
- 10.12.7. Various ancillary elements are also proposed as with the other underground stations, including ventilation shafts, air inlets and related elements including hostile vehicles bollards. At the Dartmouth Road side of the station, a small plaza area with cycle parking is proposed.
- 10.12.8. Once construction of the station is completed, the existing private access road through the site which serves the 2 Grand Parade development will be reinstated to a slightly revised layout.
- 10.12.9. Charlemont Luas station, which is on the Green Line, is located on the opposite (western) side of the Carroll's Building and extends over the Grand Canal on an elevated bridge structure with lift and stair access to Grand Parade. It is proposed to provide an additional new staircase and lift structure at the Luas station, in front of the Carroll's Building, to provide for passenger interchange between Luas and MetroLink.

- 10.12.10. This is a particularly constrained station location and, as part of the construction of the recently built 2 Grand Parade development, certain subsurface enabling or accommodation works were put in place to facilitate future MetroLink construction. These comprise secant pile walls and a concrete transfer slab which it is intended to utilise as part of the station box.
- 10.12.11. The Charlemont Station location is also particularly sensitive from a cultural heritage perspective. There are a considerable number of protected structures in the vicinity, including the Carroll's Building, Nos. 26-34 Dartmouth Road and Nos. 1-68 Dartmouth Square. Dartmouth Square and Environs Architectural Conservation Area (ACA) is located immediately to the east of the station site, while Dartmouth Square and Dartmouth Road are also zoned Z2 as a Residential Conservation Area. The Grand Canal, Grand Parade and buildings facing onto Grand Parade including the Carroll's Building and the location of the northern MetroLink entrance are also located in a designated Conservation Area.
- 10.12.12. With regard to the aboveground surface expression of the Charlemont Station, it is relatively minimal, with no skylights proposed due to the constrained site. I consider that the station design, while it uses the standard MetroLink elements, is appropriately scaled and respectful to the existing site context and the visual and cultural heritage sensitivities of the site and surrounding area.
- 10.12.13. Choice of Charlemont for MetroLink Termination
- 10.12.14. A key issue arising in a considerable number of written and oral submissions was the choice of Charlemont as the proposed termination point for MetroLink which, it is contended, is an inappropriate and unsuitable location for a terminus. Many of the submissions contend that the MetroLink project should instead either terminate at Tara Street, St Stephen's Green, another city centre location and ask that the Board require this by way of condition. Noting that there is already a Luas line connecting Charlemont to St Stephen's Green, numerous submissions contend that this section of the MetroLink proposal represents unnecessary duplication and a waste of public money. Other submissions contend that a location such as Cathal Brugha Barracks in Rathmines would be a preferable terminus location.
- 10.12.15. This issue was raised by both residents living in the vicinity of the proposed Charlemont Station and by a number of residents' associations, primarily in south

west Dublin, and other individuals/groups who express a desire for an alternative termination point that they contend would better facilitate a future extension to south west Dublin.

10.12.16. A number of submissions query why no terminus location study was undertaken when the decision was made not to upgrade the Luas Green Line to metro standard as had been originally intended – i.e. why was the alignment effectively ‘snipped off’ at Charlemont, rather than a first principles approach being taken to identify the optimal location for the south city centre terminus. A number of observers request that the Board commission such a study.

10.12.17. The NTA, in their submission at the oral hearing on 19th February 2024 (Ref. OH43), noted that the 2016 Transport Strategy for the GDA (i.e. the precursor to the GDATS) provided for a ‘New Metro North’ from Swords to the city centre and a ‘Metro South’ from the city centre to Bride’s Glen. New Metro North was a modified version of the original Metro North proposal, while Metro South was an extension of the New Metro North southwards, via a tunnel to join the Green Line in the Ranelagh area. Following a number of further studies, namely the Alignments Option Study, Green Line Tie-in Study and the Green Line Metro Upgrade study, the NTA state that the outcome of these studies is reflected in the MetroLink scheme before the Board. The NTA noted that Section 12.3.2 of the GDATS states that:

“Charlemont offers the optimal location for the primary interchange with the Green Line in response to growing demand in the longer term and is an appropriate location to facilitate any potential future metro extensions to serve the south west, south or south east of the city region should sufficient demand arise.”

10.12.18. The NTA also stated that the area within 400m of Charlemont, in particular to the north, forms part of Dublin’s Central Business District with significant numbers of jobs and associated economic activity on Charlemont Street, Harcourt Road and along the Grand Canal. They noted that major redevelopment sites, such as the former Garda headquarters and the site at the junction of Charlemont Street and Harcourt Road, would also be served by Charlemont Metro station.

10.12.19. There is clearly a certain apparent incongruity between the Estuary Station at one end of the alignment with its 3,000 space MSCP and the Charlemont Station at

the other end of the alignment, with its 2 No. PRM drop-off spaces. There is also a certain 'chicken-and-egg' circular aspect to the relationship between the MetroLink project and the GDATS – the project pre-dates the GDATS, but the GDATS supports the choice of Charlemont at the optimal interchange point with the Luas Green Line, with the applicant in turn partially justifying the choice of Charlemont based upon the policy support given in the GDATS.

10.12.20. The applicant's position in relation to the rationale for terminating at Charlemont Station is set out in various places in the application documentation, such as Chapter 7 and Appendix A7.9 of the EIAR as well as in their written response to the submissions, but is perhaps most succinctly set out in their 'Response to Submissions of the Elected Representatives at Charlemont Station' submitted at the oral hearing on 4th March 2024 (Ref. OH149). This was a response to the submissions made by a number of elected representatives at the oral hearing, who had raised this issue, including Jim O'Callaghan TD, Senator Michael MacDowell and Ivana Bacik TD.

10.12.21. The applicant makes the point that the integration of MetroLink with other forms of public transport, and in particular DART and Luas, is essential for the delivery of an integrated public transport network. Having identified the optimum location for interchange with the DART at Tara Street, which will be the busiest station in the city centre, the options for interchange with the Luas Green Line were identified as St Stephen's Green and Charlemont. Having come to the conclusion that St Stephen's Green West is not an optimum location for the interchange (addressed in Section 11.4 of this report), the applicant contends that Charlemont is the optimal location, as it serves existing and growing demand within a sizable catchment area and delivers an interchange with the segregated section of the Luas Green line which has the capability to increase capacity to respond to rising future demand.

10.12.22. This is the key point supporting the choice of Charlemont, in my opinion. Charlemont Luas Station is the point at which the Luas Green Line leaves the old mostly segregated Harcourt railway alignment and begins to share roadspace with general traffic. As a result, the Luas Green Line south of Charlemont allows for higher speeds, increased number of trams per hour and hence greater capacity than the section of the Luas line north of Charlemont.

10.12.23. The applicant notes that the route and junctions traversed by Luas between Charlemont and St Stephens Green intersect key cross-city BusConnects spine routes, which will be given priority at the Harcourt Street / St. Stephen's Green South junction, limiting the number of tram movements in any given hour through this junction. They also note that a 10km/hr speed limit is in place for trams north of Harcourt Street because of the design of the route and the interaction with the existing street network, resulting in a max. theoretical limit of 24 trams per hour through this section, which in practice is limited to c. 20 trams per hour. In contrast, south of Charlemont, a future capacity increase to 30 trams per hour is stated to be achievable, due to the largely segregated track. Equating this to passenger numbers, a service of 20 trams per hour can provide a passenger carrying capacity of 7,344, whereas 30 trams per hour could carry 11,016 passengers.

10.12.24. I note that Section 12.3.10 of the GDATS states that "the capacity and frequency on the current Green Line from Sandyford northwards to the city centre will be incrementally increased through the provision of additional tram fleet and services and associated turnback arrangements to meet forecast passenger demand." This is supported by the following Measure:

- **Measure LRT9 – Luas Green Line:** During the period of this strategy, it is intended to deliver significant additional capacity on the Luas Green Line through the provision of additional fleet and necessary infrastructure to meet forecast passenger demand.

10.12.25. I am satisfied that providing the interchange between the MetroLink and the Luas Green Line at Charlemont, where it effectively bypasses the more capacity constrained section of the Luas line, is the optimal means of providing for the greatest possible integration of the public transport system and suitably 'future proofing' it for any future Luas capacity increases as outlined in the GDATS. I therefore do not consider that the portion of the MetroLink between St Stephen's Green and Charlemont represents wasteful duplication and I do not consider that St Stephen's Green would be a preferable termination point.

10.12.26. I also note, with reference to the NTA submission and the abovementioned TII document OH149, that while Charlemont Station is close to the quiet residential areas of Dartmouth Square and Road, it is also located close to areas with

substantial residential population and employment numbers and numerous redevelopment areas. In the 2035 opening year there are forecast to be c. 19,000 jobs within a 10-minute walking distance of Charlemont Station, increasing to 27,000 jobs in 2065, and a residential population of c. 9,600 people within a 10-minute walk in 2035, increasing to 10,900 in 2065. Consequently, the station is projected to be one of the busiest along the alignment (c. 30,000 trips daily in the opening year).

10.12.27. TII also state that Charlemont is the terminus of the MetroLink, but not the terminus of the transport network. This is an important point as, unlike Estuary Station at the other end of the alignment, which is clearly a 'terminus' in the common understanding of the word, with no ongoing public transport connections other than bus, Charlemont will operate as an interchange node with the Luas Green Line as part of a more integrated public transport network. It also provides a reasonably good level of connection with BusConnects corridors on Rathmines Road and Leeson Street (addressed further below).

10.12.28. In addition to the strategic transport planning advantages of providing for MetroLink/Luas interchange at Charlemont, TII note that the interchange time between the services at Charlemont is c. 2.9 minutes, compared with 7.6 minutes with the St. Stephen's Green East station and that the transfer is more straightforward at Charlemont. While I don't have reason to doubt these transfer times, the reduced number of level changes required at St Stephen's Green may make for a preferable interchange location for some passengers who are not as time-conscious.

10.12.29. As mentioned above, tied to this issue is the desire by numerous observers that the MetroLink terminate at Tara Street or St Stephen's Green so as not to prejudice a future expansion to south west Dublin. A number of observers noted in this regard that a future south western extension from Charlemont would likely miss a number of inner suburbs such as Portobello and Rathmines. I have addressed this issue in Section 9.7. Terminating the Metro at Charlemont leaves a wide variety of potential future expansion options available, including the original Luas Green Line upgrade southwards or a route to the south east or south west. While it appears that any future extension to the south west from Charlemont would be likely to miss some of the inner suburbs such as Portobello and much of Rathmines, there are a multitude of possible alignments to serve the broader population of that part of the

city and it is not possible for one line to serve every area. I note that the Programme for Government states that a feasibility study for a south western extension to MetroLink will be undertaken. Any such future extensions would likely be in the longer term, post 2042 at the earliest (having regard to current transport planning policy), and would likely be the subject of much debate and public engagement. That is a matter for another time. With regard to the proposal before the Board, I am satisfied that the decision to terminate the Metro at Charlemont has been justified and I do not consider that this location would prejudice any further expansion in the future, should be it deemed necessary.

10.12.30. Finally on this point, it is contended by a number of observers that as a result of the station box location, any future extension would require extensive property demolition and top-down construction in areas such as Manders Terrace, Oakley Road and Charleston Road. In response, TII state that is not the case and that an extension could be achieved by driving a TBM northwards from a southerly launch site, connecting to the proposed MetroLink tunnel extension past Charlemont Station, without any aboveground works. I understand that this is a typical means of extending metro lines in urban areas, and I note that the driving off-line of the TBM, prior to its burial, will assist in facilitating any such future extension, should it be proposed and granted a Railway Order.

10.12.31. In conclusion, I am satisfied that the applicant has adequately justified the choice of Charlemont for the terminating station on the proposed MetroLink alignment.

10.12.32. Luas/Bus Interchange and Pedestrian Issues

10.12.33. A number of observers raise various issues regarding the interchange with the Luas Station and pedestrian movements more generally. The quality of the interchange is questioned, with reference to the need to use the proposed lift/stairs from the Luas station, walk along Grand Parade, past the Carroll's Building, and down into the MetroLink station. It is contended that this will be a sub-optimal experience, particularly for those with luggage heading to/from Dublin Airport or those with mobility issues, buggies etc. Issues are also raised with regard to the capacity of footpaths in the area and the capacity of the proposed stairs to accommodate forecast passenger numbers. CDCG contend that a 1.2m wide stairs

flight would give rise to a danger to pedestrians and passengers, querying the lack of an escalator up to the Luas station. Similar points were made by Metro South West Group (1FS32).

10.12.34. Other observers, such as Brendan Heneghan (S27, 1FS7), also queried the applicant's passenger forecasts for Charlemont and the breakdown in passenger figures for transfer to/from Luas and bus routes and whether Dublin Airport-bound passengers had been correctly allowed for. It was contended that the passenger figures were not credible and that in reality the majority of passengers will be Luas bound and that consequently the infrastructure (i.e. the stairs and lift) is not adequate to facilitate this volume of passengers. Concerns were also expressed regarding the potential use of the Luas platforms as a bridge over the canal by passengers wishing to travel northwards, compromising its safe operation. Further issues were raised in relation to whether the pedestrian modelling had included the southern station entrance, or if it had been omitted, and with regard to the distance from bus routes to Charlemont Station, which it is contended are excessive.

10.12.35. I consider that the interchange arrangements at Charlemont between the Luas and the proposed MetroLink are not perfect and that the transition for passengers between the two services will be somewhat awkward, rather than the seamless interchange one would hope for given the scale and ambition of the project. However, the level changes required to interchange between the services at this location are unavoidable, given the elevated Luas line and subterranean MetroLink line. The need to leave the Luas station and walk down Grand Parade to reach the MetroLink station, or vice versa, is a function of the highly constrained urban location that the station is proposed to be retrofitted into and the applicant's apparent desire to avoid the acquisition and demolition of the Carroll's Building (a protected structure), which would allow for a more seamless interchange. Notwithstanding this and having previously concluded that the location of the terminating MetroLink station at Charlemont is justified and appropriate in terms of integrating with the Luas, serving the surrounding local area, and facilitating potential future expansion, the aphorism that 'perfect is the enemy of good' comes to mind.

10.12.36. With regard to the issue of footpath capacity issues and the issue of whether the southern station entrance had been modelled in assessing passenger flows, the applicant submitted a document to the oral hearing on 20th March 2024 entitled

'Pedestrian Impact for Dartmouth Road' (Ref. OH264). This document refers to Section 6.1.3 of Appendix A9.2-B of the EIAR, 'Traffic and Transport Assessment - Charlemont Station', which shows the results of a pedestrian impact assessment. Figures 6.8 and 6.9 of said appendix illustrate that Dartmouth Road meets the DCC guidelines³⁶ and is deemed 'comfortable' in both 2050 and 2065 in the AM peak hour, illustrating that no significant impacts are expected on Dartmouth Road as a result of pedestrian volumes. In that first assessment stage, Grand Parade was deemed to have an 'Unacceptable' level of comfort, and a more detailed assessment was undertaken with a VisWalk microsimulation model. TII state that the area modelled included the full extent of the publicly accessible station area and immediate vicinity, including the Luas stop, the junctions at Charlemont Bridge, Grand Parade and Dartmouth Road.

- 10.12.37. They state that the figures contained in the EIAR, which were queried by observers, only showed the results along Grand Parade as this was the only street initially deemed 'Unacceptable'. With the more detailed VisWalk modelling, Grand Parade was found to have a Level B Level of Service overall, with some restrictions in walking speed and ability to pass others at the pedestrian crossing, due to pedestrians waiting for a green crossing signal. They considered that the model displays an acceptable level of network performance.
- 10.12.38. The abovementioned document OH264 includes a 'zoomed out' image of the full modelled area, confirming that Dartmouth Road and the southern Station entrance were included in the assessment. I note that the LoS is Level A, the highest level. I am satisfied that pedestrians will enjoy an acceptable level of service on all roads in the vicinity of the Charlemont Station.
- 10.12.39. With regard to the capacity of the proposed stairs to the Luas station, I note that the applicant's modelling indicates that c. 30,000 passengers will board and alight at Charlemont Station over the 12 hr period in Scenario A 2035, with 36,000 boarding and alighting over a 12hr period in Scenario A 2050. Of this total, over 8,000 passengers are forecast to interchange to/from the Luas over the 12hr period.
- 10.12.40. The stairs was modelled in the abovementioned VisWalk modelling, and both the stairs and Luas platforms perform well in terms of being able to accommodate

³⁶ DCC's Pedestrian Space Calculator from 'The Heart of Dublin City Centre Public Realm Masterplan' (2016)

passenger flows, generally operating with a Level B LoS. Safety concerns were raised by observers regarding passengers crossing the Luas tracks to reach the existing stairs but I note that, unlike heavy rail, the crossing of Luas tracks at Luas stations and throughout the city centre is part of their design.

10.12.41. I note that while the stair flights are 2.4m in width, they are divided into 1.2m flights, which will assist in separating ascending and descending passengers and minimising conflicting passenger flows. In light of the design of the stairs and the pedestrian modelling undertaken, I am satisfied that the design is appropriate for the forecast passenger usage. CDCG queried the lack of escalators to the Luas platform, but I note that the constrained nature of the site is such that escalators could not readily be provided without greater impacts on the front elevation of the Carroll's Building. In contrast, the proposed stairs turns back on itself, via half landings, limiting its physical footprint. Universal accessibility is provided by means of the proposed lift.

10.12.42. Another pedestrian issue raised with regard to Charlemont Station is the potential for passengers to use the Charlemont Luas platform over the Grand Canal as a bridge, rather than walking to Charlemont Bridge or Leeson Street. In response to Brendan Heneghan who raised this issue, TII stated that they do not agree that the Luas platform will be used as a bridge and that the VisWalk modelling included the Luas stop, MetroLink Station, the approaches from Leeson Street and Charlemont Road and various behaviours regarding MetroLink and Luas ingress/egress, boarding/alighting, waiting, lift and stair use etc. with pedestrian and passenger volumes and origin / destination extracted from the NTA's ERM Model. TII contend that, whilst it is possible for passengers to cross the Luas bridge, these numbers are expected to be minimal, as evidenced by the high pedestrian LoS experienced at these locations

10.12.43. Having visited the Charlemont site on a number of occasions, walking from the St Stephen's Green area, I generally did make use of the Luas platform as a bridge, as it provides the most direct route from that part of the city centre via Harcourt Terrace.

10.12.44. In peak hours, when the Luas platforms are busy, there will be less incentive for passengers to use this as a bridge, and for any onwards pedestrian journey to a

point other than directly north I accept that most people would be more likely to use Charlemont Street or Leeson Street, as the VisWalk modelling suggests. I note in this regard Figure 6 in the 'Review of Charlemont Station' document submitted at the oral hearing (Ref. OH211) which indicates that most local demand to/from Charlemont Station is to the easterly and westerly direction, rather than north and south, thus favouring the use of the Charlemont Street and Leeson Street bridges.

10.12.45. I consider that a new pedestrian bridge over the canal, possibly connecting the obvious desire line from the station entrance to Harcourt Terrace, would improve the accessibility of the proposed station from the north. However, given the strategic benefits of connecting the MetroLink to the Luas Green Line at Charlemont, and noting that the proposed development would not prevent such a bridge from being delivered at some future date, should it be proposed and permitted, I consider that the pedestrian arrangements for crossing the canal have been adequately assessed by the applicant and are adequate.

10.12.46. With regard to the connections to bus services, a number of submissions, such as CDCG (1FS8) note that the nearest high frequency/capacity bus services are located on the Rathmines Road to the west and Leeson Street to the east of Charlemont, contending that Charlemont offers a poor level of connectivity to these routes. These are radial bus routes converging on the city and will form the A Spine and the E Spine of the BusConnects network. Again, it is not possible to directly connect all such areas with one metro line. The primary justification for the location of Charlemont Station is to facilitate interchange with the Luas Green Line at the point where it becomes less capacity constrained. As a consequence, the station is at a slight remove from Rathmines Road and Leeson Street, but the distances of c. 450m and c. 350m, respectively, are within comfortable walking distance. It is also close to the Ranelagh Road (c. 150m) where there are further bus routes serving the suburban areas between BusConnect's A and E Spines.

10.12.47. Bus routes can be added or changed in the future a lot more easily than metro stations, and I consider the positioning of the Charlemont Station adjacent to the Luas station, and on the orbital R111 Grand Parade, provides for a reasonably good level of interchange with existing radial bus routes on Rathmines Road, Ranelagh Road and Leeson Street, while also creating an opportunity for potential enhanced orbital bus services in the future to further enhance the connectivity of the network. I

do note, however, that the BusConnects network does not currently include such an orbital route.

10.12.48. In conclusion, while the quality of the proposed Luas/MetroLink interchange at Charlemont is not seamless, pedestrian flows between the two stations and on surrounding streets operate at relatively high Levels of Service. While a more seamless interchange at Charlemont could have been achieved, the constrained nature of the area means that this would most likely require the acquisition and demolition of the Carroll's building, a protected structure, and the recently completed commercial office additions to the building. I am satisfied that the applicant has demonstrated that Charlemont is the most suitable location to terminate the MetroLink at this stage, offering a connection between the segregated portion of the Luas, where capacity can be further improved. Ultimately, I am satisfied that the proposed development will offer a good quality of interchange between the Luas, BusConnects routes and the MetroLink.

10.12.49. Status of Extant Subsurface Works at Charlemont

10.12.50. Many of the submissions made by or on behalf of observers living in the vicinity of the proposed Charlemont Station raised a number of legal and procedural issues regarding the abovementioned subsurface works that have already been undertaken at the location of the station as part of the 2 Grand Parade development, in order to accommodate the future construction of a metro station at this site.

10.12.51. I have addressed this issue in the 'Legal and Procedural Matters' section of this report at Section 9.17.

10.12.52. Settlement and Property Damage

10.12.53. The issues of settlement and related property damage and issues with regard to the POPS Scheme were key concerns in this area. I have addressed these issues in detail in Sections 9.10 and 9.11.

10.12.54. As the houses on Dartmouth Square West and Dartmouth Road are protected structures, they will be subject to detailed Phase 3 building damage assessment. Of particular note in relation to these houses are my recommended conditions requiring that the Expert Panel review and sign-off on the Phase 3 assessments undertaken by the contractor and that the developer shall ensure that building damage does not

exceed Category 1 ('Very Slight'). In the event of any damage issues, these properties will also be eligible for the POPS Scheme, which will allow for pre- and post-condition surveys and for any minor issues to be resolved quickly and at no expense to the property owner.

10.12.55. TII made a commitment at the oral hearing not to use blasting to construct the intervention tunnel at Charlemont. This is a welcome additional commitment that will assist in mitigating impacts on residential receptors.

10.12.56. With regard to Charlemont Station, as detailed in Section 9.9 of this report, Tyréns, having reviewed the geotechnical data submitted and based on their metro construction experience are of the view that blasting is not necessary to excavate the relatively weak limestone and they consider that it introduces unnecessary construction risks and potential impacts. They note, for example, that the boundaries of the POPS Scheme are unrelated to the radius of potential blasting vibration. They have therefore recommended that blasting should not be allowed at the deep stations in the city centre, which are generally in close proximity to sensitive receptors. This includes Charlemont Station.

10.12.57. I agree with the Tyréns assessment and I do not consider that the applicant has provided adequate justification of the need for blasting in these areas, particularly given the proximity of residential receptors and the vulnerable buildings in areas such as Dartmouth Square and Dartmouth Road which are of significant heritage value and susceptible to damage.

10.12.58. I also note in this regard that the applicant's assessment of blasting-related groundborne vibration appears to have used the incorrect higher limit value for the houses on Dartmouth Square West which, being protected structures, should have the lower limit applied, as per the applicant's methodology.

10.12.59. There are multiple alternatives to the use of blasting as identified in the EIAR, including various non-percussive methods such as expansive chemicals, rock sawing or road headers. As per Section 9.9, therefore, I recommend that a condition be included prohibiting the use of blasting at the city centre stations, including Charlemont Station.

- 10.12.60. Conditions are also recommended to ensure that there is no groundwater lowering outside of the station box beyond normal seasonal variations. This will ensure no dewatering induced settlement occurs.
- 10.12.61. Subject to these conditions, and appropriate monitoring, I do not consider that these properties are likely to experience any substantial damage or settlement impacts as a result of the construction of the station and tunnels.
- 10.12.62. Station Box Perimeter Wall Construction Method
- 10.12.63. At the oral hearing and in subsequent submissions (e.g. 1FS9, 1FS28, 1FS29), a number of observers have sought that the perimeter walls for the shallower portion of Charlemont Station box at the northern station entrance (i.e. to the rear of the northernmost houses on Dartmouth Square West) be constructed with diaphragm walls (D-walls), rather than secant pile walls.
- 10.12.64. The observers' concerns are generally that the use of a secant pile wall construction method will result in greater settlement and consequent property damage than a D-wall, as they contend it is less effective at preventing water ingress. They note that D-wall is proposed behind some houses along Dartmouth Square and they request that the use of a continuous D-wall construction method for this part of the station be mandated by condition to mitigate settlement risk.
- 10.12.65. I note from the submissions that this matter has been the subject of direct discussions between a number of the observers and TII during and subsequent to the oral hearing but the observers' concerns have not been allayed.
- 10.12.66. TII's response was that the perimeter station walls are designed to be watertight and that either solution can achieve the desired outcome (i.e. avoiding dewatering related settlement) by ensuring that adequate design, tolerances and construction control practices are implemented through the procurement of the main works contractor. They therefore contend that what is fundamental for the success of either solution is that groundwater ingress is controlled by the completeness and integrity of the secant pile wall or D-Wall perimeters and their position with respect to bedrock and they refer to the assessment contained in Chapter 19 of the EIAR and the measures for ensuring that excavations prevent water ingress.

10.12.67. TII request that flexibility regarding construction methodology for the northern entrance Structure be maintained (as per Chapter 5 of the EIAR) as this part of the perimeter wall is much shallower (c. 12m depth compared to 30m in the deepest part of the station) and consequently less thick (0.5m compared with 1.0m elsewhere) resulting in less land acquisition being required. They state that a D-Wall in this area cannot be provided within the proposed land take.

10.12.68. This matter is addressed in Section 9.4 of the Tyréns Report. They advise that secant piles and D-walls will fulfil the same function up to a maximum excavation depth of c. 25m, beyond which only D-walls are suitable, and that both methods have a similar impact during construction and they therefore recommend that the choice of method should be left up to the D&B Contractor. I agree with this assessment. The priority is the protection of the dwellings from damage and the limiting of construction disturbance. Subject to suitable conditions with regard to groundwater control and allowable settlement, I consider that this portion of the station box wall can be reasonably achieved with secant pile walls for the shallower excavation. Secant pile walls are commonly used in tightly constrained Dublin city centre streets and have already been used on the Charlemont site in recent years. Subject to mitigation measures, proposed conditions and monitoring controls, I am satisfied that they are a suitable means of construction in this scenario and I do not recommend that the Board impose a condition in relation to this matter, should they decide to grant the RO.

10.12.69. Residential Amenity

10.12.70. This will be a disruptive and prolonged construction project for the residents in the vicinity of Charlemont Station, particularly those on Dartmouth Square West and Dartmouth Road. I consider that the concerns outlined in the written and oral submissions are generally understandable and it is clear from the submissions that the 'lived experience' of residents with regard to the recently completed 2 Grand Parade development, which incorporated secant pile walling and large-scale construction and excavation works close to their properties is fresh in residents' minds.

- 10.12.71. However, it must be noted that project was a private commercial development, while this project, while it will be disruptive and impactful during the construction phase, is for public infrastructure.
- 10.12.72. There was a general misapprehension by observers here, as elsewhere, that the impacts experienced during construction would last for the full duration of the construction phase or 9.25 years. As I have outlined elsewhere, this issue was poorly communicated by the applicant in the application documentation, and while the overall construction phase is particularly lengthy, the heavy civil engineering works with the greatest potential for negative impacts on residential amenity will occur during the first 4-5 years.
- 10.12.73. I consider that there will be substantial negative impacts on residential amenity for those living in the vicinity of the Charlemont Station site during the construction phase. These impacts arise due to issues such as noise, dust, traffic and general construction disruption. While many of these impacts will be capable of being mitigated to a considerable extent, some residual impacts will remain, that ultimately are not capable of being fully mitigated due to the nature of the development and the proximity of the dwellings to the construction site. Those issues are addressed in the relevant EIA sections of this report.
- 10.12.74. The impacts associated with the construction of the Charlemont Station are some of the most difficult aspects of the proposed development that the Board will have to weigh up in coming to a determination. On balance, I consider that the inherently time-limited construction impacts are outweighed by the significant long-term strategic benefits for the city of providing a metro interchange with the Luas at this location, where the segregated higher capacity portion of the Luas alignment can be leveraged to increase connectivity to the metro. The surrounding residential and commercial owners and occupiers will also benefit from the presence of a metro station in their locality in the operational phase.
- 10.12.75. In my opinion there will be some change to the character of the area around Dartmouth Square and Dartmouth Road in the operational phase as a result of the proposed development. While these areas are close to the City Centre, they currently enjoy a very quiet suburban environment which will be altered by the insertion of a major metro interchange station in the area. Such situations are

ultimately, however, a characteristic of urban development and I do not consider that an increased level of pedestrian and cyclist movements through the area is likely to materially affect residential amenity in the operational phase.

10.12.76. PRM Drop-Off Area

10.12.77. It is proposed to provide a Persons of Reduced Mobility (PRM) vehicular drop-off area at Charlemont Station, on the northern side of Grand Parade directly opposite the Carroll's Building. The drop-off area is identified on the original alignment and structures drawings submitted with the application (but not the original property drawings) however the applicant confirmed that it had not been assessed as part of the EIAR.

10.12.78. On the first day of the oral hearing, the applicant provided an assessment of the proposed drop-off facility, entitled 'Charlemont Drop-Off' (Ref. OH21), which states that its provision arises from requests made at User Group meetings and that it will provide improved connectivity between transport modes, particularly for PRM. The PRM facility was also identified in the updated drawings pack provided on 25th March 2024 (Ref. OH323) as requiring permanent and temporary land acquisition and the CPO requirements are identified in the updated Railway Order Schedule provided as part of the Further Information submission. The land in question is identified as owned by Waterways Ireland and DCC and while CPO matters are addressed in Section 12 of this report, I note that DCC has raised no concerns regarding this element of the project and that a copy of an email from Waterways Ireland to TII was submitted at the oral hearing by TII on 5th March 2024 (Ref. OH166), stating that:

“... I can confirm that Waterways Ireland is aware of the proposed accessibility drop-off enhancement at Charlemont, which has been outlined by TII, and that we will work with TII in relation to same.”

10.12.79. The abovementioned 'Charlemont Drop-Off' document identifies that minor changes are proposed to the drop-off compared to the as-submitted drawings (see Figures 1.1 and 1.2 of the document). The main difference is the width of the footpath around the PRM spaces.

10.12.80. The proposed Charlemont Drop-Off is 3.6m wide and the adjoining footpath to be diverted around it is 3m wide. However, due to the constrained space between

the edge of Grand Parade and the bank of the Grand Canal, there will be a requirement to cantilever the footpath over the grass embankment of the canal, with a slight encroachment over the navigable canal area (stated to be c. 0.3m but certainly no more than 1m).

10.12.81. In order to minimise impacts on the canal and biodiversity it is proposed to construct this element by means of a pre-cast cantilevered structure supported on mini-pile foundations, with no in-stream works. A construction summary for the drop-off area was submitted to the oral hearing on 26th March 2024 (Ref. OH350) providing further details on this construction methodology.

10.12.82. Updated photomontages submitted at the oral hearing on 27th March 2024 (Ref. OH370) include views of the PRM drop-off area from a number of locations either side of the canal (refer to LLCA23, VVM23.1 and VVM23.2). I am satisfied that no particular visual or landscape impacts arise from this element, due to its small scale and use of minimal railings, similar to existing railings bounding the canal further to the west and those on the nearby elevated Luas station.

10.12.83. In terms of planning issues, I consider that that the provision of an accessible PRM drop-off area at Charlemont Station is an important element in terms of improving the accessibility and connectivity of the station for PRM users and that it is acceptable in principle. I note that the PRM area will be immediately adjacent to the proposed signalised pedestrian crossing and close to the raised table junction at the metro entrance which will see traffic speeds calmed in the immediate area. Thus, it will have a good level of connectivity to/from the station for PRM users.

10.12.84. There will be a slight encroachment onto the Grand Canal, due to the constrained nature of the area, but I consider that a sensitive approach has been taken to these works, reflective of the particular visual, cultural heritage, biodiversity and hydrological sensitivities of the canal and its designation as a Conservation Area. In particular, I note the avoidance of in-stream works and the cantilevered precast approach, with low-impact screw pile foundations. The sloping canal bank means that the encroachment will be primarily over this area, with a minimal intrusion in the canal navigable area. As noted above, Waterways Ireland do not appear to have any concerns in relation to this matter. Importantly, while an

encroachment into the canal area is not ideal, it will allow for footpath continuity along the Grand Canal to be retained and is thus justifiable in my opinion.

10.12.85. The 'Charlemont Drop-Off' document includes an environmental assessment of the potential impacts of the proposed works under the standard EIA headings and concludes that no significant additional impacts arise. These various environmental matters will be addressed in the relevant EIA sections of this report where necessary, but in general I am satisfied that the PRM drop-off proposal is acceptable.

10.12.86. Drop-Off Traffic

10.12.87. A concern was expressed in a number of submissions that, since this is the southernmost MetroLink station, the streets in the vicinity of Charlemont Station would be used as a drop-off location for passengers, or that cars and taxis would be idling in the area awaiting passenger arrivals. These issues raised in particular by CDCG, Brendan Heneghan and residents in the area. Concerns regarding these matters were also raised by others, including the Upper Leeson Street Area Residents Association (S307), who expressed concerns regarding the use of Charlemont as a 'kiss and ride' location. They sought that a surface management transport plan for Charlemont be agreed with DCC to enforce prohibition of illegal parking, obstruction of cycle lanes and entrances.

10.12.88. TII's traffic advisor, Mr Foy, presented a document 'Review of Charlemont Station' to the oral hearing on 11th March 2024 (Ref. OH211) in relation to this passenger drop-off issue. He stated that work undertaken for the MetroLink EIAR did not indicate any notable level of drop-off at Charlemont, but that further data collection and analysis had been undertaken, including a review of NTA Airport Passenger Survey data and a review of drop-off at existing Luas stops during the AM period.

10.12.89. On foot of this, it is still contended by the applicant that there is unlikely to be any significant volume of passenger drop-off due to Airport travel or general travel purposes at the Charlemont station, and that not providing drop-off facilities will support the overall objective of reducing reliance on private car and promoting public transport and active travel.

- 10.12.90. The lack of provision for passenger drop-off at city centre MetroLink stations is, as noted by the applicant, consistent with the general approach at city centre Luas and DART stations.
- 10.12.91. The morning peak boarding survey undertaken at four Luas stations, as outlined in the document, is instructive in this regard. At Windy Arbour, an outer suburban station with drop-off facilities, drop-off was 23% of the passenger total. In contrast, in inner suburban areas such as Beechwood, Phibsborough and Cabra, none of which have designated drop-off facilities, drop-off ranged from 0 – 4% of passengers. This appears to be a function of lower levels of car ownership closer to the city centre and the creation of an unattractive environment for drivers to drop passengers off. The proposed design of the Charlemont Station will provide such an environment, with no opportunity for substantial levels of drop-off traffic.
- 10.12.92. With regard to airport-related drop-offs to Charlemont, the applicant has re-analysed this with regard to more recently available NTA data. Given the numbers of airport passengers within 5km of Charlemont, the existing mode share for cars to Dublin Airport, and given the 6% modal shift predicted from private car to public transport as a result of MetroLink, and allowing for half of this to be via drop-off to Charlemont, this would equate to c. 5 drop-offs per hour.
- 10.12.93. While low levels of drop-off traffic are likely to occur, the discouraging of this is a traffic management issue, as noted by the applicant, and I note their intention to monitor the streets around Charlemont Station and work with DCC and the NTA to discourage drop-off from occurring by means of traffic management measures. I consider that such matters can be addressed in the operational phase if necessary through DCC's normal functions.
- 10.12.94. Given the interchange potential with the Luas Green Line and multiple bus routes, and thus highly accessible from across south Dublin, there is no reason to believe that substantial levels of drop-off traffic will arise at Charlemont Station. I consider that the approach taken by the applicant of not making provision for drop-off (other than the PRM spaces mentioned above) is the correct approach, in terms of promoting sustainable travel and active travel modes and in terms of not attracting drop-off traffic, taxis etc. to the Dartmouth Road/Square area. I agree with the applicant that people are unlikely to bypass a local Luas/DART/bus stop to drive to

Charlemont when there is a high quality integrated public transport offering available to them. MetroLink is one aspect of such an integrated public transport network, as outlined in the GDATS.

10.12.95. Closure of Dartmouth Road

10.12.96. The issue of the proposed closure of Dartmouth Road to vehicular traffic during the construction phase was raised by a number of observers, including CDCG and residents of Dartmouth Road such as Suzi Taylor (S286, 1FS39), who will lose vehicular access to their houses during this period.

10.12.97. I note that pedestrian access to the houses on Dartmouth Road will be retained at all times while, in relation to emergency access, I note that the following additional commitment was made at the oral hearing and is included in the final SAEC (Ref. OH376):

“Access for emergency vehicles at Dartmouth Road will be maintained during the construction works. The main works contractor will be required to establish a fire and emergency plan with the residents of Dartmouth Road prior to the full closure of Dartmouth Road and the installation of the site hoarding.”

10.12.98. There is uncertainty expressed in some submissions regarding the proposed length of the road closure. TII state in Chapter 5 of the EIAR, and in their responses to submissions, that it is proposed to partially close Dartmouth Road for a 12 - 18 month period to facilitate utility diversions, with access maintained along the road via a single lane closure, followed by full closure for a period of 24 - 30 months to complete the piling and roof slab construction for the station box, after which the road will be reinstated and re-opened.

10.12.99. The loss of vehicular access to their properties for a period of years is likely to greatly inconvenience affected residents of Dartmouth Road, not just for their own personal car use but also for deliveries, maintenance vehicles, visitors etc. Importantly, however, the applicant has committed to maintaining access for emergency vehicles and to putting a fire and emergency plan in place for the residents. Given the very constrained nature of the Charlemont Station site, the station box encroaches onto Dartmouth Road, and as such I am satisfied that it

would not be safe or feasible to maintain vehicular access for residents at all times during construction.

10.12.100. While there will be substantial inconvenience for residents and a negative impact on their residential amenity as a result, I consider that the full closure of Dartmouth Road is unfortunately necessary for a period to deliver this station which will provide for interchange with Luas as well as serving the local area. In the operational phase, residents of Dartmouth Road are likely to derive benefit from their proximity to a Metro station, although I note the concerns expressed regarding set-down traffic, anti-social behaviour, operational noise and lighting etc.

10.12.101. Given that the total construction phase for MetroLink is stated to be 9.25 years, I consider it appropriate that a condition be attached to ensure that Dartmouth Road is reopened as soon as is feasible, should the Board be minded to grant the RO. The applicant has outlined 24 – 30 months for the full closure during the substantive station box construction works, and I therefore recommend that a condition be attached requiring that Dartmouth Road shall be re-opened to local access traffic as soon as is feasible and that the duration of the full closure of the road shall not exceed 30 months.

10.12.102. Impact on 2 Grand Parade Development and Carroll's Building

10.12.103. Written and oral submissions (S108³⁷, S305, OH156, OH160, OH310-OH313, 1FS42) were made on behalf of Union Investment Real Estate GmbH (UIRE) in relation to the 2 Grand Parade development, under which the Charlemont Station would be partially located. The initial written submissions state that UIRE support the MetroLink development, but raise various concerns regarding details of the interface between the MetroLink and their development in the construction and operational phases, land acquisition matters, impacts on their internal access road, fire escape routes and the impact of the proposed MetroLink stairs and lift on the Carroll's Building, which forms part of the 2 Grand Parade development and which is a 1960s office building, designated as a protected structure under the Dublin City Development Plan (Ref. 3280). A number of other observers also raised the potential impacts on the Carroll's Building.

³⁷ This submission was made by Grand Parade Property Trading Company DAC and comprised a cover letter and a copy of the UIRE submission, S305.

- 10.12.104. Land acquisition matters relating to this site are addressed in the compulsory acquisition section of this report. I note, however, that UIRE, in their most recent submission following the oral hearing (1FS42), state that updated property drawings submitted at the oral hearing improve matters and that they look forward to engaging further with TII in relation to acquisition matters, including wayleaves, rights of way and operational matters. In response, TII requested that the Board confirm the CPO in the form applied for and stated that, through continued engagement post oral hearing, substantive progress has been made to reach agreement on matters relating to land take and parking.
- 10.12.105. In their original submission, UIRE had raised issues regarding the reinstatement proposals for the access road that runs through their site. Their most recent submission notes that the updated street level design layout for the station submitted by TII at the oral hearing (Drawing No. ML1-JAI-SRD-ROUT_XX-DR-Z-02090) includes the reinstatement of 14 No. car parking spaces associated with their development, following completion of the works, and that they welcome this revision.
- 10.12.106. The principal issue raised in UIRE's further submission is the proposed MetroLink stairs and lift located in front of the Carroll's Building for connection to the Luas station, which they state is unacceptable to them, as it would negatively impact on their development due to: additional risk of fire spread in the event of a fire due to proximity to the existing building; negative impact on the appearance and setting of the Carroll's Building, which is a protected structure; privacy issues within the Carroll's building due to the proximity of the stairs; and obstruction of designated fire escape routes.
- 10.12.107. UIRE contend that there is a conflict between the applicant's intention, as stated at the oral hearing, to make the lift and staircase 'transparent' in design to mitigate the visual impact on the protected structure, and their stated intention to design the lift and stairs to protect privacy. They note that the updated drawings and imagery submitted to the oral hearing indicate glass balustrades on the staircase, with large numbers of pedestrians traversing the stairs within c. 1-2 metres of workspaces within the building.
- 10.12.108. UIRE note that the submitted photomontages do not reflect the detail of the undercroft / entrance area of the Carroll's Building, due to the base imagery being

taken while site hoarding was in place. They contend that the now-completed hard landscaping, water features and setting of the main entrance will be detrimentally impacted by the proposed stairs and lift.

10.12.109. The proposed stairs and lift elements can be seen on drawing No. ML-ST 307 O-A1, the document 'Charlemont Luas Stairs & Lift Connection' (Ref. OH261) and in the updated photomontage image 23.2 provided to the oral hearing on 28th March 2024 (Ref. OH382). The applicant's rationale for the stairs and lift and their design approach is described in the document 'Carroll's Building Stairs and Lift' submitted at the oral hearing on 27th March 2024 (Ref. OH377).

10.12.110. With regard to the design of the stairs and lift structures in front of the Carroll's Building, I note the following additional commitments made at the oral hearing and contained in the final SAEC (Ref. OH376):

"The finish of the lift structure at the front of the Carroll's Building will be made compatible with the Carroll's Building finish so that it is visually consistent with the building's surface treatment, which is Portland stone."

"The stairs at the front of the Carroll's Building are proposed to have a lightweight appearance with open rails on the stairs themselves. It is intended to finish the stair stringers in a colour similar to that of the Portland stone cladding bands between the windows of the protected structure and this will further reduce the visibility of the stairway when seen against the Carroll's Building."

10.12.111. Policy BHA2 of the Dublin City Development Plan seeks to ensure that development proposals affecting Protected Structures are sensitively sited and designed and are appropriate in terms of scale, mass, height, density, layout and materials. As the abovementioned photomontage demonstrates, the stairs and lift shaft are noticeable and are clearly a visual intrusion on the lower part of the façade of the Carroll's Building. As such, I consider the proposal is inconsistent with Policy BHA2 of the Development Plan, which seeks to preserve the setting and character of protected structures.

10.12.112. Having said that, I consider there are other factors that weigh in favour of the proposal. The stairs and lift are required in order to provide an adequate level of interchange between the Luas Green Line and the proposed MetroLink station and,

in view of the location and relationship of both stations, I agree with the applicant that the proposed location is the optimal means of providing a direct, convenient transfer from the Luas platform down to ground level and the MetroLink entrance in what is a very physically constrained urban environment. The front elevation of the Carroll's Building is asymmetrical and features a brick clad two storey element at the opposite end to the proposed stairs, which is of similar size and scale. While I consider that the stairs and lift is detrimental to the visual amenity and setting of the protected structure, it is balanced somewhat by this architectural feature at the opposite end of the building. I consider that the proposed design approach of a visually lightweight open stairs with glazed balustrades and lift core cladding that is consistent with the Portland stone of the Carroll's Building is an appropriate design approach to this element of the project.

10.12.113. I do note, however, that the half landing of the staircase will protrude over and very close to the entrance canopy to the Carroll's building, which is an important design feature of this protected structure. In order to reduce the visual impact of development on the protected structure and to ensure that the stairs is 'read' as a secondary element, unrelated to the function of the Carroll's Building, I recommend that a condition should be attached to ensure that the stairs/half landing is set back from the canopy to ensure that it does not overhang it, with details of the revised stairs and lift layout to be submitted to DCC.

10.12.114. I agree with UIRE that stairs users are likely to have a view into part of the Carroll's Building, given that it is heavily glazed across the front façade. However, the building is in office use and therefore does not have the same privacy requirements that would be required for a residential use, for example. Given the transient nature of usage of the staircase by people accessing/egressing the Luas station, I do not consider that any significant issues of overlooking or loss of privacy arise. While a more solid structure could be provided to entirely eliminate any view into the building, I consider that this would likely have more of an adverse impact on the integrity of the protected structure and its setting.

10.12.115. In their second oral hearing submissions on 25th March 2024, UIRE's representatives indicated that the majority of their issues from their original submission had been resolved, with the main outstanding issue being the stairs and lift. With regard to the contended impacts on fire escape routes, I note that UIRE's

planning consultant stated at the oral hearing that these issues had been resolved. However, as noted above, UIRE subsequently raised the blocking of fire escape routes by the proposed stairs and lift in their further submission. I note that there will be a 1.4m wide gap maintained between the MetroLink lift shaft and the Luas embankment and that the proposed stairs is open in design, allowing movement under it. UIRE has not provided any clear information on how the proposed stairs and lift would materially affect their fire escape route and I do not consider that this is likely to be the case.

10.12.116. In their submission to the oral hearing on 25th March 2024 (Ref. OH311), an alternative proposal was put forward on behalf of UIRE by Henry J. Lyons Architects, with the lift shaft relocated to the opposite side of Grand Parade, adjacent to the PRM drop-off location. UIRE contend that this would strike a more appropriate balance, by allowing the stairs to be moved closer to the Luas embankment, reducing the visual impact and privacy impact on their development.

10.12.117. Whilst I acknowledge that relocation of the lift shaft would reduce the impacts on the protected structure, I consider that this alternative would be unacceptably sub-optimal for the purposes of passenger interchange and, indeed, would undermine it. Moving the passenger lift to the opposite side of Grand Parade would require lift-users to cross Grand Parade road in order to access either station and would not be consistent with the goals of universal access and ease of interchange, by inconveniencing those needing the lift. Separating the stairs and lift would also reduce the legibility of the interchange, with the lift becoming less visible, so that some passengers with heavy luggage may unsafely decide to use the stairs, if the presence of a passenger lift is not obvious. While it would be close to the PRM spaces, there are only two such spaces, and the number of lift users is likely to be substantial (estimated to be c. 7% of passengers in the AM peak). I therefore do not consider this to be a workable alternative solution.

10.12.118. Ultimately, I consider that the importance of providing a suitably high quality of interchange with the Luas Green Line at this location, which will be a very positive aspect of the overall development in terms of integration and connectivity in the public transport network, outweighs the negative visual and cultural heritage impacts on the Carroll's Building. Therefore, while there is inconsistency with Policy BHA2, I consider this is acceptable in view of the wider benefits accruing.

10.12.119. Finally, I note that, in the operational phase, both the owner and occupiers of the Carroll's Building are likely to significantly benefit from their almost unique proximity to both a metro station and a Luas stop.

10.12.120. Other Issues

10.12.121. Other issues raised in the submissions relating to this area included:

- Need for the project: Addressed in Section 9.3.
- Alternatives and route selection: Addressed in Section 11.4.
- Z2 zoning objective and the issue of material contravention: Addressed in Sections 9.2 and 9.17.
- Groundborne and Airborne Noise and vibration: Addressed in Section 11.16 and 11.17.
- Settlement and property damage: Addressed in Section 9.10.
- POPS Scheme: Addressed in Section 9.11.
- Hours of construction: Addressed in Section 9.13.
- Property devaluation: Addressed in Section 9.26.
- Human health: Addressed in Section 11.7.

11.0 Environmental Impact Assessment

11.1. Introduction

- 11.1.1. It is a requirement under the Transport (Railway Infrastructure) Act 2001, as amended, that an application for a Railway Order under section 37 of the Act be accompanied by an Environmental Impact Assessment Report (EIAR). Consequently, the application was accompanied by an EIAR, prepared by Jacobs IDOM.
- 11.1.2. This section of my report comprises an environmental impact assessment of the proposed development. Some of the matters considered have already been addressed in the Planning Assessment above. This section of the report should therefore be read, where necessary, in conjunction with the relevant sections of the Planning Assessment. The issues of land acquisition and Appropriate Assessment are addressed separately in Sections 12 and 13, respectively.

11.2. Format of EIAR

- 11.2.1. The EIAR comprises 5 No. volumes. Volume 1 is a Non-Technical Summary (NTS), which provides a summary of the EIAR in non-technical language. Volumes 2 and 3 comprise the main body of the EIAR. Volume 4 contains various Figures relating to the various chapters of Volumes 2 and 3, while Volume 5 comprises a series of technical appendices relating to various chapters. A schedule of proposed mitigation and monitoring measures is contained at Chapter 31 of the EIAR ('Summaries of the route wide mitigation and monitoring proposed').
- 11.2.2. The Appropriate Assessment Screening Report and Natura Impact Statement were included as standalone documents, rather than as part of the EIAR.
- 11.2.3. The EIAR:
- Describes the project and provides information on the site, design, size and particular features of the proposed development;
 - Describes the likely significant effects of the project on the environment;
 - Describes the features of the project and/or measures envisaged to avoid, prevent, reduce, and if possible, remedy significant impacts;

- Provides a description of the main alternatives studied, and an indication of the main reasons for the choice of alternative put forward, taking into account environmental effects; and
- Includes a non-technical summary of the above information.

11.2.4. As is required under Article 3(1) of Directive 2014/52/EU, the EIAR describes and assesses the direct and indirect significant effects of the project on the following factors: (a) population and human health; (b) biodiversity with particular attention to the species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC; (c) land, soil, water, air and climate; (d) material assets, cultural heritage and the landscape. It also considers the interaction between the factors referred to in points (a) to (d).

11.2.5. I have carried out an examination of the information presented by the applicant, including the EIAR and the submissions made during the course of the application, and I have conducted an oral hearing. A summary of the submissions made has been set out in Appendix 2 of this report and the issues arising from the written submissions and the oral hearing submissions are addressed below under the relevant headings, and as appropriate in the reasoned conclusion and recommendation, including conditions.

11.2.6. As detailed in Appendix 4, the applicant submitted a very substantial amount of information over the course of the six week oral hearing, including the correction of errata, provision of updates and proposed modifications. A Dublin Airport PFAS Management Strategy was also submitted subsequent to the oral hearing, which included an EIAR Addendum.

11.3. I am satisfied that the EIAR, as supplemented by the information submitted at the oral hearing, has been prepared by competent experts to ensure its completeness and quality, and that the information contained in the EIAR, again as supplemented by the information submitted at the oral hearing, is up to date, adequately identifies and describes the direct and indirect effects of the proposed development on the environment and complies with the requirements of European and Irish legislation relating to EIA.

11.4. Alternatives

- 11.4.1. The consideration of alternatives is addressed in Chapter 7 of the EIAR. Appendices A7.1 – A7.10 comprise a series of supporting reports relating to the alternatives considered at various locations, while Figures 7.1 and 7.2 illustrate the Emerging Preferred Route and Preferred Route, respectively.
- 11.4.2. The EIAR considers a Do-Nothing scenario and sets out the process through which alternative route options were considered before arriving at the preferred route, as well as the various further design changes, such as the change from a twin bore to a single bore tunnel, methods of crossing the M50, the location and design of the depot and various localised alterations to the alignment and station location and design. Alternatives are also addressed with regard to the Albert College Intervention Shaft and the grid connection options. Construction phase alternatives are considered with regard to the TBM launch sites and hours of operation, location of compounds and construction of stations.
- 11.4.3. The Requirement to Consider Alternatives
- 11.4.4. A considerable number of submissions raised the issues of alternatives, both in terms of particular aspects of the proposed development (e.g. station locations, intervention shaft location, alignment in particular areas) as well as alternatives to the MetroLink project as a whole, such as alternative public transport network proposals developed by the observers or alternative technologies.
- 11.4.5. At the outset, therefore, it is important to set out the basis for the consideration of alternatives under the EIA process. I note Section 39(1)(b)(v) of the 2001 Act, which requires that the EIAR contain “a description of the reasonable alternatives studied by the applicant which are relevant to the proposed railway works and their specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the railway works on the environment”. I note that this formula of words is identical to that used in Article 5(1)(d) of the EIA Directive, albeit that the Directive refers to the ‘project’ rather than ‘railway works’.
- 11.4.6. The legal submission made by Declan McGrath SC on the first day of the oral hearing (Ref. OH39) set out the applicant’s position with regard to the obligation to consider alternatives. Mr McGrath noted the abovementioned obligation in Article

5(1)(d) of the EIA Directive as well as Annex IV of the Directive, which requires that an EIAR include:

“A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.”

- 11.4.7. Mr McGrath stated, with reference to the CJEU judgment in Case C-461/17, (*Holohan & Others v An Bord Pleanála*), that the obligation placed on a developer is to provide information on the main alternatives to a development, with the decisive factor in identifying those alternatives being: “whether or not those alternatives influence the environmental effects of the project”. He noted that the Court had held that the point in time at which the alternative is rejected is not relevant and that there was no requirement for the main alternatives to be “subject to an impact assessment equivalent to that of the approved project”. Mr McGrath stated that one of the aims of imposing on the developer the obligation to outline the main alternatives is that reasons for his choice should be stated with the purpose being, as per the abovementioned CJEU judgment, to enable the competent authority to carry out a comprehensive EIA that:

“catalogues, describes and assesses, in an appropriate manner the effects of the approved project on the environment, in accordance with Article 3 of the EIA Directive”.

- 11.4.8. Mr McGrath contended that the EIAR’s consideration of alternatives demonstrates the decision-making process which led to the identification of the MetroLink route, the integration of environmental analysis into the development of the project and the main reasons, including environmental reasons, for choosing the MetroLink project or specific elements of the project. He therefore contended that the information contained in the EIAR is sufficient to discharge the obligation arising from Article 5 of the EIA Directive.
- 11.4.9. I would generally agree with Mr McGrath’s analysis of the obligation. In addition I would note that there is no requirement to consider all possible alternatives, or to consider all alternatives suggested by observers. The requirement is only to describe

the reasonable alternatives that the applicant studied and the basis of their decision to choose a particular option, including comparative consideration of environmental and other effects.

11.4.10. This is an important point to make, as numerous submissions outline alternative public transport networks devised by observers or alternative alignments/station locations or alternative technologies.

11.4.11. Do-Nothing Alternative

11.4.12. In the Do-Nothing scenario, the project objective to “provide a sustainable, safe, efficient, integrated and accessible public transport service between Swords, Dublin Airport and Dublin City Centre”, as referenced in the former National Development Plan, would not be delivered. In the absence of such a public transport system, it is contended that transport travel demand will continue to increase, that the current transport system will not increase its capacity sufficiently to meet the future predicted demand due to predicted population increases, and that private car use will increase, resulting in increased traffic congestion and a range of adverse environmental impacts.

11.4.13. I concur with the applicant’s assessment on the negative implications of doing nothing to address the clear and demonstrable need for greatly improved public transport infrastructure in Dublin. I consider that a ‘Do-Nothing’ option is not an option that can be countenanced from a planning, sustainable transport, environmental and climate action perspective.

11.4.14. Alternatives to MetroLink

11.4.15. A number of observers made the case for alternatives to the proposed MetroLink, including ACRA (S2, OH353-OH355), Ruadhán MacEoin (S271, OH367), Donal O’Brolchain (S67; OH248, OH248A, 2FS3) and Cormac Rabbitt (2FS9).

11.4.16. For instance, Tom Newton made a detailed presentation at the oral hearing on behalf of ACRA, regarding the ‘Newton Transport Plan’ which set out his proposals for an alternative integrated public transport system for Dublin. It is clear that Mr Newton has put considerable time and effort into designing his comprehensive transport proposal for the city and while it may have merit, it was not one of the reasonable alternatives that was considered by the applicant.

- 11.4.17. Mr Rabbitt and others have developed an alternative privately promoted metro system proposal, known as 'Metro Dublin' and Mr Rabbitt made a detailed submission at the oral hearing on 27th March 2024 in relation to his proposal. I note that a pre-application consultation request was made to the Board in 2015 by Metro Dublin (ABP Ref. NC06F.NC0013) but has yet to be concluded.
- 11.4.18. Mr Rabbitt contends that the Metro Dublin proposal should have been included in the cumulative impact assessment undertaken for MetroLink. I note, in terms of the statutory planning process, that the Metro Dublin project hasn't progressed past the pre-application consultation stage in 10 years and that it is not referenced in any planning or transport policy. The EIA Directive requires that the EIAR address "the cumulation of effects with other existing and/or approved projects". On that basis, I am satisfied that there is no need for a cumulative impact assessment of the Metro Dublin proposal.
- 11.4.19. Nevertheless, should the Metro Dublin proposal proceed in the future, there is no reason to believe that the MetroLink project would be prejudicial to its delivery, noting that many European cities have extensive underground tunnel networks for various purposes.
- 11.4.20. Mr MacEoin submitted a copy of his transport-related dissertation to the Board, which he completed as part of a UCD master's degree. In his written and subsequent oral submission, he contended that alternatives to the MetroLink should be progressed, including expansion of the Irish Rail network, Bus Rapid Transport, other bus related improvements and additional Luas lines.
- 11.4.21. Mr O'Brolchain presented extensive details regarding an alternative light rail-based project he called the City Access Transit (CAT), which had been proposed by a group known as Drumcondra 2005, with its alignment indicatively illustrated in the shape of a cat. His submission detailed the many years of engagement he had with NTA, TII and various engineering consultancies in relation to the CAT proposal.
- 11.4.22. While it is heartening to see many observers engaging with ideas and concepts for addressing what is clearly a current and longstanding public transport deficit in Dublin, these were not among the reasonable alternative studied by the applicant. The MetroLink project has been through a multi-stage route development process and the route, as proposed, is strongly supported by applicable transport and

planning policy. I consider that – as with the submissions seeking that the MetroLink be diverted/extended to the south west – proposals for alternative public transport networks and projects are best addressed to the transport policy arena, perhaps during the next review of the GDATS.

11.4.23. Alternative Route Options

11.4.24. The MetroLink proposal has developed from the previous Metro North project, which was granted by the Board in 2010, but subsequently abandoned due to the economic downturn at the time. That project was itself the subject of extensive consideration of alternatives.

11.4.25. In 2014, the NTA's Fingal North Dublin Transport Study considered 25 No. potential public transport schemes to connect Dublin City Centre, Dublin Airport and Swords. This included heavy rail, light rail, bus rapid transit and combined options. Following a 2-stage analysis process, which included comparison of environmental effects, option LR7 'Optimised Metro North' was identified as the preferred option. This was essentially a reduced cost version of the granted Metro North.

11.4.26. The subsequent, but now superseded, Transport Strategy for the GDA 2016-2035 proposed the development of a 'New Metro North' (i.e. the 'Optimised Metro North') as well as 'Metro South' (i.e. the upgrading of the Luas Green Line). It was intended that this would allow for metro trains from Swords to Bride's Glen.

11.4.27. The current GDA Transport Strategy 2022-2042 includes the MetroLink project on the alignment proposed in the railway order, with the upgrading of the Luas Green Line to metro status being omitted. I note Section 12.3.2, which is relevant to both the overall route and the choice of Charlemont as the southern termination point. It states that:

"The proposal to serve the northern suburbs of Dublin City, Swords and Dublin Airport by a direct rail line from the City Centre has been a long-standing objective of transport planning in Dublin. This is based on the forecast travel demand along this corridor. Swords had a population of just under 40,000 in 2016 and is planned to grow significantly. Dublin Airport is Ireland's main international gateway and, postpandemic, is forecast to grow in terms of passenger numbers and employee numbers. Between the Airport and the South City Centre terminus, there are also major population centres

such as Ballymun and Glasnevin, plus the North City Centre defined by its commercial, retail and cultural attractions.

The current Metrolink project has been identified as the most advantageous way to serve the critical levels of transport demand on this corridor. The Preferred Route for MetroLink, which runs from Estuary in North Dublin, where a strategic Park and Ride is also proposed, to the south city at Charlemont was determined following the completion of a comprehensive route options assessment study, which was also informed by the outcome from two rounds of non-statutory public consultation.

MetroLink will integrate with local, regional and national bus and rail services at several points along its route, including key interchanges at Dublin Airport, Glasnevin, Tara Street and Charlemont.

Charlemont offers the optimal location for the primary interchange with the Green Line in response to growing demand in the longer term and is an appropriate location to facilitate any potential future metro extensions to serve the south west, south or south east of the city region should sufficient demand arise.”

- 11.4.28. The EIAR outlines the process through which an Emerging Preferred Route (EPR) was developed. This began with the New Metro North Alignment Options Report prepared in 2018, with a study area from Swords to Dublin City Centre, in line with the Transport Strategy at the time. A Tunnel Configuration Study was also undertaken at that stage to consider various twin bore and single bore options. While this didn't identify a preferred option, a twin bore option was utilised for the EPR development.
- 11.4.29. The study area was divided into 3 areas, and multiple alignment options were considered in each area, based on consideration of constraints and identification of Metro Station Zones, i.e. general areas where transport modelling indicated high demand based on trip attractors, employment density etc.
- 11.4.30. A preliminary assessment of the options then shortlisted the routes to 6 No. feasible route options in Study Area A (city centre area), 9 No. in Study Area B (Drumcondra/Glasnevin to Dublin Airport area), and 5 No. in Study Area C (Swords

area). The criteria used in this preliminary assessment were the potential for interchange, potential trip demand, key trip attractors and directness/journey time.

- 11.4.31. The feasible routes are outlined in Table 7-8 of the EIAR and illustrated in Diagrams 7.2 – 7.4. I note that both ‘Old Metro North’ and ‘Optimised Metro North’ were among the options considered. There was wide variety in the route options considered, albeit that the Charlemont and Estuary end points remained fixed.
- 11.4.32. A detailed two stage Multi-Criteria Analysis was undertaken for the route options in the three study areas, and I note that the various alignments considered varied both in terms of horizontal alignment and also vertical alignment (e.g. elevated at Charlemont and at the R132). The criteria considered in the MCA included both economic factors as well as planning and environmental factors.
- 11.4.33. The overall EPR alignment emerged by combining the best-performing routes from each of the three study areas. This was known as Option 9.
- 11.4.34. Following public and stakeholder consultation on the EPR alignment, a number of modifications were made, leading to the Preferred Route. This included changing the tunnel from twin bore to single bore, changing tunnel launch sites, crossing of the M50 Motorway by a bridge, locating the Depot at Dardistown, deferral of the Luas Green Line upgrade for metro use, alterations to the alignment, station and substation locations, and introduction of intervention shafts.
- 11.4.35. Multi-disciplinary analysis of these changes was undertaken, having regard to the ‘Guidelines on a Common Appraisal Framework for Transport Projects and Programmes’ (DTTAS 2016), including consideration of environmental factors. This is documented in the Preferred Route Design Development Report, a copy of which was submitted on the first day of the oral hearing (Ref. OH4).
- 11.4.36. I am satisfied that a detailed multi-stage consideration of reasonable alternative route alignments took place over a prolonged period, and that due regard was had to constraints, opportunities and environmental and planning considerations, as well as economic factors. The applicant’s rationale for choosing the final proposed route alignment over the reasonable alternatives that they studied is clearly outlined in the EIAR and the Preferred Route Design Development Report. I note that extensive public and stakeholder consultation took place in relation to this design development

process, and that the results of this consultation have informed the final design before the Board.

11.4.37. Notwithstanding the general acceptability of the consideration of alternatives, I will address particular aspects of the proposed development in the following sections, where the issue of alternatives is relevant with regard to the submissions received.

11.4.38. Alternative Design: Single Bore Vs Twin Bore Tunnels

11.4.39. The EIAR does not contain a great deal of information with regard to why the decision was made to switch from the twin bore system proposed at Emerging Preferred Route stage to a single bore system at Preferred Route stage. This change from smaller twin bore tunnels to a larger single bore tunnel has many potential implications in terms of achievable curvatures (which may affect station locations), spoil arisings, settlement, groundborne noise and vibration, etc. Another consequence of the single bore system is that it necessitates the sizable intervention shaft which is proposed in Albert College Park as a result of the distance between stations in this area and the inability to provide emergency services access and evacuation routes via a separate tunnel, as could occur in a twin bore scenario, via cross-passages.

11.4.40. At the oral hearing I noted that the information contained in Section 7.7.2 of the EIAR focuses on the 'pros' of changing from twin bore to single bore tunnel, and I queried whether 'cons' existed, and if so, what they were and how the decision had been made. Similar queries had been raised by a number of observers in their written submissions (e.g. GADRA, Hampstead Residents CLG, Rail Users Ireland).

11.4.41. The applicant subsequently submitted a document entitled 'Derivation of the Single Bore Tunnel as the Proposed MetroLink Tunnel Option' (Ref. OH108) at the oral hearing on 28th February 2024.

11.4.42. This document notes that the EPR public consultation document had noted that the EPR had been developed on the basis of a twin tunnel arrangement but that it also stated that "an alternative arrangement is also under consideration, where both the northbound and southbound metros would run in a single, larger tunnel....This single tunnel option will be further assessed to establish its cost and construction advantages". The document details that further consideration of tunnel options was

subsequently undertaken, leading to the single bore tunnel option presented in the 2019 Preferred Route Design consultation.

- 11.4.43. The document summarises the benefits and disbenefits of the proposed single bore tunnel against an alternative twin bore tunnel under the headings of construction, costs, environmental, settlement, operations, and operational safety.
- 11.4.44. In terms of construction, key considerations were the faster construction of a single bore tunnel and the removal of the need to construct large track crossover caverns at various points along the tunnel route which would be required under a twin bore option (i.e. in a single bore tunnel the crossover happens within the tunnel). A very large and long turnback cavern would be required south of Charlemont, to provide track crossovers, necessitating a lowered station level at Charlemont for safe cavern construction. The disbenefit of the single bore tunnel is the introduction of an intervention shaft at Albert College Park and intervention tunnels beneath the Airport.
- 11.4.45. An overall construction cost and schedule saving is contended to be achieved with the single bore tunnel option. The Preliminary Business Case for the project assessed this saving as c. €0.6 billion.
- 11.4.46. The single bore tunnel is contended to have environmental benefits, due to the reduced spoil arisings and associated lorry movements. With regard to potential settlement issues, the larger single bore tunnel has greater potential for ground settlement above the tunnel compared to smaller twin bore tunnels. However, due to the twin tunnel separation, it is contended that settlement risks for the twin bore option would potentially occur over a wider area. The document notes that settlement assessment indicates that the proposed single bore tunnel is generally expected to cause only negligible to slight damage.
- 11.4.47. Operational considerations include the greater safety risks for maintenance workers in a single bore tunnel, as train service would need to continue on one of the tracks. Conversely, the single bore option makes it easier to add additional crossover points in the future, if required. It is contended that the change from central island platforms in a twin bore system to side platforms in a single bore system creates more difficult wayfinding conditions but provides clarity of access.
- 11.4.48. Both twin bore and single bore tunnels are contended to be equally safe for train operations, passenger safety, and evacuation and emergency intervention during

incidents, albeit that passenger evacuation and emergency services access differs for each tunnel configuration.

11.4.49. The applicant contends that, ultimately, the primary reasons for the change were construction programme and cost benefits, including the removal of the need for large crossover caverns, whilst retaining the operational requirements of the system and in light of the fact that both options performed equally well from an operational safety perspective.

11.4.50. The information contained in the EIAR raised the question that if single bore projects are inherently superior to twin bore projects, then why are twin bore systems still being built around the world? However, it is clear from the information provided by the applicant at the oral hearing that there are pros and cons to each option. While twin bore tunnel metro systems are more common, the applicant notes that single bore tunnels are used on existing metros such as Barcelona Line 9, Sao Paulo metro, Metro de Madrid, Metro Paris and is being adopted for some other metros under development, such as Metro de Lima and Riyadh Metro.

11.4.51. There is no one right answer to the single bore Vs twin bore question. However, I am satisfied that the applicant has provided sufficient information to demonstrate that they have considered the two options in considerable depth and have provided sufficient justification, based on a range of criteria, for the option chosen for the MetroLink proposal now before the Board. The implications of this design decision, will be addressed in the relevant sections of this report, including with regard to the Dublin Airport and Charlemont Intervention Tunnels and the Albert College Park Intervention Shaft, the need for which are a direct consequence of the change from twin bore to single bore tunnel.

11.4.52. Alternatives along R132 to East of Swords Town Centre

11.4.53. At Emerging Preferred Route stage, the proposed alignment in this area was an elevated alignment along the R132 median. Following public consultation, in which concerns were raised regarding visual impacts, operational noise impacts and accessibility, an alternative retained cut / cut and cover alignment was developed, as per the current application. I note that the submission by Estuary Court Residents Association (ECRA; S89, S90) agrees with the decision not to progress the elevated option.

- 11.4.54. ECRA queried why an alternative approach of placing the MetroLink alignment along the R132 had not been pursued, which they contended would negate the need to impact on the green spaces within Estuary Court, Seatown Villas and Ashley Avenue. Two alternatives were raised, firstly locating the alignment along the central median of the R132, or secondly locating it along the eastern (southbound) side of the R132 from Balheary pitches to Seatown Station and redesigning the R132 accordingly (see ECRA oral hearing submission OH199 and further submission 1FS23). ECRA contend that there is sufficient width on the R132 to accommodate this and that cycling infrastructure could be reinstated above a cut and cover alignment. A further alternative raised in the Seatown Villas Residents submission (S277) was a bored tunnel along the R132. This issue of alternatives on the R132 was also raised by others, such as Juliana Boland in her oral hearing submission (Ref. OH201).
- 11.4.55. The applicant's response to the written submissions states that an alternative cut and cover option along the R132 median was assessed but discounted due to the greater traffic disruption it would cause due to the need for traffic management measures along the R132 to accommodate a wide working area in the median, with associated temporary widening of the existing road corridor required to maintain FCC's R132 Connectivity Project corridor requirements. The applicant contends that that the R132 median option would also result in increased construction duration and construction and operational costs due to the increased extent of cover, compared to the proposed development, and the additional ventilation and emergency access requirements. They also note that access to the stations would be via at-grade crossings over the R132, contending that there would be limited space provision at the station entrance compared to the landscaped plaza entrances of the proposed option.
- 11.4.56. With regard to an alternative bored tunnel option beneath the centre median of the R132, it is stated that this was assessed but could not be justified due to the less built-up environment in this area and the need for deeper underground stations, ventilation etc. which would render construction and operating costs higher than the other options.
- 11.4.57. With regard to ECRA's proposal of a straight alignment along the R132 as presented at the oral hearing, TII responded to this issue at the oral hearing and in their written

response to the further submission made by ECRA which had reiterated this alternative (1FS23). TII considers that this alternative ECRA alignment is not viable for the following reasons:

- It would only be possible to achieve a straight alignment parallel to the edge of the R132 where the alignment passes close to the corner of Estuary Court Road, as Seatown Station needs to be on a straight section of track for operational safety reasons, in order to avoid curves in stations leading to gaps between trains and platforms. North of the station, it is not possible to create a straight-line alignment angled directly from the north end of the station due to the need for appropriate design curves.
- Both greens within Estuary Court would still be required for construction access on the eastern side of the alignment, as construction access on the western side of the alignment would not be possible unless traffic along the R132 was diverted and/or restricted to the west of the proposed works to avoid significant impacts to the properties in Comyn Manor.
- Towards the Estuary Roundabout, the ECRA alignment would directly impact the rear of properties along The Crescent, Seatown Park, which are not currently impacted.
- It is not possible to tie the northern end of the straight-line ECRA alignment directly into the curved section of MetroLink alignment without appropriate design curves, which would impact on a significant length of the R132 and Estuary junction, necessitating extensive traffic management measures and extending the duration of construction impacts due to the need to phase the works at the Estuary junction and along the R132. TII note that under the Railway Order proposal, traffic management measures are only required across one leg of the four-leg Estuary junction and the R132 is not impacted north of the junction.

11.4.58. Having considered the matter, I am of the view that TII has provided adequate justification for the proposed MetroLink alignment along this portion of the R132. While there will be negative impacts on the residential estates along the alignment due primarily to the temporary use of their green spaces for MetroLink construction and associated noise, dust and general disruption, the duration of these impacts will

be temporary and the open spaces will be reinstated post-construction in this area (stated at the oral hearing to be reinstated after c. 4.5 years). When balanced against the hugely positive operational phase benefits for the residents of these estates in having easy access to metro stations, I consider the temporary impacts to be justified. The R132 is an important transport corridor and will be increasingly important for bus and active travel modes as the R132 Connectivity Project and the Swords BusConnects project are implemented. The proposed alignment will minimise disruption to this corridor and as detailed elsewhere in this report, the resultant temporary negative impacts on the residents of the estates are capable of being largely mitigated to an acceptable level. While the ECRA suggestion of running the alignment along the R132 is ultimately feasible, I am satisfied that TII has provided adequate justification of why it is not their chosen option in this area, with reference to construction impacts and railway operational safety issues.

11.4.59. With regard to a bored tunnel option, I consider that a bored tunnel in this low density area could not reasonably be justified when more cost-effective alternatives are available. An elevated alignment, while potentially more visually intrusive, would have the considerable benefit of minimising severance, compared to the proposed option which limits crossing points of the alignment. I note, however, that this elevated option was not preferred by either TII or local residents.

11.4.60. In conclusion, I am satisfied that a comprehensive consideration of alternatives took place in relation to this portion of the alignment and that the applicant has adequately justified their proposed option.

11.4.61. Alternative Depot Locations and Layouts

11.4.62. At Emerging Preferred Route stage, Estuary was identified as the preferred location for the MetroLink depot. Subsequently, as part of the development of the Preferred Route, it was decided to relocate it to Dardistown following Multi-Criteria Analysis of the two options. The MCA, which included consideration of environmental matters, concluded that the operation of the system would be better served by a more centrally located depot site at Dardistown, allowing trains to come into service more quickly and efficiently on the busiest section of the alignment (i.e. Dublin Airport to Charlemont), with less empty running trains. The centrally located depot is also preferable in the event of mechanical failure of trains, as it allows them to be more

easily moved for maintenance/repair compared with a depot at the northern extent of the alignment. The Dardistown location is also contended to have the potential for less significant environmental effects compared to Estuary, particularly with regard to hydrology, biodiversity and landscape and visual impacts.

- 11.4.63. It is clear to me that the two obvious contenders for depot location are the northern end of the alignment at Estuary or a centrally located area which, given the extent of depot site required, limits the available options, with the Dardistown area to the south of the Airport being one of the few available options for such a large facility.
- 11.4.64. I am satisfied that the applicant has adequately outlined the main alternatives studied for the depot site and has provided a clear and compelling argument for the chosen option at Dardistown, which is based on both operational efficiency and due consideration of environmental factors.
- 11.4.65. Having identified Dardistown as their proposed depot location, the applicant undertook a further detailed MCA of 9 No. main options and various sub-options for the exact location and layout of the depot, given the need for large stabling and maintenance buildings, extensive railway sidings and the miscellaneous elements of a railway depot, such as cleaning areas, offices etc. Diagram 7.7 of the EIAR shows an illustrative overlay of the 9 No. options, which demonstrates that all of the available lands between the Airport and the M50 were considered. A further option (Option 10) was also considered following consultation with a major landowner in the area who had proposed an alternative location.
- 11.4.66. A summary of the MCA for the depot location and layout is set out in Section 7.7.4 of the EIAR, with the full assessment contained in Appendix A7.6. On foot of the MCA, which included consideration of environmental factors, Option 8a was chosen. Among the primary advantages of this option over the others were the more limited encroachment on “High Technology” zoned lands, with the majority of the depot site within “General Employment” zoned lands that are more limited in terms of future development potential due to being restricted by Dublin Airport’s Outer Public Safety Zone. It is also stated that the approach tracks to this option do not sterilise as much land as other options, reducing the land take and that there is a reduced interaction with existing and proposed sewerage projects.

11.4.67. I am satisfied that the proposed depot has been the subject of an extensive and comprehensive examination of reasonable alternatives, both in terms of its location and its layout. Planning and environmental issues arising from the chosen option will be addressed elsewhere in this report, but I am satisfied that clear reasons have been provided for the option chosen, based on both operational considerations and considerations of environmental factors.

11.4.68. Alternative Station Designs: Mined Station at Tara Station

11.4.69. A number of observers, both in their written submissions and at the oral hearing, contended that an alternative mined station construction methodology should have been considered at Tara Station in order to avoid the need to demolish existing buildings/facilities.

11.4.70. I refer the Board, for example, to the written and oral submissions made by An Taisce (S8; OH41; 1FS3) and Save Markievicz Pool & Gym Campaign (S276; OH267 - 268, OH270 - 272) for example. While An Taisce welcome the proposed development, they raise concerns regarding the loss of Markievicz Leisure Centre, College Gate apartment complex and other residential and office development and they question the conclusions of the Multi-Criteria Analysis undertaken by the applicant, which is detailed in Appendix A7.2 of the EIAR.

11.4.71. Of the three main City Centre DART/commuter rail stations, I consider that Tara Street Station is geographically the best positioned for an interchange station, given the possible alignments between the Glasnevin interchange Station and Charlemont Station. However, the area surrounding the existing Tara Street Station is densely developed and constrained on all sides by road infrastructure. Frank McDonald, in his written submission, noted the missed opportunities presented by large-scale developments in the area in recent years which could have accommodated a station box, but that is a moot point at this stage.

11.4.72. The applicant made a presentation at the oral hearing on 20th March 2024, in which they outlined the construction methodology for a potential mined option for Tara Station (Ref. OH259) and compared the land take for a mined option against the proposed cut-and-cover methodology. They also outlined the various options for the Tara Station which had been considered (Ref. OH260), which drew upon the material presented in Section 7.7.10.9 of the EIAR and Appendix A7.2. It is clear

that an in-depth consideration of a wide range of alternatives was undertaken by the applicant for the Tara Station, including options for retaining the leisure centre and College Gate apartments. This included alternative locations, orientations and construction methodologies.

- 11.4.73. TII, in their response to An Taisce's further submission (1FS3), contend that the chosen option eliminates many significant risks and impacts compared to An Taisce's preferred Option 4. Issues identified with regard to Option 4 include the removal of College Gate apartments residents for two years, significant risks of damage to the building which would require remediation before residents could return, increased health and safety risks for construction workers due to nature of mining works and an operationally sub-optimal station.
- 11.4.74. The main issues identified with regard to a mined station option at Tara Station include the need to significantly increase the depth of the station by c. 9m in order to ensure adequate rock cover above (i.e. sufficient remaining rock is required to form an arch over the cavern) and the size of the required cavern itself, which would have to be particularly large (c. 26m x 19m in cross-section) in order to accommodate the required platform widths at what will be one of the busiest stations on the alignment. In order to provide station access and space for the large amount of plant and equipment required for station operation, large shafts would be required either side of the cavern to the greater station depth. These shafts would book-end the College Gate building and, given the depth, would require a prolonged excavation phase with associated blasting and rock-breaking. TII state that the noise and vibration impacts associated with this would require the relocation of residents in advance of the relocation during the cavern mining phase. Additional increased risks associated with groundwater control are noted, due to the open-face excavation, with potential for groundwater ingress and associated grouting and dewatering requirements. The volumes of material to be removed and concrete required would also be greater than the proposed station box option and thus have a greater carbon footprint.
- 11.4.75. In terms of property demolition, while a mined station option could avoid the demolition of the College Gate apartments and the leisure centre, it would still require the demolition of all of the other buildings that it is proposed to demolish for the station box option (i.e. Ashford House office building, adjacent buildings and Nos. 25-32 Townsend Street) in order to construct the shafts either side of the cavern. I

note that, due to the mined area being smaller in volume than the station box approach, the lost back-of-house areas needed for M&E equipment etc. would all have to be accommodated within extended shaft areas, increasing the works footprint.

- 11.4.76. In the operational phase, TII contend that the proposed station box option offers significant advantages in terms of safety and efficiency during emergencies, since its shallower depth would allow shorter and faster evacuation times to the surface and improved emergency services access. In normal operation, TII contend that the shallower proposed option provides superior access for Persons with Reduced Mobility and enhanced passenger experience and wayfinding more generally. I agree with TII that this is a particularly important issue for Tara Street station, given that it will be one of the busiest city centre stations, driven by its interchange with the adjacent elevated Irish Rail DART Station. Given the importance of this interchange and the need to transfer from an underground metro station to an elevated rail station, or vice versa, the shorter and more convenient walking routes offered by the proposed shallower Station box design and the associated plaza area will offer a greatly enhanced and more efficient and accessible passenger experience than a deeper mined option.
- 11.4.77. While a mined option may appear to provide a means of constructing stations without demolition of buildings, as noted above it does require large shafts for access purposes during construction and operation and for spoil removal and hence has a considerable surface expression, albeit less than a top-down excavation. Mined station construction is also a fundamentally more risky endeavour, due to the open face construction and challenges around groundwater control. While risk can be mitigated and managed, it is likely that the buildings overlying the mining works would have to be vacated for the duration of mining works.
- 11.4.78. I consider the applicant's 'cookie cutter' approach of replicating generally similar station box designs and construction methodologies where possible is a positive aspect of the proposed development that will serve to reduce impacts and construction timeframes, compared to introducing novel construction methodologies in particular locations (except where absolutely necessary).

- 11.4.79. A benefit of the proposed top-down construction methodology for the station is that it facilitates the creation of an urban plaza in what is currently a road traffic dominated area with poor quality public realm and it creates opportunities for potential future urban development on the residual lands, which would likely to be of significant scale and density as would befit their proximity to the interchange station.
- 11.4.80. In conclusion, I would agree with TII's position that a mined station option at Tara Street is technically feasible without the demolition of College Gate and the Markievicz Leisure Centre, but that it would result in significantly greater construction and environmental risks including the risk of greater settlement and property damage, would require the vacation of these buildings for c. 2 years and possibly longer if mining resulting in damage requiring remediation. It would also require deeper excavation and potentially complex groundwater control measures, which if not adequate, could significantly increase construction risks in this densely developed area in terms of settlement related property damage, construction delays and other matters. The operation of the resultant deeper mined station would also be sub-optimal at this key interchange location, when compared to the proposed open cut station box.
- 11.4.81. I am satisfied that the applicant has given a considerable degree of consideration to a mined station option at Tara Street and has provided adequate justification for not pursuing this option in terms of both construction and operational matters.
- 11.4.82. While the extent of the proposed acquisition and demolition of existing urban fabric at this location, including the College Gate apartment building, DCC housing, the leisure centre and offices is a particularly regrettable aspect of the proposed development and a significant to profound negative impact for affected owners and occupiers as addressed elsewhere in this report, I consider that the need to provide a high quality metro station at this key city centre interchange location and to adequately reduce construction risk, including environmental and human health risks, is supportive of the chosen open cut station box option.
- 11.4.83. Alternatives at St Stephen's Green
- 11.4.84. A number of observers contend that there are better alternatives available for the St Stephen's Green Station, including a mined station rather than cut and cover, repositioning of the station box entirely out of the park, or relocating it to St

Stephen's Green West where, it is contended, a better interchange could be provided with the Luas Green Line than is proposed at Charlemont. It is contended that a terminus at St Stephen's Green West would negate the need for Charlemont Station and better facilitate future extension to south west Dublin.

11.4.85. *Station at St Stephen's Green West*

11.4.86. The decision to choose St Stephen's Green East instead of St Stephen's Green West for the proposed MetroLink station was made prior to Emerging Preferred Route (EPR) stage.

11.4.87. In response to the submissions who raised the issue of an alternative station location at St Stephen's Green West, TII stated that such a station location is not preferred as the alignment between Tara Station and a St Stephen's Green West Station would result in an undesirable horizontal reverse curve and an alignment section greater than 1,000m, necessitating an intermediate intervention shaft located somewhere between these stations, similar in size to that proposed in Albert College Park. They state that TCD's sports grounds would potentially be an option for such a shaft. As it is Government policy under the GDATS to provide a station and interchange with the Luas Green Line at Charlemont, they note that the alignment between a St Stephen's Green West station and the Charlemont Station would result in a further undesirable horizontal reverse curve and an alignment again greater than 1,000m, necessitating a second additional intervention shaft. Given the lack of open space, TII state that this would be expected to result in significant demolition and redevelopment in an existing built-up area. TII contend that the additional length of tunnel and the addition of two intervention shafts is uneconomic in comparison to the proposed development.

11.4.88. In addition to alignment related issues, TII contend that St Stephen's Green West itself is a very constrained location for a station, due to the presence of buildings, the Luas station/line and the park. Maintaining operation of the Luas during station construction is considered to be complex and challenging, with resultant greater impacts on the park due to the likely need to place more of the station in the park compared to the proposal at St Stephen's Green East. TII also contend that such an alternative would impact an area of the park that has greater amenity value than St

Stephen's Green East, due to the nearby park entrance at the southern end of Grafton Street and the risk of impacting the existing lake.

- 11.4.89. TII therefore contend that an alignment that links Tara Street, St Stephen's Green East and Charlemont is a more direct and economic alignment, does not require additional intervention infrastructure, avoids a complex engineering interface with the Luas Green Line, impacts the park less and has less potential for disruption during the construction phase.
- 11.4.90. In their response to the submissions of the Elected Representatives at the oral hearing (Ref. OH149), TII accept that having a terminus at St. Stephen's Green West would improve the interchange experience between MetroLink and the Luas Green Line but they note that the Luas capacity issues between St. Stephen's Green and Charlemont would remain (as addressed in Section 10.12 of this report) and that the increased demand on a section of the Luas line with no resilience to increase capacity would have negative impacts to Luas operations, quality of service and journey time reliability. They also contend that the addition of Luas/MetroLink interchange passengers to what is a busy area around Fusilier's Arch and the top of Grafton Street would result in pedestrians experiencing poor comfort levels from crowding with a negative impact on the surrounding public realm.
- 11.4.91. I consider that the applicant has adequately justified the basis for their proposed station location at St Stephen's Green East, rather than St Stephen's Green West. Having come to the conclusion elsewhere in this report that Charlemont is an appropriate location for the terminating station and interchange with the less capacity constrained portion of the Luas Green Line, as supported by the GDATS, I do not consider that the significant additional disruption and likely impacts on the park by locating a station under its western side would be justified or desirable. The station at Tara Street is also a core part of the project, in that it provides for interchange with the DART and commuter rail networks, thus supporting the development of an integrated public transport network. With the fixed points of Tara Street and Charlemont, an intermediate station at St Stephen's Green West would result in a suboptimal alignment with a need for two additional intervention shafts within the city centre, which would have the potential for significant disruption and/or property acquisition/demolition in their own right.

11.4.92. ***Alternative Station Design at St Stephen's Green East***

11.4.93. A wide range of alternatives were considered at St Stephen's Green East, as detailed in Section 7.7.10.10 of the EIAR and the associated appendices, including:

- 'St Stephen's Green Report' (Appendix A7.3): Analysis of 7 No. potential station locations on St Stephen's Green East and Earlsfort Terrace.
- 'St Stephen's Green - Mined Options Report' (Appendix A7.5): Analysis of potential options for a mined station to minimise direct impacts on St Stephen's Green.
- 'St Stephen's Green Station Study - Alternative Station Location within St Stephens Green East Carriageway' (Appendix 7.7): Analysis of the potential for a station wholly under St Stephens Green East roadway to avoid direct impacts on St Stephen's Green.
- 'St Stephen's Green Station Options Assessment Summary' (Appendix A7.8): Re-analysis of all options considered for the proposed St Stephen's Green station on St Stephen's Green East.

11.4.94. In considering alternatives at St Stephen's Green East, the applicant identified a number of important constraints, which had a significant bearing on their consideration. This included the importance of the park itself, as a historical public park which maintains its Victorian layout and is one of the most important green spaces in the centre of Dublin. The park is both a National Monument and a protected structure. Many of the buildings surrounding St Stephen's Green are also protected structures, and a number of them feature extensive cellars protruding underneath the roadway.

11.4.95. St Stephen's Green East is also an important road corridor for public transport, private vehicles, cyclists and pedestrians. The EIAR notes that during the AM peak hour, 384 buses used the corridor to access the City Centre. This road also forms a key corridor for a number of BusConnects spine routes.

11.4.96. I noted from my site inspection that two right-turning lanes of traffic on St Stephen's Green East, which provided access onto Merrion Row, are closed off with bollards, creating a dead unused space in the centre of the carriageway. It appears that this situation arises from Covid-related measures to encourage outdoor dining on

Merrion Row. I asked DCC's Traffic Engineer at the oral hearing on 19th February 2024 if a decision had been made yet as to whether this would be a permanent arrangement. He stated that no permanent decision had been made.

11.4.97. There are also multiple major utilities underneath the roadway on St Stephen's Green East, including a 1.8m brick ovoid Victorian sewer and a 1.7m reinforced plastic mortar ovoid sewer under Hume Street. Any diversions of these utilities are stated to be likely to extend the construction period by 12 months or more.

11.4.98. A further constraint in repositioning the station in this area is the potential requirement for an intervention shaft in the event that the distance between Tara Station and St Stephen's Green Station exceeds 1,000m. Any such shaft would be a significant structure and would need to be located somewhere between Tara Street and St Stephen's Green.

11.4.99. Having reviewed the EIA and the above appendices, it is clear that the examination of alternative station locations in the St Stephen's Green East area was extensive, multi-layered and detailed. This included Multi-Criteria Analysis of alternatives entirely within the roadway, partially within the park, entirely within the park as well as at Earlsfort Terrace in front of the National Concert Hall.

11.4.100. Appendix A7.8 of the EIAR is of particular relevance, as it draws together and re-analyses all 16 options considered for the station, both conventional station box options and mined options, with reference to the potential impacts on: the park (including the footprint within the park); the roadway (including on public transport and footpaths); accessibility issues; the major utilities at St Stephen's Green East; construction programme and costs; impacts on sensitive receptors; and the achievement of the architectural vision for the station.

11.4.101. The proposed station location is considered to be the preferred option as it offers the shortest construction period for any of the options, lower construction cost and cost certainty compared to options requiring an intervention shaft and/or the diversion of major utilities. It also allows the St Stephen's Green East transport corridor to remain operational during construction, whereas options entirely within St Stephen's Green East roadway significantly disrupt general traffic and public transport over a number of years. The standard station box construction is considered to offer a higher quality passenger experience, particularly for those with

mobility and visual impairment, than a mined option, due to the constraints that would be imposed by a mined construction methodology. With regard to the footprint within the park, the applicant's preferred station location is stated to impact c. 5% of the park area during construction, reducing to c. 0.21% following reinstatement.

11.4.102. The impacts of the proposed development on St Stephen's Green park are addressed elsewhere in this report, but I am satisfied that a comprehensive and detailed study of reasonable alternatives was undertaken by the applicant, with significant regard paid to the sensitivities and importance of the Park in their Multi-Criteria Analysis. As with many city centre sites, there are significant constraints to be considered in identifying a suitable location for what is a development with a large footprint. While heritage matters are one of the main constraints at St Stephen's Green, they are not the only main constraint, and the role of St Stephen's Green East as a key public transport corridor must be recognised, as must the presence of major utilities upon which the city depends and which would be difficult to divert. I am satisfied that the applicant has provided a clear and adequate justification for their chosen option at St Stephen's Green East, with reference to environmental matters. In coming to this conclusion, I do not dismiss the significant negative impacts that station construction would have on the park and I address those issues in the relevant sections of this report.

11.4.103. Alternatives to Charlemont Turnback and Intervention Tunnel

11.4.104. Once the TBM passes through Charlemont Station, it must terminate somewhere. As this is the end of the alignment, following the decision not to upgrade the Luas Green Line to metro standard, the provision of a turnback and stabling area for trains south of the station is also desirable for operational efficiency reasons. Meeting these requirements results in a run-on of the tunnel past the station, and a consequential safety requirement to provide a safe means of evacuation from the tunnel extension.

11.4.105. Five main options were considered for this turnback facility with further sub-options for the intervention method. These included various tunnel termination locations at or beyond the turnback end, and intervention by means of an Intervention Shaft in various locations or a parallel tunnel back to Charlemont

Station. Another option considered was tunnel termination at the Charlemont Station box with a mined cavern constructed for the turnback and parallel tunnel.

11.4.106. These options are detailed in Section 7.7.11.2 of the EIAR and in more detail in Appendix A7.4.

11.4.107. An MCA was undertaken for the various options, as detailed in Appendix A7.4. In terms of environmental considerations, the chosen parallel intervention tunnel (Option 7) was considered to perform best, as it does not have any ground level footprint, unlike the shaft options, which would require some demolition or property impacts or tree felling and loss of green space in the densely developed Ranelagh area, depending on location. Such a shaft would have greater land take, visual impact and potential biodiversity impacts. In terms of noise and vibration, all options would have impacts, with the intervention tunnel option resulting in groundborne noise rather than the airborne noise associated with the shaft options.

11.4.108. I consider the principle of a turn-back and stabling facility is justified and appropriate at the southern end of the alignment. Arising from this is the safety-related need to provide for intervention/evacuation. Having reviewed the MCA undertaken, I consider that the applicant has adequately justified the choice of the intervention tunnel over alternative options and I am satisfied that the decision was justifiably made with reference to consideration of environmental effects.

11.4.109. Due to the positioning of the intervention tunnel, connected to the Charlemont Station box, it will be constructed via mining and Sprayed Concrete Lining techniques, rather than being TBM-driven as with the Airport intervention and ventilation tunnels. The implications and impacts associated with this are addressed where relevant in this report.

11.4.110. Grid Connection Alternatives

11.4.111. As noted in Section 5.1 above, the 110kV high voltage cabling to connect the proposed MetroLink development to the national grid is part of a separate application to the Board by the ESB, under section 182A of the 2000 Act (Ref. ABP-317831-23) but is assessed within the MetroLink EIAR. The EIAR outlines the route options that were considered for the 3 No. cable links, which are required to connect the proposed MetroLink substation at Forrest Little to the existing Belcamp substation, to connect the proposed MetroLink substation at Ballystruan (i.e. Dardistown) to the

existing Newbury substation, and to connect the two proposed MetroLink substations to each other. Various options were considered for the cable routes, primarily along public roads, with a view to minimising impacts on major roads, watercourses, residential communities, cultural heritage and other environmental factors as well as ease of access and wayleave considerations.

11.4.112. The process by which a preferred option was established is documented in Section 7.7 of the EIAR and I am satisfied that it was a robust consideration of alternatives.

11.4.113. Finally, I note that the proposed development outlined in the separate cables application subsequently submitted by the ESB includes two potential options for the Forrest Little to Belcamp connection.

11.4.114. Alternative Technology: Third Rail Electrification

11.4.115. With regard to the means of powering the trains, Section 7.7.6 of the Alternatives chapter details the options considered, namely Overhead Contact System (OCS), comprising poles and wire and Overhead Conductor Rail (OCR) comprising a rigid aluminium bar and contact wire supported by poles. The criteria considered by the applicant included: compliance with applicable safety rules, regulations and standards; reliability with regard to temperature variations, wire wear, and wire burning; whole life cost consideration; and the ability to fit within available space constraints and effect on tunnel dimensions. While the applicant's analysis identified that OCR is the preferable solution from a technical and financial perspective, the EIAR states that it was decided to use the OCS system on above ground sections of the alignment, due to the reduced visual impact (55m pole spacings and overhead wire for OCS versus 10m pole spacings and overhead rail for OCR), with the OCR system used on the sections that are underground and in cut.

11.4.116. At the oral hearing, I asked whether the applicant had considered the alternative approach of a low-level 'third rail', which would negate the need for poles and overhead conductors and which is a proven technology on other metro systems and electrified railways in Europe. In response, the applicant submitted a Technical Note to the oral hearing on 21st March 2024 (Ref. OH296), entitled 'OCS/OCR Benefits over Third Rail'. The Technical Note outlines the advantages and benefits of

the chosen OCS / OCR approach versus the Third Rail approach under the headings of operational efficiency, safety and design philosophy and infrastructure and spatial considerations. It stated that the OCS/OCR system supports higher voltage levels than the Third Rail system, facilitating more efficient power transmission over longer distances with less energy losses and consequently allowing for wider spacing between substations with space utilisation and cost advantages.

11.4.117. With regard to safety, the applicant noted that OCS/OCR does not intrude into the track bed, unlike the Third Rail which, it is stated, could pose tripping hazards. They state that their chosen approach prioritises clear track beds for passenger safety, particularly during evacuations and interventions and that it is a safer system for staff and passengers due to the electrified elements being kept away from direct contact.

11.4.118. Finally, the Technical Note states that the bored tunnel diameter has more vertical space provision to accommodate OCS/OCR than horizontal space to accommodate Third Rail. It is contended that a Third Rail system could potentially require a larger tunnel diameter and complicate emergency access and passenger flow.

11.4.119. Having considered the issues and considerations presented by the applicant, I consider that a reasonable consideration of the alternative Third Rail approach has been undertaken and that compelling reasons have been given for why the OCS/OCR option is preferred in this instance. While there is an increased visual impact associated with overhead contact systems, I note that similar systems are already used in Dublin for the existing DART network and that the granted DART+ West and South West projects will also use that system.

11.4.120. I am satisfied that the applicant has given reasonable consideration to other methods of electrification and has adequately justified the proposed use of an overhead contact system and the associated requirement for poles and wires.

11.4.121. Alternative Technology: Autonomous Vehicles, Drones and eVtol Aircraft

11.4.122. In terms of alternative technologies, I refer the Board to the written submissions made by Cormac McKay and Aeravai (Autonomous Electric Road and Air Vehicle Association of Ireland) (S54, 1FS14) and his submission at the oral hearing on 27th March 2024. Mr McKay considers that a metro is an obsolete

technology and that investment should be made in emerging alternative technologies, such as autonomous 'RoboTaxis' (possibly in tunnels as developed in Las Vegas by the Boring Company), electric Vertical Take-off and Landing (eVTol) aircraft and delivery drones. Mr McKay also contended that these emerging technologies may result in a passenger decline at Dublin Airport in the future, as smaller electric aircraft will be able to take off and land from anywhere. He asked that the Board's representatives visit the USA or China to experience autonomous vehicles, RoboTaxis and the Las Vegas Loop. Finally, Mr McKay outlined engagement that he has had with Elected Representatives and the NTA in recent years in relation to these proposals.

11.4.123. TII's response was that they will continue to monitor emerging alternative technologies, and the potential impact these may have on passenger demand for MetroLink, but they noted the results of transport modelling which demonstrate the need for the project to meet growth in population, employment and education in the region and the forecast growth at Dublin Airport.

11.4.124. While there is clearly development occurring at pace in relation to drones, autonomous vehicles etc. there is no evidence before the Board that they would comprise a reasonable alternative to the proposed metro project at the present time, particularly with regard to the high capacity of the proposed system, the interchanges proposed to other public transport modes, and the proven technologies upon which it is based. Furthermore, I do not consider that the proposed development is based on obsolete technology, noting for example the proposed use of automated electric trains, platform screen doors, regenerative braking, renewable energy use during operation and the provision of lifts and escalators to provide highly accessible stations.

11.4.125. **Conclusion on Alternatives**

11.4.126. In conclusion, I am satisfied that the proposed development was the subject of a comprehensive design development process that occurred over many years with stakeholder engagement, various rounds of public consultation and which included an extensive examination of alternatives. In its consideration of alternatives, I am satisfied that the applicant made appropriate use of multi-criteria analysis to identify the preferred option now before the Board. I consider that the applicant has

adequately described and documented the reasonable alternatives that they considered and has given a reasonable indication of the main reasons for the options chosen, with reference to environmental effects.

11.5. Major Accidents

11.5.1. Introduction

- 11.5.2. Chapter 28 of the EIAR assesses potential significant impacts of the proposed development on the environment, arising from its vulnerability to major accidents and/or natural disasters (MANDs). Section 28.1 states that:

“In accordance with the requirements of Directive 2011/92/EU as amended by Directive 2014/52/EU (Environmental Impact Assessment (EIA) Directive), it describes and assesses ‘the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned’.”

- 11.5.3. The section further states that the assessment is based on a reasonable worst-case scenario and that the underlying objective of considering the risk of MANDs is to ensure that appropriate precautionary measures are taken for projects with a likelihood of creating significant impacts and with a focus on low likelihood but potentially high consequence events.

- 11.5.4. The chapter considers:

- Relevant MANDs, if any, that the proposed development could be vulnerable to;
- The potential for MANDs to result in likely significant adverse environmental effects; and
- Existing and proposed mitigation and management measures to prevent and mitigate likely significant adverse effects.

11.5.5. Methodology

- 11.5.6. A risk analysis-based methodology is stated to have been adopted, in order to determine (a) the risk events that have the potential to result in a MAND that the development may be vulnerable to or could contribute to, and (b) the consequent impacts and significance of same.
- 11.5.7. The methodology is stated to be based on the provisions of the EIA Directive and with reference to Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA 2022), the Chemicals Act (Control of Major

Accident Hazards involving Dangerous Substances) Regulations 2015, European Commission guidance (2017), IEMA guidance (2020) and other referenced risk assessment methodologies and professional judgement.

11.5.8. **Receiving Environment**

- 11.5.9. The assessment identifies that there are a variety of sensitive receptors along or in proximity to the proposed route, which are vulnerable to MANDs. These include densely populated areas (residential neighbourhoods, schools, employment / commercial sites, healthcare facilities, sports grounds, etc), historic buildings/sites, sensitive habitats and water resources.
- 11.5.10. Potential hazards are grouped under the headings of 'natural' and 'anthropogenic' and includes sources such as flooding, geo-stability hazards, industrial sites, Seveso sites, utilities infrastructure and railways infrastructure. Of particular relevance are the following:

- There are 4 No. industrial sites within 1km of the project alignment that are subject to Industrial Emissions Licences from the EPA, 2 No. of which are designated as Seveso³⁸ sites (SK Biotek and CLH Aviation Limited). There are 12 No. Seveso sites at Dublin Port, which the EIAR does not consider present any risk, in view of their separation distance from the route alignment.
- The project alignment interacts with transport infrastructure at Glasnevin and Tara Station (Iarnród Éireann railway lines), Charlemont (elevated Luas line), the M50 motorway, the R132 Swords by-pass, Dublin Airport and the Royal Canal Way.
- The project alignment crosses and impacts existing utilities at multiple locations.

11.5.11. **Potential Impacts**

- 11.5.12. Potential construction and operational phase impacts are outlined and assessed in a tabulated risk assessment form and the Board will note that the assessment includes risks that were ultimately determined not to constitute MANDs. For clarity, the below

³⁸ Classification as a Seveso site identifies a facility as being an industrial establishment where dangerous substances are used or stored in large quantities.

assessment summary outlines only those risks determined by the EIAR assessment to constitute MANDs.

11.5.13. Construction phase

11.5.14. The assessment identifies the potential for significant impacts arising from tunnelling and excavation works; a risk of damage to above and underground critical infrastructure; a risk of pollution arising from a significant discharge event or long-term seepage; and a major road traffic accident contributed to by construction traffic. In each instance, the assessment identifies that the potential impact is very unlikely or unlikely to occur.

11.5.15. Operational phase

11.5.16. For the operational phase the assessment identifies the potential for significant impacts arising from a MetroLink train derailment; a fire and/or explosion event; an embankment collapse; an extreme weather event; and an infectious disease outbreak. In each instance, the assessment identifies that the potential impact is very unlikely or unlikely to occur.

11.5.17. Mitigation Measures

11.5.18. Section 28.5 of the EIAR contains proposed mitigation measures. It references a number of legal requirements on project designers in relation to the incorporation of risk reduction and safety enhancement measures and states that multiple such measures are inherent elements of the project design.

11.5.19. Construction Phase

11.5.20. ***Ground/Building/Structure Damage***

- Tunnel design and construction methods include risk assessment for overlying structures and monitoring or mitigation if required.
- Stakeholder engagement.
- Use of ground treatments in areas expected to give rise to settlement. Settlement analysis has been completed for buildings and utilities along the alignment.
- Use of groundwater extraction as necessary.

- Use of measures to secure buildings at risk during construction.
- Watertight diaphragm walls will be used to prevent water ingress to stations and associated risk of settlement. Additionally, the contractor may use other specified measures to minimise ground movement.
- Implementation of Outline Construction Environmental Management Plan and Emergency Response Plan.
- Enhanced TBM and surface monitoring during tunnelling works.
- Works to be undertaken in accordance with A Code of Practice for Risk Management of Tunnel Works (The International Tunnelling Insurance Group 2012).

11.5.21. ***Impact on Critical Infrastructure***

- Best practice measures will be specified by the applicant and implemented by the contractor, including diversion strategies, movement assessments, intrusive measures, etc. The following management plans will be prepared:
 - Ground Movement Management Plans.
 - Groundwater Monitoring Plans.
 - Instrumentation and Monitoring Plans.
- Major road traffic accident:
 - Traffic Management Plan and Scheme Traffic Management Plan will be implemented to control traffic.
 - Safety awareness training will be undertaken for all HGV drivers.
 - Industry standards will be adhered to.
- Pollution:
 - Mitigation and management measures contained within Chapter 18 (Hydrology) will be implemented.
 - A water management plan and outline construction environmental management plan will be implemented by the contractor, having regard to best practice.

11.5.22. Operational phase

- Derailment:
 - Various specified measures are accepted by the Commission for Railway Regulation to manage risks to as a low as reasonably practicable.
 - All equipment will be compliant with electromagnetic compatibility and interference standards, as required under EU law.
 - A MetroLink Major Incident Management Plan will be developed, which will identify emergency response plans.
 - Stock will be subject to periodic maintenance and inspection and operation/maintenance manuals will be communicated early and maintained.
 - Training will be provided, sufficient resources will be maintained in place and compliance with best practice will be adhered to.
 - Equipment failure will be corrected as quickly as possible and the action taken dependent on the nature of the failure.
 - Critical on-board and lineside systems needed to ensure evacuation will be powered for at least 90 minutes through back-up supplies.
 - CCTV will be installed at specified locations.
 - Crossover and turnbacks will be controlled by an interlocking device guaranteeing safety in movements.
- Fire:
 - Construction materials will be required to meet the requirements of BS EN 13501-1 Fire Classification of Construction Products and Building Elements.
 - Constructed elements will be subject to fire testing.
 - The Fire Safety Strategy was developed in consultation with the Dublin Fire Brigade and includes safety measures at stations, lineside safety measures, emergency evacuation procedures.

- The proposed design complies with national and international best practice.
- Embankment collapse:
 - Embankment design complies with national and international best practice and includes an allowance for extreme weather/climate change.
 - Regular inspections and maintenance will take place.
- Infectious disease:
 - A MetroLink Major Incident Management Plan will be developed by the contractor.
 - The operator prior to start of operations will develop and follow strict biosecurity measures as part of the final outline CEMP.
 - Government procedures and control measures will be adhered to.
- Hydrological event:
 - A MetroLink Major Incident Management Plan will be developed by the contractor.
 - The drainage design includes an allowance for climate change and is thus flood resilient.
 - The drainage system will be regularly inspected and maintained.

11.5.23. **Residual Impacts**

11.5.24. Residual impacts are addressed at Section 28.6 of the EIAR, with identified residual impacts confined to the operational phase.

11.5.25. The assessment states that during the operational phase, for those vulnerable risks that cannot be completely designed-out, emergency plans will be available to deal with the response to an emergency, in order to minimise the significance of any impacts.

11.5.26. An incident such as the Covid-19 pandemic is predicted to give rise to postponement of non-essential maintenance work and walkovers/inspections, with a commensurate reduction in service capacity.

11.5.27. The assessment also states that the MetroLink Major Incident Management Plan will be a live document that undergoes monitoring, review and update throughout the lifetime of the project. The risk of MANDs will be assessed on an ongoing basis throughout the planning, detailed design and construction and operational phases.

11.5.28. **Cumulative Impacts**

11.5.29. The EIAR and Cumulative Impacts Addendum do not identify potential significant cumulative impacts in respect of Major Accidents.

11.5.30. **Oral Hearing**

11.5.31. **Errata and Updates**

11.5.32. Multiple errata and update documents were submitted over the course of the oral hearing, including a Cumulative Impacts Addendum Report (Ref. OH98). No errata or updates directly related to Major Accidents were submitted.

11.5.33. **Post-Oral Hearing**

11.5.34. A further document, Update to the Cumulative Impact Assessment, was submitted on 31st January 2025 as part of the applicant's response to the Wild Ireland Defence CLG oral hearing submission. Similarly to the EIAR Chapter 30 assessment, it does not identify potential significant cumulative impacts in respect of Major Accidents.

11.5.35. **Assessment**

11.5.36. I consider the potential significant impacts in terms of MANDs that are relevant to the proposed development are:

- Settlement/subsidence during tunnelling and excavation works.
- Impact on critical infrastructure during construction phase.
- Pollution events.
- Collapse of embankments.
- Train derailment incident.
- Hydrological event leading to tunnel/portal/station deluge.
- Fire.
- Industrial incident at a nearby Seveso site.

11.5.37. Settlement/Subsidence during Tunnelling and Excavation Works

11.5.38. The issue of settlement/subsidence arises for both the project itself, i.e. the tunnels and other below ground structures, and for other buildings and structures in proximity to the route alignment. The excavation of tunnels and other below ground structures has the potential to lead to ground movements, the extent of which is dependent on factors such as construction depth and volume of works below ground, soil and groundwater conditions. For other buildings and structures, the impact of ground movements is dependent on the proximity and nature of the given building or structure to the construction site.

11.5.39. There are 2 No. primary single bore, twin track tunnels proposed (Dublin Airport tunnel and the City tunnel), together with 3 No. additional intervention tunnels (Airport Evacuation and Ventilation tunnels and Charlemont Evacuation and Ventilation tunnel). Each tunnel, with the exception of the Charlemont Tunnel, will be excavated by a TBM which, as it progresses, immediately inserts and secures the precast concrete segments that form the tunnel. Appendix A5.13 of the EIAR, Tunnelling, addresses the tunnelling process and the TBM itself, stating that excavation will take place through variable and water-bearing ground and that there is a need to support the cutting face of the TBM. It states that there are a number of support methods available, in particular the use of bentonite slurry or earth pressure balance (EPB) mode as part of the TBM operation, and I note that Section 4.4.7 of the document states that the appointed contractor will develop a detailed specification for the type of TBM to be used, having regard to ground conditions and constraints identified.

11.5.40. The proposed tunnelling approach is established engineering practice in the excavation of underground tunnels and the TBM system effectively incorporates mitigation by design against the risk of tunnel collapse, whereby the TBM shield prevents the collapse of unsupported sections of tunnel (i.e. the areas closest to the cutting face of the TBM) and with the structural tunnel lining being immediately applied and secured by the following sections of the TBM. I note in this regard that Section 4.4 of Appendix A5.13 offers the opinion that the proposed tunnelling methodology is a well-proven form of construction of accurately mined and water-resistant structures and that it offers the most efficient and robust method of rapidly providing a structural lining to the tunnels in variable ground conditions. Subject to

appropriate engineering specification and safe operation, I am satisfied that the TBM contains adequate in-built means of protecting against tunnel collapse during excavation.

11.5.41. Regarding below ground station boxes, 15 No. of the 16 total stations are located at least partly below ground and require extensive excavation. For these stations, Section 5.5.2 of the EIAR states that excavation will commence with the installation of vertical walls from the surface, which will provide lateral ground support prior to the main excavation works being carried out. These engineering works are standard for large below ground construction sites and I am satisfied that, subject to appropriate engineering specification, they provide an adequate basis for the protection of station boxes from a major accident during excavation.

11.5.42. Appendix A5.13 states that tunnelling through the deep stations will take place either:

- Before the installation of the level 2 props (beneath the mezzanine slab) (referred to as 'TBM first'); or
- After the completion of the station base slab and removal of the temporary props (referred to as 'Station first').

11.5.43. Section 2.5 of the Appendix states that 5 No. stations can be developed in the 'station first' scenario, namely Mater, O'Connell Street, Tara, St Stephen's Green and Charlemont, with all other stations requiring the 'TBM first' scenario.

11.5.44. The Station first scenario presents a risk of collapse at the point of breakout, from the tunnel into the already excavated station box, in respect of the risk of groundwater flow and ground instability that leads to unforeseen ground movement. Section 2.5 of Appendix A5.13 identifies that the station tunnelling process requires that end diaphragm walls must be installed and could include a soft eye of weaker concrete and GRP reinforcement, or the walls could be broken out in advance of the TBM arrival. The document 'Provisions for Control of TBM Launch and Reception at Station Boxes' (Ref. OH116), submitted at the oral hearing on 29th February 2024, further discusses the issue, in response to questioning by the Board's expert consultants, and it advises that a ground-treated zone will be provided at reception/launch sites from each station and that will ensure a safe junction to mitigate the risk of water and ground ingress. I am satisfied that, subject to

appropriate engineering specification, this provides an adequate basis for the protection against excessive settlement as the TBM passes through station locations. I note that the Tyréns report (refer to Appendix 1) indicates that tailored mitigation measures are likely to be required in order to ensure that building damage arising from settlement does not go beyond Category 1 damage and they recommend a condition be attached, should the Board grant the Railway Order, requiring that building damage should not exceed Category 1.

- 11.5.45. For existing buildings, bridges and other assets potentially affected by tunnelling, such impacts are stated by Section 5.4.11 of the EIAR to be dependent on (a) factors including the nature of the construction depth and volume of works below ground, soil and groundwater conditions, and (b) the proximity and nature of any building foundations/third party structure.
- 11.5.46. The application is supported by a Building Damage Report (Appendix A5.17), which adopts a methodology described by the applicant as an industry standard 3-phased approach for assessing building damage and which was used on other projects such as the Dublin Port Tunnel, London Crossrail and the HS2 rail project. The application includes Phases 1 and 2 of the sequential methodology, with Phase 1 comprising a screening exercise that uses conservative parameters to identify any buildings that may potentially be at risk of damage from settlement, and with Phase 2 comprising an assessment of the scale of potential damage to buildings that also uses conservative parameters. According to Section 5.4.11.2 of the EIAR, 67 No. buildings have been identified to be subject to Phase 3 assessment, on the basis of 'special'³⁹ categorisation (64 No.) and where the preliminary assessment indicated a 'Moderate' level of building damage (3 No.). The Schedule of Errata (OH9) submitted on the opening day of the oral hearing identified errors in the categorisation of identified impacts, but with all such updated categorisations at the level of 'slight' or 'very slight'.
- 11.5.47. The Board will note that the Phase 3 building-specific assessment is proposed to be undertaken by the appointed design and build contractor, after the granting of the Railway Order.

³⁹ A 'special' building is identified as: Listed buildings; Prominent buildings; Buildings in poor condition; Sensitive buildings; Prestigious buildings; Buildings with historical and cultural relevance; and Buildings with high value (public buildings or hospitals)

- 11.5.48. The Tyréns report advises that “TII’s phased approach for dealing with building damage risk is in line with normal practice for such a metro project where three stages are used. This approach was developed and first used for the construction of the London Underground Jubilee Line Extension project in early nineties and has been extensively used since. It has been used for instance on all phases of the Copenhagen metro since the first phase of construction in the late nineties and most recently on the Crossrail project in London”.
- 11.5.49. Having considered the Building Damage Report, I consider it presents a reasonable high-level assessment of the likely extent of impact on buildings proximate to the proposed alignment. I would further note that the methodology has been used successfully on other international tunnelling projects. Notwithstanding this, it is evident particularly following the oral hearing that there are issues with some of the parameters used to inform the Phase 1 and Phase 2 assessments undertaken.
- 11.5.50. Using the examples of AerCap House (65 St. Stephen’s Green) and the Cadenza Building (Earlsfort Terrace, Dublin 2), it was observed at the oral hearing by the expert engineers representing the owners of these buildings that the buildings assessed within the BDR appear to be buildings that previously existed on these sites (AerCap House was constructed in 2013 and the Cadenza Building was constructed in 2019) and that both AerCap House and the Cadenza Building are more vulnerable to vibration and settlement than the buildings they replaced. Indeed, in the case of the Cadenza Building, it was pointed out at the oral hearing that the building has deep tension anchors that are in direct conflict with the proposed tunnel alignment. Such conflict has the potential to result in a major accident and the applicant subsequently proposed to lower the tunnel depth in this area to avoid a clash. For the Board’s benefit, these issues are discussed at length in oral hearing documents OH138 and OH141 and in Section 9.10 of this report.
- 11.5.51. The Tyréns report discusses the issue in detail and recommends a series of conditions, should the Board decide to grant the Railway Order, which I consider will be effective in ensuring that there is no risk of a major accident at these sites or, indeed, at any other site. I have already outlined the recommended condition that building damage arising from settlement should not exceed Category 1 damage and, additionally, Tyréns recommend that the applicant’s proposed Expert Panel should

have the powers of review and sign-off of Phase 3 assessments and the measures to be undertaken to protect sensitive buildings such as those discussed here.

11.5.52. Subject to incorporation of the measures recommended within the Tyréns report, I am satisfied that the risk of a major accident arising from settlement/subsidence is as low as is reasonably practicable.

11.5.53. Impact on Critical Infrastructure during Construction Phase

11.5.54. As stated in the EIAR, the route alignment crosses underground infrastructure at multiple locations and this includes water services, electricity and telecommunications infrastructure. Tunnelling and excavation activities give rise to a risk of a direct hit on such infrastructure, or indirect impacts due to settlement, with potential impacts including: soil and groundwater contamination; power outage; explosion; and service interruptions.

11.5.55. Figures 22.1 – 22.4, inclusive, identify the location of utilities along the proposed alignment and Section 22.5.2.1 of the EIAR contains a utility clash analysis, with multiple diversions required. Utility diversions are an inevitability for a project of this nature and provided they are undertaken in a planned and co-ordinated manner, I do not consider they would have a significant impact on affected parties. I note in this respect that Section 22.6.1 states that the duration of service interruption will be agreed with the relevant utility provider, in accordance with their service level/business interruption requirements.

11.5.56. Section 22.5.2.2 of the EIAR contains a high-level utilities settlement analysis, from which it is stated that <1% of the c.50,000 utilities identified within the project boundaries could potentially be affected by settlement. I accept that this number is likely to be further reduced on foot of further settlement analysis, including protective measures and, in particular, ground movement monitoring in order to ensure critical damage is avoided. Section 22.6.2 of the EIAR states that the appointed contractor will prepare, inter alia, ground movement management plans; groundwater monitoring plans; and instrumentation and monitoring plans and that any required mitigation will be designed and agreed with the asset owner.

11.5.57. I consider this is a sensible approach to take, in view of the sheer scale of utilities present within the project boundaries, and I am satisfied that it is sufficient to ensure

the risk of a significant impact on critical infrastructure is as low as reasonably practicable.

11.5.58. Pollution Event

11.5.59. As the EIAR identifies, working over or adjacent to watercourses gives rise to a risk of a pollution event. The project alignment crosses a number of watercourses and construction requires working either over or adjacent to a number of these watercourses. For example: in-water works are proposed at the Broadmeadow River, as part of construction of a viaduct; diversion works are proposed at Dardistown (Turnapin Stream) and Northwood (Santry River); 2 No. 3-month long dewatering phases are proposed at the Royal Canal, between locks 5 and 6 (Cross Guns); a number of culverts are required; and a cantilevered parking bay structure is proposed over the Grand Canal. There are also large construction sites and construction compounds in proximity to open water in a number of locations, as can be seen from Figure 5.1 of the EIAR.

11.5.60. Table 28.8 of the EIAR cross-refers to proposed mitigation within Chapter 18 (Hydrology), which itself provides extensive mitigation for the protection of the water regime. Of particular importance it is stated that no water will be discharged directly to a watercourse during construction. Other relevant mitigation includes:

- Implementation of a Sediment Erosion and Pollution Control Plan that will include measures to manage soil and silt-laden water on site, accidental leaks/spills to ground and water quality monitoring to ensure compliance with environmental quality standards specified in the relevant legislation.
- Boundary treatments such as silt fencing and berms will be installed prior to the commencement of any construction works, in order to enhance the protection of identified water features.
- Where excavations include significant placement of concrete and/or bentonite, additional treatment including pH neutralisation and pH monitoring will be employed.
- Additional monitoring will be required as part of discharge permit agreements.
- Use of sheet piles and cofferdams where construction activities are proposed on or near flood zones, including the Broadmeadow River and Ward River.

- 11.5.61. I note that, in the case of in-water works at the Broadmeadow River, the applicant submitted a document entitled 'Note on Removal of Pipe and Instream Supporting Structure at the Broadmeadow River' to the oral hearing on 11th March 2024 (Ref. OH213), which describes the nature of the works and which also includes mitigation measures that are intended to ensure no suspended solids or pollutants are likely to be discharged into downstream waterbodies.
- 11.5.62. I consider the suite of mitigation measures proposed is of a standard nature and is likely to ensure that a pollution event will be avoided during construction. This said, I am unclear on the exact circumstances governing the deployment of specified boundary treatments. I accept it is likely that this information will be contained within the Sediment Erosion and Pollution Control Plan and, taking a precautionary approach, I consider it reasonable that the applicant should be required to submit this Plan to both planning authorities for agreement prior to commencement of construction.
- 11.5.63. As has been outlined elsewhere in this report, the issue of PFAS ground contamination at Dublin Airport was raised at the oral hearing in submissions by Wild Ireland Defence CLG & Sabrina Joyce-Kemper. PFAS (otherwise known as 'forever chemicals') are a large group of man-made chemicals that are highly resistant to degradation.
- 11.5.64. There is known PFAS contamination at Dublin Airport, the full extent of which is unknown, and station and tunnel construction gives rise to a risk of mobilisation of PFAS that is contained within the soil, bedrock and/or groundwater and this may potentially be transferred onward to receiving waters. Following the abovementioned submissions, TII submitted a PFAS Management Strategy that contains measures intended to control and manage the risk of PFAS mobilisation.
- 11.5.65. This issue is addressed in detail in other sections of this report, including in Material Assets, Hydrology and Hydrogeology. In summary, I am satisfied that the applicant's approach to dealing with the issue will be effective in ensuring that potentially contaminated material can be appropriately handled and stored and that there is a very low likelihood of PFAS being discharged from a construction site.
- 11.5.66. Subject to the above, I consider the risk of a pollution event during construction is as low as is reasonably practicable.

11.5.67. Collapse of Embankments

11.5.68. The EIAR assessment identifies that during the operational phase, extreme weather events or prolonged rain/flooding may lead to a breach in the embankments of water crossings, in particular in areas at high risk of flooding at the Broadmeadow River, Ward River and at Glasnevin in the area of the Royal Canal. The assessment states that proposed designs are in compliance with best practice, international and national guidance. It also states that the embankments are designed to accommodate 1 in 100 annual probability floods plus climate change, will remain safe during a 1 in 1000 annual probability flood and will be subject to regular inspections and maintenance.

11.5.69. The impact of an embankment failure would be significant, but I concur with the EIAR that the risk is low. I am satisfied that subject to appropriate engineering specification, including specified climate change allowances and ongoing monitoring and maintenance, the applicant has adequately addressed and mitigated the risk and that a significant impact is unlikely.

11.5.70. Train Derailment Incident

11.5.71. The potential for a train derailment incident arises during both the construction and operational phases but, for the construction phase the EIAR states that there is no risk of a major accident as there are embedded design measures in the project, which accord with relevant specified guidelines and international best practice, that ensure the risk is as low as is reasonably practicable.

11.5.72. For the operational phase, the EIAR assessment identifies that a derailment may occur in several circumstances, including power failure, terrorist incident, communications failure, rolling stock or infrastructure failure, etc. The assessment identifies that a derailment has the potential to give rise to very significant impacts, including loss of life and/or injury, infrastructure/building damage and environmental contamination.

11.5.73. Regarding the construction phase, I note and agree with the EIAR that embedded design measures and compliance with international best practice and guidance are sufficient to ensure the risk is as low as is reasonably practicable. The route alignment closely interacts with existing rail lines at Glasnevin and Tara and Luas

lines at O'Connell Street and Charlemont and the tunnel route also passes under the Luas line at the north end of O'Connell Street and at Eden Quay.

11.5.74. In view of the nature and scale of the proposed development, together with the varied urban environments through which it passes, there is an inherent risk of settlement during construction and this may affect existing rail lines at Glasnevin and Tara and Luas lines at O'Connell Street and Charlemont, which closely interact with the proposed alignment. However, underground metro projects have been delivered in numerous locations around the world without such incident, including the recently completed London Cross Rail project and the Copenhagen Sydhavn Metro extension. I note in this regard that the development is supported by detailed settlement analysis and there are other inherent mitigation measures such as ground treatments, building support mechanisms such as props or reinforcement and monitoring of the surface and TBM face pressure, each of which will contribute to reducing the risk of settlement. There is also a commitment to ongoing settlement monitoring, which I consider is particularly important for the elements of the project that are in proximity to the existing rail lines at Glasnevin and Tara and Luas lines at O'Connell Street, Eden Quay and Charlemont. In view of these project elements, I consider the risk of a derailment during construction is as low as is reasonably practicable.

11.5.75. For the operational phase, Table 28.9 of the EIAR states that design measures are incorporated to manage the risk of derailment to as low as reasonably practicable, in order for a licence to be granted by the Commission for Railway Regulation (specified CRR guidance related to new light rail rolling stock is referenced) and that other systems of work/operation, including staff training and operating procedures, inspection and maintenance of rolling stock, power system elements and a major incident management plan will be implemented. I do not consider the risk of a derailment incident can be entirely addressed by mitigation measures or design elements of the project but, subject to implementation of proposed design and construction mitigation, I am satisfied that the applicant has adequately considered and mitigated the impact of a potential train derailment incident.

11.5.76. Hydrological Event Leading to Tunnel/Portal/Station Deluge

- 11.5.77. The issue of a hydrological event that results in deluge arises during both the construction and operational phases. However, I note that the EIAR does not consider the issue to constitute a potential MAND during construction. I am unclear why this is the case and the issue is not discussed in any detail in Table 28.5.
- 11.5.78. In view of the open and deep nature of excavations at a number of construction sites, I consider there is a risk of deluge in a prolonged rainfall/flood event, albeit the risk of such an occurrence is very low. Section 4.9 of the FRA outlines that Estuary Park & Ride facility (unnamed ditch), Dardistown Depot (Turnapin Stream), Griffith Park (River Tolka) and Tara (River Liffey) Stations are in close proximity to a watercourse or its floodplain and, further, that a number of the proposed station locations are vulnerable to pluvial flooding, in view of the undersized nature of Dublin's surface water drainage system.
- 11.5.79. The Board will be aware that the applicant proposes diversion of the unnamed ditch at Estuary and the Turnapin Stream at Dardistown prior to construction of these elements of the development, with flows thereafter conveyed away from the construction sites.
- 11.5.80. For the construction phase, Table 28.5 of the EIAR identifies a variety of measures that could be undertaken to mitigate flood risk to structures, for example through physical design amendments, changes to the construction programme/activities and the use of temporary measures such as sheet piles, cofferdams, sandbags, etc. The updated Outline CEMP submitted at the oral hearing on 25th March 2024 (Ref. OH320) also commits to the preparation of a Construction Flood Protection Plan (CFPP) and the CEMP itself also contains general flood risk management proposals, at Table 6.4. I consider the mitigation measures mentioned in Tables 28.5 and 6.4 are reasonable, in the context of the identified risk and, further, I consider it appropriate that a CFPP should be prepared by the appointed contractor. I consider the applicant's approach ensures that the risk of deluge during construction is as low as is reasonably practicable.
- 11.5.81. For the operational phase, the EIAR identifies that a deluge incident could give rise to significant impacts, including injury to passengers, flooding of adjacent land/property/underpasses or untreated waters entering nearby watercourses. Proposed mitigation includes development of a major incident management plan,

implementation of the proposed drainage scheme, which includes climate change allowances, and ongoing inspection and maintenance, to ensure the development is protected from significant flood events.

- 11.5.82. The development includes a surface water drainage system for each station, which is described in detail in Chapters 4 (Project Description) and 18 (Hydrology) of the EIAR and also in the Flood Risk Assessment. Each station incorporates a mix of SUDS, attenuation measures, piped connections to the public surface water network and discharge outfalls to surface waterbodies. The tunnels include a central drainage channel that is intended to collect and convey water to an assigned discharge point and which also incorporates a 20% 'spare' capacity, to accommodate additional flows.
- 11.5.83. Regarding the risk of flood, the FRA identifies that the proposed Tara Station is at risk from coastal flooding, with the effects of climate change, and that in such an event the station could be flooded and sections of the tunnel could be inundated. To mitigate the risk, it is proposed that demountable defences will be provided at each entrance to the station, which the FRA identifies will have the effect of making the station flood-resilient.
- 11.5.84. The Board will note that the adequacy of the proposed surface water drainage system to serve the development and the adequacy of the flood resilience mitigation at Tara Station are assessed elsewhere in this report and are considered to be acceptable for their purposes. In view of this, I consider the applicant has adequately addressed the issue of potential station/tunnel/portal deluge and that the risk during operation is as low as is reasonably practicable.
- 11.5.85. Fire
- 11.5.86. The issue of a fire event arises during both the construction and operational phases. However, I note that the EIAR does not consider the issue to constitute a potential MAND during construction.
- 11.5.87. For the construction phase, I am unclear why the EIAR concludes that there is no potential for a MAND and the issue is not discussed in any detail in Table 28.5. As the EIAR outlines, the construction phase gives rise to above ground and underground fire risks, related to activities such as blasting, tunnelling, ground excavation works and construction site storage. Blasting activities are regulated by

both the Department of Justice (storage and transport of) and the Health and Safety Authority (use of), whilst tunnelling is regulated by the CRR and station construction is regulated by Dublin Fire Brigade (DFB). I am satisfied that other regulatory processes that will control construction activities are sufficient to ensure that the risk of a major fire incident during construction are as low as reasonably practicable.

11.5.88. For the operational phase, the EIAR again identifies potential above ground and underground fire risks, including related to overheating in tunnels, electrical faults, a terrorist incident or maintenance activities. Table 28.9 of the EIAR identifies a number of mitigation measures, including development of a fire safety strategy, meeting regulatory standards and fire testing and I would again highlight the regulatory roles of both DFB and the CRR play in relation to the design and operation of tunnels and stations.

11.5.89. I also note the document 'Outline Legal Submission on Behalf of Transport Infrastructure Ireland on The Roles of Dublin Fire Brigade and The Commission For Railway Regulation In Relation to Fire Safety In Railway Infrastructure', submitted at the oral hearing on 28th February 2024 (Ref. OH105), which I consider provides a particularly helpful synopsis of the regulatory roles of both DFB and the CRR as part of the proposed development. In respect of buildings forming part of MetroLink, it states that the issuance of a Fire Safety Certificate by DFB is a legal prerequisite and, in respect of tunnel infrastructure, it outlines that under s.42 of the Railway Safety Act 2005, the construction, installation or assembly of new railway works is prohibited until a safety assessment has been submitted to and accepted by the CRR. In both instances, it states that these separate regulatory processes will follow completion of the Railway Order consenting process.

11.5.90. In light of the foregoing, I am satisfied that other regulatory processes will ensure that the risk of a major fire incident during the operational phase is as low as reasonably practicable.

11.5.91. Industrial Incident at a Nearby Seveso Site

11.5.92. The EIAR assessment identifies the risk of a fire, explosion or equipment / infrastructure failure at nearby Seveso sites in Swords and near Dublin Airport which are subject to management under the Chemicals Act (Control of Major Accident

Hazards involving Dangerous Substances) Regulations 2015 ('COMAH Regulations').

11.5.93. I have given consideration to latest Seveso site data available from the Health and Safety Authority⁴⁰ (HSA) and note that the following facilities are in proximity to the project alignment:

Seveso Facility	Distance from Project Alignment
SK Biotek, Watery Lane, Swords.	c. 350m west
CLH Aviation Ltd, Corballis Road, Dublin Airport.	c. 625m west

11.5.94. Both Seveso sites are separated from the project alignment by built form, in the form commercial/residential buildings and airport buildings, respectively, and as the applicant states, each site is also subject to management under the COMAH Regulations, which place an obligation on the operators to take necessary measures to prevent major accidents.

11.5.95. I consider that there is a reasonable level of separation between the above-mentioned Seveso sites and the project alignment, and I also note the commitment within the EIAR that the applicant will liaise and coordinate with the HSA in relation to risks associated with an incident at either site. Taken together with operational controls on each facility under the COMAH Regulations, I do not consider there is a need for additional specified mitigation as part of the proposed development.

11.5.96. **Cumulative Impacts**

11.5.97. Although not identified by the EIAR assessment or subsequent update assessments, construction projects have the potential to have significant cumulative impacts on critical infrastructure, if undertaken in an uncoordinated manner. In this respect I note that TII has already undertaken extensive consultation with utility providers and that interfacing works will be agreed with the relevant provider in advance. I am satisfied

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https://www.hsa.ie/eng/Your_Industry/Chemicals/Legislation_Enforcement/COMAH/List_of_Establishments/

that this will ensure no significant adverse impacts arise and that the project will not have any cumulative impact with other projects constructed at the same time.

11.5.98. The oral hearing submission by Sabrina Joyce-Kemper and Wild Ireland Defence CLG (Ref. OH369) raises the issue of a potential major accident, associated with the Uisce Éireann Greater Dublin Drainage Scheme (ABP-312131-21), where a sludge hub centre at Clonsaugh that forms part of that application, which is stated to include a biogas storage facility and is, in the observer's opinion, close enough to the Belcamp substation and the MetroLink Grid and Cables elements and may give rise to a risk of a major accident. She suggests that this project was not considered as part of the EIAR or NIS.

11.5.99. In its response to the submission, TII note that project was considered as part of both the NIS and EIAR. They further state that they do not consider that there would be likely significant effects on the proposed development arising from a major accident arising at the Sludge Hub Centre due to the distance between the developments.

11.5.100. The proposed sludge hub centre site is c. 1km to the east of Stockhole Lane, where the proposed HV cable route for the grid connection elements is located, and is around 4km from the closest point of interaction with the MetroLink alignment at Northwood. I agree with TII that there is no likelihood of significant effects on the proposed development arising from a major accident arising at the Sludge Hub Centre, in view of the separation distance between the projects. The issue of potential impacts on the cable route for the grid connection elements are discussed in the Inspector's Report on ABP-317831-23.

11.5.101. **Conclusion**

11.5.102. I have considered the relevant contents of the file, including the EIAR and relevant update reports provided to the oral hearing, in relation to the issue of Major Accidents. I am satisfied that the potential for major accidents can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, by the proposed mitigation measures and with suitable conditions. I am therefore satisfied that the potential for direct, indirect or cumulative impacts, in terms of major accidents, can be ruled out.

11.6. Likely Significant Direct and Indirect Effects

11.6.1. The likely significant direct and indirect effects of the development are considered under the following headings, after those set out in Article 3 of the EIA Directive 2014/52/EU:

- Population and human health.
- Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC.
- Land, soil, water, air and climate.
- Material assets, cultural heritage and the landscape.
- The interaction between the factors referred to in points (a) to (d).

11.6.2. My assessment is based on the information provided by the applicant, including the EIAR, the additional material presented at and subsequent to the oral hearing, and the written and oral submissions made in the course of the application process by the local authorities, prescribed bodies and observers.

11.7. Population and Human Health

11.7.1. Introduction

11.7.2. Human Health is addressed at Chapter 10 of the EIAR and Population and Land Use are addressed at Chapter 11. Chapter 10 considers human health impacts through an assessment of the relevant environmental factors/pathways that could give rise to impacts, such as air quality, airborne and groundborne noise and vibration, electromagnetic frequency, water, soils and geology and amenity. Chapter 11 considers impacts on demography and households, socio-economic activity and connectivity and land use.

11.7.3. Chapter 11 is supported by a series of appendices and figures, including written and mapped presentations of relevant features within the study area, such as educational facilities (Figure 11.10), open space and sport/recreational facilities (Figures 11.11 and 11.12), walking and drive times (Figures 11.15 and 11.16), land-use zonings (Figure 11.17), healthcare facilities (Figure 11.21), health status (Figure 11.9).

11.7.4. Methodology

11.7.5. Chapter 10, Human Health, is stated to have been prepared in accordance with relevant guidance and policy. Data is stated to have been collected through desk-based research and analysis of existing documentation that informed the baseline as part of the preparation of the wider EIAR.

11.7.6. Chapter 11, Population and Land Use, is stated to be based on established best practice and undertaken with due regard to overarching guidance on EIARs, including the 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports' (EPA 2022) and 'Environmental Impact Assessment of Projects – Guidance on the Preparation of the Environmental Impact Assessment Report' (EU 2017). The assessment is stated to have been primarily desk-based, using available GIS mapping software, and supplemented by site visits in the period 2018 – 2021. Impacts are assessed under the following headings:

- Characteristics of population.
- Access to employment, education, health and commercial facilities.
- Effects on employment.

- Economic investment in the region from construction expenditure.
- Strategic level benefits.
- Access to tourism and recreation.
- Land use.

11.7.7. In both chapters the study area has been split into the four standard Assessment Zones AZ1 – AZ4. Chapter 11 sub-divides area AZ4 into 3 further sub-zones, with Section 4A relating to the northern-most end of the zone, Section 4B relating to the central section between Glasnevin Avenue/Collins Avenue and the Royal Canal and Section 4C relating to the southern-most end of the zone.

11.7.8. **Receiving Environment**

11.7.9. Sections 10.4 and 11.4 describe the receiving environment. The study area is identified as having a total population of 165,836, with 76.9% being of working age (between 15-64 years old). Section 11.4 provides information in relation to the total population, demographics, economic activity and employment (including geographic spread), education, community and social infrastructure, connectivity and land use. Section 10.4 provides information in relation to healthcare facilities, educational facilities and community profiles including socioeconomic profiles.

11.7.10. Chapter 10 identifies a practical difficulty in gathering data pertaining to individual health circumstances and instead presents a community profile, focussing on healthcare and education settings. A total of 27 No. health centres are identified within the study area, together with 11 No. hospitals, 11 No. nursing homes, 45 No. primary schools, 17 No. secondary schools and 41 No. third-level establishments.

11.7.11. Chapter 11 identifies that Dublin is the primary economic driver and most populous region in Ireland, with Fingal's population growing at twice the national rate. It further states that Dublin City and its suburbs are intended to grow to a population of 1.4m under the NPF and that the proposed development is identified by the NPF as a key growth enabler. Also of relevance, the chapter outlines that Dublin Airport in 2019 (pre-Covid) welcomed 32.9m passengers, supported 19,200 full-time jobs and contributed €1.7bn GVA, with a further 129,700 jobs and €9.8bn GVA indirectly supported.

11.7.12. **Potential Impacts**

11.7.13. Both chapters consider potential impacts through the construction and operational phases, separately.

11.7.14. Do Nothing

11.7.15. In the Do-Nothing scenario, connectivity and accessibility are likely to deteriorate, both within the study area and in the wider Dublin region, contributing to and exacerbating wider societal issues, in the absence of the development and given anticipated population growth.

11.7.16. Construction phase

11.7.17. Chapter 10 considers the relationship of EIAR environmental factors to human health and identifies potential human health impacts related to: air quality; air and groundborne noise and vibration; psychological effects; amenity; electromagnetic frequency; water; soils and geology; aspergillus fumigates and vermin related diseases.

- Potential air quality impacts arise from clearance works, concrete and bentonite batching and demolition, excavation, blasting and boring, but no significant human health impacts are predicted subject to implementation of mitigation contained in EIAR Chapter 16 (Air Quality).
- The assessment identifies that a number of locations/properties have the potential to be affected by airborne noise and vibration but, with reference to the availability of measures such as noise insulation and limited impacts on night-time sleep, no significant human health impacts are predicted.
- Potential **significant negative** groundborne noise and vibration impacts are identified, arising primarily from the TBM and underground mechanical blasting/excavation. For the TBM, the assessment states that it is likely to cause a significant effect in terms of annoyance and sleep deprivation for a period of c. 2 weeks, with a peak of 2-3 days when the TBM is closest, and with affected properties on or close to the line of the TBM most affected. Blasting will take place at defined discrete times, for at most 2 times per day. However, adverse human health impacts are not predicted to arise, due to the implementation of mitigation up to and including temporary relocation where thresholds may be exceeded.

- The Mater Hospital Psychiatric Ward is identified as a particularly vulnerable receptor location, where the tunnel passes directly underneath, and the assessment states that it is difficult to envisage any part of the ward being usable in the 2 – 3 day period that the TBM passes under.
- Psychological effects are identified as being complex, not easily predicted and dependent on other factors. The demolition of the College Gate apartment complex is identified as likely to give rise to psychological effects for the affected residents, but the effects are not considered to be long-term.
- Loss of amenity is predicted to be a **significant negative** impact, in view of the length of the construction phase and with reference to the loss of a number of public amenity spaces for its duration.
- No significant soils and geology, electromagnetic frequency, water, aspergillus fumigates or vermin human health impacts are predicted to arise.

11.7.18. Chapter 11 assesses predicted impacts on population and land use under the following grouped headings: demography and households, economic activity and employment, community and social infrastructure and connectivity and land use.

- Regarding demography and households, the assessment identifies that 14 No. occupied residential buildings (refer to EIAR Table 11.53) will be acquired and demolished, giving rise to localised **significant negative** impacts for the affected parties. It also identifies a general, negative disturbance experienced by households within the study area, with impact significance dependent on proximity to construction activity. Associated impacts identified relate to disruption to roads/pedestrian/cycling infrastructure, dust, visual impacts and utility diversions.
- Potential economic activity and employment impacts are identified as relating to direct and indirect expenditure and job creation arising from the development, including a multiplier effect along the supply chain. **Significant negative** impacts are predicted for the retail, hospitality, tourism and business sectors. **Significant positive** impacts are predicted for development potential/capacity for development sites in proximity to the route alignment.

- Identified Community and social infrastructure impacts range from those associated with construction activity (i.e. noise, dust, footpath/road closures etc.) to disruption of activities and services and permanent loss of facilities. The assessment predicts a **significant negative** impact on the general attractiveness and amenity of neighbourhoods affected by the development. A large number of social infrastructure locations along the route alignment are predicted to experience impacts ranging from slight to **significant**, over the short and medium terms.
- The assessment of connectivity and land use considers impacts on: journey patterns and amenity; severance; land-use zoning; and residential lands. **Significant negative** severance impacts are predicted, in view of the extent of the project boundary and proximity to communities, facilities and infrastructure.

11.7.19. Operational phase

11.7.20. Chapter 10 again considers the relationship of the various environmental factors considered by the EIAR to human health.

- Regarding groundborne noise and vibration, the assessment states that the development is unlikely to impact on human beings beyond a distance of 25m from an operational line, whether at-grade or in tunnel, but that sensitive equipment at a distance of up to 100m may be affected. The magnitude of such impacts is not categorised.
- Amenity improvements are identified, through restoration of amenity spaces discommoded during construction and improved access to services brought about by the new metro system. The magnitude of such impacts is not categorised.
- The assessment identifies improvements to socio-economic development, arising from the ability of the proposed development to generate wider economic developments. The magnitude of such impacts is not categorised.
- No significant airborne noise and vibration, air quality, electromagnetic interference, water, suicide, violence and terrorism, soils and geology or equity impacts are predicted to arise.

11.7.21. Chapter 11 similarly assesses predicted impacts on population and land use under relevant EIAR environmental factors. In summary, the assessment predicts long term positive impacts for population and land use, facilitating delivery of various land use zoning objectives and improving connectivity and amenity for residents/metro users within the catchment.

- Regarding demography and households, the assessment identifies that the development will facilitate compact and higher density development, in line with goals and objectives contained within national, regional and local planning policy documents.
- Economic activity and employment impacts are identified as relating to direct and indirect expenditure and job creation, with such impacts stated to be positive. Commercial sectors such as retail hubs, tourist accommodation/attractions, transport/logistics hubs and businesses are predicted to experience a positive impact, associated with proximity to the development, improved connectivity and improvements in efficient travel.
- Community and social infrastructure impacts are identified as relating to relating to opportunities for enhanced/additional services, enterprises and retail businesses, together with improved access to facilities across the study area. Open spaces affected by construction will be restored and enhanced.
- Connectivity and land use impacts are identified as relating to more efficient travel and improvements to overall rail capacity. In particular, the assessment states that the development will increase the effective proximity of the 146,604 people in 61,738 households living in the study area to education, employment, social infrastructure and the broader transport network. The development is also identified as likely to reduce car-commuting times across the study area, as a result of modal shift.

11.7.22. **Mitigation Measures**

11.7.23. Mitigation measures pertaining to Human Health are stated to be contained in relevant chapters of the EIAR and Chapter 10 does not contain additional proposed mitigation. Mitigation of relevance to Human Health is set out in Table 10.14 and can be summarised as follows:

- Installation of noise barriers up to 4m tall at specified locations.
 - Additional noise insulation is identified as proposed at a number of these locations.
- Reduced blast charges and max. twice-daily discrete blasts in the area of Our Lady Queen of Heaven Church, St Joseph's Church, 42 O'Connell Street, Dublin Fire Brigade HQ and Charlemont Station
- Communication and notification for buildings within 75m of the tunnel centre in respect of groundborne noise and vibration.
- Production of outline CEMP and implementation of appropriate controls and processes.
- Monitoring of radon / ground gas emissions during construction.
- Monitoring of excavated material (potential contamination) based on updated ground investigation.
- Regular cleaning and maintenance regime, to prevent spread of infectious disease.

11.7.24. Mitigation measures pertaining to population and land use include restatement of mitigation measures contained in other EIAR chapters. The proposals can be summarised as follows:

- Measures for property owners:
 - A Land Acquisition Strategy has been prepared, which sets out arrangements for the provision of information and assistance to those affected by the compulsory purchase of land as part of the development. Compensation will be provided to affected property owners through the compulsory purchase order process.
 - A Property Owner Protection Scheme (POPS) will be put in place prior to commencement of construction, which will include pre-works, interim-works and post-works condition surveys of private properties and other selected properties along the alignment.
- Construction activity:

- Implementation of dust minimisation measures detailed in Chapter 16 Air Quality.
- Implementation of noise minimisation measures detailed in Chapter 13 Airborne Noise and Vibration and Chapter 14 Groundborne Noise and Vibration.
- Temporary relocation in specified circumstances.
- Ensure all construction activities are appropriately located so as to limit impacts and reduce the footprint of construction activities.
- All construction areas will be suitably fenced (either a standard 2.4m hoarding or specific sound barriers), screened and monitored.
- Noise insulation or the reasonable costs thereof will be offered, where applied for, subject to meeting the other requirements of the proposed Project.
- Implementation of mobility and traffic management measures including the Traffic Management Plan contained in Chapter 9 Traffic and Transport.
- Alternative access arrangements will be put in place at relevant locations and appropriate temporary signage will be put in place on roads, footpaths or cycleways that will be temporarily affected by the construction works.
- Provide for safe pedestrian and cyclist access, egress and movement at points of entry and exit of construction vehicles at all sites.
- Implement and monitor safe working practices, in accordance with the relevant legislation.
- The contractor will inform stakeholders of the general construction process/phasing in line with the TII Community Engagement Strategy to ensure local residents and businesses are fully informed on the nature and duration of construction works taking place in the vicinity.
- Advance notice will be given to the owners of all residential, commercial and community properties before construction starts and in advance of any major planned disruptions of services or localised traffic management measures.

- Works that could involve high noise or visual intrusion during major social events will be avoided.
- Temporary adjustments will be made to the layout of affected playing pitches during the works, with rehabilitation to be carried out at the earliest practicable opportunity following construction of the proposed Project.
- Permanent relocation of Whitehall Rangers FC from Dardistown will be accommodated at the earliest practicable opportunity.
- Re-provision of Markievicz Leisure Centre will be funded by TII upon selection of a suitable alternative site by Dublin City Council.
- Community Relations Officers will be employed during the construction phase and contact details will be provided so that stakeholders and communities can make contact as required.
- Reinstate all land as quickly as possible following construction.
- Implementation of key sustainability aims.
- No specific mitigation measures are proposed for the operational phase.

11.7.25. **Residual Impacts**

11.7.26. Chapter 10 states that during construction phase there will be temporary and short-term, but **significant adverse** effects at certain locations and that these are largely attributable to emissions from the construction process such as groundborne noise and vibration from the TBM, noise emissions and air quality impacts. Particular reference is made to groundborne noise and vibration attributable to the TBM and blasting. In the case of the Mater Hospital Psychiatric Ward and some residences along the route of the TBM, there is a possibility of patients/residents having to be moved for a period of time, whilst works are ongoing.

11.7.27. Psychological impacts for those whose homes are to be acquired are identified, as are impacts on amenity associated with the loss of leisure facilities and amenity spaces. Annoyance associated with traffic diversions and delays is also predicted.

11.7.28. For the operational phase Chapter 10 states that there will be permanent and **significant positive** impacts in terms of human health, directly and indirectly.

- 11.7.29. Chapter 11 states for demography and households, moderate residual impacts remain for households to be acquired and demolished as part of the development, as do impacts for property owners within the POPS area. For economic activity and employment, it states that slight/moderate residual impacts remain, related to severance, disruption and environmental impacts associated with noise, dust, air quality, etc. in a number of locations. The outright loss of a Smyths Toy Store, Brian Boru Pub, Des Kelly interiors shop and adjacent offices, the Bolands car sales premises, ESB installations, Griffith Park Station health centre, Bytek Office Systems, Laragh Counselling Services, Prospect House, Ashford House, Poolbeg Street property, the Markievicz leisure centre and loss of a portion of St. Stephen's Green during construction are also identified.
- 11.7.30. Regarding community and social infrastructure, the assessment identifies slight – moderate impacts related to groundborne noise and vibration, for a number of specified residential, community, cultural and commercial amenity/activity sites along the alignment; severance impacts; traffic/access impacts; and impacts on the attractiveness of neighbourhoods and neighbourhood amenity as a result of construction elements and activity.
- 11.7.31. Connectivity and land use impacts are identified as slight, relating to temporary road closures and diversions and severance for residents adjacent to construction activities.
- 11.7.32. The assessment predicts that there will be no significant residual effects for the operational phase.
- 11.7.33. **Cumulative Impacts**
- 11.7.34. Cumulative impacts are assessed at Section 30.4.2 and 30.4.3 of the EIAR. The assessment identifies the potential for significant cumulative impacts on traffic flows on the surrounding road network, if the proposed development is undertaken simultaneously with other specified largescale developments.
- 11.7.35. **Oral Hearing**
- 11.7.36. **Errata**

11.7.37. The Schedule of Errata submitted to the oral hearing (Ref. OH374) on 27th March 2024 identified a number of typographical errors in the EIAR Population and Land Use assessment. Of particular relevance are the following:

- Table 11.64, Row 4C: The applicant has no control over the delivery of a replacement leisure facility and this should not be taken into account as part of proposed mitigation. The loss of the Markiewicz Centre represents a permanent, significant negative impact.
- Table 11.58: A health centre by Griffith Park Station is incorrectly identified as being acquired and demolished as part of the development.

11.7.38. Updates

11.7.39. A number of additional documents were provided that are of relevance, including: a Land Acquisition Strategy (Ref. OH36); a Stakeholder Communications Plan (Ref. OH3); a POPS (OH187); a series of Trigger Action Plans were proposed (Refs. OH175, OH190 and OH276); a Schedule of Additional Environmental Commitments (Ref. OH376); additional groundborne noise commitment (Ref. OH174); an Updated CEMP (Ref. OH348); and an updated to the EIAR Chapter 11 Population and Land Use assessment (Ref. OH379).

11.7.40. Document Ref. OH379 contains an updated assessment for the operational phase, in particular MetroLink's role in the delivery and implementation of national planning guidelines (the Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities) and the impact of TII's asset protection policy (the Guidance Note for Developers).

11.7.41. An updated Cumulative Impacts Addendum Report (Ref. OH98) was submitted to the oral hearing on 28th February 2024. The Addendum comprises an updated review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application. Regarding Human Health, it identifies potential significant positive cumulative impacts arising from the various NTA BusConnect schemes. It does not identify potential significant cumulative population and land use impacts.

11.7.42. Post-Oral Hearing

11.7.43. Following closure of the oral hearing, on 31st January 2025 as part of their response to the submission by Sabrina Joyce-Kemper and Wild Ireland Defence CLG (Ref. OH369), the applicant submitted a PFAS Management Strategy for Dublin Airport, which addresses the potential for encountering PFAS during tunnelling and excavation works at the Airport. This submission followed the raising of the issue at the oral hearing and a request by the Board to respond to identified concerns.

11.7.44. The 31st January 2025 submission also included a further document, 'Update to the Cumulative Impact Assessment'. In relation to Population and Land Use, the assessment update identifies a large number of projects that are considered to have the potential to give rise to cumulative impacts, including a number of developments in both Fingal and Dublin City that are considered to have the potential to give rise to significant cumulative impacts during construction, in the absence of mitigation. In all instances, the assessment states that following the implementation of the mitigation contained within the EIAR, no significant residual cumulative impacts are predicted.

11.7.45. **Assessment**

11.7.46. A number of submissions have been received, which include concerns related to population and human health impacts. Identified concerns relate to issues including the proposed demolition of housing and the Markievicz Leisure Centre.

11.7.47. I consider the potential significant impacts are as follows:

- Loss of housing.
- Building damage during construction.
- Human health.
- Community and social infrastructure.
- Economic activity.
- Connectivity/Travel patterns.

11.7.48. **Loss of Housing**

11.7.49. Section 11.5.2.2 of the EIAR identifies that 14 No. occupied residential buildings will be acquired and demolished, with Table 11.53 identifying the following distribution across the project alignment: 5 No. buildings in Area AZ1, 3 No. buildings in Areas AZ2 and AZ3 and 6 No. buildings in Area AZ4.

- 11.7.50. According to Section 24.6.1.2 of the EIAR, 85 No. residential units will be acquired including the College Gate apartment complex at Townsend Street, which contains 70 No. units.
- 11.7.51. A number of submissions and a number of participants at the oral hearing object to the acquisition of occupied housing. Examples include Julianna and Joe Boland and Family (S155, 2FS8 and OH201); submissions from a number of occupiers/owners at the College Gate Apartment Complex (see for example S17, S61, S103 and S206); Townsend Apartment Management Company (OH255); and Nicola Brait and Greta Tumiatti (OH256).
- 11.7.52. I note that Section 11.5.2.2 of the EIAR categorises the impact on local populations as significant and Table 21.6 (Land Take chapter) categorises the building-by-building impact as profound. I consider the loss of a home in each instance will have a profound impact on affected parties.
- 11.7.53. The loss of occupied housing is one of the most significant construction phase impacts of the proposed development but I acknowledge that this is an unavoidable consequence of the proposed development, as each of the housing units to be acquired and demolished is either located along the tunnel/route alignment or is within a station box footprint. Figure 5.3 of the EIAR identifies each property to be demolished as part of the development.
- 11.7.54. Mitigation is proposed, in the form of a Land Acquisition Strategy (Ref. OH36) that outlines arrangements for communication and engagement with people affected by compulsory purchase. Section 11.6.11 of the EIAR states that all reasonable efforts will be made to contact affected property owners and occupiers, with the aim of better understanding the specific circumstances and the nature of assistance required. I consider the proposed strategy represents a reasonable framework under which to engage and assist affected homeowners/occupiers. However, I do not consider this will fully mitigate the profound effect of the development on those affected by the loss of their home. Indeed, I do not consider the impact can be fully mitigated by the applicant, particularly where there is no guarantee that affected residents can be rehomed in the same area. In this context, whilst the EIAR assessment considers the residual impact of housing loss to be moderate, I consider the residual impact is significant in each instance.

11.7.55. Notwithstanding the foregoing, consideration must be given to the fact that the proposed development is strongly supported by planning policies at local, regional and national levels and, further, in view of the urban/city environment through the proposed alignment passes, alternative routes are equally likely to require the acquisition and demolition of occupied housing. Therefore, in its consideration of the proposed development, the Board will have to satisfy itself that the wider societal benefits of the proposed development justify the proposed loss of housing.

11.7.56. Building Damage During Construction

11.7.57. The issue of building damage during construction is discussed in detail elsewhere in this report and is thus discussed in summary here.

11.7.58. A number of submissions and a number of participants at the oral hearing expressed concerns regarding the impact of construction on their homes. Examples include Louise Boughton and Glenn Sharpe (S173, OH62 and OH220), Anne Confrey (S12), Dymrna Rooney (S75 and OH82), Prospect Architectural Conservation Area (S260 and OH223) and the various Charlemont and Dartmouth Community Group submissions (S40-42, 1FS8-11, OH151-153, OH158 and OH307-309).

11.7.59. The application is supported by a Building Damage Report, at Appendix A5.17 of the EIAR, which assesses estimated ground movements generated by construction on buildings and other assets, and the issue of settlement and associated building damage was discussed extensively at the oral hearing, including through submission of a 'Ground Movement Monitoring Information Paper' (Ref. OH26), a paper on 'Monitoring During Construction' (Ref. OH173), a paper on the 'Methodology Used for Assessment of the Likely Significant Effects on Buildings from Ground Movement and Settlement' (Ref. OH183) and an updated Property Owners Protection Scheme (POPS) (Ref. OH187). The issue is also discussed extensively in Section 9.10 of this report and in the Tyréns report included in Appendix 1.

11.7.60. As is set out in OH183 and the Tyréns report, the Building Damage Report is based on an established assessment methodology that has been used for other international tunnelling projects, including in the UK and Denmark. Section 13.2 of the Tyréns report advises that TII's approach is acceptable for such a large infrastructure project, subject to additional conditions that include: (a) limits on building damage; (b) independent expert review and sign off of additional

assessments for particular buildings (known as Phase 3 assessments); and (c) implementation of baseline monitoring ahead of commencement of construction.

11.7.61. Mitigation measures include extensive monitoring of ground conditions and building movement throughout construction and a POPS.

11.7.62. Regarding the ground monitoring scheme, such an approach has been utilised in a number of international locations, including the Copenhagen Metro. It primarily comprises fixed point monitoring on the ground and on buildings, to allow for measurement of vertical and three-dimensional movement. Section 1.1 of the 'Ground Movement Monitoring Information Paper' provides a helpful summary of the monitoring strategy, as follows:

"The core purpose of the monitoring system is to ensure the safe construction of MetroLink. To do this, it is necessary to: confirm existing baseline ground characteristics so construction generated movements can be differentiated; verify design parameters and ground movement predictions, confirm the works and property are behaving as expected; provide advance warning of unacceptable movement trends; assist in determining whether movements have impacted property; and confirm when the risk of MetroLink generated movement has passed. All buildings and infrastructure...assessed to be potentially at risk of being adversely impacted by ground movements will be monitored."

11.7.63. The Tyréns report advises that monitoring is an important part of an urban metro construction, in relation to the main construction impacts (i.e. noise, vibration, groundwater and settlement, deformation and stress and strain in critical structures). They further advise at Section 7.1 of the report that the technical aspects of TII's proposal "appear to be in line with normal practice for such a large infrastructure project" and, in this context, I am satisfied that it will be effective in ensuring there are no significant impacts in respect of building damage during construction.

11.7.64. The Board will note that monitoring will be overseen by an Independent Monitoring Engineer (IME) and at the oral hearing the applicant clarified that this IME will be appointed directly by TII, separately from the contractor.

11.7.65. The applicant's proposed response to building damage incidents is set out within the updated POPS (Ref. OH187) provided to the oral hearing on the 6th March 2024. As

is set out in Section 2 of the document, the scheme is available to homeowners where their property lies within 30m of the edge of the tunnel alignment or the edge of open cut or cut and cover structures, or within 50m of a station box (and includes a property that immediately adjoins a house that is eligible for POPS) and it provides a framework for the handling of claims of up to €75,000.

11.7.66. As with the monitoring strategy, the proposed approach has been utilised as part of other international projects and I am satisfied that it represents a reasonable approach to dealing with damage to any homes. The Tyréns report similarly advises that the POPS represents an acceptable way of dealing with residential properties.

11.7.67. Human Health

11.7.68. Construction phase human health impacts include: air quality; airborne and groundborne noise and vibration; psychological effects; loss of amenity; and human health effects.

11.7.69. As is pointed out by the EIAR, the greatest potential air quality impact during construction relates to dust. According to Section 16.5.2.12 of the EIAR, deposition of dust typically occurs in close proximity to the source and potential impacts generally occur within 350m of a haul route or 500m from the site entrance. Table 16.18 of the EIAR presents a summary of dust emission magnitudes from the main construction sites and the assessment concludes that a high-level of mitigation is required for the majority of these sites. The issue was discussed at the oral hearing on a number of occasions, including on 21st February 2024 and 12th March 2024, where the applicant's human health and air quality advisers, Dr. Martin Hogan and Dr. Avril Challoner, separately outlined that important factors that can affect human health, such as PM₁₀, PM_{2.5} and NO₂, will be subject to real-time monitoring and that construction activity can be shut down in an event where a threshold value is exceeded. I also note Dr. Challoner's advice, that PM_{2.5}, which can be inhaled and is harmful to human health, is not produced from construction dust.

11.7.70. Aspergillus is acknowledged as a particular concern near hospitals, but the EIAR assessment advises that dust suppression techniques successfully prevent suspension of aspergillus. The District 7 Community Alliance raised this issue on 27th February 2024 and asked the question of whether sign advisories should be put on display, to advise vulnerable passers-by of the potential health issues associated

with construction and that precautions should be taken. In response to this, Dr. Hogan advised that aspergillus is widespread and that people are exposed to it on a regular basis, with the majority of people (including the majority of people in hospital settings) being immune to potential health effects. In response to the question regarding advisory signage, and with particular reference to the close proximity of the Mater Hospital to the Mater Station construction site, Dr. Hogan did not agree that such signage should be put in place and he offered the view that one's own doctor is best-placed to advise on whether a particular precaution (for example the use of a face mask) should be taken when outdoors.

11.7.71. Dust arisings from construction sites are inevitable and the EIAR contains what I consider to be extensive mitigation related to the control of dust. The outline CEMP (Ref. OH320) and draft Dust Mitigation Plan contained at Appendix A16.4 of the EIAR outline proposals for the control/suppression of dust arisings and also outline a monitoring strategy, each of which is intended to be submitted to the planning authorities for approval. I am satisfied that dust does not present a significant risk to human health and that the mitigation measures proposed are adequate to address any nuisance issues.

11.7.72. Noise and vibration concerns are a common aspect of a large number of submissions and concerns were raised by multiple speakers at the oral hearing.

11.7.73. As is identified in Sections 13.5 and 14.4 of the EIAR, construction will involve a number of particularly noisy processes, including piling, excavation, the operation of very heavy plant and machinery, etc. I concur with the assessment that construction is likely to have significant adverse noise and vibration impacts on some residential and commercial properties (this is discussed in detail in Sections 11.16 and 11.17) and in some instances this will be for prolonged periods. Examples of such impacts relate to:

- Linear works between Estuary Station and DANP.
- TBM passage from Northwood portal to Charlemont.
- Various stages of construction of Glasnevin, Mater and Charlemont stations.

11.7.74. For the cut and cover and retained cut works between stations in Section AZ1, the applicant's noise and vibration expert clarified at the oral hearing that construction

will involve a linear working area that will progress at a rate of approx. 300m every 6 months and with affected properties likely to experience significant noise impacts for approx. 6 months, whilst works are in closest proximity.

- 11.7.75. For the TBM passage, the EIAR advises that significant impacts will be experienced for a period of up to 2 weeks, with a peak in the 2 to 3 days when the TBM is closest.
- 11.7.76. The majority of underground stations will be constructed using top-down construction, which involves excavation under the station roof slab, once it has been installed, and Section 13.5.2 of the EIAR outlines that this approach reduces the level of construction activity and associated noise at surface level. Section 5.5.9 of the EIAR discusses the construction schedule and it outlines that installation of the roof slab will follow completion of D-wall activities and foundation works. The amount of time taken to progress construction to this stage is unclear to me, but it is reasonable to assume it will take a number of months at least, in view of the scale and complexity of preparatory works that are required.
- 11.7.77. The EIAR incorporates a variety of mitigation measures and the assessment states that with the implementation of proposed mitigation, the majority of construction sites can be controlled to within the relevant noise threshold.
- 11.7.78. For those properties that are shown to experience excessive noise, above the applied thresholds, extensive mitigation is proposed in specified circumstances, in the form of an Airborne and Groundborne Noise Mitigation Policy (Appendix A14.6 of the EIAR), which includes for direct intervention in the form of noise insulation, temporary rehousing or other soft interventions. This Policy is grounded in guidance contained within BS5228-1 and similar approaches have been adopted on other large projects, including the consented DART+ South West project (ABP-316119-23), so TII is following an established path in dealing with the issue. As I have outlined in Section 11.16, in circumstances where the Noise Mitigation Policy is applied, I consider it will be effective in mitigating the impact of noise on sensitive receptors.
- 11.7.79. I note there is a discrepancy between the Noise Mitigation Policy, EIAR and statements made by TII at the oral hearing. The NMP is primarily intended for residential property but there is reliance on its provisions in some areas of the EIAR, for commercial property. When queried on the issue at the oral hearing, on 21st

February 2024 TII advised that it will be applied to non-residential property on a case-by-case basis.

- 11.7.80. Whilst it may be the case that the modelled assessment identifies that most affected properties will be retained below the construction noise threshold (CNT), I acknowledge that retention of a given property below the CNT does not mean that that property will not experience high levels of noise. But, having regard to the nature and scale of the construction works required to deliver the MetroLink project, there is clearly an unavoidable high level of airborne noise and vibration that will be generated in specified locations.
- 11.7.81. TII has proposed standard mitigation measures (control at source, pathway or receptor) and bespoke mitigation measures (the above-mentioned Noise Mitigation Policy) and also commits to the production of site-specific Construction Noise and Vibration Management Plans (CNVMPs), which will involve additional noise modelling and prediction and, additionally, further mitigation that will be implemented in order to minimise such impacts. I consider TII's approach in this regard to be reasonable, as construction methods and schedules may be subject to refinement and technological or methodological advances in the period before construction commences and there is a likelihood of predicted noise levels being reduced.
- 11.7.82. The potential for mobilisation of PFAS contaminants within soils / bedrock / groundwater at Dublin Airport and subsequent transfer to receiving waters was an issue first raised at the oral hearing. I have discussed the issue in detail within other sections of this report and so discuss in summary here.
- 11.7.83. PFAS (otherwise known as 'forever chemicals') are a large group of man-made chemicals that are highly resistant to degradation. Following the raising of the issue at the oral hearing, the applicant submitted a PFAS Management Strategy that provides a strategy for dealing with any such materials encountered during excavation works or tunnelling. It applies a worst case scenario whereby 100% of excavated material (both soils and water) is assumed to be contaminated and requiring management. Construction sites will be isolated and segregated, with excavated materials tested either in-situ or ex-situ and with contaminated material to be stored in a purpose-built storage facility at Dardistown pending export for treatment/disposal to landfill.

- 11.7.84. Water pumped from excavations in Dublin Airport will be similarly treated as contaminated, until otherwise confirmed. Chapter 19 of the EIAR, Hydrogeology, predicts low levels of water ingress at each of the station excavations and, in the context of the >1km distance to the nearest receiving waters to the north or south of the Airport, I am satisfied that there is a low likelihood of PFAS being mobilised and transferred to receiving waters. I have recommended elsewhere that the Board attach a condition requiring that there shall be no dewatering above the above-specified levels at any of the Dublin Airport construction sites. Subject to implementation of this recommended condition, I am satisfied that there will be no significant adverse impacts on Human Health.
- 11.7.85. For the operational phase, I note from Section 13.5.3.4.2 that rolling stock is generally not predicted to give rise to significant noise impacts, in view of relatively high observed baseline noise levels. An exception to this is at Northwood, where a noise barrier is proposed along both sides of the rail embankment south of the M50 in order to protect adjacent housing from noise. Such noise barriers are an established form of noise mitigation and I am satisfied that subject to appropriate specification, significant impacts at this residential property can be avoided.
- 11.7.86. The EIAR assessment states that the primary noise sources for the underground stations in the operational phase are ventilation shafts, grilles for which are at surface level and Section 13.5.3.2.3 of the EIAR states that noise modelling has indicated that emergency operation of these shafts may pose a potential significant noise impact. TII proposes that the appointed contractor will be required to design and construct fixed installations such that noise levels during normal operations do not exceed 5dB over the measured baseline level. I am satisfied that this approach will ensure there are no significant noise issues from fixed installations such as this during operation.
- 11.7.87. For the operational phase, the applicant made a unilateral commitment at the oral hearing on 5th March 2024 (Ref. OH174) that operational groundborne noise levels in lawfully occupied residential dwellings will be below 35dB $L_{Amax, S}$. This commitment was made following questioning by Tyréns with the motivation mainly being to ensure that the disturbance caused by groundborne noise from operation during sleeping hours is comparable to typical in-house background levels. Tyréns advise that this commitment is a significant improvement for nearby housing and a very

positive development for MetroLink, bringing it more in line with levels utilised, for example, in the Nordic countries.

11.7.88. As Section 10.5.1.4 of the EIAR states, psychological effects are complex and are not easily predicted. It can be reasonably predicted that potential psychological effects will relate to issues including loss of housing; building damage; prolonged exposure to construction noise and vibration; and traffic disruption.

11.7.89. I agree with the EIAR assessment, that some people due to the proximity of their home or place of work, may experience significant negative impacts. This is particularly the case for those whose homes are to be acquired and demolished or those whose homes may be damaged during tunnelling. I have discussed previously mitigation proposals intended to support those affected by these aspects of the proposed development.

11.7.90. Regarding traffic, concerns were expressed by a number of oral hearing speakers regarding the impact of construction traffic, including Senator Marie Sherlock (Refs. S181), Iona and District Residents Association (Refs. S123, S124 and OH231) and the Management Company Board on Behalf of The Court (Refs. S175, OH84 and OH232). The issue is discussed in detail elsewhere in this report and is thus discussed in summary here.

11.7.91. The application is supported by a detailed traffic and transport assessment, at Chapter 9 of the EIAR, and a detailed Scheme Traffic Management Plan, at Appendix A9.5. Section 9.6.1.1 of the EIAR identifies that construction phase impacts relate primarily to traffic management arrangements and the movement of construction vehicles and, to this end, I note that the traffic and transport assessment contains modelled assessments of both aspects of the development. It identifies potential significant impacts in Areas AZ1, AZ3 and AZ4 and with impacts largely related to traffic management measures and construction traffic. It is particularly noteworthy that the development is predicted to have a significant adverse impact on operation of the R132, R108 and Berkeley Road. The assessment also identifies significant adverse impacts on the Western and South Western commuter rail lines during construction of Glasnevin station.

11.7.92. In view of the scale and linear length of the project, together with the busy city environments through which it passes, the project will inevitably contribute to

congestion on a number of the public roads. The R132 in particular directly interacts with the development at a number of locations and I concur that construction is likely to have a very disruptive impact on traffic patterns, including on filter and approach roads.

- 11.7.93. Closure of the Western and South Western commuter rail lines will also have a disruptive effect on commuting patterns into the city, although I note that in its response to the IÉ submission, TII outlines that onward access to Connolly Station will be available throughout the 21- month period of closure of the western rail line. This is to be welcomed and in view of which I do not consider the disruptive impact would be significant.
- 11.7.94. In the case of the south western line, there is no such commitment to maintaining onward access to Connolly Station and, in this context, I agree with the IÉ submission that the line closure will have a significant disruptive impact on rail users. delivered without some level of interaction between rail lines during construction.
- 11.7.95. In my view, road closures/diversions, traffic management measures and the identified heavy rail line closures are a necessary component of the delivery of the proposed development through a busy urban environment and, in the case of heavy rail lines, providing for direct interchange between public transport modes. A variety of mitigation measures are proposed, in particular the implementation of a traffic management plan for all stations and the establishment of a project construction traffic forum. I consider these are sensible measures to limit the impact of construction on traffic flows, albeit I consider it is important to acknowledge that construction will have a disruptive effect on multiple roads.
- 11.7.96. The above-discussed impacts must be balanced against the significant positive impact that is likely to accrue through the operational phase, in particular through significant enhancement of the city's public transport network and also through reduced traffic flows along key routes into and around the city centre, as detailed in Section 11.20 of this report.
- 11.7.97. Regarding amenity, Section 11.5.2.4.1 of the EIAR states that the construction phase is likely to have significant adverse impacts on the attractiveness of neighbourhoods that are proximate to construction sites, related to the presence of construction compounds, plant, equipment, hoardings, etc. Impacts are likely to be

varied and will include impacts on visual and general amenity. The outline CEMP (Ref. OH348) contains commitments to good housekeeping and worksite layouts, which are standard for appropriate upkeep/operation of these sites and for minimising amenity impacts. Tall/large construction elements, including plant and machinery, will still present a visual reminder of the nature of works ongoing at each site, but they are a feature of large construction projects and I do not consider the applicant can reasonably be expected to screen the entirety of each construction site. I have recommended elsewhere that painted finishes and/or artwork should be incorporated onto site hoardings at particularly sensitive locations, as a means of providing some visual interest to these sites, particularly in the context of the prolonged nature of the construction programme. I am satisfied that good housekeeping practices and considerate working procedures will mitigate the impact of construction elements on amenity to a level that is not significant.

11.7.98. Community and Social Infrastructure

11.7.99. Community and social infrastructure elements are likely to experience and direct and indirect impacts.

11.7.100. Section 11.5.2.4 of the EIAR analyses these impacts on a section-by-section basis and identifies a number of significant, short-term negative indirect impacts. I agree that the development may lead to impacts such as noise and dust at a number of community and social infrastructure locations that are proximate to the route alignment. Regarding dust, mitigation measures are incorporated (these are discussed in detail in Section 11.14) which I am satisfied will ensure significant impacts do not arise.

11.7.101. Regarding noise, construction involves a number of noisy processes and very high noise levels are likely to be experienced at locations proximate to construction sites, for prolonged periods. This is discussed in detail in Section 11.16. The applicant submitted a proposal for site-specific Trigger Action Plans (Refs. OH190 and OH276) to the oral hearing and this includes a number of sensitive community and social infrastructure locations, which includes hospitals, schools, museums and other important cultural buildings. These Plans will be implemented where the EIAR identifies a significant impact at a non-residential receptor with special noise and vibration sensitivity and will include applicant commitments in respect of the

management of noise and vibration through construction. I am satisfied that this approach will ensure significant noise and vibration impacts do not arise at sensitive community and social infrastructure locations.

11.7.102. 11.77 ha of open space will be temporarily acquired during construction and, as Section 11.5.2.4 of the EIAR states, this will limit functionality of open spaces during that time. In particular, areas of open space at Balheary Park, Albert College Park, Four Masters Park and St. Stephen's Green will be affected by construction activity. Additionally, the Royal Canal Greenway will be closed during construction. I agree with the EIAR assessment, that this will have a local-level effect, but there are other areas of open space in the vicinity of the alignment that are unaffected by the development and which will remain accessible for the duration. Indeed, I would highlight to the Board that areas of Balheary Park, Albert College Park and the majority of St. Stephen's Green will remain accessible to the public during construction. I agree with the EIAR, that the overall impact on loss of open space during construction would be slight.

11.7.103. A number of leisure/sports facilities and playing pitches will also be impacted by construction. As Table 11.64 of the EIAR states, playing pitches at Swords Rovers FC, Fingallians GAA, Starlights GAA, Na Fianna GAA, Albert College Park and Home Farm FC will each be required for periods lasting a number of years, to facilitate construction, whilst the Whitehall Rangers FC facility will be demolished and a replacement facility provided. The loss of these facilities for periods of up to 105 months (Home Farm FC) will result in significant permanent and temporary impacts but, in each instance, the facility will be restored or relocated following the completion of construction. The Board will note that at the oral hearing the applicant proposed an amendment to the Balheary Park playing pitch layout, in order to provide a full-size all-weather pitch with floodlighting.

11.7.104. The Markievicz Leisure Centre will be demolished as part of the demolition of the College Gate apartment complex and a replacement facility will be provided, separately, by Dublin City Council. The Schedule of Errata provided to the oral hearing on 27th March 2024 (Ref. OH374) identifies an error in the impact classification for this aspect of the project, identifying that it should be classified as a permanent significant negative impact. I agree that the impact of the loss of this facility is permanent significant adverse; both An Taisce (S8 and 1FS3) and the Save

the Markievicz Pool & Gym Campaign submission (S276) state that the facility is the only large public swimming pool in the city centre and that it represents critical infrastructure.

11.7.105. Dublin City Council confirmed in an email read into the record at the oral hearing on 22nd February 2024 that a new, larger facility will be provided at Irishtown. This facility (which has not been subject to detailed design and the exact site of which is unknown to me) will be at some remove from the current location, in a less central part of the city. Whilst it may be the case that the facility will be larger, it will not be as readily accessible to the community and its specific benefit as a replacement facility will therefore be reduced.

11.7.106. For the operational phase, each of the temporarily acquired open spaces will be restored and a number of new landscaped spaces or plazas will be provided, in particular through the creation of a linear park adjacent to the R132 and a new public plaza at Tara, both of which will benefit the communities they serve.

11.7.107. Economic Activity

11.7.108. As the EIAR states, the development is likely to have direct and indirect impacts on economic activity, giving rise to job creation, direct and indirect expenditure and other supply chain benefits during both construction and operation. Notable benefits during construction include predicted capital expenditure of an estimated €6.7bn (additional indirect spend is predicted to see this number rise to c.€10.6bn) and a peak workforce of 4,300 FTE employees. I acknowledge though, as does the EIAR, that the international nature of tunnelling/underground rail industry, a sizeable portion of such expenditure will be spent overseas. Notwithstanding this, the construction phase will still clearly have a positive impact in terms of job creation and local-level expenditure. For operation, the development will require 300 FTE employees and can be expected to give rise to multiple indirect benefits for other businesses, particularly those in proximity to stations, as well as improved connectivity benefits.

11.7.109. Notwithstanding overall positive economic impacts, I concur with the EIAR that specific sectors and some individual businesses will suffer adverse impacts during construction.

- 11.7.110. A number of retail and commercial outlets will be demolished as part of the development: Boland's Car Dismantlers at Nevinstown; Smyths Toy Store at Airside Retail Park; Hedigan's the Brian Boru Pub, Des Kelly Interiors outlet and offices building at Prospect Road, Glasnevin. Ashford House and the unnamed building at Poolbeg Street that are to be demolished in order to facilitate construction of the Tara Station are identified as business locations. The acquisition and demolition of these outlets is discussed elsewhere in my report.
- 11.7.111. Retail and commercial outlets in proximity to construction sites may also become less desirable, for example due to reduced connectivity, noise, visual barriers, etc. Table 11.54 of the EIAR identifies a number of outlets that are likely to be affected, including significant impacts at Airside Retail Park, Gulliver's Retail Park, Glasnevin Town Centre and Grafton Street shopping district. The assessment outlines a general commitment to mitigation measures including diversions, alternative routes and advance notice of works in proximity to affected outlets is outlined. I am satisfied that this approach will be effective in ensuring significant impacts do not arise.
- 11.7.112. The issue of business disruption was raised in a number of submissions, including Troys Butchers (S304, 1FS41, 2FS12) and Brendan Flanagan (S26, OH86 and OH244). The impact of construction on both of these businesses is acknowledged by TII, but they are of the view that affected businesses (including Mr. Troy's and Mr. Flanagan's) will see longer term benefits once MetroLink becomes operational.
- 11.7.113. I consider the proposed mitigation strategy is a sensible approach to limiting the adverse impact of construction on retail and commercial outlets. As addressed elsewhere, given the duration of the construction phase, I consider it appropriate that temporary signage should be placed on construction hoardings that obstruct visibility of businesses.
- 11.7.114. I would also point out that some retail or food businesses that are in proximity to construction sites may also benefit from the prolonged presence of construction workers in their area.
- 11.7.115. Hotels/guest accommodation, visitor attractions and other businesses in proximity to the route are likely to experience disruption during construction (Table

11.55 of the EIAR identifies potentially affected locations), through noise, dust, reduced connectivity, etc. This includes significant impacts on hotels/guest accommodation in Areas AZ1, AZ2 and AZ4 and visitor attractions including St. Stephen's Green, the Royal and Grand Canals, the O'Connell Street area and the GPO. In identifying such impacts, the EIAR again outlines a general commitment to mitigation measures including diversions, alternative routes and advance notice of works in proximity to affected locations.

11.7.116. I am satisfied that access to these sites can be maintained, through a combination of diversions and alternative routes.

11.7.117. Importantly, the standard working day runs from 7am-7pm on weekdays and 7am-1pm on Saturdays and works will primarily take place outside of the night-time period when Hotels are busiest. However, hotels proximate to the tunnel alignment will be affected in a similar way to residential property, i.e. for a two-week period and with a 2 – 3 day peak when the TBM is closest.

11.7.118. For Hotels/guest accommodation that experience significant noise impacts/disruption arising from airborne noise, TII confirmed at the oral hearing that eligibility for the provisions of the Noise Mitigation Plan will be considered on a case-by-case basis. I have outlined the basis for and the provisions of the Noise Mitigation Policy in Section 11.16 and I consider it will be effective in ensuring there are no significant noise impacts at these locations.

11.7.119. The Board will note that the issue of disturbance was raised by Wynn's Hotel (S317 and OH102) at the oral hearing and TII acknowledged in their response to the submission that there are no effective methods available to reduce such noise. They further advised that the principal mitigation to be implemented is advanced engagement with the hotel operator. The response also states that TII will consider applications for additional measures on a case-by-case basis although I would highlight to the Board that there was no submission to the oral hearing on the issue.

11.7.120. I acknowledge the significant adverse impact that is likely to arise at Wynn's Hotel but it is for a very short period of time and I consider the impact is justified by the wider benefit accruing from the development.

11.7.121. I have previously outlined that the applicant proposes site-specific Trigger Action Plans for a number of sensitive locations and this includes a number of

sensitive visitor attraction locations, including The National Library, The National Museum of Archaeology, The Natural History Museum, The National Concert Hall, Government Buildings, etc. I am satisfied that this site-specific approach will ensure significant noise and vibration impacts do not arise at such sensitive receptor locations.

11.7.122. Connectivity/Travel Patterns

11.7.123. The issue of traffic movements and associated impacts on the road network is discussed elsewhere in this report and is thus discussed in summary here.

11.7.124. As is stated at Section 11.5.2.5.1 of the EIAR, construction traffic will utilise the road network and the removal of road space during construction will require a variety of traffic management initiatives to be employed. Such initiatives will include localised road/footpath closures, diversions and bus stop relocations, etc, with works most prevalent in Section AZ1 and thereafter reduced through Sections AZ2-AZ4 where the alignment descends underground.

11.7.125. I agree with the EIAR assessment, that delays are inevitable and will affect journey times and general amenity across the route alignment. This is particularly the case along the R132, as detailed in Section 11.20 of this report.

11.7.126. I agree with the EIAR assessment, that the operational phase will facilitate improved efficient rail travel and overall rail capacity. The primary significant benefit of the development will be a high-quality, high-frequency public transport corridor that will reduce travel times and will reduce pressure/congestion on other transport modes and routes. Associated benefits will include enhanced access to employment, services and amenities.

11.7.127. Cumulative Impacts

11.7.128. I agree with the EIAR assessment and both of the update reports received, that the accumulation of construction works, for both the proposed development and other largescale projects in the vicinity, may give rise to nuisance effects but I do not consider there is potential for significant cumulative population and human health impacts. Construction sites are commonplace across the route alignment and whilst the proposed construction phase may be over a longer period than other projects, it nevertheless gives rise to the same impact factors, i.e. noise, dust, traffic, etc.

- 11.7.129. Noise is discussed in detail elsewhere, in Section 11.16 of my report.
- 11.7.130. Dust management is a standard feature of large construction sites and in this instance the applicant proposes real-time monitoring of important environmental factors such as PM₁₀, PM_{2.5} and NO₂ and there is commitment that construction activity can be shut down in an event where a threshold value is exceeded. I would also reiterate the applicant's point that PM_{2.5}, which can be inhaled and is harmful to human health, is not produced from construction dust.
- 11.7.131. I have outlined that the development is likely to have significant impacts on traffic flows at a number of locations along the alignment and other largescale projects, for example the BusConnects Ballymun/Finglas infrastructure project, have the ability to contribute to and compound such impacts. The applicant proposes a variety of measures to mitigate and minimise the impact, including road closures, diversions and active travel management, as detailed in the Scheme Traffic Management Plan.
- 11.7.132. For the operational phase the proposed development is likely to act in combination with other major public transport infrastructure projects, in particular the BusConnects Ballymun/Finglas project and other bus, rail and Luas projects, in providing high-quality, high-frequency public transport corridors that will improve connectivity between communities along the alignment and in particular will reduce pressure/congestion on other transport modes and routes. I consider the cumulative impact of such projects will be significant positive.
- 11.7.133. **Conclusion**
- 11.7.134. I have considered all of the submissions made in relation to population and human health and the relevant contents of the file, including the EIAR and relevant update reports provided to the oral hearing. Subject to specified exceptions below, I am satisfied that the potential for significant adverse impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.
- 11.7.135. I consider significant adverse residual impacts are likely to arise, notwithstanding the implementation of proposed mitigation measures, in the case of:
- Compulsory acquisition of occupied housing as part of the development.

- Groundborne and airborne noise at residential and commercial receptors at locations across the alignment during construction.
- The permanent loss of the Markievicz Leisure Centre, Townsend Street, Dublin 2.
- Temporary acquisition and loss of playing pitches at Swords Rovers FC. Fingallians GAA; Starlights GAA; Na Fianna GAA; Albert College Park; Home Farm FC and Whitehall Rangers FC (which is to be relocated).
- Traffic flows on the R132, R108 and Berkeley Road.
- Operation of the South Western commuter rail line.

11.7.136. In each instance, I am satisfied that impacts have been correctly identified, assessed and understood. Further, I am satisfied that additional practical mitigation is not available, which would have the effect of reducing an identified impact below the 'significant' level.

11.7.137. For the operational phase, I consider the development is likely to have significant positive impacts, both individually and acting in combination with other public transport infrastructure projects, improving connectivity between communities along the alignment and reducing pressure/congestion on other transport modes and routes.

11.7.138. In view of the very large scale of the project and the nature and complexity of the construction and engineering processes required during construction, I consider the likelihood of significant population and human health impacts is unavoidable in some locations. However, I consider such impacts must be balanced against the very significant wider societal benefits that will accrue from the provision of a high-quality underground rail system. For example, communities and residents that are closest to construction sites and which will experience greatest groundborne and airborne noise levels during construction will derive the significant benefit of being proximate to the Metro for its operational life.

11.7.139. Thus, to conclude my assessment, it is my opinion the long-term benefits of the development outweigh the identified significant residual impacts and none would give rise to an unacceptable impact on a sensitive receptor that would justify a refusal of the Railway Order.

11.8. Biodiversity

11.8.1. Introduction

11.8.2. Chapter 15 of the EIAR addresses Biodiversity. The chapter is supported by a series of appendices, including desktop studies, habitat surveys, breeding and winter bird data, aquatic and fisheries assessment and an outline invasive species management plan. The chapter also includes a series of figures, including survey data and habitat mapping.

11.8.3. The chapter is stated to describe and assess the likely direct and indirect significant effects of the proposed development on Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC.

11.8.4. Methodology

11.8.5. The assessment is stated to have been prepared having regard to relevant guidance and policy and consisted of both desktop and site survey assessments. An initial desktop assessment informed the scope of field surveys required and a suite of survey were carried out between 2018 and 2021. Table 15.4 identifies relevant surveys undertaken and the date of survey. Detailed summaries of the survey programme are contained at Section 15.2.5.

11.8.6. The results of the desk study and field surveys established the habitats and species present along the route of the development and a Zone of Influence was defined for receptors, based on individual sensitivity and the nature and extent of predicted impacts. An ecological evaluation of all receptors was undertaken, taking into consideration legal protection, conservation status and local abundance. Key ecological receptors were taken forward to the assessment, whereas non-qualifying receptors were not, with the approach stated to be in line with current best practice.

11.8.7. The chapter states that the National Parks and Wildlife Services, Fingal County Council Heritage Officer, Dublin City Council Biodiversity Officer, Inland Fisheries Ireland, Waterways Ireland, Bat Conservation Ireland and the Botanical Society of Britain and Ireland were consulted as part of the assessment and meeting minutes for consultation meetings are outlined at Section 15.2.6.

11.8.8. Receiving Environment

11.8.9. The receiving environment is described as dominated by the following:

- Areas of hardstanding, including Dublin Airport, the R132, the R108, the M50 Motorway and the existing railway lines and associated permanent way fit [sic] at Glasnevin;
- Agricultural fields primarily cultivated with arable crops;
- Areas of public amenity (including parkland) and open space; and
- Private residential, commercial and industrial properties and residential gardens and landscaped areas associated with commercial and industrial estates.

11.8.10. The route is also stated to cross 11 watercourses, including the Broadmeadow River, Royal Canal, River Tolka, River Liffey and Grand Canal.

11.8.11. Sections 15.3.3 to 15.3.13 describe the ecological baseline as it relates to the ecological receptors recorded, or known from, the study area, under the following headings: designated areas for nature conservation; habitats; rare and protected plant species; non-native invasive plant species; and animal species. The baseline can be summarised as follows:

11.8.12. **Designated sites for nature conservation:** The route does not overlap with any European sites. The nearest European site is Malahide Estuary SAC, c. 370m downstream, and there are 24 No. European sites in the vicinity of the route (Table 15.9 identifies all such sites). There is 1 No. Natural Heritage Area (NHA) and 19 No. proposed Natural Heritage Areas (pNHA) within the zone of influence (Table 15.10 identifies all such sites). There are also 5 No. Ramsar sites, the Unesco Dublin Bay Biosphere and 2 No. Special Amenity Area Order sites in the vicinity.

11.8.13. **Habitats:** Individual habitat types and their geographic spread along the route are outlined in Table 15.11 and include arable land, buildings and artificial surfaces, wetlands and open water (rivers/streams/canals/drains), bare ground, amenity grassland, woodland, hedgerows, etc.

11.8.14. **Rare and protected plant species:** No protected plant species listed on the Flora Protection Order (2022) were recorded within or in close proximity to the route. There are desktop records of opposite-leaved pondweed 'Groenlandia densa' and stonewort 'Tolypella intricata' on the route, but these species were not encountered

during site surveys. Horned pondweed, rigid hornwort and whorled water-milfoil were recorded on the Royal Canal in relatively high abundance.

- 11.8.15. **Non-native invasive plant species:** 7 No. non-native plant species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 were present within or in close proximity to the route: Canadian pondweed, Giant hogweed, Indian Balsam, Japanese knotweed, New Zealand pigmyweed, Nuttall's pondweed, three-cornered leek. Winter heliotrope and Butterfly bush, listed in 'The Management of Invasive Alien Plant Species on National Roads - Technical Guidance' (TII, 2020) were also recorded widely across the survey area.
- 11.8.16. **Animal species:** Otter, identified as being of international importance, were detected in the following locations: Broadmeadow River, Santry River and the Royal Canal. The assessment identifies as likely that otter utilise various watercourses within the Broadmeadow River, Mayne River, Ward River and River Tolka sub-catchments and the Barberstown Stream and Dunbro Stream for breeding, foraging and commuting activities. Otter are also identified as having been previously recorded in locations at Cuckoo River, Mayne River, Santry River, Tolka River, River Liffey and the Grand Canal.
- 11.8.17. Regarding bats, Leisler's bat, Common Pipistrelle, Soprano Pipistrelle and unidentified pipistrelle species were widely recorded across the study area. Nathusius' Pipistrelle, Long eared bat, Daubenton's bat and Whiskered bat were recorded in a small number of locations. Full results of bat surveys are contained in Figure 15.7.
- 11.8.18. Badger were identified in a number of proximate locations to the route, including in the area of chainages Ch.1000, 1620 (at Lissenhall Demesne), 4400 and in the area of the proposed grid connections, north of the R139 at Belcamp. Results of the mammal survey are contained in Figure 15.8.
- 11.8.19. In terms of other mammals, Irish hare was encountered in a field west of the R132 in the centre of Swords. Aquatic mammals, common porpoise, grey seal, sperm whale and striped dolphin are identified as being located downstream of the project. Other mammals such as Irish stoat, hedgehog, pygmy shrew, fox and rabbit are also identified as likely to be present and widespread in suitable habitat areas within the study area.

- 11.8.20. Invertebrates, glutinous snail and false orb pea mussel are identified as having been recorded in the Grand Canal. Both are identified as an endangered species and of National Importance by the assessment.
- 11.8.21. Bird surveys recorded the presence of 55 species across the study area, including 4 identified as Species of Conservation Interest (SCI) for SPAs, one Birds Directive Annex I species, five Red list species, 19 Amber list species and 23 Green list species. The results of the breeding bird surveys are contained on Figure 15.9 and the full list of bird species recorded is provided in Appendix A15.5. Winter bird surveys recorded 38 species across the study area, including 16 species listed as SCI for SPAs, 3 Birds Directive Annex I species, 8 Red list species, 17 Amber list species and 12 Green list species. The results of the winter bird surveys are contained in Appendix A15.6.
- 11.8.22. Amphibians, smooth newt and common frog have previously been recorded at various locations along the route and both species are protected under the Wildlife Acts. Suitable amphibian habitat was identified at 4 locations along the route, including drainage ditches located north and west of the Staffordstown Stream at Estuary; a drainage ditch located along a treeline, east of the R132 at Nevinstown West; drainage ditches along field boundaries at Dardistown, where common frog was previously recorded; and, an area of wet grassland, with temporary pooling of stagnant water where common frog was previously recorded, and a drainage ditch within a rough grassland field at Ballymun, west of the R108.
- 11.8.23. Regarding reptiles, 1 recent record of common lizard in proximity to the site is identified, but the species was not encountered during surveys. Suitable breeding and hibernating habitat for this species was identified within the study area (i.e. semi-natural grassland, scrub, hedgerows, earth banks and areas of spoil and bare ground/recolonising bare ground, which may provide suitable basking habitat).
- 11.8.24. A series of fish surveys informed the following baseline conclusions:
- Brown trout was the only salmonid species recorded in the River Tolka, Ward River and Broadmeadow River. No Atlantic Salmon was recorded during surveys, but there are records of Salmon in the Staffordstown Stream, Broadmeadow River, Ward River, River Tolka and River Liffey. Salmonid habitat quality across all watercourses was considered to be moderate with

only 2 surveyed watercourses (Ward River and River Tolka) achieving good quality water status. Despite this, the quality of spawning gravels at these rivers was considered to be moderate at best due to levels of siltation, the bedded nature of the substrate and overall threats from water quality issues.

- Overall suitability of watercourses for Lamprey species is moderate at best, due to factors including compaction, shallow depth and anoxic conditions (black silt), but there are records of Lamprey in the River Tolka and River Liffey. Water quality in a number of watercourses (Staffordstown Stream, Cuckoo Stream, Mayne River and Santry River) is stated to be incapable of supporting Lamprey species.
- European Eel was recorded in 3 watercourses (Broadmeadow River, Ward River and River Tolka) and the Broadmeadow is identified as a valuable migration corridor.
- The following additional species were recorded: Three-spined stickleback recorded at all locations apart from the Cuckoo Stream and River Mayne. Stone Loach, Minnow recorded in the Broadmeadow River, Ward River and River Tolka. sand goby, flounder recorded in Broadmeadow River, with Flounder also recorded in the Ward River.

11.8.25. Following the baseline assessment, a number of Key Ecological Receptors (KER) were identified for the purposes of impact assessment. Table 15.16 contains a summary of the ecological evaluation of receptor sites and identifies whether the site constitutes a KER.

11.8.26. **Potential Impacts**

11.8.27. The impact assessment considers potential impacts through the construction and operational phases, separately. The do-nothing scenario is also assessed.

11.8.28. **Construction Phase**

11.8.29. For the construction phase, the assessment addresses potential impacts on biodiversity under the grouped headings of: designated areas for nature conservation; habitats; rare and protected plant species; mammals; invertebrates; birds; amphibians; reptiles; and fish.

11.8.30. ***Designated Areas for Nature Conservation***

11.8.31. Impacts on designated areas for nature conservation relate to European sites (SACs and SPAs) and NHAs/pNHAs. For European sites, the assessment overlaps with the NIS (which itself directly addresses potential impacts on European sites) and predicts that, in the absence of mitigation measures, the development has the potential to have **significant adverse** impacts on 17 No. European sites, namely: Baldoyle Bay SAC, Malahide Estuary SAC, North Dublin Bay SAC, South Dublin Bay SAC, Wicklow Mountains SAC, Baldoyle Bay SAC, Dalkey Islands SAC, Howth Head Coast SPA, Ireland's Eye SPA, Lambay Island SPA, Malahide Estuary SPA, North Bull Island SPA, Rockabill SPA, Rogerstown Estuary SPA, Skerries Islands SPA, South Dublin Bay and River Tolka Estuary SPA and The Murrough SPA. Identified impacts relate to pollution or contamination of receiving waterbodies and the spread of invasive species resulting in habitat degradation.

11.8.32. For NHAs/pNHAs, the assessment predicts that, in the absence of mitigation measures, the development has the potential to have a **significant adverse** impact on 19 No. sites, namely: Malahide Estuary pNHA, Sluice River Marsh pNHA, Baldoyle Bay pNHA, Santry Demesne pNHA, North Dublin Bay pNHA, Royal Canal pNHA, Dolphins, Dublin Docks pNHA, Grand Canal pNHA, South Dublin Bay pNHA, Booterstown Marsh pNHA, Rogerstown Estuary pNHA, Ireland's Eye pNHA, Lambay Island pNHA, Skerries Islands NHA, Dalkey Coastal Zone and Killiney Hill pNHA, Howth Head pNHA, Liffey Valley pNHA, The Murrough pNHA and Rockabill pNHA. Identified impacts relate to habitat loss or fragmentation, habitat degradation caused by air quality impacts, changes in hydrological regime, pollution or contamination of receiving waterbodies and the spread of invasive species.

11.8.33. **Habitats**

11.8.34. The development is stated to result in the permanent loss of c. 139ha of habitats, including c. 125ha of Local Importance (Lower Value) and c. 14ha of Local Importance (Higher Value) habitat types. Local Importance (Higher Value) habitats include wetland and open water, grassland, woodland, parking, hedgerow and trees, measuring c. 14ha, and the extent of habitat loss is stated to have the potential to result in a **significant adverse** impact. Dewatering of the Royal Canal between locks 5 and 6 for 2 x 3-month periods is identified as having a short-term impact on vegetation within the canal, but this is seen as similar to routine maintenance works.

11.8.35. Degradation of habitats arising from contamination/pollution events, reduced surface water quality, air quality impacts and the spread of invasive plant species are also identified as potential **significant adverse** impacts on habitats.

11.8.36. ***Rare and Protected Plant Species***

11.8.37. Regarding rare and protected plant species, no protected plant species listed on the Flora (Protection) Order, 2022 were recorded within or in close proximity to the route. Three rare plant species were recorded along the Royal Canal, horned pondweed, rigid hornwort and whorled water-milfoil. Temporary dewatering between locks 5 and 6 will temporarily remove these species' habitat, affecting its survival in the basin, but they are seen to be widely distributed along the Royal Canal and significant adverse impacts are considered unlikely. A contamination/pollution event during construction is identified as having the potential to give rise to a **significant adverse** impact on these species and other downstream Red list species in downstream waters.

11.8.38. ***Mammals***

11.8.39. Impacts on mammals are assessed on a case-by-case basis, in relation to otter, bats, badger, and other mammals, summarised as follows:

11.8.40. Otter: The development will result in permanent loss of suitable Otter riparian habitat along the Broadmeadow River, Ward River, Mayne River, Santry River, Royal Canal, Sluice River and Turnapin Stream, associated with construction works and surface water drainage installations. Severance is also predicted to arise. Impacts are assessed as being short-term, apart from the Royal Canal element, and are unlikely to be significant. Habitat degradation arising from a contamination/pollution event at receiving waters is identified as having the potential to have **significant adverse** direct or indirect impacts on otter.

11.8.41. Regarding the Royal Canal element, temporary dewatering is predicted to take 6 months and there is an acknowledged high level of otter activity recorded along the Royal Canal. The assessment predicts that works may result in a temporary barrier effect as a result of habitat severance along the canal, which may impact the local otter population that utilise the canal for foraging and/or commuting along. The impact is stated to be potentially **significant adverse**, if otter cannot navigate their way around the artificial barriers in place.

- 11.8.42. Disturbance including at night-time, associated with construction and human activity, are also acknowledged as a likely negative impact on otter, but no significant impacts are predicted.
- 11.8.43. Bats: 22 No. trees were identified within the site boundary that have the potential to support roosting bats, 8 No. of which are proposed to be felled, leading to a potential **significant adverse** local impact. 1 No. bat roost was identified, in a building that is unaffected by the development. The assessment acknowledges that hibernating bats may utilise buildings that will be demolished as part of the development, in view of the difficulty surveyors have in locating hibernacula.
- 11.8.44. The loss of foraging and commuting habitat is identified as potentially resulting in a **significant adverse** impact on local bat populations. The assessment utilises a Core Sustainance Zone (CSZ) method of predicting and quantifying the impact of habitat loss and predicts that the development will give rise to a max. loss of 2.46% of the CSZ for recorded bat roosts whose CSZ traverses the study area, and it asserts that the loss of habitat is of a low order. Table 15.19 quantifies and analyses the extent of habitat loss for each bat species encountered within the study area and does not predict likely significant adverse impacts.
- 11.8.45. Disturbance including at night-time, associated with construction lighting, are also acknowledged as having the potential to have **significant adverse** impacts, in specific circumstances such as lighting in the area of roost access or the introduction of light to previously unlit spaces. Particularly sensitive parts of the route are identified as being: lands adjacent to the park & ride facility; river corridors and adjacent lands crossed by the route; hedgerow and treelines at Dardistown; house known as St Anne's at Northwood; Albert College Park; Griffith Park (including the River Tolka); and St Stephen's Green.
- 11.8.46. Badger: 4 No. badger setts were recorded across the study area, with none located inside the development boundary. 1 No. sett is located within the Zol of the electricity cable route at Belcamp and the remaining setts are more than 150m from the route and are outside the Zol of any construction activity. The badger sett at Belcamp may experience disturbance that affects breeding, resulting in a **significant adverse** impact, if the sett is in use for the period December – June. Construction work is

acknowledged as likely to disturb and displace badger and that, on a precautionary basis, this may give rise to a **significant adverse** local impact.

11.8.47. Other mammal species: Habitat loss is predicted to affect species such as Irish hare, pine marten, wood mouse, red squirrel, Irish stoat, hedgehog, pygmy shrew, fox, rabbit and bank vole, but there is considered to be abundant alternative habitat available. A risk of mortality is also identified, particularly during breeding and hibernation periods, but the potential for effects that would affect overall conservation status is considered unlikely. Similarly, habitat disturbance and habitat degradation arising from water quality impacts are considered unlikely.

11.8.48. The issue of habitat severance/barrier effect is identified, given the presence of a new above-ground rail line, P&R facility and depot that have the potential to impede movement. This is stated to have the potential to have a long-term **significant adverse** impact on local mammal population dynamics, affecting both local foraging behaviour and competition for resources and larger scale movements associated with dispersal and/or with breeding behaviour and genetic exchange between populations.

11.8.49. ***Invertebrates***

11.8.50. Construction of Charlemont Station may give rise to contaminants or pollutants being discharged to surface waters, which may ultimately end up in the Grand Canal and have a **significant adverse** impact on glutinous snail and false orb pea mussel, either directly or indirectly.

11.8.51. ***Birds***

11.8.52. The assessment overlaps with the NIS, in respect of effects on the overall conservation status of birds, and it predicts that the development will not affect the conservation status of the breeding bird populations and will not result in a likely significant negative adverse effect on the integrity of any European site. Regarding habitat loss for breeding birds outside of Annex 1/red list species, the assessment identifies a variety of habitat types and extents that will be affected, but none is considered to be unique or is likely to support a significant proportion of any given breeding bird species. The development is considered unlikely to affect the local range of the breeding bird species present nor is it likely to affect the ability of these breeding bird populations to maintain their local populations in the long-term.

- 11.8.53. Habitat and food source degradation arising from water quality impacts are identified as having the potential to have local **significant adverse** impacts on breeding and wintering birds and are identified as potentially arising directly and/or indirectly.
- 11.8.54. Site clearance works are predicted to present a likelihood of destruction of nest sites and bird/chick deaths, if undertaken during the nesting season of March – August inclusive. Site clearance is envisaged to be completed over 1 No. breeding season, with an acknowledged impact on the local bird population, but long-term effects are considered unlikely.
- 11.8.55. Construction activity is predicted to have a disturbing effect on bird species, the magnitude of which will be dependent on the type of construction works and their duration, but no significant adverse impacts are predicted.
- 11.8.56. The assessment addresses relevant Annex 1/red list species individually:
- 11.8.57. Kingfisher was recorded along the Broadmeadow River during the breeding bird surveys and the Broadmeadow River and Ward River during the vantage point survey. The assessment states that there is no suitable nesting habitat along the route but that there is suitable foraging habitat in the areas where Kingfisher were recorded. The assessment states that the extent of habitat loss is minimal and is confined to the construction of discharge points.
- 11.8.58. Grey wagtail was recorded at the Royal Canal, St. Stephen's Green, Ward River and Tolka River. No nests were encountered during surveys. The assessment identifies that there is suitable nesting habitat present at the walls of the Royal Canal and Tolka River, both of which are outside of the development footprint. Further, the area of the Royal Canal affected by construction does not contain any nests.
- 11.8.59. Meadow Pipit was recorded in 4 locations: (1) a grassland field located south-east of the R132 at Barrysparks; (2) along hedgerow boundaries in Dardistown; (3) a rough grassland field in Ballymun located west of the R108; and (4) beyond the footprint of the proposed Project at Glasnevin Cemetery. The assessment identifies that there will be permanent loss of suitable breeding habitat at (1) and (2) and temporary loss of habitat at (3), for the duration of construction, but predicts that the development will not affect overall conservation status as the recorded numbers were considered to be relatively low and there is suitable habitat in the wider environment beyond the Zol of the development.

- 11.8.60. Snipe was recorded in a field west of the R108, south of St. Margaret's Road in Ballymun. This area is where the Northwood construction compound would be located and, as such, the assessment identifies that the issue of habitat loss arises for the duration of construction. The assessment states that the availability of suitable wet grassland nesting habitat is limited within the study area but that rough grassland, which may also be suitable, is more commonly found. The assessment states that 2 individuals were flushed during the second survey (none recorded on 2 other surveys) and this indicates a presence of low numbers of breeding snipe. The assessment predicts that, in view of the low numbers encountered and wider distribution across Ireland, the development will not impact on wider conservation status of the species.
- 11.8.61. Swift was recorded in urban, parkland locations (for example Santry Demesne, Albert College Park, north of the Royal Canal, St Stephen's Green and Dartmouth Square) and in a field west of Estuary. No nests were recorded during surveys and there are no known records for swift nests within buildings affected by the development. The assessment predicts there is no potential for impacts to arise as a result of loss of breeding and/or foraging habitat as swifts forage a wide area and generally forage for insects while in the air.
- 11.8.62. Yellowhammer was recorded in the northern part of the route, in hedgerows, treelines and scrub present along field boundaries at Estuary at the proposed P&R Facility, along the Sluice River north of Dublin Airport and at Dardistown. The extent of habitat loss is stated to be extensive and permanent at both the proposed P&R Facility and the proposed depot at Dardistown, while habitat loss along the Sluice River will be restricted to the treeline. The impact of the development on Yellowhammer is stated to be **significant adverse**, at a local scale.
- 11.8.63. Regarding wintering birds, the assessment refers to the NIS assessment of SCI of relevant European sites, which concluded that the development would not affect their wintering bird colonies or have any long-term effects on the local wintering populations. Regarding habitat loss for geese, waders and waterfowl, the development gives rise to the loss of c. 82.5ha of feeding/roosting habitat, but the assessment does not predict significant adverse impacts in view of the low frequency of occurrence of wintering bird species, both within the development footprint and within the 300m study area, and the availability of other suitable habitat within the

wider area. Regarding habitat loss for other wintering bird species, the assessment states that surveys identified the presence of the following: Kestrel, Kingfisher, Meadow Pipit, Redwing, Snipe and Yellowhammer but in each case, significant impacts are not predicted.

- 11.8.64. Disturbance/displacement may arise during construction, which is predicted to give rise to displacement of bird species to other suitable habitat in the wider area. The assessment outlines that at a distance of 300m from the source, noise levels are likely to be attenuated below 50/60dB. Available research indicates that construction noise between 50-70dB would provoke a moderate effect/level of response from birds, but birds would be expected to habituate to noise levels within this range. Locations considered to be particularly vulnerable to and affected by noise are: (1) Broadmeadow River and Ward River east of the project boundary; (2) Balheary playing pitches and Fingallians GAA playing pitch; (3) Field at Barrysparks; (4) Large field south-east of the depot at Dardistown, north of the M50 Motorway; (5) Glasnevin/St Vincent's Primary School; (6) Kilmore/Oscar Traynor Football Pitches.
- 11.8.65. A risk of collision is identified in relation to: the Broadmeadow River temporary bridge; construction of the viaduct over the Broadmeadow River and Ward River; construction activity between lock 5 and 6 on the Royal Canal; and track installation along the above-ground sections of the alignment. The assessment states that some degree of mortality may arise, but that there would not be deaths of a large number of birds or long-term bird population-level effects.
- 11.8.66. ***Amphibians***
- 11.8.67. A permanent loss of suitable amphibian habitat is identified, in the form of c. 3.2km in length of drainage ditches and c. 0.95ha of wet grassland fields that contain temporary pools with stagnant water, but the assessment predicts that this is unlikely to affect the ability of the local common frog (identified as breeding within the project boundary) or smooth newt populations to maintain themselves in the long-term as there is a low number of affected habitat features and an abundance of alternative habitat. A risk of disturbance/mortality during site clearance is also identified, particularly during the breeding season. Habitat degradation arising from surface water quality impacts is identified as having the potential to give rise to a **significant**

adverse impact on amphibians, in view of the potential for long-term effects of such an incident.

11.8.68. **Reptiles**

11.8.69. A permanent loss of c. 19.5ha of suitable common lizard habitat is identified, with reference to the loss of semi-natural grassland, scrub, hedgerows, earth banks and areas of spoil and bare ground/recolonising bare ground. The assessment states that there is an abundance of unaffected habitat in the wider area and predicts that habitat loss is unlikely to affect the long-term viability of the species. A risk of disturbance/mortality during site clearance is also identified, particularly during the hibernation period of October – mid-March) but this is not predicted to lead to any significant adverse impact at any geographic scale.

11.8.70. **Fish**

11.8.71. Fisheries habitat is identified as being lost, associated with temporary bridges across the Broadmeadow River, Ward River, Mayne River, Santry River and Royal Canal (each bridge anticipated to be in place for c. 4 weeks), together with provision of permanent outfalls at 8 No. locations (Broadmeadow River, Ward River, two unnamed watercourses, Sluice River and tributary, Mayne River and Santry River), permanent culverts (Sluice River and Forrest Little Stream), diversion of the Turnapin Stream (tributary of the Mayne River) and works to straighten the channel of the Santry River. In each case, no significant impacts are predicted.

11.8.72. Construction works within these watercourses is also identified as having the potential to result in direct mortality of fish species, due to interaction with construction vehicles and machinery, and to sever fisheries habitat. The Sluice River, Mayne River and Santry River are identified as heavily modified and polluted, with the result that construction is predicted as unlikely to affect conservation status of ecologically sensitive fish species, whilst for the Broadmeadow River and Ward River, works are of a limited scale and are not predicted to pose a significant risk of fish mortality such that it is likely to affect the conservation status of any of the fish species present. Works outside of but adjacent to the rivers and the imposition of a temporary barrier during construction works within the Broadmeadow River are predicted as having the potential to result in **significant adverse** local impacts, particularly for brown trout and European eel.

11.8.73. Disturbance, associated with human presence and noise and vibration, are predicted as likely to result in temporary displacement of fish species but the impact is not predicted to be significant adverse or affect the conservation status of local fish populations.

11.8.74. Habitat degradation arising from surface water quality and groundwater quality are also identified as having the potential to have **significant adverse** impacts on aquatic habitats and fish species.

11.8.75. Operational Phase

11.8.76. The operational phase assessment again addresses potential impacts on biodiversity under the grouped headings of: designated areas for nature conservation; habitats; rare and protected plant species; mammals; invertebrates; birds; amphibians; reptiles; and fish.

11.8.77. ***Designated Areas for Nature Conservation***

11.8.78. For designated areas for nature conservation, the assessment identifies that surface waters containing pollutants and/or contaminants from the site may result in habitat degradation within specified European sites, such that conservation objectives of each European site would be undermined. Similar potential impacts are identified for a number of specified pNHA sites.

11.8.79. In the case of the Royal Canal pNHA and Grand Canal pNHA the assessment additionally identifies impacts on rare and protected plant species, habitat degradation arising from the introduction/spread of non-native species and disturbance/displacement of qualifying species.

11.8.80. The development itself is not predicted to give rise to air quality impacts at designated sites, but the assessment addresses air quality impacts arising from altered travel patterns/volumes and predicts that the development does not give rise to potential impacts on sensitive receivers (identified exceedances are stated to relate to existing traffic volumes at these location).

11.8.81. ***Habitats***

11.8.82. Habitat degradation is addressed from a number of potential sources: surface and ground water quality; shading; non-native invasive plant species; air quality and hydrological regime. The assessment predicts that there is a limited risk of habitat

degradation arising from surface water and groundwater quality impacts, in view of the electric nature of the MetroLink system and the minimal bulk chemical storage required, but it identifies that an accidental pollution event of sufficient magnitude has the potential to have a **significant adverse** impact on water quality of downstream waterbodies. Routine maintenance works are stated to have the potential to inadvertently spread invasive species, resulting in a **significant adverse** impact at sensitive/important habitat areas. No significant adverse impacts are predicted in relation to shading, hydrological regime or air quality.

11.8.83. ***Rare and Protected Plant Species***

11.8.84. No predicted impacts are identified for rare and protected plant species.

11.8.85. ***Mammals***

11.8.86. Impacts on mammals are again assessed on a case-by-case basis, in relation to otter, bats, badger and other mammals.

11.8.87. Otter: The two culverts of the Sluice River and Forrest Little Stream have the potential to create a barrier to otter movement, particularly in periods of rapid flow/flooding, and the impact could be **significant adverse** if otter are confined to a territory significantly below the typical territorial range. Night-time activities associated with operations at Dardistown Depot, proximate stations and rail maintenance activities are stated to have the potential to disturb otter, but no significant impacts are predicted. Habitat degradation as a result of reduced water quality is unlikely but has the potential to result in a **significant adverse** impact. The risk of mortality/injury is considered to be low due to the type of watercourse crossing proposed and where the potential for interaction with otter is negligible.

11.8.88. Bats: Man-made structures (buildings, trains, OCR system) are identified as potential collision risks for bats but the risk is predicted to be low. The project is not predicted to impede the movement of bats but disturbance associated with night-time activities (i.e. lightspill) is identified as having the potential to have a **significant adverse** impact on roosting, foraging and/or commuting behaviours. Sensitive bat areas are identified at the following locations: (1) Lands at the proposed P&R Facility and Estuary Station; (2) Broadmeadow River and Ward River corridors and planted woodland within Balheary Park; (3) Sluice River corridor; (4) Mayne River corridor and field boundaries at Dardistown; (5) Santry River corridor and Santry Demesne;

(6) Albert College Park; (7) Griffith Park and Tolka River corridor; (8) Royal canal and adjacent lands; (9) Stephen's Green Park; (10) Dartmouth Square; and (11) Grand Canal.

11.8.89. Badger: The risk of habitat severance or barrier effect is predicted to be negligible, as is the risk of mortality or injury, in view of proposed design elements and existing movement constraints in the vicinity of the route. Lightspill is identified as potentially impacting on breeding and foraging areas, but the assessment outlines that there are no setts or areas of high activity within or in the vicinity of areas where external lighting will be provided and, therefore, predicts that the development is unlikely to disturb or displace badgers.

11.8.90. Other mammals: The assessment does not identify the potential for significant adverse impacts associated with habitat severance / barrier effect, disturbance / displacement or risk of mortality for other mammal species. Habitat degradation arising from surface water or groundwater quality impacts are identified as having the potential to give rise to a **significant adverse** impact, but the risk is considered to be low.

11.8.91. ***Invertebrates***

11.8.92. No predicted impacts arise for invertebrates or freshwater molluscs.

11.8.93. ***Birds***

11.8.94. A risk of mortality and disturbance / displacement during operation is acknowledged by the assessment, but this is not predicted to affect the conservation status of breeding bird species and is not predicted to give rise to a significant adverse impact. Positive impacts are identified for breeding birds, arising from the creation of new habitats along above-ground sections of the route and with reference to the proposed wetland feature north of the Broadmeadow River. Similar to other species discussed above, habitat degradation arising from surface water or groundwater quality impacts is identified as having the potential to give rise to a **significant adverse** impact, albeit the risk of such an event is considered low. Breeding bird surveys recorded the presence of coot, cormorant, mallard, tufted duck, mute swan, herring gull and lesser black-backed gull, grey wagtail and Kingfisher, each of which is identified as vulnerable to such impact.

11.8.95. Regarding wintering birds, the assessment overlaps with the NIS assessment of birds listed as SCI of European sites for their wintering populations and identifies that there is no possibility of significant effects on any wintering population during operation. Noise, human activity and visual disturbance are each identified as having the potential to disturb/displace wintering bird species in proximity to the route but significant impacts are not predicted, in view of high baseline noise levels. A risk of collision with buildings and structures is identified, but no potential significant adverse impacts are predicted as, the assessment states, bird species are accustomed to traversing the urban landscape and navigating potential obstacles. Habitat degradation arising from surface water or groundwater quality impacts is identified as having the potential to give rise to a **significant adverse** impact, albeit the risk of such an event is considered low.

11.8.96. ***Amphibians and Reptiles***

11.8.97. For amphibians and reptiles, the assessment does not predict potential significant adverse impacts associated with risk of mortality or habitat severance / barrier effect. For amphibians, habitat degradation arising from surface water or groundwater quality impacts is identified as having the potential to give rise to a **significant adverse** impact but the risk of such an event is considered to be low.

11.8.98. ***Fish***

11.8.99. Habitat degradation as a result of reduced surface water and/or groundwater quality is identified as having the potential to have a **significant adverse** impact on fish species, but the but the risk is considered to be low.

11.8.100. **Mitigation Measures**

11.8.101. Proposed mitigation measures are contained in Section 15.5, with proposals outlined separately for the construction and operational phases. The proposals include cross-references to mitigation measures contained in other chapters and can be summarised as follows:

11.8.102. **Construction phase**

- An ecological clerk of works during construction to monitor and ensure implementation of mitigation measures.

- A site-specific CEMP and outline Invasive Species Management Plan are included with the application and contractors will be required to comply with their provisions.
- Adherence to good housekeeping practices and compliance with best practice.
- A Water Management Plan will be produced, which will outline strategies for sourcing and minimising water use and the means of treatment/disposal of wastewater.
- A Sediment Erosion and Pollution Control Plan will be implemented, including measures to manage soil and silt-laden water on site, accidental leaks/spills to ground and water quality monitoring.
- Staff will receive spill training and spill kits will be provided.
- Attenuation tanks will be used as part of dewatering of construction sites, together with specified additional treatment. Method statement to be prepared for all construction water discharges, with a stated preference to discharge all waters to sewer.
- Concrete usage in proximity to identified watercourses will be managed, including provision of designated wash-out areas. A continuous pH monitor and water sampling for water discharged from construction sites will be incorporated.
- Boundary treatments such as silt fencing and berms will be used. Any sedimentation system implemented will allow for settlement of suspended solids and will be subject to daily inspection and monitoring as required.
- Stockpile areas will be appropriately located and constructed, including segregation and treatment of potentially contaminated material. Excavated material will be reused where possible.
- Refuelling to take place in designated areas, hazardous materials to be handled, stored and disposed of appropriately.
- Agreed haul routes to be used and road surface impacts will be remediated.

- Flood Management: Flood zone A/B designations will be avoided when selecting locations for site compounds and watercourses within compound areas to be fenced off at min. distance of 5m unless there is direct construction within the watercourse. Contractors will be responsible for ensuring that flood risk is managed safely throughout the Construction Phase and that all designs comply with the flood risk assessed in the EIAR and include provision of a safe refuge for flood events. Additional detailed mitigation measures are specified.
- Cofferdams and sheet piling are required at the piers situated adjacent the Broadmeadow and Ward Rivers and anywhere where construction activities are to occur on or near flood zones.
- Additional measures will be utilised for the route section in the area of the Broadmeadow and Ward Rivers and their flood plains, including sheet piles, raised capping beam for retained cuttings, permanent flood mitigation measures, inflatable barriers to protect haul roads, plant and materials not to be left on flood plain, protection of shafts and box structures.
- Fire contaminated water will be tankered to approved disposal facility.
- Groundwater inflow to tunnel sections:
 - The TBM will be advanced in a pressurised earth pressure balance (EPB) mode, to maintain ground stability and avoid/limit groundwater inflow.
 - Grouting of the tunnel eyes will take place before / after passage of the TBM.
 - A minimum crown pillar of 5m of rock will be maintained where possible within tunnel excavation (i.e. coverage above the top of the tunnel ring) to reduce the incidence of groundwater inflow.
 - Measures to improve tunnel stability may also be employed.
- Measures to mitigate settlement within tunnel excavations including jet grouting, compaction grouting, pile and micropile walls, soil grouting and compensation grouting will be employed, together with ground loss measures.

- Cut sections and deep stations will be excavated within a water-resistant box, using secant piles or diaphragm walls. Vertical bored holes will also be utilised, to monitor the piezometric level outside the excavation footprint and to maintain and stabilise the phreatic level by injecting pressurised water, where deemed feasible. Additional measures are also proposed, to control groundwater inflow.
- Further groundwater level monitoring will be undertaken, to assist in determination of and monitoring of groundwaters levels and to assist in mitigation. Dewatering will be required and a Zol has been determined by modelling.
- In areas of pressurised groundwater, a pressurised front will be maintained at the TBM front.
- Groundwater well locations intercepted by the development will be recorded by a hydrogeologist and will be tested and replaced. Operational wells within 150m of the site boundary or 50m of the Zol and abstraction wells within 150m of the site boundary will be monitored for 12 months before and after construction and any impact will be mitigated.
- Other general risks related to tunnelling along the route will be duly addressed in the outline CEMP procedures and emergency and contingency plans for the proposed Project.
- Dust emissions controls will be implemented, including a demolition dust management plan and blasting dust management plan.
- Areas of valuable habitat type within the site boundary but which are not required for construction will be retained and fenced off for the duration of construction.
- Terrestrial and riparian habitats that are not directly impacted by the development will be retained and will be fenced off at an appropriate distance. If fencing is not feasible for trees/hedgerow, protection will be afforded by wrapping hessian sacking around the tree.
- A pre-construction survey of all suitable habitat is required within 12 months of construction commencement and new holts/couches will be treated and/or

protected in accordance with the Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes (NRA, 2008c).

- Temporary mammal-proof fencing will be installed in the dewatered area between locks 5 and 6 of the Royal Canal, with the location supervised and monitored by an ecologist.
- Suitable bat roosting space within 2 No. identified buildings to be demolished (BS06 and BS16) should be examined and surveyed, with appropriate mitigation implemented as necessary to ensure there are no impacts on bats. Other building demolition to take place outside hibernation period, or to be checked by an ecologist prior to demolition works.
- A lighting management plan will be prepared for each location, prepared in accordance with best practice.
- Felling of trees with roosting potential will be felled during September – October and will be supported by pre-felling dusk emergence/dawn re-entry survey. Pruning of suitable trees will be supported by pre-works survey under licence.
- 30 No. bat boxes will be erected in retained trees.
- A pre-construction survey of badger setts will be undertaken within 12 months of commencement of construction. A non-interference zone of 20m will be established around badger setts within the Zol and if the sett is active, the boundary will be extended to 50m during the breeding season.
- No heavy machinery to be used within 30m of a badger sett and no light machinery within 20m of a sett entrance (exception to this is grid connection works north of the R139, which pass within c. 24m of a sett and which will be supervised by an ecologist). No blasting or piling will take place within 150m of an active sett during the breeding season.
- Hedgerows, treelines, parkland, woodland, scrub and grassland will not be removed in nesting season, 1st March – 31st August. If this is not possible, areas will be inspected by an ecologist and areas found not to contain nests will be cleared within three days of the nest survey, otherwise repeat surveys will be required.

- Works to clear suitable amphibian habitat in the period February – mid-Summer (frogspawn, tadpoles presence) or mid-March – September (breeding newts) will be supported by a pre-construction survey. Frogs or newts present will be captured and translocated to suitable habitat beyond the Zol. If necessary, a habitat feature will be drained under supervision in order to confirm there are no amphibians present.
- For common lizard, grass/scrub vegetation will be removed in winter but, if not possible, vegetation will first be cut to c. 15cm and then to the ground under the supervision of an ecologist. Potential hibernacula sites will be removed during the active season under supervision.
- Open water sections within the site boundary but not affected by the development will be fenced off at a minimum distance of 5m from the riverbank, to protect from site clearance and construction works.
- In-stream works will be carried out between October – June inclusive.
- Electro-fishing will be utilised if required, together with manual searching, to capture/transfer fish prior to rivers/streams being diverted as part of the development.
- Temporary watercourse crossing structures will be appropriately designed to maintain fish passage and to prevent sedimentation/erosion.

11.8.103. Operational Phase

- Reference is made to mitigation measures contained within the NIS, which are designed to address potential significant effects on European sites.
- Chemical storage at the Dardistown Depot will be within an impermeable compound.
- Oil and petrol interceptors are included at outfall locations at the Dardistown Depot, the Park & Ride area, maintenance areas, track drainage and along surface water routes.
- Wastewater from the tunnel and foul water will be discharged to the public system, under licence.

- Firewater will be contained within an attenuation pond/tank, for discharge in agreement with the EPA, Irish Water and other relevant stakeholders.
- Ongoing inspection and maintenance will occur at designed swales / wetlands / infiltration basins.
- Mitigation measures within the outline invasive species management plan will be implemented, including ongoing monitoring.
- Culverts of the Sluice River and Forrest Little Stream include a raised mammal ledge for otter, to allow individuals access upstream and downstream sections of the crossing point.
- An operational lighting design will be prepared for bat sensitive locations, which will ensure that lux levels in such locations are not increased above baseline conditions. The following sensitive locations are identified: Lands at the proposed P&R Facility and Estuary Station (i.e. along hedgerows/treelines); Broadmeadow River and Ward River corridors and planted woodland within Balheary Park; Sluice River corridor; Mayne River corridor and field boundaries at Dardistown; Santry River corridor and Santry Demesne; Albert College Park; Griffith Park and Tolka River corridor; Royal Canal and adjacent lands; St. Stephen's Green Park; Dartmouth Square; Grand Canal; Fingallians GAA pitch at Balheary; Starlights GAA pitch at Dardistown; and Na Fianna GAA pitches on St Mobhi Road.
- 250 No. bird boxes will be erected in suitable locations away from above-ground sections of the development.

11.8.104. **Residual Impacts**

11.8.105. The assessment predicts that for the majority of factors, subject to implementation of proposed mitigation measures, the development will not result in any likely significant residual effect.

11.8.106. Regarding yellowhammer, the assessment predicts that the development gives rise to a permanent loss of territory, resulting in a **significant adverse** impact.

11.8.107. The assessment identifies that the development will result in permanent loss of the following habitats valued as being of Local Importance (Higher Value), resulting in a **significant adverse** residual impact at a local geographic scale:

- Depositing/lowland rivers (FW2) – c. 1,186m².
- Drainage ditches (FW4) – c. 3.22km.
- Species-rich dry calcareous and neutral grassland (GS1) – c. 3.2ha.
- Wet grassland (GS4) – c. 0.95ha.
- (Mixed) broadleaved woodland (WD1) – c. 4.4ha.
- (Mixed) conifer woodland (WD3) – c. 0.43ha.
- Scattered trees and parkland (WD5) – c. 0.95ha.
- Hedgerows (WL1) – c. 385m.
- Treelines (WL2) – c. 77m.
- Immature woodland (WS2) – c. 1.19ha.

11.8.108. **Cumulative Impacts**

11.8.109. Potential cumulative biodiversity impacts are addressed in Section 30.4.7 of the EIAR. It states that of the 176 other developments reviewed, the majority were 'screened in' for potential cumulative impacts with the proposed development prior to implementation of proposed mitigation measures. According to the assessment, the majority of these other developments have the potential to contribute to habitat degradation/loss at downstream habitats, arising from accidental pollution events during both the construction and operational phases. Other projects were identified as having the potential to give rise to significant cumulative disturbance, cumulative impacts on fauna species and habitat severance / barrier effect impacts during both the construction and operational phases and direct habitat loss impacts during construction.

11.8.110. **Oral Hearing**

11.8.111. **Errata**

11.8.112. The Final Schedule of Errata (Ref. OH374) submitted to the oral hearing on 27th March 2024 identified a number of errors in the EIAR Biodiversity assessment, in relation to the number of trees to felled or retained as part of the development.

11.8.113. **Updates**

- 11.8.114. An EIAR Biodiversity Update Report and Drawings (Ref. OH198) were provided to the oral hearing on 7th March 2024, together with an Appropriate Assessment Update Report (Ref. OH202).
- 11.8.115. An updated Cumulative Impacts Addendum Report (Ref. OH98) was submitted to the oral hearing on 28th February 2024. The Addendum comprises an updated review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application. It identifies potential significant residual cumulative Biodiversity impacts with: residential developments at Clonsilla (ABP-314125-22⁴¹), Malahide (ABP-318393-23), Santry (ABP- 313179-22) and Swords (Refs. ABP-318046-23 and F23A/0369); an EirGrid electrical infrastructure development at Ringsend (4057/23); warehouse developments at Swords (Refs. FW22A/0079 and FW23A/0067); the Iarnród Éireann Dart+ West project (ABP-316119-23); Dredging of Howth Harbour (ABP-314487-22); Belfield/Blackrock to City Centre (ABP-314487-22), Blanchardstown to City Centre (ABP-313892-22), Ringsend to City Centre (ABP-317679-23), Tallaght/Clondalkin to City Centre (ABP-316828-23) and Templeogue/Rathfarnham to City Centre (ABP-316272-23) BusConnects infrastructure projects.
- 11.8.116. On 25th March 2024 the applicant provided a 'Note on Plan Level Biodiversity Policy Compliance' (Ref. OH319) and a 'Charlemont Drop-Off Biodiversity Update Report' (Ref. OH324). The Plan Level note provides additional discussion on policies and objectives within both Development Plans that the project is not fully consistent with and the Drop-Off report assesses predicated impacts arising from construction of the drop-off facility at the Grand Canal.
- 11.8.117. The Board will also note that a number of design amendments were submitted at various stages of the oral hearing. These amendments are outlined elsewhere in this report and are discussed as relevant in my assessment below.
- 11.8.118. **Post-Oral Hearing**
- 11.8.119. Following closure of the oral hearing, on 31st January 2025 the applicant submitted a PFAS Management Strategy for Dublin Airport, which addresses the potential for encountering Per- & Poly-fluoroalkylated Substances (PFAS) during

⁴¹ The Board's decision to grant permission was quashed on 2nd August 2024 and the application was remitted to the Board under ABP-320560-24.

tunnelling and excavation works at the Airport. This submission followed the raising of the issue at the oral hearing and a request by the Board to respond to identified concerns.

11.8.120. A further document 'Update to the Cumulative Impact Assessment' was also submitted on 31st January 2025, as part of the applicant's response. In relation to Biodiversity, it identifies that a number of other projects have the potential to give rise to cumulative impacts when considered alongside the proposed development, however; following the implementation of mitigation already contained within the EIAR, in the vast majority of instances no significant adverse impacts are identified. An exception to this is the proposed North Irish Sea Array offshore wind farm (ABP-319866-24), where potential residual significant cumulative adverse impacts are identified.

11.8.121. **Assessment**

11.8.122. I consider the potential significant impacts in terms of Biodiversity are:

- Impacts arising from reduced surface water or groundwater quality.
- Impacts on habitats.
- Impacts on mammals.
- Impacts on birds, amphibians, reptiles, fish and invertebrates.

11.8.123. **Impacts Arising from Reduced Surface Water or Groundwater Quality**

11.8.124. The EIAR identifies that the route alignment crosses 11 No. watercourses, each of which drains into Dublin Bay and which provide hydrological connections to both European sites (SAC/SPA) and Natural Heritage Area (NHA) / proposed Natural Heritage Area (pNHA) sites. The proposed development interacts with these watercourses in a number of ways, including diversion, culverting, dewatering and in-water works. A number of construction sites are also in close proximity to these watercourses.

11.8.125. As the EIAR outlines, a contamination or pollution event during either the construction or operational phases has the potential to have a significant negative impact on water quality with receiving waters, affecting aquatic and wetland habitats in the receiving environment and also affecting fauna species that utilise these

habitats for foraging and commuting. I agree with the EIAR that reduced water quality has the potential to have significant adverse impacts on designated sites, aquatic and terrestrial habitats and flora and fauna, dependent on the scale of the contamination/pollution event.

11.8.126. In terms of controlled surface water discharges during construction, the applicant states that no direct discharge to a watercourse will take place during construction and further commits at Table 15.23 that “Under no circumstances will treated water be discharged to a watercourse without the respective water quality meeting the statutory limits as set under the relevant EU Environmental Objectives for surface water”. This will be achieved primarily through attenuation and treatment of surface waters prior to discharge, together with ongoing monitoring of water quality within receiving waters, and other measures including the use of silt fencing and berms. Site management procedures will also be implemented and the Outline CEMP provided to the oral hearing on 26th March 2024 (Ref. OH348) outlines a number of measures that will control and manage the storage and use of contaminants and pollutants on construction sites.

11.8.127. The Inland Fisheries Ireland (IFI) document ‘Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters’ (2016) provides detailed guidance on measures to be incorporated in order to protect receiving waters during construction. Of note, it outlines that direct discharge to waters should not be made where there is potential for cement or residues in discharges and that temporary interceptor facilities should be installed where site works involve discharge to rivers and streams. Further, in relation to silt traps/fences, it advises that a buffer zone should remain between the silt trap and receiving watercourse, with a specified level of 25mg/l suspended solid content not to be exceeded.

11.8.128. I consider the proposed mitigation strategy is consistent with these Guidelines and is likely to be effective in ensuring that significant adverse impacts on receiving surface water quality do not arise during construction.

11.8.129. There is also the potential for uncontrolled surface water discharges, associated with the following elements of the construction phase:

- In-water works at the Broadmeadow River as part of construction of the Broadmeadow River and Ward River viaduct.

- Diversion works at Dardistown and Northwood.
- Culverting works at Estuary and the Sluice River and Forrest Little Stream crossings.
- Dewatering of the Royal Canal.

11.8.130. Each of these elements of the project is discussed in detail in the Appropriate Assessment section of my report and are thus discussed in summary here.

11.8.131. For the Broadmeadow River works, the required in-water works are of a minor nature, limited to a construction operative working from the river to assist with removal of a pipe and supporting structure and with no machinery operating in-water. Mitigation is proposed, in the form an in-water installation that will prevent disturbed material from being dispersed downstream. In view of the minor nature of the works, I consider there is a low risk of a pollution event and that the applicant's approach is adequate to mitigate the risk of a significant pollution event.

11.8.132. Required diversion works consist of diversion of the Turnapin Stream, in order to facilitate construction of the Dardistown depot; and realignment of an existing channel of the Santry River at Northwood, to straighten the channel and to provide scour protection. Appendix A5.10 of the EIAR provides methodologies for the construction of culverts and diversions, including details of construction sequencing. Having considered these methodologies, I consider they provide appropriate construction methods for the proposed works.

11.8.133. There are a number of drainage ditches at Estuary and Section 2.3.1 of Appendix A5.10 states that they will be either replaced by artificial drainage or diverted around the operational site. The section discusses both diversion and culverting works and it outlines that either a temporary diversion or a temporary dam will be implemented, to allow for works to be undertaken, and that a method statement for such works will be agreed with the OPW.

11.8.134. Both the Sluice River and Forrest Little Stream are crossed at Nevinstown, Swords and both are proposed to be culverted under the rail line and require the provision of a temporary diversion. Both culverts are stated to maintain a similar width to the natural flow channel, an invert level below the natural stream bed and internal mammal ledges in order to allow for mammal passage.

- 11.8.135. Dewatering of the Royal Canal is required on two separate occasions, as part of the construction of Glasnevin Station. The applicant has agreed with Waterways Ireland that L-shaped concrete panels will be installed and backfilled within the canal bed once drained and with a protective layer applied to the canal base prior to any works.
- 11.8.136. The drop-off cantilevered parking bay at the Grand Canal is a 3.6m wide precast structure that is stated to overhang the navigable area of the canal by between 0.3m and 1m. Its construction does not require in-water works and it affects an area of the canal bank described by the applicant as grassy verge / embankment and vegetation of varying width. The further submission by Brendan Heneghan (1FS7) raises concerns regarding the impact of this structure on wildlife. Whilst I accept that there will be some impact, I do not consider the impact would be significant in view of the small-scale nature of the structure and the avoidance of in-stream works.
- 11.8.137. Extensive mitigation is proposed, including important measures such as: ongoing water quality monitoring and sampling; usage of coffer dams and sheet piling in specified locations; incorporation of silt fencing / berms and the appointment of an Ecological Clerk of Works to oversee construction. The proposed approach is consistent with advice contained within IFI's 'Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters' (2016) and is sufficient to ensure that likely significant adverse impacts do not arise.
- 11.8.138. Taking a precautionary approach, I have recommended in the Appropriate Assessment section that a condition should be attached, requiring the applicant to submit additional drawings and method statements that outline compliance with these Guidelines to the planning authorities for agreement.
- 11.8.139. The potential mobilisation of groundborne PFAS at Dublin Airport and transfer to receiving waterbodies was raised at the oral hearing by Sabrina Joyce-Kemper and Wild Ireland Defence CLG (Ref. OH369), in response to which the applicant has submitted a PFAS Management Strategy for Dublin Airport. The submission describes PFAS as a large group of man-made chemicals, that have potential ecological effects and that are highly resistant to degradation. It also acknowledges that the full extent of contamination is unknown and that excavation works and

tunnelling may give rise to mobilisation of PFAS that is contained within the soil, bedrock and/or groundwater.

11.8.140. As outlined elsewhere in this report, in view of the current uncertainty regarding the full extent of contamination at the Airport, a worst case assumption has been applied whereby 100% of excavated material (both soils and water) is assumed to be contaminated and require management. Excavated material will be tested in-situ and ex-situ, at a purpose-built bunded storage facility at Dardistown, to determine whether it requires treatment/disposal or is uncontaminated. Material that is found to be contaminated will be stored at Dardistown for subsequent transport to Dublin Port in order to be exported for treatment or final disposal, and the applicant commits that the facility will be constructed and operated to ensure the absence of pathways that would allow soils or runoff to enter the receiving environment.

11.8.141. Regarding water management, there is a likelihood of water ingress at excavation sites and this gives rise to a risk of water-bound PFAS mobilisation. Chapter 19 of the EIAR contains predicted discharge rates from station excavations and associated works sites and in the case of the Airport construction sites, low levels of water ingress are predicted. The Chapter 19 assessment further predicts that the station site will have a drawdown zone of influence radius of some 83m, although I note that the station site is over 1km from both the Cuckoo Stream and the Mayne River and is thus not likely to affect the natural process of groundwater recharge of these waterbodies. As I have outlined in the Appropriate Assessment section of my report, the rate of groundwater ingress is merely a prediction at this stage and I accept, based on advice from Tyréns, that the exact rate of ingress can only be confirmed when the station box perimeter is in place and necessary water tightening measures have been implemented. To protect against the risk of groundwater drawdown and associated PFAS mobilisation, I have recommended elsewhere that a condition be attached requiring that there shall be no dewatering above the abovementioned levels at any of the Dublin Airport construction sites. This will allow the applicant to implement site-specific water tightening measures, based on further ground investigations and testing, and at the same protect against unintended mobilisation of groundborne PFAS contaminants.

- 11.8.142. Subject to implementation of this suggested condition, I am satisfied that the applicant's approach to dealing with potential PFAS contamination will be effective in ensuring there is no significant adverse impact on biodiversity.
- 11.8.143. For the operational phase, whilst it is not identified or addressed within the EIAR assessment, I note that utility diversion drawing No. ML1-JAI-URD-ROUT_XX-DR-Y-01011 provided as part of the original application drawings identifies an emergency overflow, from the proposed Seatown pumping station to the Ward River. This gives rise to the potential for a significant adverse impact on receiving water quality, in the event of an emergency event. However, the document 'Utilities and Infrastructure Amendments Swords Pumping Station' (Ref. OH344), provided to the oral hearing on 26th March 2024, states that an alternative design solution has been developed that avoids discharge to the river and returns overflows to the Swords WWTP. This revised arrangement is shown on drawing No.ML1-JAI-URD-ROUT_XX-DR-Y-01011 submitted to the oral hearing on 25th March 2024 (Ref. OH323). This revised arrangement removes the potential for a significant adverse impact on receiving water quality in the event of an emergency event.
- 11.8.144. Regarding groundwater, the EIAR assessment states that this may be encountered during a number of the required excavation works, in particular station excavations and tunnelling activities, and that in such an event there is potential for impacts on the groundwater level, flow patterns and overall groundwater quality. The EIAR identifies a potential significant adverse groundwater impact at the Tara Station construction site, whereby dewatering during construction may potentially affect baseflow conditions of the River Liffey, in particular the Annex 1 habitat 'Estuaries'.
- 11.8.145. The mitigation strategy identifies that in order to avoid affecting the phreatic watertable it will be necessary to excavate underground stations within a water-resistant closed box. The issue of the excavation/construction of this closed box was discussed at the oral hearing and the applicant provided a document 'Metrolink Permeabilities Targeted with Grout Bottom Plug to Avoid Upwelling in Station Boxes' (Ref. OH92) on 27th February 2024 that discusses the engineering approach. It states that "station boxes are designed to ensure drawdown of the water-table will not take place outside of the station box. Modelling...has confirmed that grouting procedure and permeability will ensure there is no measurable impact on the surrounding water table and as such no settlement in surrounding soils". They further

commit in the document 'Supplemental Note: Dewatering Assessment in Station Boxes and SCL Tunnels (Version 2)' (Ref. OH189) that "lowering of the water table will not take place outside the station boxes".

11.8.146. The Tyréns report contains a detailed analysis and discussion of groundwater dewatering during construction and identifies what they consider is contradiction and uncertainty in the application documents. In view of these issues and given TII's commitment not to lower the water table, Tyréns recommend that the Board attach a condition, if it decides to grant the Railway Order, requiring that no groundwater lowering shall occur outside the station boxes beyond normal seasonal variation. Subject to implementation of this condition, I am satisfied that there will be no significant impact on baseflow conditions of the River Liffey.

11.8.147. For the operational phase, I agree with the EIAR that there are limited opportunities for interaction between the development and surface water or groundwater receptors and the potential for impacts on water quality is low. The development incorporates separate drainage systems for uncontaminated and contaminated waters, whereby uncontaminated surface water will be collected and treated prior to discharge to either a receiving waterbody or to the public network, and contaminated waters (from a fire or accident) will be contained within the system and will be either discharged to a sewer or pumped to a tanker for appropriate disposal. Whether the applicant discharges treated surface water to open water or the public network, a discharge licence is required. The licensing process will impose controls over the manner of surface water treatment prior to discharge, in order to protect the receiving environment, and I am satisfied that it provides for an adequate level of treatment of surface waters prior to discharge. I am therefore satisfied that there is unlikely to be any significant adverse impact arising from reduced surface water quality during operation.

11.8.148. Impacts on Habitats

11.8.149. The EIAR assessment outlines that a total of c. 140ha of habitats will be permanently lost as a result of clearance works, with around 10% of this comprising Local Importance (Higher Value) habitat. Table 15.17 of the EIAR identifies that the types of Local Importance (Higher Value) habitat affected by the development relate to open water, drainage ditches, grassland, woodland, hedgerows and treeline and

Figure 15.6 of the EIAR identifies the location of all habitat types encountered during habitat walkover and the extent of habitat loss.

11.8.150. The NRA document 'Guidelines for Assessment of Ecological Impacts of National Roads Schemes' (2009), as referenced by the EIAR, describes Local Importance (Higher Value) habitat as follows:

- Locally important populations of priority species or habitats or natural heritage features identified in the Local BAP, if this has been prepared.
- Resident or regularly occurring populations (assessed to be important at the Local level) of the following:
 - Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive;
 - Species of animal and plants listed in Annex II and/or IV of the Habitats Directive;
 - Species protected under the Wildlife Acts; and/or
 - Species listed on the relevant Red Data list.
- Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or populations of species that are uncommon in the locality.
- Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value.

11.8.151. The assessment states that the extent of Local Importance (Higher Value) habitat loss has the potential to affect the conservation status of each habitat type and, therefore, result in a significant negative effect at the local geographic scale. The assessment also identifies that significant impacts will have an effect on local biodiversity areas as identified within the Fingal and Dublin City Biodiversity Action Plans.

11.8.152. The Board will note that the 'Biodiversity Update Report' (Ref. OH198) includes an updated habitat assessment and it indicates that generally minor terrestrial habitat changes have taken place across the study area. Exceptions to this

are the stated extent of hedgerow and treeline loss, which have increased substantially due to a calculation error in the original assessment. The applicant states that there is no actual increase in habitat loss but, nevertheless, outlines that hedgerow loss is increased from c. 385m to c. 6.55km linear length and treeline loss is increased from c. 77m to c. 3.17km linear length. The Update Report includes an updated version of Table 15.17, which reflects the updated habitat loss extents.

11.8.153. The permanent loss of Local Importance (Higher Value) habitat is unfortunate, and I agree that the loss of such habitat, especially in an urban setting, has the potential to result in a significant adverse impact at a local level. However, I accept that in view of the scale and linear nature of the project and the types of landscape it traverses, site clearance and construction works will inevitably give rise to the loss of a variety of habitat types. Having considered Figure 15.6 I note that habitat loss primarily arises in area AZ1 and in all cases the Figure shows that the extent of habitat loss is closely contained to the route alignment and station box extent. I further note that the proposed mitigation includes measures that will be effective in ensuring that habitat loss is minimised and, also, that habitat areas that are to be retained will not be unintentionally disturbed or cleared during construction.

11.8.154. The loss of such habitat will not be rectified through implementation of standard mitigation measures, as is acknowledged by the applicant's identification of a significant residual adverse impact on habitats and in this context the applicant proposes compensatory measures, as outlined in Section 15.8 of the EIAR. Compensation comprises alternative new habitat provision, in the form of woodland, grassland, hedgerows, trees, river/riparian habitat and scattered trees and parkland and in each instance the EIAR outlines that the replacement quantum exceeds the existing quantum that will be lost. In view of this, the EIAR concludes that the development is not likely to have a significant residual impact on affected Local Importance (Higher Value) habitats, with the exception of drainage ditches (FW4), where there are no new/replacement ditches proposed as part of the development.

11.8.155. I do not consider the proposed compensation can be taken as a like-for-like replacement of the valuable and mature habitat types that will be lost. However, taking a balanced view, I consider the applicant's approach is reasonable and over time, the newly provided habitat types will mature and will increase in biodiversity value. I therefore consider the applicant's approach to compensation is acceptable.

11.8.156. I note from the assessment that whilst no National Importance habitat types will be permanently lost, the project is in proximity to the River Liffey at Tara Station, with the waterbody corresponding to the Nationally Important Annex 1 habitat type Estuaries (1130) at this location. The project is also identified as being in proximity to the Annex 1 habitat type tall-herb swamp (FS2) at Glasnevin and Charlemont Station, with Figure 15.6 identifying that this habitat type is present on both sides of the canals in these locations. The assessment states that severe habitat degradation may occur at these locations, in the absence of mitigation. I have previously outlined and discussed mitigation measures proposed to protect surface water and groundwater bodies from contamination or pollution and I am satisfied that these measures will be effective in ensuring significant adverse indirect impacts on these proximate habitat types do not arise.

11.8.157. Regarding the loss of Local Importance (Lower Value) habitat types, this represents the majority of the habitat type to be lost and Table 15.17 and Figure 15.6 also identify the location of such habitat types and the quantum of habitat type to be lost. It can be seen that the majority of affected habitat comprises arable crops, improved agricultural grassland and amenity grassland. I agree with the EIAR, that habitat loss may lead to fragmentation or isolation but, in view of the extent of such habitat in the wider landscape, there will be no significant adverse impact arising.

11.8.158. Unintentional spread of non-native invasive species, either during clearance works or routine maintenance during operation, is identified as having the potential to impact on both terrestrial and aquatic habitats and, in the case of spread to an ecologically sensitive site, it is identified as having the potential to have a significant adverse impact.

11.8.159. I have discussed this issue in detail in relation to designated European sites in the Appropriate Assessment section. In summary, 6 No. non-native invasive species were recorded within or in close proximity to the proposed development and there is an additional desktop record of Indian balsam on the River Tolka, within c. 2km of the development. An outline Invasive Species Management Plan (ISMP) is contained at Appendix A15.8 of the EIAR and the applicant commits to its implementation including a further pre-construction survey in order to provide an up-to-date picture of the precise location of such species across the alignment prior to the commencement of development. Having considered this outline ISMP, I am satisfied

that it contains measures that will be effective in ensuring that clearance works and/or routine maintenance do not give to the spread of introduction of non-native invasive species to sensitive downstream sites.

11.8.160. Regarding air quality impacts, the EIAR assessment identifies that dust will have the greatest potential impact on sensitive habitats. The assessment outlines that dust deposition can occur at a distance of c. 350m of a route used by construction vehicles and 500m from a site entrance and in the case of the proposed development it identifies the potential for dust deposition at the Royal and Grand Canals, both of which are adjacent to a construction site and both of which are designated pNHAs. Section 16.6.1.1 of the EIAR contains mitigation measures related to the control of dust from construction sites, which includes standard proposals regarding the stockpiling of materials and which also includes a commitment to prepare an Air Quality Management Plan that will provide for the monitoring of locations that include ecological receptors, alert levels and an alert system. I am satisfied that this approach will be effective in ensuring that the development does not give rise to any significant adverse air quality impact at either location.

11.8.161. Impacts on Mammals

11.8.162. The EIAR assessment identifies potential significant adverse impacts for otter, bats, badger and other mammals.

11.8.163. Regarding otter, I note from the assessment that there were no surveyed otter breeding or resting places with the project boundary. The EIAR identifies that otter have been recorded along the Broadmeadow River, Santry River and Royal Canal and, additionally, there are records of otter on the Broadmeadow River, Ward River, Cuckoo River, Mayne River, Santry River, Tolka River, Royal Canal, River Liffey and Grand Canal. The proposed development crosses each of these waterbodies and directly interacts with the Broadmeadow River, Ward River, Sluice River, Mayne River, Santry River and Royal Canal. In view of this, I concur that the development has the potential to give rise to significant adverse impacts arising from reduced water quality and the creation of a barrier to movements.

11.8.164. I have discussed impacts arising from reduced surface water or groundwater quality at length in preceding sections. Reduced water quality has the potential to

affect otter directly, through ingestion of pollutants/contaminants, and indirectly, by affecting the ecological functioning and availability of prey species within receiving waters. I agree with the EIAR, however, that the likelihood of such an event is low. Further, and as I have outlined above, I consider the proposed mitigation strategy, which is consistent with IFI's 'Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters' (2016), is likely to be effective in ensuring that significant adverse impacts on receiving surface water quality do not arise.

11.8.165. During construction, there is potential for the creation of a barrier to otter movement along the Royal Canal at Glasnevin, between locks 5 and 6. As has been outlined elsewhere in this report, the development requires dewatering of the Royal Canal on two separate occasions, with each dewatered period lasting c. 3 months. The EIAR assessment outlines that no signs of breeding otter were recorded during surveys but it acknowledges the presence of holts both upstream and downstream and acknowledges "an abundance of signs of otter along the Royal Canal" and accepts as "likely that breeding otter regularly utilise the extent of the Royal Canal as part of their territory, including the affected basin between Lock 6 and Lock 5".

11.8.166. Whilst the assessment expresses the view that it is very unlikely that otter would attempt to cross Cross Guns Bridge on Prospect Road in order to access the Canal, I note that the Department's submission (S63) on the application suggests that an otter may have been killed attempting such a crossing in 2021 and in this context, requests that the applicant should prepare and implement an otter by-pass plan.

11.8.167. The applicant responded directly to this request in the Biodiversity Update Report (Ref. OH198), Section 10 of which contains an Otter Mitigation Plan proposal that comprises the installation of otter fencing along the dried canal basin between the west end of Lock 5 and the western extent of the works, together with associated ledges that will allow access to the corridor. In its submission to the oral hearing on 7th March 2024, NPWS (representing the Department) confirmed their satisfaction with the proposed mitigation strategy, although I note that in its further submission on the application (1FS17), the Department requests that the downstream end of the otter fencing should be extended across the full width of the basin immediately above the upper gates of the 5th Lock, in order to funnel otter into the proposed

passage. In the response to this further submission, the applicant commits to updating the Plan, to ensure that safe access to the proposed otter pass through the full extent of the works area is provided. They also commit to ongoing monitoring and adjustments as required, to ensure that passage is maintained at all times. The applicant's approach is consistent with advice contained within 'Guidelines for the Treatment of Otters Prior to the Construction of National Roads Schemes' (NRA, 2008) and I am satisfied that it will be effective in ensuring that the dewatered phases do not give rise to any temporary barrier to otter commuting along the Royal Canal.

11.8.168. In view of the interaction of the project alignment with the abovementioned watercourses that have known otter records, there is also potential for elements of construction to give rise to disturbance impacts on otter. Section 15.4.2.4.1 of the EIAR outlines the night-time construction works that may give rise to disturbance, which are generally in proximity to these waterbodies and it identifies that disturbance may occur at the Broadmeadow River, Ward River, Mayne River, Tolka River and the Royal Canal. In view of the nocturnal nature of otter, taken together with the temporary duration of night-time works that are proposed at these locations, I concur with the EIAR assessment that the project will not give rise to any significant adverse disturbance impacts.

11.8.169. For the operational phase, the EIAR assessment identifies that the proposed culverts of the Sluice River and the Forrest Little Stream have the potential to create a barrier to otter movements and that this could have a significant effect if it resulted in otter being confined to a territory substantially below its typical range. Mitigation is proposed, in the form of raised mammal ledges, that will allow for ongoing passage through each culvert. I am satisfied that this proposal will be effective in ensuring these culverts do not present a barrier to otter movements upstream and downstream.

11.8.170. In its further submission on the application the Department (1FS17) also recommended that consideration should be given to installation of a mammal ledge as part of the proposed Santry River culvert and installation of a similar ledge in an existing culvert over the river.

- 11.8.171. In their response, the applicant submits that the requested ledge will not achieve more effective otter passage as the existing culvert which it adjoins under the R108 roadway does not have a mammal ledge and, further, that TII cannot install a ledge in the existing culvert as it does not own or operate it.
- 11.8.172. I accept TII's point that it has no powers to install a mammal ledge in the existing culvert, which it does not own, and that the absence of a ledge in this existing culvert would undermine any ledge incorporated within the proposed culvert. In this context, I consider it would not be appropriate for the Board to require that a mammal ledge be incorporated as part of the proposed Santry River culvert.
- 11.8.173. Regarding badger, I note from the EIAR assessment that there are no recorded badger setts within the project boundary. There is 1 No. sett located within the 50m Zol of general construction activities, north of the R139 at Belcamp, and with all other setts located more than 150m from the project boundary. Thus, having considered advice contained within the 'Guidelines for the Treatment of Badgers Prior to the Construction of National Roads Schemes' (NRA, 2006A), as referenced by the EIAR, I am satisfied that the development will not have any significant adverse impact on any known badger setts.
- 11.8.174. Having said this, I note that the Guidelines outline that badgers create new setts regularly and that existing setts may change in terms of breeding status or level of usage and, in this context, recommends that further pre-construction surveys should be undertaken within 150m of the project boundary in the period of 10-12 months before commencement of construction. This suggested approach is intended to verify that mitigation proposals remain adequate to address potential impacts on badgers and I note that as part of the proposed mitigation strategy, the applicant proposes such additional surveys within the Zol. I am satisfied that this approach will be effective in ensuring that active badger setts are not adversely affected by the development.
- 11.8.175. The Board will further note that badgers are a protected species under the Wildlife Acts, under which it is an offence to intentionally kill or injure or to wilfully interfere with or destroy a breeding or resting place. This provides an additional layer of security in relation to the protection of this species during construction.

- 11.8.176. To conclude, I do not consider the development will have a significant adverse impact on badgers.
- 11.8.177. Bats are similarly protected under the Wildlife Acts and the EIAR assessment identifies that there is an “onus of due diligence on anyone proposing to carry out works that might result in such damage or destruction”.
- 11.8.178. According to the EIAR, 1 No. bat roost was identified within the study area, at St. Anne’s, that is c. 20m east of the project boundary and 53m east of the route alignment. The roost is stated to have contained one soprano pipistrelle, it is considered likely to be a transitional/occasional bat roost, and is considered to be at risk from severance, disturbance of displacement during construction.
- 11.8.179. The assessment further identifies that 22 No. trees within the project boundary have the potential to support roosting bats, with 8 No. of these trees to be felled as part of the development. Figure 15.7 of the EIAR identifies the location of these trees and the required losses are predicted to have a significant adverse impact at a local scale. I note that the assessment identifies that the majority of bats recorded are common Irish species (common pipistrelle, soprano pipistrelle and Leisler’s bat) and that identification of common pipistrelle and soprano pipistrelle hibernacula is extremely rare and it therefore acknowledges that buildings/structures to be demolished as part of the development may be utilised by hibernating bats and that potential impacts on hibernating bats cannot be completely ruled out.
- 11.8.180. The Biodiversity Update Report (Ref. OH198) includes updated building emergence, activity and tree surveys. The report states that the St. Anne’s roost remains the only confirmed roost in close proximity to the route alignment and identifies 96 No. trees with the potential to support roosting bats, 44 No. of which are identified to be felled.
- 11.8.181. I am unclear on the reason why the updated assessment has increased the number of potentially suitable trees from 22 No. to 96 No. and it is not discussed in the Update Report. The location of these trees is shown on Figure 1 of the Update Report, where it can be seen that they are spread along the alignment and with particular concentrations in the vicinity of Estuary and St Stephen’s Green Stations.
- 11.8.182. The surveyed extent of tree roosts along the route alignment is clearly low, but I acknowledge the applicant’s comments regarding difficulties associated with

identifying the hibernacula of common pipistrelle and soprano pipistrelle. There is therefore a possibility of additional tree roosts being encountered during clearance works. Notwithstanding this, in view of the aforementioned legal protection, there is a high level of protection in place to protect bats and their resting places. The applicant acknowledges this legal protection and proposes a number of mitigation measures that I consider will be effective in ensuring the development does not result in unintentional fatalities or disturbance of bat resting places. These measures include: buildings/structures that are suitable for hibernacula will be felled outside of the November – March period where possible or will be subject to further check by an ecologist prior to demolition if this is not possible; tree felling will only take place in the period September – October; trees will be subject to additional survey prior to felling, utilising infra-red illumination, thermal imaging tools, bat detectors and cameras; affected sections will be further inspected prior to pruning works, including careful removal of roost features and bat removal under licence, as necessary. Additionally, bat boxes will be erected in retained trees that are in close proximity to felled trees.

11.8.183. The loss of woodland, hedgerows, treelines, areas of mature trees including parkland, scrub, open grassland, rivers and drainage ditches will have an adverse impact on bat foraging and commuting habitat. The EIAR assessment discusses a Core Sustenance Zone (CSZ) that relates to the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the “resilience and conservation status” of the colony and CSZ radial distances of between 1-3km are identified for the species recorded during surveys.

11.8.184. Regarding the single known roost within the Zol, at St. Anne’s, I agree with the EIAR assessment that the M50 motorway presents a strong barrier to northward travel from this roost. The development requires a substantial level of suitable habitat clearance in this area but, in view of the low level of usage of the roost, which has been observed over multiple survey years, I accept the applicant’s assertion that the roost is likely a transitional or occasional roost and that the development will not result in any significant adverse impact.

11.8.185. The assessment also identifies that there are 15 additional known bat roosts with CSZs that overlap with the project boundary and may be affected by suitable habitat loss. Of these, Table 15.19 of the EIAR identifies that the development will

affect less than 0.7% of the CSZ of 12 No. roosts, less than 1.5% of the CSZ of a further roost and less than 2.5% of the CSZ of 2 No. roosts. I agree with the EIAR, that these habitat losses represent a small proportion of the wider CSZ and there is other suitable habitat available. As such, I do not consider any potential significant adverse impacts arise.

11.8.186. Regarding loss of foraging and commuting habitat, the EIAR assessment states that there is evidence of bat activity in multiple locations across the study area and it further acknowledges that a large portion of the aboveground sections of the proposed Project which contain suitable habitat are likely to be within the CSZ of at least one bat roost. The development will initially involve a large amount of habitat clearance, followed by the establishment of a number of construction sites that will be maintained in place for a prolonged period, lasting multiple years. In this context the assessment identifies that the development may give rise to a barrier, manifesting itself as soon as the clearance phase commences.

11.8.187. Figure 15.7 of the EIAR contains bat survey results and includes bat detector results along the entirety of the alignment. It can be seen from these results that bat activity is most concentrated along the R132 corridor in alignment section AZ1, with other concentrations in the area of the Dardistown depot in section AZ3 and Northwood, Griffith Park and Glasnevin Stations in section AZ4. The Biodiversity Update Report (Ref. OH198) includes the results of updated bat surveys. It identifies reduced bat activity across the alignment, but I would highlight to the Board that the surveys are from a single survey season, May-July 2022, whereas the original EIAR surveys span multiple years, 2018-2021.

11.8.188. I agree with the EIAR assessment, having considered the results contained in both Figure 15.7 and the Biodiversity Update Report that the alignment will present a barrier to flight paths for a large proportion of the construction phase and that the impact will be most pronounced in the northern-most part of the alignment.

11.8.189. For the R132 corridor in particular, the development is likely to present a barrier to both north-south and east-west flight routes, in view of both the extent of clearance works involved and the presence and scale of construction sites that will include external lighting. However, I accept that such works are necessary as part of the development and I agree that the extent of habitat loss is very small, in the

context of available suitable habitat in the wider landscape. I note in this respect that the EIAR identifies this section of the route alignment as being within the CSZ of 4 No. bat roosts (Table 15.19 of the EIAR refers). I also agree with the EIAR assessment, that there is extensive commuting and foraging habitat in the wider landscape.

11.8.190. While it is not outlined as such, I would also draw attention to the landscaping proposals along the R132 corridor, which includes substantial tree planting as part of the creation of a linear park. Such planting, in time, is likely to recreate conditions that promote bat commuting and foraging.

11.8.191. At Dardistown and Northwood, the bat activity locations shown appear to relate to activity around the Mayne and Santry Rivers, whilst at Griffith Park and Glasnevin Stations the recorded activity is along the Tolka River and Royal Canal corridors, respectively. As with the above-discussed impact at the northern end of the alignment, clearance works and the presence of construction sites for prolonged periods will present a barrier to flight paths.

11.8.192. In the case of the Mayne River, construction of the Dardistown Depot will reshape the site and immediate surrounds and will involve clearance of habitat that is suitable for bat commuting and foraging, to be replaced by a 24/7 operations and maintenance facility. Diversion of the Turnapin Stream, a tributary of the Mayne, is also required. The proposed landscaping scheme (drawing No. ML1-JAI-ARL-SC06_GF-DR-Y-00113 refers) includes tree planting around the perimeter of the site, including a band along the north boundary that follows the route of the Turnapin Stream diversion. This is likely to have the effect of creating a new corridor that avoids the depot, also providing connections to other suitable habitat in the wider area. In my view it represents a reasonable approach to mitigating the impact of commuting and foraging habitat loss at Dardistown.

11.8.193. The updated arboricultural impact assessment drawings provided to the oral hearing on 21st March 2024 identifies the extent of clearance works at Northwood and it can be seen from drawing Nos. ML1-JAI-EIA-ROUT_XX-DR-Y31077, ML1-JAI-EIA-ROUT_XX-DR-Y31078 and ML1-JAI-EIA-ROUT_XX-DR-Y31079 that a substantial amount of clearance and a new road layout are required to facilitate the development. It should be noted that the single identified bat roost is not affected by

clearance but, notwithstanding, the extent of clearance is likely to affect commuting and foraging patterns in this area south of the M50.

11.8.194. Proposed landscaping in the area primarily comprises low-height shrub and grass planting, interspersed with small pockets of tree planting. It is unlikely to result in the creation of new commuting and foraging habitat and moreover, I consider the road and rail line layout is likely to act as a barrier to east – west movements. However, I accept that the proposed clearance is necessary as part of the development and I further note that the primary commuting corridor in the area, along the Santry River, is largely unaffected by proposed clearance works and will continue to provide suitable foraging habitat during the operational phase.

11.8.195. At Griffith Park Station, Figure 15.7 identifies that bat activity is heavily concentrated along the Tolka River. The updated arboricultural impact assessment drawings identify that a number of trees will be felled adjacent to the Tolka, with greater clearance required within the grounds of Whitehall College of Further Education. I do not consider the scale of clearance required will have a significant adverse impact on commuting and foraging bats. Further, the ongoing presence of the tree band along the Tolka River will provide protection against lightspill during construction, where the main construction site is set back from the river.

11.8.196. At Glasnevin, Figure 15.7 identifies a wider dispersal of bat activity and, whilst it is most heavily concentrated along the Royal Canal, activity is also identified to the north of the existing Iarnród Éireann rail lines. The updated arboricultural impact assessment identifies that the development requires removal of 20 No. trees, which are primarily located to the north of the Iarnród Éireann rail lines, including a tree that is identified as potentially suitable for roosting that lies within the station footprint.

11.8.197. Although not identified in the arboricultural impact assessment, the development also requires hedgerow clearance adjacent to the Royal Canal, between locks 5 and 6. Taken together with the aforementioned tree clearance and the requirement for dewatering of the Royal Canal for 2 No. three-month periods, I consider the development is likely to affect bat foraging and commuting patterns. However, I accept that such works are necessary as part of the development and I agree that the extent of habitat loss is very small, in the context of available suitable habitat in the wider landscape. I also note that in the Final Schedule of Additional

Environmental Commitments (Ref. OH376) TII commits to replacement of the hedgerow section “at a suitable location along the proposed new boundary wall”. The EIAR identifies this section of the Royal Canal as being within the CSZ of 4 No. bat roosts (Table 15.19 of the EIAR refers), each of which is located within the Phoenix Park. The affected area is at the outer end of the CSZ of these individuals and the Phoenix Park provides extensive commuting and foraging habitat.

11.8.198. Disturbance associated with lightspill from a number of sites, including both construction sites and the operational station sites and other project sites, may have a disturbing effect on commuting and foraging bats. The applicant commits to the preparation of site-specific lighting management plans for specified locations, both construction and operational sites and there is a commitment that lux levels at sensitive bat areas will not be increased above baseline levels as a result of the project. I am satisfied that subject to appropriate specification, this approach will be effective in ensuring significant disturbance impacts do not arise.

11.8.199. As has been discussed elsewhere in my report, noise is likely to be significant at construction sites, at different stages of construction. The EIAR assessment outlines that in view of their nocturnal nature, night-time working is likely to have a disturbing impact on bats, due to increased light levels, with potential for significant adverse impacts in specified sensitive locations such as Estuary, Dardistown, Albert College Park, Griffith Park, St. Stephen’s Green and river corridors that are crossed by the route alignment.

11.8.200. The assessment provides similar commentary in relation to the operational phase, identifying that lights associated night-time working at all station and depot sites and, additionally, operation of proposed floodlighting of playing pitches at Balheary, Dardistown and St. Mobhi Road may have a disturbing impact. The assessment identifies the potential for significant adverse impacts at Estuary, Albert College Park, Griffith Park, Glasnevin, St. Stephen’s Green, Dartmouth Square and river/canal corridors that are crossed by the route alignment.

11.8.201. In view of the primarily urban environment through which the route alignment passes, existing unlit areas are likely to be a valuable foraging and commuting resource for bats and I note in this respect that the EIAR assessment identifies the presence of bat species that are considered to be particularly sensitive to light. A

number of the identified sensitive areas will be subject to night-time working and, in this context, I note that the applicant commits to the preparation of bespoke lighting management plans for sensitive bat locations, under the supervision of a qualified bat ecologist. Subject to appropriate specification regarding the exact nature of external lighting systems at these sensitive sites, I am satisfied that the development will not give rise to lightspill from construction and operational sites of such a magnitude that would have a significant adverse impact on commuting and foraging bats.

11.8.202. Noise associated with night-time working may also affect bat species that are dependent on passive hearing in order to capture prey and, in this respect, construction compound locations such as Estuary and Northwood that will be operational 24/7 may have an impact on noise-sensitive species. Brown long-eared bat was recorded at Estuary during surveys and are sensitive to noise. However, in view of the fact that no roosts were recorded at Estuary during surveys, and particularly with reference to the availability of extensive areas of suitable habitat in the wider landscape, I do not consider the impact would be significant. Additionally, other night-time working activities such as track laying may also have an impact on affected species but such activities will be for short-term temporary periods and I do not consider the impact would be significant.

11.8.203. To conclude, I do not consider the development will have a significant adverse impact on bats.

11.8.204. Impacts on Birds, Amphibians, Reptiles, Fish and Invertebrates

11.8.205. Regarding birds, the EIAR assessment identifies potential significant impacts arising from loss of suitable breeding habitat, habitat degradation arising from reduced surface water quality and disturbance associated with construction activities.

11.8.206. The potential significant adverse impact on suitable breeding habitat relates to yellowhammer and the assessment identifies that, notwithstanding the implementation of proposed mitigation, the development will result in the permanent loss of its territory and will result in a significant adverse residual impact. Yellowhammer is identified by the EIAR assessment as a Red list species and the assessment identifies that they are known to nest in farmland, bushy areas,

woodland edges, wooded pasture, glades and clearings, on heaths and coastal meadows. The species was surveyed in multiple locations along alignment sections AZ1, AZ2 and AZ3 and the assessment acknowledges that the nature of surveyed encounters is suggestive of these locations being breeding territories for the species. The assessment also states that there are further records of yellowhammer at Rogerstown Estuary, Malahide Estuary and west of Forrest Little Golf Club in Swords.

- 11.8.207. With particular reference to the Red list conservation status of the species; the restricted distribution of the species that according to Birdwatch Ireland data⁴² is confined to the east and south of the country; the surveyed extent of species present within the study area; and the extent of suitable habitat clearance, particularly at Estuary and Dardistown, I agree with the EIAR that the development is likely to have a significant adverse impact on yellowhammer. However, in view of the substantial availability of suitable habitat in the wider landscape, I consider the impact will be at a local level.
- 11.8.208. I accept that clearance of this habitat is required as part of the development and that the applicant cannot replicate the cleared habitat type as part of the proposed landscaping strategy. Whilst the loss is unfortunate, I consider it is justified by wider benefits that will accrue from the proposed development.
- 11.8.209. Aspects of the proposed development that have the potential to give rise to reduced surface water quality have been discussed in previous sections and I agree that a contamination or pollution event of sufficient scale has the potential to affect the ecological functioning of receiving waters and can have direct and indirect impacts on bird species. However, as I have already outlined, I consider the proposed mitigation strategy is likely to be effective in ensuring that significant adverse impacts on receiving surface water quality do not arise.
- 11.8.210. Regarding disturbance, as the EIAR assessment outlines, noise, vibration, increased human presence and the visual effect of construction activity and machinery are likely to have a disturbing effect and will displace birds from habitat areas adjacent to the route alignment. The assessment identifies that birds can be expected to habituate to noise levels within the range of 50-70dB and that at a

⁴² <https://birdwatchireland.ie/birds/yellowhammer/>

distance of 300m from a particular noise source, noise levels are likely to be attenuated below 50/60dB.

11.8.211. The issue of disturbance of SCI bird species within proximate European sites is discussed in both the applicant's Appropriate Assessment Screening Report and the Appropriate Assessment Screening section of my report and, importantly, there are no European sites within the critical 300m distance of the route alignment. In view of this, I am satisfied that construction will not have a significant adverse disturbing impact on birds within any designated European site.

11.8.212. For birds located within the 300m distance of the route alignment, the project can be expected to have a disturbing impact but, consideration should be given to the urban environment through which the route alignment passes. Construction activity is commonplace across the entire alignment and birds present within the area are already habituated to high noise levels. In view of the temporary nature of the construction phase, following which noise levels will revert to baseline levels, I do not consider the development is likely to have a significant adverse disturbing impact on birds.

11.8.213. Amphibians are identified by the EIAR assessment as potentially impacted by site clearance works, which will remove suitable habitat and present a risk of mortality; noise and vibration during construction; and habitat degradation arising from reduced surface water quality.

11.8.214. In relation to habitat loss, I note that the Biodiversity Update Report (Ref. OH198) identifies a reduced extent of drainage ditches loss, down from 3.22km to 2.32km. The habitat type is stated to be generally associated with field boundaries between Estuary and the M50 motorway, with other pockets encountered at Northwood. The wet grassland habitat to be cleared is located at Northwood Station. I agree with the EIAR, that there is extensive alternative habitat in the wider landscape and that significant adverse impacts arising from proposed clearance works are unlikely.

11.8.215. The Board will note that most extensive habitat clearance is required at Estuary and Dardistown stations and I note from the EIAR assessment any suitable amphibian habitat could be colonised by common frog or smooth newt, both of which are legally protected under the Wildlife Acts. Wilful destruction or interference with an

amphibian breeding or resting place is prohibited under the legislation and in this context the applicant proposes to undertake further pre-construction surveys, to identify, capture and remove any encountered common frog or smooth newt to an area beyond the limits of a construction site. This approach is consistent with best practice and I am satisfied that it will ensure there is no potential for significant impacts arising from mortality.

11.8.216. Disturbance arising from airborne and groundborne noise and vibration are identified as having the potential to change amphibian species' behaviour and to affect breeding success, however, I agree with the EIAR assessment that there is a large amount of suitable habitat in the wider landscape to accommodate any species that are temporarily displaced during construction. I am thus satisfied that disturbance will not give rise to any significant adverse impact on amphibians.

11.8.217. In relation to habitat degradation arising from reduced surface water quality, aspects of the proposed development that have the potential to give rise to reduced surface water quality have been discussed in previous sections.

11.8.218. Common lizard is similarly identified as being legally protected and, whilst the development is not predicted to give rise to significant adverse impacts, in view of the protected status, the EIAR incorporates mitigation measures that will minimise the risk of mortality or disturbance of hibernating species. This comprises removal of grass or scrub vegetation during winter, avoiding potential hibernacula sites, and where this is not possible, clearance will be undertaken under the supervision of an ecologist. I am satisfied that the proposed mitigation strategy is likely to be effective in ensuring that significant adverse impacts on common lizard do not arise.

11.8.219. Fish are identified as potentially affected by a risk of mortality during certain construction works and habitat degradation arising from reduced surface water quality.

11.8.220. I have discussed in previous sections the potential for a contamination or pollution event that might affect receiving water quality and I have outlined that the proposed mitigation strategy is likely to be effective in ensuring that significant adverse impacts on receiving surface water quality do not arise.

11.8.221. The EIAR assessment identifies that all fish species are afforded legal protection. A risk of mortality is identified, arising from works at the Broadmeadow

River, Ward River, unnamed watercourse at Swords, Sluice River and its tributary, Mayne River, Santry River and the Royal Canal. I have discussed the nature of proposed works at these locations above and I note that the EIAR identifies risks associated with interactions between fish species and construction vehicles and machinery.

11.8.222. In the case of the Sluice, Mayne and Santry, each is described as heavily modified, polluted and of low fisheries value, in view of which the risk of any impact on species' conservation status is considered unlikely. Proposed works adjacent to the Broadmeadow and Ward are stated to have the potential to have a significant impact on local fish populations and, in this context, a mitigation strategy is proposed.

11.8.223. As I have outlined in previous sections, there is a requirement for in-water works as part of the project, at the Broadmeadow River as part of the removal of an elevated pipe and supporting structure and with no requirement for machinery to operate in-water. These works, which are described in the document 'Note on Removal of Pipe and Instream Supporting Structure at the Broadmeadow River' (Ref. OH213), are limited to a single operative working in the water, to secure lifting equipment to elements of the structure being removed and cutting the supporting structure from its plinth.

11.8.224. The mitigation strategy proposed entails avoidance of in-water works in the period October – June, capture and transfer of fish prior to diversion works and agreement with IFI regarding the location of dust suppression abstraction points together with the use of a screen at the suction head in order to ensure fish are not removed during abstraction. I am satisfied that the proposed mitigation is likely to be effective in ensuring that there is no significant risk of mortality during construction.

11.8.225. Glutinous snail is an endangered Red List species and is vulnerable to degraded water quality. Glutinous snail present at the Grand Canal will be vulnerable to reduced water quality but, as has been discussed above, I am satisfied that TII's proposed mitigation strategy will be effective in protecting this surface water quality.

11.8.226. **Cumulative Impacts**

11.8.227. As the EIAR assessment, Cumulative Impacts Addendum Report (Ref. OH98) and Addendum report point out, other large-scale development proposals have the

potential to act in tandem with the proposal, giving rise to significant cumulative biodiversity impacts. Identified cumulative impacts relate to habitat degradation arising from pollution/contamination of receiving waters; displacement/disturbance during construction; habitat loss; and habitat severance / barrier effects.

- 11.8.228. In relation to habitat degradation arising from pollution/contamination of receiving waters, TII's original and updated assessments identify a substantial number of developments that have the potential to have significant cumulative impacts on downstream habitats, in the event of an accidental pollution / contamination event during either the construction or operational phases. The assessments include a number of permitted developments that are located at some remove from the proposed development.
- 11.8.229. I would question whether each of the developments considered by the applicant does have the potential to have significant cumulative impacts on downstream habitats. However, I would concur with the overarching theme of the EIAR assessments, that the development has the potential to act in tandem with other approved developments in the event of a pollution or contamination event at receiving waters. I have previously discussed the applicant's construction and operational phase drainage strategies and I am satisfied that both will be effective in ensuring that the potential for an accidental pollution or contamination event does not arise. In view of this, I am satisfied that there will no significant cumulative adverse impacts arising from this aspect of the development.
- 11.8.230. Regarding the North Irish Sea Array offshore wind farm, it is identified by the January 2025 Addendum as giving rise to potential residual significant adverse impacts in respect of habitat interference and habitat loss. However, I note that this finding contradicts the oral hearing Addendum (Ref. OH98), which also considered the North Irish Sea Array and which did not identify any potential for residual significant adverse impacts on biodiversity. The identification of 'habitat interference' is stated to relate to habitat type FW2 Depositing/Lowland Rivers and the identification of 'habitat loss' is stated to relate to habitat types WL1 Hedgerows and WL2 Treelines. I am unsure what habitat interference relates to and it is not discussed further within the report.

- 11.8.231. Notwithstanding, I have considered impacts on each of habitat types FW2, WL1 and WL2 previously in my report, outlining that I consider the loss of habitat of Local Importance, especially in an urban setting, has the potential to result in a significant adverse impact at a local level. In this respect, I agree that other projects have the potential to magnify such impact. The Addendum predicts a short-term, reversible impact, until replacement planting at the wind farm's landfall site establishes. Taken together with TII's proposals for compensatory new habitat provision, which provides a variety of new habitat types and proposes additional habitat provision over and above the quantum lost to the project, I agree the impact will be short-term and will be resolved as new habitat creation establishes and matures.
- 11.8.232. Regarding displacement/disturbance, whilst a substantial number of developments are identified as having the potential to have significant cumulative impacts during construction, no residual significant cumulative impacts are predicted. For the operational phase, residual significant cumulative impacts are identified for 7 No. projects, as identified in Table 30.24 of the EIAR. Neither assessment provides a detailed assessment of the nature of the disturbance/displacement impacts likely to arise, but I am satisfied that they relate to noise and vibration, human/construction activity and lightspill.
- 11.8.233. The proposed development and each of the other developments considered within the cumulative assessment are located within an urban environment and fauna species present are habituated to the presence of human beings and noise and activity associated with daily activities. Human/construction activity and external lighting are common features of the city landscape and I am satisfied that measures related to the screening of construction sites and a properly specified external lighting scheme will be effective in ensuring there is no significant disturbance/displacement effect during construction. These measures are standard construction practice and can be reasonably expected to be employed on other large construction sites, thus mitigating the potential for cumulative impacts.
- 11.8.234. Noise is likely to be significant at a number of construction sites at multiple stages of the construction phase and there is a requirement for regular night-time working in specified circumstances. I have assessed and excluded the possibility of disturbance/displacement impacts on SCI species within a European site in view of

the separation distance from construction sites. Regarding other fauna species in the vicinity, whilst the development may have a disturbing effect, this will be temporary, for the duration of construction. It is also relevant to point out that on any construction site, construction activities are not constant and are subject to peak periods. Construction sites operating as part of the proposed development are likely to form part of a wider network of construction sites across the city. Such sites are commonplace and I am satisfied that noise during construction will not give rise significant cumulative adverse impacts.

11.8.235. The Dublin City Council Biodiversity section submission on the application requests that consideration should be given to the cumulative impact of the proposed development, together with the proposed Luas extension (I have interpreted this as the Luas Finglas proposal) and the Royal Canal Greenway. Both projects involve works in proximity to, but not within the canal, and thus the potential for in-combination effects relates to disturbance during construction.

11.8.236. The proposed project involves limited aboveground night-time works, over a short period of time, with works otherwise primarily following pattern of working during daytime hours (07:00-19:00) and I have previously expressed the view that there will be no significant adverse disturbance impact on otter. I note from the publicly available information regarding the Luas Finglas project that it also proposes primarily daytime working hours, with extended working hours only required in specified circumstances and whilst I have not encountered published working hours for the Greenway project, it is not of the same scale or order as either MetroLink or Luas Finglas, and I consider it reasonable to assume that it also primarily involves working during daytime hours.

11.8.237. There is a distance in excess of 1.5km between the Glasnevin Station site and Luas Broombridge stop and according to the application documents, disturbance would not be expected at distances greater than 250m. I acknowledge Greenway works may introduce a level of disturbance in the intervening area and, in a worst case scenario, this may result in otter avoiding the canal section between Cross Guns and Broombridge, however; I consider this is unlikely as the Greenway project does not involve heavy or noisy construction and otter present in the area will be habituated to high levels of human activity. I would also point out that the Greenway

construction will likely be short-term. I am thus satisfied that there will be no significant cumulative impact on other arising from these developments.

11.8.238. For the operational phase, the projects identified by the applicant as having the potential to give rise to significant cumulative adverse impacts are generally large infrastructure/transport projects, including BusConnects, the Dublin Airport North Runway Project, a future Metro 'south' extension and road projects. The Board will note that the Dublin Airport North Runway and R126 Donabate Relief Road have been completed and there is no planning consent in place for a Metro 'south' extension or Luas Poolbeg.

11.8.239. The development will contribute to the existing noise environment in Sections AZ1 and AZ3, where it is overground. In both areas the development will form part of a noisy background environment, where it routes alongside the R132 corridor in Section AZ1 and where it is in close proximity to the south runway at Dublin Airport and the M50 motorway. I do not consider the development will have any significant impact on existing noise levels in these locations, which are already elevated. In sections AZ2 and AZ4, where the alignment runs underground, the development will again form part of the busy and noisy background environments of Dublin Airport and Dublin City. There will be some noise associated with station activity and train movements, but I do not consider these elements will have any significant impact on existing noise levels in any location. In view of the low level of noise that will be produced by the development, together with the existing noise environments through which the alignment runs, I am satisfied that the development will not give rise to significant cumulative adverse impacts.

11.8.240. The EIAR cumulative impact assessment and Cumulative Impacts Addendum Report (Ref. OH98) together identify 49 No. additional developments as having the potential to have significant cumulative adverse impacts in terms of direct habitat loss. 12 No. of these developments are identified as giving rise to residual significant cumulative adverse impacts, as outlined in Table 30.1 of the Cumulative Impacts Addendum Report.

11.8.241. Neither assessment provides a detailed assessment of the nature of the habitat type to be lost as part of these other developments and I am thus unclear of the basis on which significant residual cumulative adverse impacts are identified.

Notwithstanding this, I have given consideration to the location and context of these developments and note that none involves the loss of priority habitat.

11.8.242. Both the proposed development and each of the additional developments identified by the applicant are located in an urban, zoned context and in the case of the proposed development, it is generally consistent with relevant development plan zonings, policies and objectives. I have previously outlined that the permanent loss of Local Importance (Higher Value) habitat as part of the proposed development has the potential to result in a significant adverse impact at a local level and whilst the loss of similar habitat may exacerbate the issue, I consider it unlikely that the significance of impact would extend beyond the local geographic scale.

11.8.243. 5 No. additional developments are identified by the EIAR assessment as having the potential to result in significant cumulative impacts, in terms of habitat severance / barrier effects. These additional projects are BusConnects, the Dart+ Programme, the Oldtown-Mooretown Western Distributor Link Road (WDLR), the Swords Relief Road at Lord Mayors and a new link road from the roundabout to the south of Lakeshore Drive, Crowcastle, Swords.

11.8.244. Regarding the WDLR and Swords Relief Road, both projects are objectives of the Fingal CDP and they will be subject to environmental assessment as part of any future planning application, including the implementation of mitigation measures that will address the potential for habitat severance / barrier effects. Regarding the WDLR, it is being constructed on a piecemeal basis, as part of other developments, and a section of the road has been constructed to the west and is known as Miller's Avenue. The eastern-most section of the road will be constructed as part of the proposed development, at Estuary, and it has been assessed as part of the proposed development.

11.8.245. The link road at Lakeshore Drive (F21A/0100) is located in a heavily developed part of Swords and the site is located in a surrounding context of commercial and residential development. Whilst the construction of the road may give rise to a cumulative impact when considered alongside the proposed Swords Central Station, in view of the heavily developed context in which the site is located together with the low level of bat activity recorded during surveys and the absence of

trees with roosting potential, I do not consider the impact would extend beyond the local level or would be of a significant order.

11.8.246. My assessment of potential barrier/habitat severance impacts arising from the proposed development discusses the potential for a barrier at Glasnevin, where required dewatering of the Royal Canal for 2 three-month periods may affect otter commuting further along the Royal Canal. I am aware that the Dart+ West project (ABP-314232-22) requires dewatering of the Royal Canal at Ashtown and this aspect of the development has the potential to act in tandem with the proposed development, giving rise to the creation of a barrier to otter movement along the canal. Both the current proposed development and Dart+ West incorporate an otter bypass plan, which will ensure there is no barrier to movement during dewatered phases.

11.8.247. **Conclusion**

11.8.248. I have considered all of the submissions made in relation to biodiversity and the relevant contents of the file, including the EIAR, Biodiversity Update Report and relevant reports provided to the oral hearing. Subject to specified exceptions below, I am satisfied that the potential for significant adverse impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

11.8.249. Arising from my assessment, I consider there is a likelihood of significant adverse impacts as follows:

- Permanent loss of Local Importance (Higher Value) habitat as part of the proposed development and including cumulative impacts arising from the loss of similar habitat as part of other developments.
- Permanent loss of suitable Yellowhammer breeding habitat.

11.8.250. In each instance, I am satisfied that impacts have been correctly identified, assessed and understood. Further, I am satisfied that additional practical mitigation is not available, which would have the effect of reducing an identified impact below the 'significant' level.

11.8.251. In view of the very large scale of the project, the proposed alignment and the nature of the lands through which it passes, which includes interactions with

environmental designations, I consider the likelihood of significant adverse impacts on biodiversity is unavoidable in some locations. But I consider such impacts must be balanced against the very significant wider societal benefits that will accrue from the provision of a high-quality underground rail system. To conclude my assessment, it is my opinion the long-term benefits of the development outweigh the identified biodiversity impacts and that none would give rise to an unacceptable impact on a sensitive receptor that would justify a refusal of the Railway Order.

11.9. Land, Soil, Water, Air and Climate – Land Take

11.9.1. Introduction

11.9.2. Land take is addressed in Chapter 21 of the EIAR, with areas of permanent and temporary landtake identified in Figure 21.1, however; it should be noted that the proposed land take in a number of areas has been subsequently amended. The associated Property drawings submitted with the RO are also of relevance.

11.9.3. There is substantial crossover between this environmental topic and the issue of compulsory land acquisition, which is addressed in detail in Section 12 of this report. Agricultural land take is addressed separately under Agronomy in Section 11.10.

11.9.4. Methodology

11.9.5. The methodology utilised has regard to Irish and European guidance on EIA, local planning policy, a desktop review of land uses, property types and zonings, walkover surveys and public and consultation with prescribed bodies and the public.

11.9.6. The standard appraisal method for assessing impacts is utilised. The baseline environment is assigned a baseline rating based on its character, value (importance) and sensitivity. With regard to value or importance, the EIAR notes that every property is important in its own right, particularly to the owner. With regard to sensitivity, properties such as hospitals, educational facilities, private residences and protected structures are identified as being very sensitive to change, while commercial properties may have lower sensitivity, depending on the circumstances. The overall baseline ratings for land take / properties are therefore evaluated by means of their capacity to accept change taking into account their value at a community/societal level and the current use of the property.

11.9.7. The criteria used to assess the magnitude of the impacts on properties are set out in Table 21.3 of the EIAR. A High impact magnitude occurs where the current use of the property is no longer feasible, while a Medium to Low impact magnitude occurs where the current use of a property could continue during and after temporary or permanent acquisition, depending on duration of impact. Substratum land take is considered to be a Negligible impact magnitude as the property use and occupancy are not affected. The significance of impacts is identified, based upon a standard 'significance matrix'.

11.9.8. **Receiving Environment**

11.9.9. The baseline land take environment is stated as having been defined through title research for all properties to be acquired on a temporary or permanent basis within the study area, a desktop study, consultation with property owners/occupiers and walkover surveys. Affected properties are detailed on the RO property drawings and Schedules and in Figure 21.1, while Table 21.6 of the EIAR sets out a general description of the affected properties along with a baseline rating, which is independent of the extent of land take.

11.9.10. **Potential Impacts**

11.9.11. **Do Nothing Scenario**

11.9.12. In the 'Do Nothing Scenario', where the proposed project does not go ahead, the potential impact is Neutral. Some of the lands which would have been affected may be brought forward for development consistent with their zoning objectives.

11.9.13. **Construction Phase**

11.9.14. Construction phase impacts on land take are considered to arise due to acquisition of properties (whether on a temporary or permanent basis), demolition (in whole or in part) of properties and substratum land acquisition.

11.9.15. According to Section 21.5.2 of the EIAR, a total of 189ha of land lies within the project boundary, of which 92ha is to be acquired temporarily to accommodate construction compounds and construction and related activities (e.g. enabling works, demolition, traffic diversions etc.).

11.9.16. Potential impacts include:

- **Permanent Land Take and Demolition:** Permanent land take is required at the proposed stations and along the surface, retained cut, and cut and cover sections of the alignment. The EIAR considers the acquisition of lands for cut-and-cover as permanent land acquisition, although it states that this land may have the potential to be returned or made available for use following construction, subject to agreement with the landowner.

Numerous structures are proposed for demolition and are listed in Table 21.5 of the EIAR. There will also be other minor elements of demolition works associated with utility structures and boundary walls.

- **Temporary Land Take:** Temporary land take is required for the construction of the project, including:
 - Construction of main, satellite and logistics compounds.
 - Temporary linear working areas along the alignment within AZ1 and AZ3 for construction of retained cut, cut and cover, elevated track and surface track sections. These strips range from 10m to 25m wide on either side of the alignment and a portion will remain a permanent easement feature for maintenance purposes.
 - Diversion and realignment of roads, junctions, public rights of way, private accesses, watercourses, railways and utilities. Provision of temporary alternative routes in some cases.
 - Facilities for groundwater control and piling activities.
 - The EIAR also notes the separate planning application for the proposed grid connection to provide power for the operation of the project, which will include installation of cables through public roads or public lands as far as possible.
- **Substratum Land Take:** The total area of substratum land take is stated to be 325,388m², based on the Limits of Deviation⁴³. The baseline rating for substratum land is taken as Very Low, with reference to Rule 17 introduced by Section 48 of the Planning and Development (Strategic Infrastructure) Act 2006, which states that “the value of any land lying 10 metres or more below the surface of that land shall be taken to be nil, unless it is shown to be of a greater value by the claimant”.

11.9.17. Table 21.6 of the EIAR describes the land take from each affected property, in terms of the quantum of land to be temporarily or permanently acquired, the percentage of the overall property area that this represents and a description of each property and the impact of the land take on it.

11.9.18. Of the affected properties, the significance of impacts pre-mitigation is as follows:

⁴³ Several aspects of the LOD were subsequently modified over the course of the oral hearing. Refer to Section 9.18.

- **Profound:** 22 No. (generally dwellings⁴⁴ to be acquired, as well as Whitehall Rangers sportsground in Dardistown, Santry Lodge, open space adjacent to Our Lady of Victories Church, Home Farm sportsgrounds beside Whitehall College of Further Education, lands at The Court apartment complex, Glasnevin, buildings at O'Connell Street (including protected structures) to be partially or fully demolished, Four Masters Park and St Stephen's Green).
- **Very Significant:** 18 No. (generally areas of open space to be permanently acquired, as well as Smyths Toy Store and other elements in Airside Retail Park, and a retail unit at O'Connell Street).
- **Significant:** 7 No. (generally areas of amenity land to be temporarily and/or permanently acquired, as well as private garden areas to be temporarily acquired, the Royal Canal Tow Path and properties at Dartmouth Square affected by temporary land take and the loss of access to a pedestrian walkway to the rear of their properties).
- **Moderate:** 47 No. (includes commercial/office buildings, car parking bays, an electricity substation, playing pitches, areas of amenity or urban land to be temporarily and/or permanently acquired, a telecommunications mast and a number of laneways).
- The remaining properties are identified as experiencing **Slight** or **Not Significant** impacts.
- The substratum land take associated with the proposed development is considered to have an **Imperceptible** impact in terms of land take.

11.9.19. Operational Phase

11.9.20. No additional negative impacts on property are identified during the operational phase, as all land take would occur during the construction phase. It is stated that existing and planned future properties will benefit from being located in close proximity to a new permanent public transport system.

11.9.21. Mitigation Measures

⁴⁴ I note that the College Gate apartment complex, comprising 70 No. apartments and the Markievicz Leisure Centre, which it is proposed to demolish, is considered as just one receptor. Similarly, the numerous buildings on O'Connell Street to be demolished are identified as one receptor.

11.9.22. Construction Phase

11.9.23. The proposed mitigation measures for the construction phase are outlined in Section 21.6 of the EIAR under the following headings:

- **Mitigation by Design:** Alternatives have been considered and assessed and have largely determined the requirements for permanent land take. Temporary land take has been minimised wherever possible and boundaries adjusted to avoid and/or minimise impacts as far as possible.
- **Compensation:** Compensation will be provided to property owners affected by permanent and/or temporary land acquisition. The EIAR notes the standard CPO criteria that TII will need to demonstrate to the Board's satisfaction.

20 No. individual residential buildings are impacted by the permanent or temporary land take (of which 7 No. were vacant at the time of writing of the EIAR), equating to a total of 85 No. residences. This includes 70 No. separate apartments at College Gate, Townsend Street, Dublin 2.

It is proposed to offer affected property owners the services of a property advisory company and to invite them to participate in a Discretionary Scheme, in order to reach a 'Pre-Agreement' on compensation amounts at an early stage. TII also undertake to provide both residential and commercial property owners with as much time as possible in which to relocate.

- **Land Acquisition Strategy (LAS):** Prepared to provide information on the acquisition process for residential and commercial property owners and establish the arrangements for communication and engagement with affected parties.
- **Property Protection:** The Property Owner Protection Scheme (POPS) will provide for condition surveys of private properties and other selected properties along the route to ascertain their condition before, during (if deemed necessary), and after the completion of the project to determine whether there has been any deterioration of the properties attributable to the project and to recommend repairs as appropriate. This will be used to assess property damage claims. Where parts of properties are occupied, access to the remaining unoccupied parts will be maintained, where possible and safe.

Construction site boundaries will be protected with hoardings to prevent damage outside the boundary.

Analysis of ground settlement potential for buildings, bridges and other assets has been undertaken and a programme of ground movement monitoring will be implemented. Construction mitigation measures contained in the Airborne Noise and Groundborne Noise Mitigation Policy will also be implemented.

- **Protection of Sports and Leisure Facilities:** Temporary and permanent land take affecting public parks and sports facilities including: Fingallians GAA and Swords Celtic FC in Balheary Park, Swords; Starlights GAA, Na Fianna GAA and Whitehall Rangers FC in the vicinity of the proposed Dardistown Depot; pitches at Albert College Park; and Home Farm FC at the proposed Griffith Park Station will be mitigated through the realignment, alterations and reinstatement of pitches and associated facilities or assistance in finding alternative pitches in the case of Whitehall Rangers FC.

The demolition of the Markievicz Leisure Centre at the proposed Tara Street Station will be mitigated⁴⁵ through the provision of alternative leisure facilities during construction by TII and DCC. TII has committed to fund a replacement centre upon selection of a suitable alternative site by DCC.

- **Protection of Architectural and Archaeological Heritage:** A number of different forms of mitigation are proposed, including archaeological surveys, condition surveys, temporary removal and reinstatement of features, temporary propping of buildings and preservation by record in some instances.
- **Protection of Public Buildings, Health Facilities and Churches:** Mitigation measures include maintenance of access, reinstatement of landscaping and protection of sensitive elements, including temporary removal and reinstatement where necessary.
- **Reinstatement of Temporary Construction Areas:** Following construction, compounds will be removed and landscaping and reinstatement of temporary land take areas will take place.

⁴⁵ Refer to oral hearing and assessment sections below.

11.9.24. Operational Phase

11.9.25. No mitigation measures are proposed for the operational phase.

11.9.26. Residual Impacts

11.9.27. With regard to permanent land acquisition, the EIAR states that, although affected landowners will be financially recompensed, the residual impact will remain **Profound** for many owners, particularly of residential properties.

11.9.28. The residual impact associated with the loss of Markievicz Leisure Centre is stated to be reduced from **Profound** to **Significant**, as a result of TII and DCC working to provide alternative leisure facilities⁴⁶. Similarly, with regard to the proposed permanent acquisition of a playing field used by Whitehall Rangers Football Club and the demolition of the clubhouse due to the proposed Dardistown Depot, it is stated that TII is continuing to engage with the club with a view to assisting them in finding alternative playing pitches.

11.9.29. With regard to temporary land acquisition, it is stated that the proposed mitigation measures will reduce the residual impact from **Very Significant** to **Moderate** or **Slight**.

11.9.30. Cumulative Impacts

11.9.31. Potential cumulative land take impacts are addressed at Section 30.4.13 of the EIAR. the assessment states that of the 176 other developments reviewed, 12 No. were screened in for potential cumulative impacts. These impacts are identified for the construction phase and are related to land clashes, including 2 No. developments that directly interface with the project; the 2 Grand Parade development at Charlemont and the Arora Dublin T2 Ltd hotel proposal at Dublin Airport. No significant impacts are predicted.

11.9.32. Oral Hearing

11.9.33. Errata

11.9.34. No errata specific to Chapter 21 were identified by the applicant, other than a number of minor corrections to the cumulative impact assessment.

⁴⁶ Refer to oral hearing and assessment sections below.

- 11.9.35. I note the correction to Chapter 11 identified in the Schedule of Errata, which states that the Board should not take a replacement leisure facility for the Markievicz Leisure Centre into account, as it is a DCC project and TII have no control over its delivery.
- 11.9.36. Updates
- 11.9.37. A number of updates have been provided that are of relevance to the issue of land take.
- 11.9.38. A proposed PRM drop off facility adjacent to the proposed Charlemont Station was shown on the structures drawings submitted with the application, but it was not identified on the original property drawings and was not assessed within the EIAR. On 19th February 2024, TII submitted a document to the oral hearing entitled 'Charlemont Drop-Off' (Ref. OH21), which contained an environmental assessment of the facility. An updated property drawing was also provided on 25th March 2024 (Ref. OH323), which identifies the property acquisition requirements associated with its provision. The updated Railway Order Schedules provided as part of TII's further information submission also includes updates to the permanent and temporary land acquisition requirements.
- 11.9.39. Also on 19th February 2024, TII submitted a Property Owners Protection Scheme (Ref. OH5) and a Land Acquisition Strategy (Ref. OH36). The POPS was updated on 6th March 2024 (Ref. OH187) and TII also provided a POPS Boundary Map (Ref. OH188) on the same day. On 21st February 2024, TII submitted a Draft Guidance Note for Developers (Ref. OH50) and this was subsequently updated on 27th March 2024 (Ref. OH378) and its status was changed from 'Draft' to 'Outline'.
- 11.9.40. The proposed modifications to the landscaping proposals along the R132 in Swords, also presented on 19th February 2024 (Ref. OH18), reduce the extent of permanent land acquisition in order to return green space to its existing condition following construction works, rather than providing a linear park with a network of footpaths. This proposed modification arose in response to submissions made by a number of local residents.
- 11.9.41. Following submissions from the owner of 2 Grand Parade, a revised property drawing was provided on 25th March 2024 (Ref. OH323), drawing No. ML-P 307 O-

A, that identifies a substantially reduced temporary land take requirement at the Charlemont Station site.

- 11.9.42. Agreements with FCC (Ref. OH147) and DCC (Ref. OH76) setting out agreed 'conditions' were submitted on 26th February and 4th March 2024, and correspondence from Waterways Ireland (Ref. OH166) regarding the proposed Charlemont drop-off was submitted on 5th March 2024.
- 11.9.43. The Schedule of Additional Environmental Commitments (Ref. OH376), which was updated at numerous stages over the course of the oral hearing, also sets out commitments in relation to land take.
- 11.9.44. An updated cumulative impacts addendum was submitted to the oral hearing on 28th February 2024 (Ref. OH98). It comprises a more up-to-date review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application. Where a potential for overlap in land take boundaries with other developments was identified, it is stated that engagement will take place with the developer regarding land take requirements, scheduling of works and access arrangements, as relevant. Where there is potential for development close to or above the MetroLink, the assessment states that TII is in the process of developing a Guidance Note for Developers, designed to facilitate future adjacent or oversite development while protecting the integrity and safety of the MetroLink works and operations. No additional significant residual cumulative land take impacts are identified.
- 11.9.45. **Post-Oral Hearing**
- 11.9.46. A further document Update to the Cumulative Impact Assessment was submitted on 31st January 2025 as part of the applicant's response to the Wild Ireland Defence CLG oral hearing submission.
- 11.9.47. In relation to land take, the potential for cumulative impacts is identified with other developments which fall within permanent or temporary land take boundaries, substratum land take and/or MetroLink exclusion and protection zones. Where there is potential for development close to or above the MetroLink, the assessment again notes that TII is in the process of developing a Guidance Note for Developers. No significant residual cumulative land take impacts are identified.

11.9.48. An EIAR Addendum was also submitted by the applicant as part of their abovementioned response, addressing impacts associated with the proposed PFAS management strategy at Dublin Airport. In relation to land take, it is stated that there is no change from the EIAR submitted with the Railway Order application, as the proposed area to be used for material management is within the proposed temporary land take extent.

11.9.49. **Assessment**

11.9.50. My considerations in relation to the issue of land take are primarily set out in Section 12 of this report, which relates to the proposed CPO. In that section I have considered the relevant 'tests' to be applied by the Board in the determination of the compulsory acquisition issue. In summary, while the compulsory acquisition of land is regrettable, I am satisfied that the proposed development is justified by the exigencies of the common good, that the land take is proportionate to the community need that the project will address and that the applicant has not proposed the permanent acquisition of excess lands.

11.9.51. At an individual landowner level, I consider that the proposed development will have negative impacts, primarily due to temporary and permanent land take but also due to disruption and disturbance during construction.

11.9.52. A number of submissions contend that the proposed extent of temporary and/or permanent land acquisition is excessive or unnecessary in respect of particular landholdings or properties. These individual submissions are addressed in Section 12, which assesses the proposed CPO. The Board will also note, in their review of the submissions and this report, that quite a number of affected landowners submitted correspondence at the oral hearing confirming that their concerns had been addressed and that they support the proposed development.

11.9.53. Given the extent of land take proposed to construct the project, and noting in particular the number of residential units that it is proposed to acquire, this is a difficult case for the Board to determine. I consider that there will be significant and very significant and profound impacts on some affected property owners, which will not be mitigated, other than through the payment of compensation and a commitment from TII in respect of engagement and assistance. Ultimately, however, I am satisfied that the wider public interest served by MetroLink, which will support a

shift from the private car to more sustainable transport modes, including reducing traffic congestion, and which will contribute to reducing greenhouse gas emissions as part of Ireland's climate action obligations, outweighs the localised impacts on landowners affected by proposed acquisition. That is not to downplay the significance of the impacts on individual landowners, some of whom will have their homes or places of business acquired, or the wider negative community impact arising from the loss of public amenities either temporarily (e.g. sports pitches and green areas) or permanently (e.g. Markievicz Leisure Centre). This is discussed in detail in Section 12 of this report.

11.9.54. I note that the LAS and POPS, which are identified as mitigation measures, were not submitted with the application, and were submitted to the oral hearing on 19th February 2024. The LAS outlines TII's high-level approach to engagement in respect of land acquisition and the POPS is a scheme available to residential properties that undertakes to repair damage directly caused by construction. The Board will note POPS was updated over the course of the hearing (Ref. OH187), including a substantial uplift in the monetary value (€45,000 increased to €75,000) of repair works that will be covered by the Scheme. As discussed in detail elsewhere in my report, I consider both documents contain proposals that are reasonable in attempting to address the impact of the development on affected landowners.

11.9.55. With regard to the Markievicz Leisure Centre, TII point out that the facility will be provided separately, by DCC, and in this respect I note the submission from DCC to the oral hearing on 19th February 2024, which stated that a new facility is likely to be provided on the site of the Irishtown Sports Centre. The impact assessment (Table 21.6 of the EIAR) identifies that the impact of the loss of the Centre would be profound and Section 21.7 states that this would be reduced to significant adverse, in view of TII's undertaking to work with DCC to provide an alternative facility. However, the applicant's response to submissions and the Schedule of Errata (Ref. OH374), relating to Chapter 11 (Population and Land Use) states that the Board should not take the provision of an alternative facility into account, as mitigation.

11.9.56. I therefore am of the opinion that the impact of the loss of the Leisure Centre, in land take terms, is profound. This is reflective of the fact that the facility is a community asset of substantial benefit and there is ongoing uncertainty regarding the timeframe for the provision of a replacement facility.

11.9.57. I agree that the provision of an alternative facility, albeit in a different location within the City, will be beneficial in terms of reducing the effect, but I agree that it would be inappropriate to consider this as mitigation in the context of the proposed development, where TII has no role in its provision.

11.9.58. As I have addressed in Section 12, I am satisfied that the lands identified are necessary for the construction of the project, that they are suitable for this use and that the extent of land take is proportionate to the community need to be satisfied by the delivery of the MetroLink project.

11.9.59. **Cumulative Impacts**

11.9.60. Regarding land take, I agree with Section 30.4.13 of the EIAR and both the EIAR Cumulative Impacts addendum (Ref. OH98) and the Update to the Cumulative Impact Assessment that there is potential for cumulative land take impacts where the construction phase overlaps with other construction projects.

11.9.61. In view of the linear nature of the development and the prolonged construction phase, there is a likelihood of interaction with other projects and, in this context, I agree that engagement with other relevant developers regarding construction requirements and sequencing is a practical way of addressing issues such as disruption and severance. I agree with the EIAR, that this approach will ensure that significant cumulative impacts do not arise.

11.9.62. Of the 2 projects identified as having a potential direct interface with MetroLink (developments at Charlemont and Dublin Airport), I note that the 2 Grand Parade development that lies partially over the Charlemont station box has been completed and, as such, there is no longer any potential interaction.

11.9.63. **Conclusion on Land Take**

11.9.64. I have considered all of the submissions made in relation to landtake and the relevant contents of the file, including the EIAR and relevant update reports provided to the oral hearing. Subject to specified exceptions below, I am satisfied that the potential for significant adverse landtake impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

- 11.9.65. There will be a series of significant, very significant and profound adverse impacts on property owners affected by compulsory acquisition, which will not be mitigated other than through the payment of compensation and a commitment from TII in respect of engagement and assistance. This includes the acquisition of occupied housing and in the case of the proposed Tara Station, includes the demolition of the Markievicz Leisure Centre. In each instance, I am satisfied that impacts have been correctly identified, assessed and understood. I am also satisfied that additional practical mitigation is not available, which would have the effect of reducing an identified impact below the 'significant' level.
- 11.9.66. The number of occupied homes that are proposed to be acquired is substantial and would appear to be unparalleled in recent times but I consider this is a function of the urban landscape through which the route alignment runs, the large size of underground station boxes and the proposed construction methodology. As I have outlined in Section 12 of my report, I consider the acquisition of this housing is necessary to deliver the proposed development, that the extent of acquisition is proportionate to the identified need.
- 11.9.67. To conclude, I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts, in terms of land take, that would warrant refusal of the Railway Order.

11.10. Land, Soil, Water, Air and Climate – Agronomy

11.10.1. Introduction

11.10.2. Agronomy is addressed in Chapter 23 of the EIAR. Appendix A23.1 contains an example of the landowner questionnaire/farm survey utilised in the assessment, while Figures 23.1 and 23.2 comprise maps of agricultural land holdings along the alignment and agricultural land take, respectively.

11.10.3. There is substantial crossover between this environmental topic and the issue of compulsory land acquisition, which is addressed in detail in Section 12 of this report. There is also potential crossover with many other EIAR chapters, given potential non-land take related impacts on agriculture (e.g. noise, dust etc.). Non-agricultural land take is addressed separately in Section 11.9.

11.10.4. Methodology

11.10.5. The methodology for assessing potential impacts on agricultural land holdings along the alignment included:

- Definition of study area: Initially 250m wide corridor along the alignment centreline and all land described as agricultural within the project boundary. The study area includes the affected land parcels which are directly impacted and other sensitive agricultural land parcels which may be indirectly impacted within 300m either side of the construction area.
- Review of relevant Guidelines, policy, and legislation, including European and Irish guidance on EIA, including that prepared by the EPA and NRA.
- Data collection: Desktop study to identify agricultural land parcels along the alignment that will be potentially directly or indirectly impacted, to gather soil information and to obtain information from CSO and Teagasc sources on the nature of farming at the National, County and Farm Level.
- Consultation with landowners/occupiers. Principle concerns were stated to include access throughout construction, degree of land take, degree of severance and timeline for the project. Consultation also took place with the Irish Farmers Association, Teagasc and the Agricultural Consultants Association.

- Baseline environment described, based on available mapping, agricultural and soil maps, the results of farm walkovers and questionnaires and other information.
- Farm visits to establish the baseline conditions of individual land parcels and to record other relevant details. This included a walkover, interview and completion of a questionnaire. Where walkovers weren't possible, roadside inspections were undertaken.
- Assessment of impacts, based on sensitivity, magnitude and duration of the impacts and assigning the significance of impacts as per the EPA Guidelines. The assessment considers impacts at the National, County and individual farm level.
- Mitigation and monitoring measures determined, and residual impacts defined.

11.10.6. **Baseline**

11.10.7. County Dublin has a total Utilisable Agricultural Area, excluding commonage, of 37,963 ha, equating to c. 0.8% of the national agriculture land area. There are 699 farms in the County with an average farm size of 47.57 ha.

11.10.8. The predominant soil type found in the land parcels along the proposed alignment is classified as soil association Elton, a moderately well drained soil of clay loam texture which is suitable for grassland, tillage and intensive vegetable production.

11.10.9. The study area includes 14 No. agricultural land parcels owned by 11 No. landowners in assessment zones AZ1, AZ2 and AZ3. No agricultural land is in AZ4. The main agricultural land uses are tillage, grassland and grassland – managed extensively (i.e. areas found to not be intensively managed or grazed or found to not be farmed at the time of assessment). The land parcels are identified and described in terms of use and quality in Table 23.8 of the EIAR, with each having a Land Owner Reference (LO) and a Parcel Reference (PR). Figure 23.1 illustrates the locations of each land parcel.

11.10.10. The EIAR also notes the presence of a veterinary practice within the study area at LO7 PR1, located just off the R132 Pinnock Hill Roundabout in Swords. The

practice, O'Scanaill Veterinary Hospital, treats both small and large animals at its facility, including horses.

11.10.11. The EIAR notes that while some of the parcels of agricultural land within the study area are zoned 'Open Space', 'High Amenity' and 'Green Belt'. the majority is zoned for non-agricultural development, including 'Metro Economic Corridor', 'General Employment' 'High Technology', 'Dublin Airport' and 'General Employment'. Given the high value of the land and the low returns on agricultural use, the EIAR considers that the majority of the land is likely to be developed in the future. All the land holdings directly affected by the proposed Project are stated to be of Low or Medium sensitivity, while the specialist equine facility belonging to landowner / occupier LO6 PR1 is assigned a Very High Sensitivity⁴⁷.

11.10.12. **Potential Impacts**

11.10.13. **Do Nothing Scenario**

11.10.14. In the 'Do Nothing' Scenario there would be no impacts on the environment and no change in land use, however even in the absence of the proposed development, it is stated that the current agricultural land use will change in line with the zoning objectives of the Fingal Development Plan.

11.10.15. **Construction Phase**

11.10.16. The EIAR states that the land required for the project will be fenced off at an early stage, before the main construction works commence, and temporary access, crossing points and drainage installed. Topsoil will be removed and stockpiled.

11.10.17. Table 23.12 lists the potential impacts, which vary depending on the landholding. Potential impacts include:

- **Permanent Land Take:** Permanent land take of agricultural lands will be required for the proposed development. Of the 14 No. agricultural land parcels, 13 No. are directly affected by permanent land take. The remaining 1 No. land parcel (LO6 PR1), while not affected by land take, is identified as a 'Very Sensitive' enterprise and may experience indirect impacts such as sporadic noise causing stress or fright to grazing horses.

⁴⁷ While the text in the EIAR states that only LO6 PR1 is of Very High Sensitivity, the associated Table 23.10 also identifies LO7 PR1 (i.e O'Scanaill Veterinary Hospital) as being of Very High Sensitivity.

The amount of land take from each land parcel along the alignment, compared to the total area of each land parcel, is set out in Table 23.13 of the EIAR, while the affected portions of each land parcel are illustrated in Figure 23.2.

- **Temporary Land Take:** Temporary land take is required for various construction related uses and activities, including compounds, batching plants, material stockpiles, office and welfare facilities, as well as for the diversion/ realignment of roads, provision of temporary alternative routes and accesses, diversion/ realignment of watercourses and utilities etc. Once the construction works in that area are complete, temporary land take areas will be reinstated as agreed with the owner of the land and the relevant planning authority.

Of the 14 No. agricultural land parcels, 9 No. are affected by temporary land take. These are again set out in Table 23.13 of the EIAR and illustrated in Figure 23.2.

- **Temporary Loss of Services (Water and Electricity):** Potential temporary interruptions to utility supplies, such as water and electricity are identified. The land holdings identified that may be potentially affected are LO1 PR1, LO2 PR2 and LO6 PR1 as these are the only land holdings with livestock at the time of assessment.
- **Traffic Nuisance:** Increased traffic volumes associated with the construction phase are predicted to cause nuisance to farming operations, resulting in a **not significant** indirect impact on farmers who use the local road network to access land parcels within the study area. The potential for access arrangements during construction to potentially cause nuisance to all farming operations due to increased traffic volumes is also identified.
- **Noise Nuisance:** The land holdings that have the potential to be affected by noise nuisance from the construction sites are identified as LO1 PR1, LO2 PR2 and LO6 PR1 as these are the land holdings with livestock.

The EIAR notes that noise may cause distress to farm animals if it becomes excessively loud, although it contends that animals become accustomed to regular noise and sounds, as evident by the nationwide grazing of livestock in

close proximity to motorways. It notes that horses are of a more nervous disposition than other stock types and are more sensitive to unfamiliar, sporadic and excessively loud noise, with rock breaking activity being of particular concern to the breeding and training of horses.

It is not anticipated that excessively loud noise will occur within the agronomy study area, however the EIAR notes that new noises that have not yet been experienced by the livestock may initially cause fright until they become habituated to it.

- **Dust Nuisance:** Dust generated by construction machinery and exposure of soil may have a nuisance impact for a landowner or farm animals. Dust may accumulate on crops, restricting their ability to photosynthesise, although no significant issues are anticipated given the level of rainfall in Ireland and dust mitigation measures. Grazing stock are stated not to be generally sensitive to dust as they are in an open area where any dust will disperse. Livestock confined to a shed and located within 150m to 300m of a construction site have the potential to be impacted by dust. Winter housing for grazing stock is present on land holding LO1 PR1 c. 200m from the centre of the alignment. LO7 PR1, O'Scanail's Veterinary Hospital, may be impacted by dust due to hosting animals recovering from illness or surgery.
- **Impact on Shelter:** Removal of trees and hedgerows may result in a loss of shelter, which will be greatest on livestock-based farms. The following land parcels will be affected: LO1 PR1, LO3 PR1, LO2 PR2: LO4 PR1, LO5 PR1, LO4 PR2, LO8 PR1, LO10 PR1, LO11 PR1. The level of impact will depend on the extent of the shelter removed and the type of enterprise affected.
- **Disturbance to Farm Operations:** The potential for impacts arising from disturbance on farm operations was noted, due to changes to layout of farm infrastructure, creation of irregular land parcel shapes, interruptions to livestock movement due to temporary access arrangements and land severance. The main disturbances include:
 - Potential change in access for LO1 PR1, LO2 PR1, LO2 PR2, LO3 PR1, LO2 PR2, LO4 PR1, LO5 PR1, LO4 PR2, LO7 PR1, LO8 PR1, LO9 PR1, LO10 PR1, LO10 PR2 and LO11 PR1.

- Reduction in the area available outside the project boundary for LO1 PR1, LO2 PR1, LO3 PR1 LO2 PR2, LO7 PR1, LO5 PR1, LO8 PR1, LO9 PR1, LO10 PR1, LO10 PR2 and LO11 PR1.
- Land severance for LO8 PR1, LO9 PR1, LO10 PR1 and LO10 PR2.
- **Interruption to Field Drainage Systems:** The potential for impacts on existing known and unknown field drainage systems is noted, which may require modification if intercepted.
- **Spread of Noxious Weeds and Invasive Species:** The potential for noxious weeds or invasive species to be spread through exposed soil via wind or machinery is noted. Giant hogweed and Japanese knotweed were identified at various location throughout the study area.
- **Spread of Animal Diseases and Soilborne Diseases:** With regard to livestock farming, the increased risk of spreading animal diseases such as Bovine Tuberculosis (TB) is noted, particularly due to cattle straying.

With regard to tillage farming, the risk of soilborne disease spread is noted, such as potato eelworm, which can destroy potato plants and can be spread by direct movement of soil or by soil attached to equipment.
- **ESBN Cables within Agricultural lands:** The EIAR considers the associated 110kV MetroLink cables project, which is a separate application to the Board. The cables will be installed along a mixture of public road and private land and it is stated that the cables project will not impact on agricultural lands. **No significant** impacts are identified.

11.10.18. The EIAR notes that none of the affected farms will experience all of the potential impacts identified for the construction phase, but some impacts will be identified on all farms. It identifies the following significance levels for the abovementioned adverse impacts on the 14 No. land parcels:

- **Profound short-term:** 1 No. (L04 PR2).
- **Very Significant short-term:** 3 No. (LO1 PR1, LO2 PR1, LO3 PR1).
- **Significant short-term:** 5 No. (LO4 PR1, LO7 PR1, LO8 PR1, LO10 PR1, LO10 PR2).

- **Moderate short-term:** 4 No. (LO2 PR2, LO5 PR 1, LO9 PR1, LO11 PR1).
- **Slight short-term:** 1 No. (LO6 PR1).

11.10.19. Operational Phase

11.10.20. The following operational phase impacts are identified:

- **Permanent Land Take:** Removal of c. 76.15 ha during construction, with c. 26.72 ha permanently removed from 'agricultural' use during the operational phase. This permanent agricultural land take affects 10 No. landowner/occupiers (LO1, LO2, LO3, LO4, LO5, LO7, LO8, LO9, LO10 and LO11), as detailed in Table 23.13 and illustrated in Figure 23.2 of the EIAR

The EIAR notes that effects on the viability of individual farms is not solely dependent on the amount of land take but is also dependant on other factors such as land quality, total size of the landholding, severance impacts etc. Landowner/ occupier will be compensated for permanent land loss.

- **Permanent Severance:** Of the 14 No. affected land parcels, 4 No. will incur severance (LO8 PR1, LO9 PR1, LO10 PR1 and LO10 PR2). Alternative access to the severed land will be provided in all cases and compensation will be paid for resultant disturbance.
- **Operational Noise:** Additional noise associated with the operation of the proposed development is not predicted to have any significant impacts on landowners/occupiers or land holdings, which are already exposed to noise from nearby sources such as roads and Dublin Airport.

11.10.21. The EIAR notes that the proposed development may accelerate the change in land use from agricultural to other economic uses, consistent with the applicable zoning objectives of the land.

11.10.22. The EIAR states that the operational phase impact assessment is summarised in Table 23.17 of the EIAR, however I note that table relates to construction phase impacts post-mitigation. Table 23.18 would appear to be the relevant table.

11.10.23. The following significance levels for the abovementioned adverse impacts on the 14 No. land parcels:

- **Moderate:** 4 No. (LO7 PR1, LO8 PR1, LO10 PR1, LO10 PR2).
- **Slight:** 3 No. (LO1 PR1, LO4 PR1, LO5 PR1).
- **Not Significant:** 6 No. (LO2 PR1, LO3 PR1, LO2 PR2, LO6 PR1, LO9 PR1, LO11 PR1).
- **Imperceptible:** 1 No. (LO4 PR2).

11.10.24. **Mitigation Measures**

11.10.25. The proposed mitigation measures are outlined in Section 23.5 of the EIAR. It notes that compensation will be paid to landowners/occupiers directly impacted by the proposed development for land take, severance, injurious affection and disturbance to their farming operation, where appropriate.

11.10.26. **Construction Phase**

- **Access:** Crossing points and suitable access arrangements will be provided. Access to LO1 PR1, LO2, PR1, LO2 PR2, LO7 PR1, LO8 PR1, LO10 PR, LO10 PR2 and LO11 PR1 land will be required during the construction phase, while access to LO6 PR1 is not affected. The remaining land parcels will be used for the construction phase with only some of the land returned post-construction. The areas not taken up by construction are likely to be too small to continue farming during the construction period.
- **Reinstatement:** Reinstatement work will be undertaken in accordance with the CEMP requirements and the Landscape Plans.
- **Liaison/Communication:** Landowners/occupiers will be given notice in advance of construction works so they can arrange their farming activities to reduce any potential impacts. A key liaison person will be appointed to address any queries throughout the construction phase and to facilitate the reorganisation of farm enterprises during critical times during the construction phase. They will also consult with landowners/occupiers to identify any special requirements, such as specific on-farm biosecurity measures and or disease status of farms.
- **Land Take (Permanent and Temporary):** Land acquired on a temporary basis will be reinstated by agreement and returned to the landowner/occupier

and compensation will be payable. The permanent land take will be mitigated through the compensation process.

- **Temporary Loss of Services:** Where water and power supplies are disrupted, an alternative water source and electricity supply will be made available. If permanent access to surface water sources is disrupted, alternative water supplies will be provided, or landowner/occupier compensated to drill their own well.
- **Traffic Nuisance:** A Scheme Traffic Management Plan will be put in place to reduce nuisance to landowners/occupiers and other road users and minimise the transport impacts.
- **Noise Nuisance:** Specific mitigation measures most suitable to individual farm situations will be developed through continued dialogue with landowners/occupiers. Noise and vibration mitigation measures are detailed in the outline CEMP and Chapter 14 of the EIAR.
- **Dust Nuisance:** A stockpile and materials movement management plan has been prepared including construction of stockpiles bunds and covers to reduce potentially contaminated run-off and generation of leachate, damping down to prevent wind-blown dust and monitoring of stockpile emissions. Other measures include wheel washing and road sweeping.
- **Impact on Shelter:** Any shelter removed will be reinstated and re-planting of hedgerows will reflect the original species mix. Compensation may be payable where loss of shelter causes disturbance during the regrowth period.
- **Disturbance to Farm Operations:** Consultation and liaison with landowners/occupiers to ensure that appropriate measures are taken to minimise disruption and enable construction activities to occur, in as far as practicable, in conjunction with farming operations. This will include notification of works and commencement of specific works, access arrangements and access to severed lands.
- **Interruption to Drainage Systems:** Consultation with landowners/occupiers to agree the extent of impacted existing land drainage systems and to agree

the nature and extent of replacement drains required. Impacted drainage systems will be reinstated.

- **Spread of Noxious Weeds/Invasive Species:** Clearing of all plant and equipment before arriving and prior to leaving site; staff will be informed of the location of any invasive species; a Non-Native Invasive Species Management Plan has been prepared having regard to NRA/TII guidance and will be implemented in advance of the proposed construction works.
- **Spread of Animal Diseases:** Biosecurity measures, including site fencing and spraying down of dust, to protect and prevent the spread of pests and diseases; compliance with Department of Agriculture Food and the Marine regulations in relation to disease; agreement of stockproof fencing requirements with landowners/occupiers; separate storage of topsoil and subsoil; reinstatement of drains to ensure no cross contamination between different land holdings; stockpiling of soil close to origin and on the same land holding.
- **Spread of Soil-Borne Diseases:** All construction equipment will arrive on site clean; wash-down facilities for equipment, machinery, vehicles and footwear before entering farm premises; biosecurity measures implemented to minimise soil-borne disease and weed spread.

11.10.27. Operational Phase

11.10.28. Measures to address operational phase impacts will be implemented as part of the construction phase, such as erection of noise barriers and compensation where hedgerows are removed or land is permanently acquired. The mitigation measures during the operational phase will be the on-going maintenance and upkeep of the project's boundary fences.

11.10.29. **Residual Impacts**

11.10.30. Residual impacts are considered at National and County level and at individual farm level.

11.10.31. At National and County level, the EIAR notes that the agricultural area in Ireland is c. 4,509,256 ha and in County Dublin is c. 37,963 ha. Compared to this,

the proposed temporary and permanent agricultural land take is considered to be a **Not Significant** change in land use and no other significant impacts are anticipated.

11.10.32. At the individual farm level, residual impacts during the construction phase will consist of a reduction in the area farmed, land loss, increased traffic and noise and the severance of agricultural lands at certain locations. The following significance levels for the residual adverse impacts on the 14 No. land parcels are identified:

- **Profound:** 1 No. (L04 PR2).
- **Moderate:** 11 No. (LO1 PR1, LO2 PR1, LO3 PR1, LO2 PR2, LO4 PR1, LO5 PR1, LO7 PR1, LO8 PR1, LO10 PR1, LO10 PR2, LO11 PR1).
- **Slight:** 1 No. (LO9 PR1).
- **Not Significant:** 1 No. (LO6 PR1).

11.10.33. In the operational phase, the only residual impacts will be associated with a change in land use and permanent land severance at certain locations. As land take occurs during the construction phase, it is stated that these are not new impacts during the operational phase. Compensation will be paid to cover disturbance caused by severance and temporary and permanent land loss. The residual impacts for affected land holdings are stated to range from **Imperceptible** to **Not Significant**.

11.10.34. **Cumulative Impacts**

11.10.35. Potential cumulative impacts on agronomy are addressed in Section 30.4.15 of the EIAR. Following a screening exercise, a total of 3 No. projects were screened in for potential cumulative impacts, as listed in Table 30.19 of the EIAR. The 3 No. projects were screened in due to the combined removal of agricultural land and related to 2 No. developments in the Swords area and the Greater Dublin Drainage project.

11.10.36. In the operational phase, no other projects were considered likely to result in cumulative impacts on agronomy with the proposed project.

11.10.37. No specific mitigation measures over and above those already proposed for the proposed development are identified for cumulative impacts. The stated reason for this is that, in most cases the mitigation included in the proposed project, together

with standard mitigation measures which would be implemented by the other developments, will be sufficient to reduce cumulative impacts so that they are not significant.

11.10.38. No significant residual cumulative impacts on agronomy are identified in the EIAR.

11.10.39. **Oral Hearing**

11.10.40. **Errata**

11.10.41. The applicant noted a number of minor errata in this Chapter. These are identified in the final Schedule of Errata (Ref. OH374). No additional impacts or changes to the significant of impacts were identified.

11.10.42. **Updates**

11.10.43. No updates directly related to agronomy were submitted at the oral hearing. A proposal to replace a c. 50m portion of retained cut with cut-and-cover tunnel adjacent to O'Scanaill's Veterinary Hospital was made and is addressed below.

11.10.44. **Cumulative Impact Assessment**

11.10.45. An updated cumulative impacts addendum was submitted to the oral hearing on 28th February 2024 (Ref. OH98). The Addendum comprises a more up-to-date review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application.

11.10.46. No additional significant residual cumulative impacts on agronomy are identified.

11.10.47. **Post-Oral Hearing**

11.10.48. A further cumulative impact assessment update was submitted on 31st January 2025 as part of the applicant's response to the Wild Ireland Defence CLG oral hearing submission.

11.10.49. In relation to agronomy, the potential for cumulative impacts due to land take and/or severance during the construction and operational phase is noted. No additional mitigation measures or significant residual cumulative impacts on agronomy are identified.

11.10.50. An EIAR Addendum was also submitted by the applicant as part of their abovementioned response, addressing impacts associated with the proposed PFAS management strategy at Dublin Airport. In relation to agronomy, it is stated that there is no change from the EIAR submitted with the Railway Order application, as there is no change in land take from that assessed in the EIAR.

11.10.51. **Assessment**

11.10.52. I note that of the remaining outstanding submissions (i.e. excluding those which were withdrawn or where the observer confirmed that their concerns had been addressed and that they supported the project), none raised particular issues in relation to agronomy.

11.10.53. My considerations in relation to the issue of land take are primarily set out in Section 12, which relates to the proposed compulsory acquisition. In that section I have considered the relevant 'tests' to be applied by the Board in the determination of the compulsory acquisition issue. In summary, while the compulsory acquisition of agricultural lands is regrettable, I am satisfied that the proposed development is justified by the exigencies of the common good, that the agricultural land take is proportionate to the community need that the project will address and that the applicant has not proposed the permanent acquisition of excess agricultural lands.

11.10.54. At an individual landowner level, I consider that the proposed development will have negative impacts on agronomy, primarily due to temporary and permanent land take but also due to disruption and disturbance during construction.

11.10.55. I am satisfied that the compulsory acquisition of agricultural lands on a temporary or permanent basis and consequential disruption, disturbance and severance impacts on farm enterprises are ultimately matters to be addressed through the compensation process, in addition to a range of local accommodation works for fencing, access, services maintenance / provision etc. as outlined in the EIAR.

11.10.56. I would generally concur with the applicant's assessment of the unmitigated and mitigated impacts on the individual land parcels, with the significance of the impact varying, depending on the percentage of the parcel to be acquired and the nature of the farming activity undertaken. In relation to land parcel LO4 PR2, I would agree that the residual impact in the construction phase is profound, on the basis

that it is to be permanently acquired (albeit that it is a small parcel of 0.43 ha). In relation to the land parcels significantly or very significantly impacted in the construction phase, I consider that the significance can be effectively mitigated, as outlined in the EIAR, through the return of temporary land take post-construction, through adequate compensation and through a range of accommodation works and related mitigation measures. I note that agricultural activities will be able to continue on the majority of land parcels during the construction phase.

11.10.57. In relation to O'Scanail's Veterinary Hospital (LO7 PR1), a submission was made and subsequently withdrawn, with the former observer listed in the applicant's Schedule of Third Party Agreements (Ref. OH381). I note the additional commitment made at the oral hearing to replace c. 50m of retained open cut in the immediate vicinity of the veterinary hospital with cut and cover tunnel. This is included in the final SAEC (Ref. OH376) and illustrated in the revised drawings submitted on 25th March 2024 (Ref. OH323). I consider this to be a welcome additional commitment that will lessen operational impacts on this sensitive receptor, albeit that I do not consider that significant impacts would arise.

11.10.58. While there will be negative impacts on agricultural lands, it is important to note that a considerable portion of these lands affected are zoned for development. Given the respective economic returns from farming compared to selling/developing zoned development land, there is clearly likely to be a natural decline in farming activity in the study area regardless of whether the MetroLink project proceeds. Notwithstanding this, the presence of a metro line is, of course, likely to accelerate the transition from agricultural uses to other uses with resultant positive economic benefits to individual landowners, but negative impacts on agronomy in the study area.

11.10.59. At the county and regional level, I do not consider that the impacts on agronomy will be significant, given the relatively small land take compared to the large agricultural land base in both North County Dublin and the region (i.e. at a county level, the proposed agricultural land take is c. 0.002% of the total).

11.10.60. Other impacts on agronomy are primarily related to noise, dust and related construction phase disturbance type impacts. These environmental topics are generally addressed elsewhere in this report, but in summary I am satisfied that the

applicant has identified sufficiently robust mitigation measures for these potential impacts and that, subject to suitable conditions, a comprehensive monitoring regime will be in place to ensure the effective implementation of the measures.

11.10.61. **Cumulative Impacts**

11.10.62. In relation to cumulative impacts and noting the generally limited amount of agricultural lands in the study area and the fact that the majority of the lands are already zoned for development and are likely to be brought forward for development in any event, I concur with the applicant's assessment that no significant cumulative impacts on agronomy are likely to arise.

11.10.63. **Conclusion on Agronomy**

11.10.64. I have considered all of the written and oral submissions made in relation to agronomy and the relevant contents of the file including the EIAR and relevant updates provided to the oral hearing. Profound adverse residual impacts on 1 No. land parcel will arise due to the extent of permanent land take, while moderate adverse residual impacts will arise for a number of other land parcels, again primarily due to the extent of permanent land take at construction phase. The potential for other significant adverse agronomy impacts (such as severance, access, services and disturbance) and on agronomy in the wider county and region can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

11.10.65. Notwithstanding these residual impacts, having regard to the nature and location of the receiving environment, the zoning of the majority of the agricultural lands for economic development (with a likely natural reduction in agricultural activity), the commitment to return temporary land take and to mitigate the impacts on farming operations, I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on agronomy.

11.11. Land, Soil, Water, Air and Climate – Soils and Geology

11.11.1. Introduction

11.11.2. Soils and Geology are addressed in Chapter 20 of the EIAR. Appendices A20.1 to A20.9 include ground investigation, monitoring and laboratory data, a review of potential contamination sources, conceptual and geological models, a Land Contamination Interpretative Report and geological cross-sections. Figures 20.1 to 20.15 include baseline mapping for various parameters while Figure 20.16 indicates settlement contours.

11.11.3. Methodology

11.11.4. The chapter considers: soils and superficial geology; bedrock geology; current/historic mining sites; Irish Geological Heritage sites; radon and ground gas; contaminated land; and the analysis undertaken to identify settlement risk arising from the TBM. Topography does not form part of the assessment on the basis that it is not a sensitive receptor in its own right with regard to soils and geology, while a limited assessment of geomorphological features was undertaken for the same reason.

11.11.5. A 250m corridor from the works area was defined as the study area for the baseline ground conditions. The baseline study included desk study, consultation with relevant statutory bodies, site walkovers and ground investigations. Five phases of ground investigation were undertaken to inform the assessment of ground conditions. This included groundwater and ground gas monitoring at 86 No. locations and 23 No. locations, respectively. The desk study also made use of historic published reports and ground investigations, including those undertaken in connection with the previous Metro North proposal and Luas projects.

11.11.6. The impact assessment methodology is set out in Section 20.2.4 of the EIAR for the various aspects of the soils and geology environment. This is generally in line with EPA, IEMA and IGI guidance. For land contamination, a risk-based approach is utilised. The methodology for predicting ground movement and building damage assessment is stated to be based on an approach adopted in worldwide tunnel projects including London Crossrail and High Speed 2 in England. This is based on a three phase assessment, with Phase 1 and the initial analysis for Phase 2 (Phase

2a) undertaken as part of the preliminary design and the completion of Phase 2b and Phase 3 undertaken by the detailed designers of the Design and Build Contractor (refer to Appendix A5.17, Building Damage Report). It is stated that Chapter 20 only considers effects of settlement on receptors relevant to soils and geology, with settlement effects on the built environment and utilities etc. considered in other chapters, where appropriate.

11.11.7. **Baseline**

11.11.8. The baseline soils and geology environment is described in Section 20.3 of the EIAR under various heading from both a regional setting perspective, and for each of the four Assessment Zones (AZ1 to AZ4). The associated Figures support the baseline description and the geological cross-sections contained in Appendix A20.9 illustrate the soils and geology baseline, supported by the borehole data from Appendix A20.2.

- **Regional:**

- Topography: Gentle surface gradients with small areas of higher gradients generally associated with river features. Topography varies from c.7m AOD at the northern extent of the study area to a high of c.70m AOD in the vicinity of Dublin Airport, then reducing to sea level at the River Liffey before rising to c. 20m AOD in the vicinity of Charlemont.
- Geomorphology: Shaped principally from glacial activity. The glacial features encountered are typically linear and oriented north west to south east.
- Geohazards: The GSI karst database does not indicate any karst features within the study area and the GSI Landslide Susceptibility Map shows the majority of the study area to be of low susceptibility to landslides, with small areas classified as moderately low or moderately high associated with areas of higher ground gradients.
- Hydrology: Majority of the study area is located within the Liffey and Dublin Bay Catchment (WFD Catchment ID 09). North of Dublin Airport, the study area is located within the Nanny Delvin Catchment (WFD Catchment ID 08). Watercourse flow is generally in an east to south-east direction.

- Soils and Superficial Geology: The footprint of the project outside urban areas is underlain by Grey Brown Podzolics. Urban soils are the Teagasc classification for soils within an urban area without any further classification. GSI mapping suggests the subsoils primarily consist of till derived from limestone along with areas of alluvium and limestone derived gravels. The till is generally low permeability and cohesive apart from subordinate (although locally extensive) granular horizons, with high strength and low compressibility, i.e. black and brown boulder clays. These were encountered extensively within the ground investigation and described generally as firm to very stiff brown slightly sandy gravelly clay with variable cobble content.
- Bedrock Geology: Regional bedrock geology comprises folded Carboniferous Tournasian limestone, and Viséan limestone and calcareous mudstone. The heavily faulted older Tournasian rocks are primarily present towards the north and include the Tober Colleen and Malahide formations, and the Waulsortian limestones. An anticline axis is present in the Swords area with an associated syncline axis just to the south of the M50, both trending south east to north west. The Viséan limestone and calcareous mudstone of the Lucan Formation are primarily present south of the M50 Motorway. More particularly, the bedrock geology can be described as follows:

The Malahide formation is predominant towards the north of the project (areas AZ1 and AZ2) and where encountered was described as 'strong, locally medium strong indistinctly thinly laminated dark grey argillaceous bioclastic limestone'.

The Waulsortian Formation is only present within the vicinity of Dublin Airport (area AZ2) and was typically described, where encountered, as 'strong to extremely strong bedded to massive grey and locally black fin-grained siliceous limestone'.

The Tober Colleen Formation is present at the southern end of areas AZ2 and AZ3 and was typically described, where encountered, as 'strong to

very strong interbedded or interlaminated dark grey to black calcareous mudstone and argillaceous limestone’.

The Lucan (calp) formation is present throughout area AZ4 and was typically described, where encountered, as ‘strong to moderately strong thinly bedded to thickly laminated dark grey or black calcareous limestone’. More generally, it consists of muddy limestone beds inter-bedded with calcareous shale beds, with pyrite in the majority of samples.

- Hydrogeology: The study area falls within the Swords and Dublin groundwater bodies, both classified as Poorly Productive Bedrock. Smaller areas around Swords and Dublin Airport are designated as Industrial Facilities and classified as Poorly Productive Bedrock. GSI bedrock aquifer classification identifies the majority of the study area as LI (Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones). Areas around Swords and Dublin Airport are classified as PI (Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones). The study area is largely classified as Low vulnerability to contamination, with areas up to Very High vulnerability around Swords, Dublin Airport and Dublin City Centre, typically associated with bedrock at the ground surface or more highly permeable superficial geological deposits. Groundwater levels were determined from boreholes installed during the GI works.
- Current and Historic Mining Sites: No active or historic mines within the study area. No active quarries, sand or gravel pits, but several historic pits and quarries noted, with the potential that localised small-scale quarrying may have taken place that is not shown on historic mapping. With regard to the potential for future aggregate extraction, the majority of the study area is classified as a Low Potential, with Areas of Moderate Potential around Swords and the city centre, and areas up to Very High Potential recorded around Dublin Airport and Griffith Park Station. Higher potential areas are primarily associated with watercourses.
- Irish Geological Heritage Sites: GSI has compiled a list of sites proposed for designation as Natural Heritage Areas (pNHAs) and a secondary list of

County Heritage Sites, which may be considered for protection at local authority level. Geological Heritage Sites within each AZ are detailed below.

- Radon and Ground Gas: Baseline radon risk illustrated in the EPA Radon Map of Ireland. 'Ground gas' (e.g. carbon dioxide, methane, carbon monoxide, hydrogen sulphide or VOC vapours) records were reviewed to identify risk.
- Contaminated Land: A number of potentially contaminative historical land uses and potential contamination sources were identified from a review of available records, including extractive industries, industrial estates and factories, transport infrastructure (e.g. airport, fuel stations and railways) and tanks. Refer to Land Contamination Interpretative Report in Appendix A20.8 and the tables of soil, leachate, groundwater and ground gas data screening in Appendix A20.5 and locations where assessment criteria have been exceeded in Figure 20.13 (soils) and Figure 20.14 (groundwater) as well as Figure 20.15 (asbestos fibres).
- Geochemical Baseline: A review of the Dublin SURGE Project undertaken by GSI found that heavy metals and Polycyclic Aromatic Hydrocarbons (PAH) were detected in soils across the city while polychlorinated biphenyl was detected at low concentrations in isolated samples. Concentrations of lead, copper, zinc and mercury were strongly influenced by human activities, such as industry, combustion and traffic while other metallic elements are related to the regional bedrock material. The greatest concentrations of PAH were in the city centre. Of the 1,058 sampling locations in the SURGE dataset, only 28 are within the project study area.
- **Area-by-Area:**
 - While the above gives an overview of the soils and geology baseline, considerable further detail is provided on an area-by-area basis in Sections 20.3.2 – 20.3.5 of the EIAR, and to avoid undue repetition I refer the Board to those sections.

11.11.9. Potential Impacts

11.11.10. Do-Nothing Scenario

11.11.11. In the Do-Nothing scenario there would be no disturbance or change to the baseline conditions for soils and superficial geology, bedrock geology, current/historic mining sites, Irish geological heritage sites or radon. Some areas of potential land contamination would remain in place and remain unaddressed. Such impacts are assessed as having an **imperceptible** significance.

11.11.12. Construction Phase

11.11.13. Potential impacts that could arise during the construction phase are associated with:

- Loss of soil cover and soil sealing.
- Degradation in chemical or organic quality resulting from the stripping, storage and reinstatement of soils during construction.
- Soil erosion and compaction.
- Stability impacts due to disturbance of superficial deposit and/or bedrock geology during earthworks and tunnelling, including settlement effects.
- Removal, storage, placement and disposal of soils, superficial geological deposits and bedrock from earthworks and tunnelling.
- Loss of geological heritage /scientific value/ economic value.
- Risk of encountering contaminated ground, including potential human health and environmental impacts arising from the excavation, handling, on-site processing, transport and off-site disposal and recovery.
- Risk of contamination of uncontaminated soils and geology by construction activities such as accidental fuel spills and the introduction of new contaminant migration pathways via temporary storage of contaminated materials and piling.
- Contamination of soil and water by materials used for construction (e.g. via use of TBM).
- Removal and/or obscuring of any features of geological or geomorphological interest and importance.

11.11.14. With regard to the various soils and geology topics, the following impacts are identified:

- Geomorphology: **Imperceptible** impacts. While some permanent loss of parts of geomorphological features such as glacial lineations and meltwater channels, where they intersect with surface works, may occur, the magnitude of impact is small adverse, with the features having 'Low' sensitivity.
- Soils and Superficial Geology: **Imperceptible** impacts⁴⁸ for most units of both soil and subsoil as much of the project is within urbanised areas of mostly low soil sensitivity. The exception is a **Slight** impact for loss of the Medium sensitivity Elton Association soils in areas AZ1, AZ2 and AZ3.

Tunnelling and station construction along the alignment will result in the production of large quantities of superficial deposits, the majority of which comprises glacial till with some smaller volumes of alluvium and gravels derived from limestones. While the excavation volumes are high it is stated that the shallow geology does not have heritage value and is not considered to have future economic value.

- Bedrock Geology: **Imperceptible** impacts. While large quantities of carboniferous limestones of the Malahide, Waulstorian, Tober Colleen and Lucan Formations will be excavated, this bedrock geology does not have heritage value and is not considered to have future economic value. The Lucan Formation is identified as having high concentrations of pyrite which may limit its reuse within the project for certain uses.

A temporary benefit is identified as new areas of subsurface geology are exposed, which will allow refining of geological information for the Dublin area.

Karst features are not indicated in the study area by published information. Waulstorian Limestone near ground surface at the proposed Dublin Airport Station could be prone to formation of solution features, however the risk of these being present or forming is considered low based on GI conducted to date and the very long time period over which these features form.

⁴⁸ Note that the impacts associated with the management of the subsurface materials are addressed separately (see Material Assets section).

- Current and Historic Mining Sites: **Imperceptible to Slight** impacts, since it is considered unlikely that mineral extraction within the study area will be economically or environmentally viable.
- Irish Geological Heritage Sites: **Imperceptible** impacts.
 - In the case of Glasnevin Cemetery, the TCD Museum building and the Oscar Wilde Statue, this is due to their distance from the works and outside the zone of predicted measurable settlement effects.
 - The GPO and 51 St Stephen's Green, which are designated as Heritage sites on the basis of decorative stone used in their construction, may be subject to impact from settlement effects during construction. Phase 2a settlement assessment for the GPO indicated a Slight (Category 2) damage classification, while the Phase 2a assessment for 51 St Stephen's Green indicated a negligible damage category. Both buildings were recommended for Phase 2b assessment on the basis of being a 'Special Building'.
- Radon and Ground Gas:
 - **Slight** impacts from radon, due to creation of voids and confined spaces during construction in which radon can accumulate, potentially to hazardous levels, although the area is generally of low radon potential.
 - **Moderate** risk of ground gases accumulating in voids or other enclosed spaces in all AZs, particularly carbon dioxide.
- Contaminated Land:
 - Construction has the potential to result in both adverse (e.g. exposure of construction workers to contaminants) and beneficial (e.g. removal of contaminated material) effects on baseline land contamination conditions. A preliminary and updated Conceptual Site Model was developed to define the relationships between potential contamination sources, receptors which could be affected by contamination and the exposure pathways (see Appendices A20.3 and A20.7, respectively).
 - Table 20.57 of the EIAR sets out the land contamination risk summary for the construction phase. This ranges from **Negligible** to **Moderate** on the

basis of the worst-case scenario for each potential pollutant linkage. The **Moderate** risks are identified for human health (both workers and residents) due to dermal contact, ingestion and inhalation of soil, dust, asbestos fibres and waters as well as due to migration of ground gases and vapours in the case of site workers. **Moderate** risks to surface and groundwater are also identified due to leaks and spills from plant and materials storage.

- **Negligible** impact from TBM consumables (e.g. spoil conditioning additives, bentonite slurry and greases) due to their biodegradable nature or being a low environmental hazard (bentonite, which is a natural clay and which is continuously recycled in the tunnelling process).
- Foundation piling is identified as introducing a potential new contamination pathway, such as at the Broadmeadow River crossing. Risk is considered to be Low from historical potential contaminant sources given the absence of previous contaminative activities, however risk remains from leaks and spills from plant and materials storage during construction.

11.11.15. Operational Phase

11.11.16. Potential impacts that could arise during the operational phase are associated with:

- Soil erosion and degradation via surface run off from scheme drainage.
- Limiting access to mineral resources for future extraction.
- Alteration of groundwater flows and/or introduction of permanent new migration pathways for contaminants.
- Introduction of new confined/enclosed spaces resulting in gas and vapour accumulation with consequent risks to human health.
- Leaks/spills of contaminative materials from trains and other plant.
- Direct exposure of end users and maintenance workers to contaminated materials in the subsurface.

11.11.17. With regard to the various soils and geology topics, the following impacts are identified:

- Soils and Superficial Geology: **Imperceptible** impacts due to the installation of drainage systems that will manage surface waters and limit interactions with soils and superficial geology.
- Bedrock Geology: **Imperceptible** impact due to lack of further disturbance or excavation of bedrock geology.
- Current and Historic Mining Sites: **Imperceptible** impacts as, while there are areas of moderate to very high aggregate potential, future economically viable mineral extraction in the study area is considered unlikely.
- Irish Geological Heritage Sites: **Negligible** impacts, as settlement effects will occur over the short-term.
- Radon and Ground Gas: **Imperceptible** impacts due to sealing of underground spaces from the surrounding subsurface which will limit the potential for any radon to enter below ground spaces. These below ground spaces will be ventilated which will reduce the likelihood of gas build up.
- Contaminated Land: Contamination remaining within the development footprint may present risks to future site workers or passengers. Contamination may also be introduced through leaks/spillages or from trains, plant or structures acting as a preferential pathway for contaminant transport.

Table 20.61 of the EIAR sets out the land contamination risk summary for the operational phase. This ranges from **Negligible** to **Moderate/Low** on the basis of the worst-case scenario for each potential pollutant linkage.

11.11.18. Section 20.5 of the EIAR considers the two options for O'Connell Street Station (i.e. with or without the aboveground Dublin Central commercial development) and the MetroLink grid connections, which are part of a separate application to the Board.

11.11.19. With regard to O'Connell Street, no significant difference in impacts is identified with regard to soils and geology since the below ground works are very similar in either scenario. With regard to the MetroLink cable route options, potential impacts are stated to be similar to those assessed for the main MetroLink construction and operation.

11.11.20. **Mitigation Measures**

11.11.21. Mitigation measures are set out in Section 20.6 of the EIAR, where it is noted that some mitigation measures apply across different chapters and that measures associated with groundwater and other dewatering and discharge activities are considered in Chapter 19 'Hydrogeology'. The mitigation measures include:

- Geomorphology; Current and Historic Mining Sites; and Bedrock Geology:
 - No specific mitigation measures are proposed, given the lack of significant effects.
- Soils and superficial geology:
 - Permanent soil loss is unavoidable but the CEMP will include a strategy and methods for addressing impacts associated with topsoil excavation, movement, temporary storage and removal. The Materials and Waste Management mitigation measures are also relevant.
- Geological Heritage Sites:
 - Completion of Phase 2b settlement analysis during development of the detailed design will inform the requirement for any mitigation measures to protect the heritage value of the GPO and 51 St Stephen's Green.
- Radon and Ground Gas:
 - Monitoring programme for tunnels, excavations and other enclosed spaces during construction to identify whether radon migration and build up is occurring. If the workplace reference level is exceeded, safe systems of work will be developed (e.g. use of respiratory equipment and working time restrictions).
 - Ground gas risks for workers within confined spaces will be mitigated by the development of safe systems of work (e.g. personal protective equipment and respiratory equipment).
- Contaminated Land:
 - Further ground investigations and ground gas/groundwater monitoring prior to construction to inform the detailed design, allow detailed risk assessments, selection of appropriate construction procedures and additional mitigation/ remedial design that may be required. Also used to

inform the materials management strategy and beneficial reuse of suitable soils.

- Watching brief during ground investigation/ construction works to identify potential presence of previously unidentified contamination. Previously unidentified contamination will be recorded, risk assessed and managed via a remedial strategy, as required.
- Establishment of H&S and waste management procedures for working with potentially contaminated soils and water, including risk assessments for construction within potentially asbestos contaminated ground. Waste management procedures including material containing asbestos will take into account the provisions of the Waste Management Act.
- Risks to staff and neighbouring site users will be mitigated by the implementation of the abovementioned procedures in combination with appropriate systems of work, including PPE as a last resort. If unrecorded contamination is encountered, works should be stopped and procedures re-assessed to confirm the working methods remain appropriate.
- Monitoring programme to determine whether construction activities are affecting groundwater/ surface water quality in areas of high receptor vulnerability. If a change in baseline conditions and/or unacceptable risk is identified, further mitigation may be required. (Mitigation measures also separately proposed in Hydrology and Hydrogeology chapters).
- A stockpile and materials movement management plan will be developed as part of the CEMP to include construction of stockpile bunds and covers to reduce potentially contaminated runoff and generation of leachate, isolating from open excavations and drainage points, damping down to prevent wind-blown dust and monitoring of stockpile emissions.
- Fuelling/maintenance of construction vehicles will be undertaken in designated and controlled zones with measures incorporated to prevent potential spillages (e.g. bunds and interceptors). Incident Response Plan will be developed detailing the procedures to be implemented in the event of such spillage, including requirements for training, equipment (e.g. spill

kits), response plans for likely scenarios and methods for logging incidents.

- Assessment prior to construction to determine the most appropriate building material for construction with respect to the existing ground conditions and the potential for chemical attack via direct contact with contaminants in soil and groundwater.
- Location specific risk assessment undertaken, prior to reuse and placement of any excavated material, to demonstrate that it will take into account the provisions of the Waste Management Act, relevant guidance and that it is suitable for reuse.
- Specific assessment of the presence of pyrite for the Lucan Formation which will be excavated during construction to account for potential swelling properties and environmental risks and to inform potential reuse options. Material will be required to comply with appropriate specifications for earthworks.
- Where piling is proposed, piling risk assessments will be undertaken at detailed design to inform appropriate piling techniques and designs.
- Investigation of ground conditions for the MetroLink cable route options to determine any requirements for additional mitigation.

- **Cross-Topic Mitigation:**

Given potential interactions with other environmental topics, some of the proposed mitigation measures for those chapters are also stated to be applicable to Soils and Geology, including:

- Materials & Waste Management:
 - Principal Contractor will be responsible for the compliant management of all construction waste and for preparing and implementing CEMP, identifying construction methodologies and procedures to minimise the impact.
 - CEMP will include a Construction and Demolition Waste Management Plan incorporating the measures outlined in the Spoil Management

Strategy and identifying how waste will be managed and how waste prevention and minimisation principles will be applied.

- Excavated Material Management Strategy has been prepared to provide an initial summary of excavated material arisings and potential methods and sites for reuse, recovery, recycling and disposal. Strategy is to be used by the Contractor(s) to develop an Excavated Materials Management Plan to be followed during the excavation phase.
 - Options for beneficial reuse of clean, suitable soil and stone material in accordance with Article 27 of the Waste Management Act will be sought to prevent the need to classify it as waste. Material not included within the Article 27 application would be classified as waste and require disposal. Should an Article 27 application be unsuccessful then secondary mitigation would involve consignment of suitable excavated material to Soil Recovery Facilities.
- Hydrogeology:
 - Sediment Erosion and Pollution Control Plan as part of the CEMP to include measures to manage soil and silt-laden water as well as accidental leaks to ground and monitoring to ensure compliance with relevant EQSs.
 - Agronomy:
 - Dust Management Plan (e.g. covering material loads, wheel washing and road sweeping).
 - Loss of agricultural land is permanent and will be addressed in the statutory compensation process. The project has been designed to minimise land take so that only required lands are acquired. Land acquired on a temporary basis will be reinstated and returned to the landowner.

11.11.22. **Residual Impacts**

11.11.23. Following implementation of the mitigation measures, no significant residual impacts on soils and geology are anticipated as a result of the construction and operation of the proposed development.

11.11.24. **Cumulative Impacts**

11.11.25. Potential cumulative impacts on soils and geology are addressed in Section 30.4.12 of the EIAR. Following a screening exercise, a total of 43 No. projects were screened in for potential cumulative impacts, as listed in Table 30.16 of the EIAR. Of these, 18 No. projects were screened in for potential cumulative impacts from the potential for settlement if their construction phase occurred at the same time as that for the proposed project, with 2 No. developments at Dublin Airport were screened in for potential cumulative impacts arising from potential alterations to source-pathway-receptor linkages relating to an infilled quarry in the area. 25 No. projects, including one BusConnects development were screened in for potential cumulative impacts associated with soil loss. These impacts are assessed as negative and **Slight**.

11.11.26. In the operational phase, no other developments were considered likely to result in a cumulative impact in relation to soils and geology.

11.11.27. No specific mitigation measures over and above those already proposed for the proposed development are identified for cumulative impacts. The stated reason for this is that, in most cases the mitigation included in the proposed project, together with standard mitigation measures which would be implemented by the other developments, will be sufficient to reduce cumulative impacts so that they are not significant.

11.11.28. **No significant residual cumulative impacts** on soils and geology are identified in the EIAR.

11.11.29. **Oral Hearing**

11.11.30. **Errata**

11.11.31. A number of errors in the appendices and figures associated with the Soils and Geology chapter of the EIAR were identified by the applicant and are listed in the Final Schedule of Errata (Ref. OH374) submitted at the oral hearing on 27th March 2024. The majority of the errors are associated with the inclusion in the submitted documentation of proposed borehole locations which were not drilled.

11.11.32. This issue is explained in more detailed in a document entitled 'Additional Errata Relating to Chapter 20', which was submitted at the oral hearing on 26th March 2024 (Ref. OH345). This states that certain borehole locations which

appeared in an early drawing of proposed borehole locations, which did not form part of the GI scope, and which were not drilled, were included in error. The erroneous boreholes are contained in Figure 20.6, Appendix A20.1, A20.2 and A20.8 of the EIAR.

11.11.33. The 21 No. erroneous borehole locations are identified in Table 1 of the errata document and are spread across areas AZ1, AZ3 and AZ4. The applicant stated that, as no data was derived from these borehole locations, there is no impact on the geotechnical assessment or any of the conclusions reached. It contends that adequate geological data was available from the 42 boreholes in the GI scope and data from existing 215 boreholes. A further 30 boreholes were added in the Phase 2 GI and included in the assessment.

11.11.34. Updates

11.11.35. ***Tunnel Lowering and Additional Pumping Stations***

11.11.36. At the oral hearing, the applicant proposed lowering the tunnel alignment by 5m between St Stephen's Green and Charlemont stations to avoid impacts on existing buildings. This localised lowering of the tunnel introduces a new low point, necessitating a sump and associated pumping station.

11.11.37. The applicant submitted an EIAR Addendum (Ref. OH193) regarding the tunnel lowering. No significant additional soils and geology impacts are identified. The two additional underground low point sump pumping stations are at Leinster Street South and Hatch Street 's Green. Drawings of these two pumping stations and EIAR Addendums were submitted at the oral hearing on 6th March 2024 and 20th March 2024 (Ref. OH193 and OH262, respectively). No significant additional soils and geology impacts are identified.

11.11.38. ***Hydrogeological Updates***

11.11.39. Various documents were submitted by the applicant in relation to hydrogeology, particularly with regard to the dewatering assessment. These are addressed further in the hydrogeology section of this report but a number are also of relevance to aspects of soils and geology.

11.11.40. Cumulative Impact Assessment

- 11.11.41. An updated cumulative impacts addendum was submitted to the oral hearing on 28th February 2024 (Ref. OH98). The Addendum comprises a more up-to-date review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application.
- 11.11.42. Where potential cumulative impacts are identified, they are associated with the construction phase and relate to potential alterations to source-pathway-receptor linkages to ground and/or settlement. It is contended that any cumulative settlement impacts can be addressed via negotiation to ensure works are not undertaken concurrently or potentially via ground treatment. Potential cumulative effects relating to ground contamination will need to be defined based on the extent and nature of the works.
- 11.11.43. **No additional significant residual cumulative impacts** on soils and geology are identified.
- 11.11.44. **Post-Oral Hearing**
- 11.11.45. A further cumulative impact assessment update was submitted on 31st January 2025 as part of the applicant's response to the Wild Ireland Defence CLG oral hearing submission.
- 11.11.46. In relation to soils and geology, the potential for construction phase cumulative impacts is identified with respect to a number of projects. The potential impacts are again related to settlement and/or alteration of source-pathway-receptor linkages. Proposed mitigation, as with the earlier CIA, is negotiation to ensure works are not undertaken concurrently. **No additional significant residual cumulative impacts** on soils and geology are identified.
- 11.11.47. A MetroLink PFAS Management Strategy for Dublin Airport was also submitted by the applicant as part of their abovementioned response, and incorporating an EIAR Addendum. This was developed with reference to a recent DAA report on PFAS contamination within and around Dublin Airport, arising from historical airport operations and further assessment by TII.
- 11.11.48. It states that there is no change in significance of impact for the majority of attributes assessed under soils and geology, with the potential risks from PFAS being primarily associated with land contamination and potential impacts on human

health (exposure of workers or exposure/migration during transport), surface and groundwater (mobilisation) and material management (cost and landfill usage).

11.11.49. The human health measures include:

- Design considerations which ensure no preferential pathways created that will result in PFAS mobilisation into groundwater and/or surface water.
- Construction methodology makes use of TBM and isolates excavation sites from surrounding soils, bedrock and groundwater to control potential mobilisation of PFAS.
- All potentially contaminated material will be removed from the construction sites and isolated on the Triage and Material Management Centre until such time as the presence of PFAS is identified. Contaminated material will then be exported for treatment or disposed at appropriately licensed facilities.
- PFAS contaminated material will be transported in a standalone fleet of vehicles that will be cleaned down daily thereby minimising the potential for cross-contamination.
- Runoff from vehicles, stockpiles of contaminated material or potentially contaminated works areas will be collected and treated using a carbon filter before re-use or disposal.
- Dust management plan will be implemented in line with EIAR.
- Risk awareness training and PPE will be provided for construction workers with continuous monitoring of the working environment.

11.11.50. It is stated that the proposed mitigations do not result in an increased significance of effect to that presented in the EIAR.

11.11.51. The water related mitigation measures include:

- Delineation and segregation of the works site from any adjacent site with a dedicated access route.
- All excavated material will be removed to the PFAS Triage and Holding Centre for appropriate management.

- Any instream works will be undertaken and completed in dry or very low flow conditions. Any potentially contaminated water will be treated as per the methods identified in Section 7 of the PFAS Management Strategy (e.g activated carbon filtration).
- To prevent any cross contamination, dedicated plant and equipment will be used for the activity, stored within a secure location and cleaned regularly during each shift with the water from this process also segregated and stored for suitable disposal.
- Any diversion works and change of flows are to be monitored for any increase levels of PFAS during the full progression of the works. Suitable barriers are to be procured to limit PFAS migration downstream of any inline watercourse works, diverting the river and realigning the river at completion of the instream culvert; and
- Backfilling will be undertaken with clean suitable fill material only.

11.11.52. With the implementation of these mitigations, it is contended that there will be **no increased significance** of impact to that presented within the EIAR.

11.11.53. With regard to material management, the worst-case assumption that 100% of material excavated at Dublin Airport contains PFAS increases the quantity of hazardous excavated material requiring management (an additional c. 304,000m³). While a large amount of this material may ultimately be suitable for treatment rather than landfilled, it will not impact on Ireland's commercial hazardous waste landfill capacity in any event, as it will be exported to Europe. Therefore, it is stated that the impacts associated with the PFAS management strategy presented in the EIAR do not change.

11.11.54. **Assessment**

11.11.55. This section should be read in conjunction with the hydrogeology section of this report and the consultant's report prepared by Tyréns Group AB, which is contained in Appendix 1.

11.11.56. The issue of excavated material management is addressed separately in Sections 9.19 and 11.19, while the issue of settlement and building damage is addressed in Section 9.10 of this report and in the abovementioned Tyréns report.

11.11.57. I note the submissions from Geological Survey Ireland (S56, 1FS16) which do not raise any concerns regarding soils and geology but identify relevant GSI datasets and seek copies of site investigation reports and records/visits to document significant new exposures of bedrock. The applicant, in response, agreed to this and I do not consider that a condition is necessary in relation to this matter.

11.11.58. Construction Phase

11.11.59. ***Adequacy of Ground Investigations***

11.11.60. Section 4 of the Tyréns report relates to geotechnical issues. It considers that the applicant has made a thorough investigation of the ground conditions along the alignment and that the geotechnical conditions are generally good for tunnelling and underground construction, although it notes that they are complex at some station locations such as Glasnevin.

11.11.61. The report considers that the geotechnical investigations and evaluations have been carried out in line with industry best practice and are appropriate given the stage of the project. It notes that further investigations will need to be carried out during the next phase of design development and by the D&B Contractor in order to bring the investigations to a level required by the applicable standards and also to investigate in further detail geotechnical conditions at particularly sensitive locations such as the locations of the pumping sumps and particularly sensitive buildings in area AZ4.

11.11.62. In area AZ4, Tyréns note the abovementioned issues regarding non-existing boreholes and the correct interpretation of ground conditions. This issue had been raised by Earldev and their consultants, AGL Consulting (S79), in relation to a building known as the Arthur Cox building at 13-14 Earlsfort Terrace at the oral hearing on Day 8 (Ref. OH126 to OH133). Although Earldev subsequently submitted a letter confirming that it had reached an agreement with TII in relation to matters of concern and that they support the project, the issue remains.

11.11.63. The Applicant responded to this matter at the oral hearing on 5th March 2024 (Ref. OH155) and again with the submission of further documents (Refs. OH191 and OH345) where these borehole issues were addressed. Tyréns consider that this matter raises some concerns regarding whether the applicant had obtained all of the

available existing GI information and correctly interpreted the ground conditions at particularly sensitive locations.

- 11.11.64. While Tyréns consider that issues such as this can be addressed during the detailed design by the D&B Contractor, they recommend that a condition be attached to require that additional geotechnical investigations be carried out for the detailed design of the works in accordance with best practice and that the Expert Panel should review the scope of the additional investigations and the adequacy of the interpretation of them at sensitive locations, such as locations where SCL works are proposed or where buildings are located that require a Phase 3 Building damage assessment.
- 11.11.65. Subject to such a condition, Tyréns consider that the risks associated with ground conditions have been satisfactorily identified and addressed by the applicant and that subject to additional conditions, as specified above, the applicant's interpretations of the ground conditions and their proposals for dealing with geotechnical risks are acceptable.
- 11.11.66. The applicant contends that the investigations conducted to date are sufficient for the current stage and preliminary design of the project. In terms of the number of boreholes utilised in the assessment to date, the applicant notes in document Ref. OH345 that Eurocode 7 recommends "...for linear structures such as roads, railways, channels, pipelines, dikes, tunnels, and retaining walls, a spacing of 20 m to 200 m...". Considering the 287 No. boreholes utilised to define the MetroLink ground model over the c. 19km alignment length, this equates to an average distance between investigations of c. 66m, i.e. well within the recommended spacing of 20m to 200m.
- 11.11.67. I note that Section 20.8 of the EIAR ('difficulties encountered in compiling information') states that access to Boland Car Dismantlers yard for GI works was not possible and that uncertainty therefore remains regarding contamination and ground conditions in that area. Given the use of the site as a car dismantlers yard, the EIAR states that some ground contamination, such as fuels and lubricants, is likely to be present. Another area of residual uncertainty regarding contamination and ground conditions is in built-up and city centre areas, where GI works were only possible

outside the footprint of existing buildings and structures. Clearly, this can only be resolved when the buildings/structures are demolished.

11.11.68. I am satisfied that a reasonable programme of ground investigation was undertaken for EIAR purposes and that the interpretation of subsurface soils and geology is likely to be reasonably accurate and sufficient for the Board to reach a reasoned conclusion for EIA. There is always an inherent degree of uncertainty regarding subsurface conditions that cannot be fully resolved at this stage in a project lifecycle. I am satisfied that the applicant has adopted a conservative approach to their assessment and has identified the correct range of likely significant impacts. I agree with the imposition of the condition recommended by Tyréns in relation to further GI works and the involvement of the Expert Panel.

11.11.69. ***Contaminated Land***

11.11.70. Having reviewed the information submitted by the applicant and all written and oral submissions made, I agree with the EIAR assessment that the only potential for significant soils and geology impacts in the construction phase are associated with contaminated land risks (encountering or mobilising existing contamination or contamination of soils and geology as a result of MetroLink construction activity) and ground gas risks.

11.11.71. Tyréns have addressed the issue of subsurface contamination in Section 5 'Hydrogeological Issues' of their report and I also refer to the Hydrogeology section of this report.

11.11.72. It is clear from reviewing Appendix A20.8 'Land Contamination Interpretative Report' that the applicant has utilised both existing GI data and their own GI data to develop a reasonably good understanding of potential land contamination risks along the proposed alignment. Clearly, in a historic city environment there are many potential sources of existing subsurface contamination and in terms of uncertainties, there are both 'known unknowns' and 'unknown unknowns', as demonstrated by the PFAS issue at Dublin Airport which arose during the oral hearing. For the purposes of EIA, I am satisfied that the assessment of potential risk sites is adequate, but it will need to be supplemented during the detailed design and construction phases, as outlined above and as committed to in the EIAR and CEMP.

- 11.11.73. The highest land contamination risks identified were Moderate and the CEMP sets out detailed measures for the control of such risks (see Table 6.5 of CEMP).
- 11.11.74. Residents of Coke Oven Cottages, in their written submission, raised the issue of creosote at the Royal Canal, which they contend is present in the soil and canal lining and that it may result in negative impacts. TII's response was that Waterways Ireland had informed them that creosote application to railway sleepers had occurred historically at a site to the south of the Royal Canal near the proposed Glasnevin Station (west of Shandon Gardens). The applicant states that this information has been taken into account in the baseline and impact assessment (potential contamination source code C99C refers). Prior to construction, in situ contamination levels will be ascertained and the resultant design and construction methodology developed to manage any potential environmental or health and safety risks.
- 11.11.75. I am satisfied that the proposed contaminated land control and mitigation measures will be adequate to ensure that no significant residual impacts on soils and geology are likely to occur.
- 11.11.76. With regard to the issue of existing PFAS contamination at Dublin Airport, I am satisfied that the PFAS Management Strategy for Dublin Airport, as detailed above and in more detail in Section 10.2 of this report, presents a comprehensive worst case scenario, whereby all material excavated from the Dublin Airport area (tunnels, station and portals) is assumed to be contaminated with PFAS and brought to a segregated Triage and Material Management Centre at the Dardistown Depot site, where it will be temporarily held in separate stockpiles, covered and on an impermeable surface surrounded by cut-off drains and berms, pending testing results. If the material is not contaminated, it will be treated as normal spoil and if it is contaminated, it will be exported to Europe for treatment and disposal. The submitted information included an EIAR Addendum assessing the worst case scenario that all this material is contaminated.
- 11.11.77. I consider the applicant's approach to be suitably conservative and appropriate to the current stage of the project. There are inherent uncertainties with regard to the exact extent and nature of the historic PFAS contamination at Dublin Airport and it is appropriate that a worst case scenario be developed and assessed.

11.11.78. I am satisfied that the proposed management strategy and the mitigation measures contained therein is sufficient to ensure that there are no significant additional residual impacts associated with the mobilisation or spreading of existing PFAS contamination at the Airport and I note that the proposed development will not result in the introduction of any new PFAS contamination.

11.11.79. ***Other Impacts***

11.11.80. Other impacts on soils and geology during the construction phase as a result of excavations and tunnelling include loss of soil and bedrock geology, degradation of stockpiled soils due to erosion, compaction or other quality impacts, loss of features of geological heritage values or economically viable aggregate deposits.

11.11.81. I am satisfied that these other impacts will not be significant. While some geomorphological features will be impacted, they have low sensitivity. Similarly, while the proposed development will entail a very substantial amount of excavation with a total of c. 3 million cubic metres of soil, subsoil and bedrock excavated and deposited elsewhere, the impacts will not be significant due to the low to medium sensitivity of the soils and bedrock and its lack of any particular geological heritage or economic value.

11.11.82. Noting the results of the assessment undertaken, including ground investigation works and the gathering of borehole data from other developments and databases, I agree that Karst features are not likely to be encountered along the alignment.

11.11.83. With regard to mineral extraction, no significant impacts are likely given the location of the MetroLink within primarily urban and suburban areas.

11.11.84. With regard to Irish Geological Heritage Sites, the only sites with the potential for impacts are the GPO and 51 St Stephen's Green, as a result of settlement. Both buildings will be brought forward for further building damage assessment as 'Special' Buildings during detailed design, which will identify any required mitigation measures, and these buildings will be subject to monitoring during construction. As per Section 9.10 of this report, it is recommended that a general condition be included requiring that settlement related damage to buildings shall not exceed Category 1 (Very Slight).

11.11.85. With regard to radon and ground gas, I note that the applicant has identified potential risks rather than likely impacts. These gases are common and well-understood risks in subsurface confined spaces and subject to good working practices, such as monitoring, availability of PPE and respiratory equipment etc. and compliance with applicable H&S legislation I am satisfied that no significant residual impacts are likely to arise.

11.11.86. Operational Phase

11.11.87. Having reviewed the information submitted by the applicant and all written and oral submissions made, I agree with the EIAR assessment that the only potential for significant impacts on soils and geology in the operational phase are associated with remaining contaminated land risks associated with either existing contamination or spillages from MetroLink plant and infrastructure.

11.11.88. Table 20.61 of the EIAR sets out the land contamination risk summary for the operational phase. Moderate/Low risks are identified with regard to human health impacts as a result of contact with soil/dust or ground gases as well as on groundwater and surface water due to runoff from placed excavated material or migration of contaminated shallow groundwater through drainage channels. Subject to the land contamination mitigation measures outlined above, such as further GI and monitoring ahead of and during construction to identify contaminant issues, no significant residual impact or risk is identified. I agree with this assessment and consider that the construction phase will be the key to identifying and mitigating contamination impacts, particularly with regard to the PFAS issue. such that the residual risk during the operational phase is minimised.

11.11.89. With regard to the other soils and geology factors, I comment as follows:

- Soils, superficial geology and bedrock will not experience any further disturbance in the operational phase, and the sealed watertight nature of the underground stations and tunnels and the proposed drainage systems will manage surface water discharge in a sustainable manner.
- As with the construction phase, I consider that mineral extraction in the vicinity of the MetroLink project is highly unlikely given the nature of the receiving urban/suburban environment.

- Irish Geological Heritage Sites will not experience any potential impacts in the operational phase, as any settlement would occur during the construction phase.
- Radon and ground gas risks can be readily managed through good operational practices, including ventilation and monitoring and I am satisfied that no significant impacts are likely to arise.

11.11.90. Cumulative Impacts

11.11.91. In relation to cumulative impacts, I concur with the applicant's assessment that potential cumulative impacts on soils and geology are limited to the construction phase, should MetroLink and other projects be under construction at the same time and that the nature of any such potential cumulative impacts would be related to alterations to linkages between contamination sources and receptors. With the implementation of the proposed design and mitigation measures as outlined in the EIAR and CEMP, which generally comprise good practice construction practices for construction sites, and the implementation of similar measures on other construction sites, I am satisfied that no significant cumulative residual impacts on soils and geology are likely to arise.

11.11.92. Conclusion on Soils and Geology

11.11.93. I have considered all of the written and oral submissions made in relation to soils and geology and the relevant contents of the file including the EIAR and relevant updates provided to the oral hearing. I am satisfied that the potential for significant adverse impacts on soils and geology can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on soils and geology.

11.12. Land, Soil, Water, Air and Climate – Hydrology

11.12.1. Introduction

11.12.2. Hydrology is addressed in Chapter 18 of the EIAR. Baseline surface water quality laboratory results are provided in Appendix A18.1 – A18.3, with a ESB Networks construction methodology for the associated HV cable routes provided in Appendix A18.4 and a Flood Risk Assessment provided in Appendix A18.5. Figures 18.1 to 18.14 include details of surface water features, sampling points, catchments, proposed watercourse diversions and flood events.

11.12.3. Section 18.2 of the EIAR sets out various embedded design measures of the proposed development to manage drainage and pollution control, including: discharge of construction phase water and operational phase wastewater to public foul sewer; use of bunds and hydrocarbon interceptors; attenuation to greenfield runoff rates; use of Sustainable Urban Drainage Systems (SuDS); design of Broadmeadow viaduct to minimise flood risk and avoid in-stream works; and design of culverts to protect aquatic species, mammals and water quality.

11.12.4. Methodology

11.12.5. The hydrological assessment is stated to have been carried out in accordance with relevant guidance and best practice, including: EPA and European Commission guidance on EIAR preparation; the Water Framework Directive (WFD); the Planning System and Flood Risk Management, Guidelines for Planning Authorities (DEHLG & OPW); TII guidelines on Road Drainage and Water Environment (TII, 2015), Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes (TII, 2009) and Guidelines for the Crossing of Watercourses during Construction of National Road Schemes, (TII, 2008); and IFI Guidelines on protection of fisheries during construction works in and adjacent to waters (IFI, 2016)

11.12.6. The assessment established a study area, comprising all surface water bodies within the proposed alignment as well as lands within a c. 500m buffer either side of the centreline. The EIAR states that this is a conservative assessment for the likely zone for any interaction.

11.12.7. A desktop review was undertaken including flood data, water quality data and ecological and fishery/leisure importance of water features. A number of field and walkover assessments were also undertaken, as well as several rounds of chemical and biological water quality sampling and ecological surveys of watercourses. Consultation was held with the public and various statutory and non-statutory bodies, including Irish Water (now Uisce Éireann), DCC, Waterways Ireland, Iarnród Éireann and Inland Fisheries Ireland.

11.12.8. **Baseline**

11.12.9. In terms of regional hydrology, the proposed development falls within the Irish River Basin District as defined under the EU Water Framework Directive ('WFD', 2000/60/EC) and it lies predominantly within the Liffey and Dublin Bay Catchment (WFD Catchment Identification: 09), with the northern portion of the route within the Nanny-Devlin Catchment (WFD Catchment Identification: 08). Within the Nanny-Devlin Catchment, the alignment comes within 2 No. sub-catchments (Ballough and Broadmeadow sub-catchments) and within the Liffey and Dublin Bay Catchment the alignment comes within 3 No. sub-catchments (Mayne, Tolka and Dodder sub-catchments). The alignment crosses or is in the vicinity of a considerable number of watercourses, listed in Table 18.10 of the EIAR, all of which eventually outfall to the Irish Sea via coastal and transitional waters. These sub-catchments and watercourses are illustrated in Figure 18.1 of the EIAR. A considerable number of EPA hydrometric and water quality stations are located within the study area along the various watercourses.

11.12.10. In addition to these surface water features, the EIAR notes that there are a number of historical watercourses across Dublin which have been culverted or infilled. Due to these being shallow and sealed, it is stated that the proposed development will not disturb or affect any of these. These historical watercourses are illustrated in Diagrams 18.3 and 18.4 of the EIAR, and more clearly in Figures 18.6 and 18.7.

11.12.11. Certain watercourses crossed by the project have potential connectivity between hydrology and hydrogeology, due to the nature of the underlying water-bearing strata or bedrock. Those watercourses identified include the Broadmeadow

River, Ward River, Sluice River, Forrest Little Stream, Tolka River and the River Liffey.

11.12.12. The potential interface between the project and various ecologically designed sites, including European Sites, Natural Heritage Areas and proposed Natural Heritage Areas as a result of indirect hydrological connectivity is noted in the EIAR.

11.12.13. Section 18.4.3 of the EIAR provides a detailed area-by-area description of the various watercourses, with reference to their position relative to the proposed development and their water quality, ecological and WFD status. Overall, baseline surface water quality of watercourses within the study area, which were sampled over three rounds in 2018-2019 (provided in Appendices A18.1 – A18.3), is stated to be consistent with an urban to agricultural setting with no significant issues or variation in values recorded.

11.12.14. Table 18.12 of the EIAR lists the key water features along or within close proximity to the project according to their then-most recent WFD status and risk score, including the Broadmeadow River, Ward River, Sluice River, Mayne River, Santry River, Tolka River and River Liffey. All of the water bodies fall into 'Poor' or 'Poor to Moderate' status and all are 'At Risk' of not achieving their WFD objectives, with the exception of the Sluice River which is 'Under review'. The EIAR notes that these rivers (with the exception of the Sluice River) are highlighted in the then-draft 3rd RBMP with restoration as their objective.

11.12.15. The Flood Risk Assessment undertaken included a desktop review of baseline flood data and historic data, identifying the watercourses with a present day 'high probability' of fluvial flooding, i.e. an Annual Exceedance Probability (AEP) of 10%. These flood extents are illustrated in Figure 18.3 of the EIAR, with the MetroLink alignment overlaid.

11.12.16. The following potential sources of flooding are identified:

- Pluvial Flooding: Risk of temporary pluvial flooding along the entire alignment due to capacity constraints of the existing surface water network. The EIAR states that it is beyond the scope of the project to increase the capacity of the existing network.

- Fluvial Flooding: Risk of fluvial flooding from the proposed diversion of a tributary of Staffordstown Stream⁴⁹, Broadmeadow and Ward Rivers, Sluice River and a tributary, and the proposed diversion of the Turnapin Stream.
- Coastal Flooding: Risk of coastal flooding from the River Liffey at the proposed Tara Station.

11.12.17. The potential for climate change to result in an increased risk of flooding is also noted as a result of increased river flows, rainfall depth/intensity, and sea levels.

11.12.18. Table 18.15 of the EIAR provides a description of hydrological features along the route, including the current WFD status, WFD risk score and EPA ecological value of each and it rates the importance of each, based on standard TII criteria, commonly used in road schemes. The designated importance ratings range from 'Medium' to 'Extremely High'.

11.12.19. **Potential Impacts**

11.12.20. **Do Nothing Scenario**

11.12.21. In the Do-Nothing Scenario, there would be no resulting impacts on hydrology, although changes in the existing hydrological baseline as a result of zoned land along the corridor being developed would occur. This would result in an increase in impermeable hardstanding areas with changes to recharge and hydrological flow patterns.

11.12.22. **Construction Phase**

11.12.23. The following construction phase potential impacts are considered in the EIAR:

11.12.24. ***Surface Water Crossings, Culverts and Diversions***

11.12.25. The proposed development includes eight water crossings. All of these are in areas AZ1 to AZ3, since the alignment is in tunnel in area AZ4 and therefore passes below the waterbodies in that area.

11.12.26. It is stated that all culverts, crossing and diversions will be designed in accordance with section 50 of the Arterial Drainage Act 1945, as amended, and compliant with OPW and IFI requirements, to ensure continued conveyance of

⁴⁹ The EIAR states that this is sometimes incorrectly referred to as the Turvey River.

existing flows without impacts on flow or water quality up or down-gradient. The methodology for culvert construction and watercourse diversion is set out in both Chapter 18 and in more detail in Appendix A5.10 'Watercourse Diversion'.

11.12.27. I note that there are inconsistencies between the significance of the impacts set out in Section 18.5.3.1 (which itself is incorrectly numbered as Section 18.1.1.1) and Table 18.17. I will reference the highest significance ratings between the two in the interests of taking a conservative approach.

11.12.28. The nature of the potential impacts, in the absence of the design and mitigation measures, relate to impacts on flow, river morphology and water quality due to issues such as silt run-off, potential leaks from construction vehicles and instream disruption of flows.

11.12.29. In area **AZ1**, it is proposed to divert a number of ditches that currently run through the Park & Ride Facility site and which are connected to the Staffordstown Stream. The ditches will be diverted either via open channel (intercepting ditch), or via 500mm diameter pipes where they pass under MetroLink facilities and together with attenuation ponds they will form part of a surface water system to re-direct the flow in the existing ditches around to the north-east and south of the P&R Facility building. Construction of the permanent culverts/diversions will involve either temporary diversion and culverting of the watercourse or constructing a temporary dam upstream of the works and pumping the water to the downstream side of the works and it is stated that method statements will be agreed with OPW prior to commencement. A temporary **significant** impact is identified, due to the potential impact on water quality and river morphology.

11.12.30. The proposed viaduct over the Broadmeadow and Ward Rivers is a concrete structure with length of c. 260m, with the length arising from the Flood Risk Assessment, which seeks to ensure no upstream flooding from the proposed development. A cofferdam method, using sheet piles, will be used to construct the pier foundations to prevent concrete/grout spillages entering the watercourses. The beams of the viaduct will be precast concrete, with the top slab cast in situ.

11.12.31. Temporary modular 'bailey' bridge crossings will be required for construction traffic. These will have sealed decks to provide built-in protection from silt or other material entering the rivers. Construction of the temporary foundations for these

temporary bridge crossings is identified as having a **significant** temporary impact, due to the potential impact on water quality and river morphology.

- 11.12.32. A watermain diversion will also be needed at this location, which will involve horizontal directional drilling (HDD) under the rivers. With the proposed design measures, and IFI approval of the methodology, the significance is **imperceptible**.
- 11.12.33. In area **AZ2**, the proposed development crosses two branches of the Sluice River⁵⁰, necessitating the construction of two box culverts (located at Ch. 5+963 and Ch. 5+762). The second of these is larger where it passes under the alignment, in order to incorporate a farm accommodation underpass roadway, and both feature mammal ledges. In order to construct these culverts, temporary river diversions are proposed (see Diagram 18.8 of EIAR) with the permanent box culvert structures subject to a Section 50 OPW approval. **Moderate** temporary impact for the Forrest Little Stream and a **moderate to significant** temporary impact for the Sluice River.
- 11.12.34. In area **AZ3** the proposed alignment passes over the Santry River immediately north of the proposed Northwood Station, at a location where the river is contained within an existing culvert. No works to the culvert are proposed but minor alterations are proposed to the Santry River immediately downstream of the culvert to straighten the channel and add scour protection. It is stated that this will reduce hydraulic losses at the culvert outlet, resulting in a marginal increase in culvert capacity. A **significant** impact is identified.
- 11.12.35. At the proposed Dardistown Depot, which is located at the head of the Mayne River system, diversion of the Turnapin Stream (a tributary of the Mayne River) around the large depot building is proposed. A **moderate to significant** temporary impact is identified.
- 11.12.36. In area **AZ4**, as noted above, there are no surface level waterbody crossings since the alignment is completely underground. Instead, the alignment will be tunnelled beneath the watercourses and culverted historical watercourses. Construction of Glasnevin Station will temporarily affect the Royal Canal, with a section of the canal closed and temporarily drained on two occasions. It is stated in the EIAR that this closure has been agreed with the IFI and other relevant parties.

⁵⁰ Elsewhere referred to as the Sluice River and Forrest Little Stream.

The section of canal will be drained for two periods of 3 months to allow for installation of sheet piles⁵¹ and 2 months for their removal/reinstatement, respectively. This is identified as a **short-term significant** effect on the Royal Canal.

11.12.37. ***ESB HV Cable Installation***

11.12.38. The underground high voltage transmission cables required to connect the proposed MetroLink substations at the DANP and Dardistown Depot to the national grid via existing substations at Newbury and Belcamp are assessed in the EIAR although, as detailed elsewhere, they are part of a separate application to the Board.

11.12.39. Appendix A18.4 of the EIAR outlines the standard construction methodology for the HV cable routes, noting that it is ESB policy to place HV cables only under public roads, where possible. The EIAR states that this results in only short-term impacts.

11.12.40. The local receiving environment for the proposed grid connections is dominated by existing roads, with the majority of the works taking place within the footprint of existing roads. The proposed grid connections alignment will also potentially cross several watercourses including the Dunbro Stream, Barberstown Stream, Cuckoo Stream and Mayne River. Watercourse crossings will be via either open trench or trenchless methods, with the construction methodology for these options set out in Appendix A18.4.

11.12.41. The open trench methods will involve in-stream works, however it is contended that the design measures and approval of the methodology from the IFI will be sufficient to ensure that impacts are **not significant** in the construction phase and **imperceptible** in the operational phase. The trenchless method entails horizontal directional drilling underneath the waterbody with no in-stream works. With the design measures and IFI approval, impacts in both construction and operational phases are contended to be of **imperceptible** significance.

11.12.42. No significant impacts are predicted with regard to the substation buildings, given that they are contained within bunds with all equipment and materials being of high quality.

⁵¹ Subsequently changed at the oral hearing to precast concrete L-shaped precast concrete units to avoid impacts on the canal structure. This is addressed below.

11.12.43. ***Flooding***

11.12.44. The potential for flood risk is identified during the construction phase, due to site clearance, changes in land use and drainage leading to alterations in the dynamics of any flood water in terms of capacity, attenuation, runoff and quality. Poor planning and preparation for flood events is identified as potentially having a significant impact on the environment, surrounding areas and structures on and off site.

11.12.45. The potential for material stockpiles to increase sediment within the water is also noted, with potential impacts in terms of riverbank erosion and blocking of drainage infrastructure leading to increased flood risk and damage to the aquatic environment. The potential role of flood waters in picking up and spreading contaminants is also noted, as are the programme consequences of dealing with flood events.

11.12.46. Table 18.16 lists all of the construction compound, identifying those with bulk fuel or subsoil storage, the nearest watercourse and their flooding potential. All compounds are identified as having either a low or no risk.

11.12.47. ***Discharges***

11.12.48. Temporary dewatering will be required during the early stages of construction of below ground structures, where the water table is encountered. While this is primarily a hydrogeological impact, Chapter 18 of the EIAR considers the matter with regard to the impact the temporary dewatering zone of influence could have on baseflow to surface water features. Due to the clayey nature of the soil in which most of the identified rivers along the proposed route flow, the EIAR considers that dewatering is not likely to have an impact on long-term baseflow but notes that the River Tolka is set in QBR clays/upper weathered rock with a slight potential for a temporary impact during dewatering. The predicted impact from dewatering is considered **temporary** and **imperceptible to not significant**.

11.12.49. Water discharges from construction areas are stated to likely be high in sediment, with potentially elevated alkalinity where cement works are on-going, potentially posing a risk to receiving waters if not adequately mitigated. Identified sources of water for discharge off-site include groundwater from dewatering of the R132 cuts, TBM Portal sites, station boxes, intervention shafts and discharge from

the TBM process itself, as well as localised surface water run-off. While a number of surface water features will be crossed by the project as detailed above, no discharges are proposed to these watercourses in the construction phase.

11.12.50. The design incorporates attenuation and treatment prior to discharge of treated water to sewer under appropriate permits. Any discharge water exceeding approved discharge limits will be re-circulated at the site for clearing, washdown and dust suppression or transported to other MetroLink sites with a water demand or disposed offsite to an appropriate disposal facility. Similarly, any contaminated water and/or firewater will be tankered off-site to a licensed facility.

11.12.51. Table 18.18 of the EIAR sets out a summary of the main station construction sites and associated works area along the alignment. It states that it identifies the “planned discharge point (surface water/storm sewer) for treated/attenuated water and the estimated daily rate of discharge to that receiving feature” however errata submitted at the oral hearing stated that the Column hearing 'Estimated Discharge (m³/day) prior to any grouting' should state 'Estimated Discharge (m³/day) to sewer (post mitigation)'. The impact assessment is based on assessment of accidental discharges during construction on “the most likely receiving watercourse” and attribute rating. The identified impacts are temporary and **moderate to significant**.

11.12.52. ***Football Pitch Construction***

11.12.53. Relocation of a number of football pitches will be required during the construction phase (e.g. at Balheary Park) and will include both natural grass and synthetic turf pitches. Potential temporary hydrological impacts are identified due to increased run-off, sediment loading, spills/leaks of pollutants such as hydrocarbons, cement, wastewater, oils/paints etc. With design measures in place, **no significant impact** is identified.

11.12.54. ***Potential Discharge of Microplastics***

11.12.55. The EIAR notes that microplastic pollutants from road traffic, such as tyre and brake wear, can reach the water environment via runoff or airborne drift. The EIAR considers that while there will be some potential for microplastics entering watercourses due to additional traffic movements, microplastics are present in all watercourses and it is difficult to implement a strong design measure. The impact is considered **temporary and not significant**.

11.12.56. ***Water Framework Directive***

11.12.57. With regard to the Water Framework Directive, it is stated that the assessment has considered the current water status of all relevant water bodies and that with mitigation measures in place there will be no degradation of the current water body status or its potential to meet the requirements/objectives of the then-current RBMP 2018-2021 and then-draft RBMP 2022-2027. The EIAR notes that there will be no discharge of water to any open waterbody/watercourse during the construction phase. The potential for accidental discharges during construction is noted, but the EIAR states that these are temporary short-lived events that will not impact on the water status of waterbodies long-term and as such will not impact on trends in water quality and overall status assessment. With regard to dewatering, the EIAR states that there will be limited impact on the hydrological environment, reducing as the structures become sealed, piling works are completed and bottom grouting of deep station box excavations occurs. Following this, the dewatering zone of influence is small with a negligible impact on hydrology. It is stated that the CEMP measures will ensure the protection of the hydrological environment such that there will be no negative impact on the quantitative or qualitative or morphology of the nearby watercourses.

11.12.58. **No significant effects** are anticipated on the WFD status of any waterbodies as a result of the proposed development.

11.12.59. Operational Phase

11.12.60. The following operational phase potential impacts are considered in the EIAR:

- Surface water crossings, culverts and diversions.
- Discharges to watercourses.
- Potential discharge of microplastics.

11.12.61. ***Surface Water Crossings, Culverts and Diversions***

11.12.62. As noted above, the proposed development includes the crossing, culverting or diversion of various watercourses.

11.12.63. All proposed culverts include headwalls, wingwalls and a buried concrete apron or armour stone to resist scour at the inlet and outlet. In fishery watercourses,

culverts will be embedded beneath existing riverbed levels and all culverting will be the subject of applications to the OPW under Section 50 of the Arterial Drainage Acts 1945, as amended, prior to commencement of construction. It is stated that culvert design will be undertaken in consultation with IFI and that they will be designed to allow for aquatic species and mammal migration, as well as to maintain the existing riverbed as far as possible in accordance with the 'Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes' (NRA, 2008).

11.12.64. Modelling of the Broadmeadow River and Ward River viaduct was undertaken, as detailed in Appendix A18.5 of the EIAR, to avoid impacts on the flow characteristics of the two rivers and its design is based upon conveyance for the 100-year period flood event (i.e. 1% AEP) with allowance for climate change. **No significant** impact is predicted on either the up-gradient or down-gradient potential for flooding or water quality during operation.

11.12.65. Two culverts are proposed in area AZ1, at the Forest Little Stream and at the Sluice River. In area AZ3, the proposed development will pass over an existing culverted section of the Santry River. No works are proposed to the culvert but minor alterations to the river are proposed immediately downstream of the culvert to straighten the channel and provide scour protection. It is stated that this will reduce hydraulic losses, resulting in a marginal increase in culvert capacity.

11.12.66. With regard to watercourse diversions, the EIAR states that in the operational phase, the design will ensure on-going conveyance of flow for the 100-year period flood event with appropriate climate change allowances. Therefore, the EIAR considers that there is no likely impact on flood risk or water quality during the operational phase. With the incorporation of the design measures for the proposed development, e.g. the designing of the culverts and diversions for adequate conveyance of current and future flow conditions, the impact on flow conditions and water quality is assessed as **long-term and imperceptible**.

11.12.67. ***Discharges to Watercourses***

11.12.68. The proposed track drainage system provides for the collection of rainfall generated surface water flows and firewater flows in surface/retained cut sections of the route and firewater flows only in tunnelled sections. This is achieved by means of a channel with a grated cover at the centre of the alignment, which will convey flow

to the assigned discharge point. The channel is deliberately oversized to allow for modelling uncertainty, climate change, maximise online storage and reduce the required size of the attenuation tanks or ponds that are required prior to discharge. At pumped discharge points, water will be collected in pumping wells, which include back-up pumps, for pumping to outfall points.

11.12.69. Eight main drain outfalls to receiving watercourses are proposed, either directly or indirectly through existing storm water sewers. These drainage outfalls are identified as having the potential to impact flow regime and water quality in the watercourses, unless adequately designed and mitigated. It is stated, however, that the potential for accidental discharge during the operational phase is low, since the only potential chemical source is accidental release from storage areas for maintenance chemicals, incorrect use of herbicides and/or discharges from individual vehicles in park and ride areas.

11.12.70. Design measures to minimise any impact to receiving watercourses include attenuation to greenfield run-off rates for new hardstanding areas. The alignment was divided into catchment areas based on the slope of tracks, catchment size, local topography and viable discharge points, with the required attenuation storage calculated for each catchment to match the existing greenfield run-off rate, including for 1% AEP flood events and climate change allowance. These are set out in Appendix A18.5 of the EIAR. The design provides for attenuation storage for areas where the track results in the creation of new impermeable surfaces in areas that are currently permeable but not in areas where the track crosses areas which are currently impermeable. The receiving watercourses selected for each catchment area seek to minimise the transfer of surface water flows across 'natural' sub-catchment boundaries to minimise flood risk or impacts on water body status. Outfall structure design includes headwall, wingwalls and a bed apron to prevent local scouring of the banks and the channel bed and ensure no measurable impact on river morphology, flow hydraulics or flood risk.

11.12.71. In addition to the attenuation storage, various SuDS measures are incorporated in the design, including: green roofs on certain buildings, swales/filter strips, permeable surfaces, infiltration basins, retention ponds, petrol/oil separators at outfall points, hydrobrakes and other elements such as sediment traps.

- 11.12.72. The proposed Dardistown Depot includes train cleaning and maintenance areas that will be provided with water treatment and recycling systems, which includes settling tanks, hydrocarbon separator, sand filters and biological treatment. Two different sewerage systems are proposed at Dardistown Depot, one to collect industrial water from the train washing plant and workshop and the other to collect domestic wastewater from the canteen facilities, showers and toilets. Industrial wastewater will be collected and treated in the onsite Water Treatment Plant, with treated water from the plant and domestic wastewater both being discharged to the public sewer.
- 11.12.73. The two tunnelled sections will be watertight and any drainage will be collected internally via sumps and discharged by pumping into the public drainage system. Wastewater arising from staff welfare facilities in the stations and the public toilets in interchange stations will be discharged to the public foul sewer.
- 11.12.74. The potential for impacts on flooding and hydro-morphology as a result of operational phase water discharge is considered **temporary and moderate to significant**, in the absence of the abovementioned design measures. With these measures in place, the impact is considered as **long-term, imperceptible**.
- 11.12.75. In the event of a failure in drainage design measures, the potential for impact on surface water quality is considered **slight** and with the measures in place, **imperceptible to not significant**.
- 11.12.76. ***Potential Discharge of Microplastics***
- 11.12.77. The EIAR identifies the increased potential for discharge of microplastics, generated from the Metro brakes and brake and tyre wear associated with additional traffic movements. It is stated that microplastics are present in all watercourses and it is difficult to implement a strong design measure to eliminate the discharge of these pollutants.
- 11.12.78. ***Water Framework Directive***
- 11.12.79. With regard to the WFD, it is stated that the assessment has considered the current water status of all relevant water bodies and that with mitigation measures in place there will be no degradation of the current water body status or its potential to meet the requirements/objectives of the then-current RBMP 2018-2021 and then-

draft RBMP 2022-2027. The EIAR notes the limited discharges of water to any open waterbody/watercourse during the operational phase and that discharges will be adequately treated via SuDS measures, interceptors etc. to ensure there is no long-term negative impact to the WFD water quality status of the receiving watercourse. The EIAR also notes that there is no dewatering associated with the operational phase and hence no impact on baseflow in the hydrological environment and that limited chemical/fuel storage is required due to the electrically powered nature of the MetroLink.

11.12.80. **No significant effects** are anticipated on the WFD status of the relevant waterbodies.

11.12.81. **Mitigation Measures**

11.12.82. The proposed mitigation measures are set out in Section 18.6 of the EIAR. It states that measures have been incorporated into the design of the proposed development to avoid impacts where possible and hence that the measures outlined are additional measures. It also states that the mitigation measures should be read in conjunction with those outlined in the Biodiversity, Hydrogeology and Soils & Geology chapters.

11.12.83. **Construction Phase**

- **Management of Run-off Quality:**
 - Compliance with the CEMP.
 - Preparation of a Water Management Plan, including: activities requiring water and anticipated peak water demand for each site; source of water; water minimisation and conservation strategies; wastewater treatment and means of disposal.
 - Preparation of a Sediment Erosion and Pollution Control Plan, including measures to manage soil and silt-laden water, accidental leaks/spills, and monitoring to ensure compliance with environmental quality standards.
 - Training of staff to respond to accidental discharge/leaks, provision of spill management kits and implementation of an Incident Response Plan detailing the procedures to be undertaken in the event of spillage of chemicals, fuel etc.

- Preparation of site-specific constructability reports specifying how water emanating from site activities will be managed from source to final approved discharge point.
- Stormwater/groundwater inflows into the cut section/station boxes will be pumped through a temporary construction site attenuation tank/Siltbuster, prior to discharging through a series of treatment tanks with storage equivalent to one day's discharge. Continuous monitoring of pH, temperature, conductivity, Total Suspended Solids and Totals Dissolved Solids. All treated water will be discharged to nearby sewers.
- Treated water will not be discharged to a watercourse without the respective water quality meeting the statutory limits as set under the relevant EU Environmental Objectives for surface water.
- Boundary treatments (e.g. silt fencing/berms) will be installed prior to the commencement of any construction works to enhance the protection of identified water features.
- Temporary stockpiles will be located outside of buffer zones; leachate generation will be prohibited and refuelling of construction vehicles and addition of hydraulic oils/lubricants will take place in a designated and controlled area away the buffer zones and sewers.
- Any potentially contaminated material encountered will be segregated, tested and classified as either non-hazardous or hazardous. If it is not possible to immediately remove contaminated material, then it will be appropriately stored and removed as soon as possible.
- Excavated material will be reused where possible (e.g. embankments, backfill, bunding and landscaping) with the spoil management approach in accordance with the waste hierarchy and regional waste management plan and Development Plans. Contractor will ensure acceptability of the material for reuse through appropriate handling, processing and segregation of the material.
- Surplus suitable material shall be used for other projects where possible, subject to appropriate approvals/notifications.

- Earthwork haulage will be along agreed routes. Where compaction occurs, remediation works will be undertaken to reinstate the ground to its original condition.
- Appropriate handling, storage and disposal of hydrocarbons in accordance with TII guidance. Chemical and fuel refilling locations contained within effectively bunded areas with minimum 10m setback from watercourses.
- Foul drainage from site offices/construction facilities will be contained and disposed of in an appropriate manner or discharged to foul sewer in agreement with Irish Water.
- **Discharge Management:**
 - Where applicable, all water will be discharged to sewer in compliance with required licences/permits. A treatment train and monitoring will be undertaken under a monitoring program set by the Local Authority.
 - Treatment train design will depend on the activity at each construction compound. Stormwater and any dewatering will be collected and stored, if required, prior to discharge to the site-specific treatment plant. No direct discharge to watercourses without adequate attenuation and controlled by a hydrobrake to mimic greenfield runoff rates.
 - To mitigate alkaline discharges where concreting is being carried out, the discharge water will require additional treatment including pH neutralisation, with installation of a continuous pH monitor. Such water will be either re-circulated for further treatment, removed off site for appropriate treatment and disposal, or treated on site and discharged into the foul sewer, with due permission from Irish Water.
 - Any sedimentation systems, ponds and treatment plant will allow adequate settlement of suspended sediment with daily visual inspection at the outfall(s) to ensure adequate settlement. Where the visual inspection highlights elevated suspended sediments, the water will be recirculated for further treatment. Samples will be taken at regular intervals and recorded for inspection.

- Use of concrete in or close to identified watercourses carefully controlled to avoid spillage. Any on-site batching will be carried out at a safe distance from watercourses and washout of plant and vehicles will be carried out only in a designated contained impermeable area.
- Detailed monitoring requirements will be put in place and will depend on discharge permit agreements. This may include installation of continuous monitoring equipment for parameters such as temperature, pH, Total Organic Carbon, total suspended solids, total dissolved solids and Electrical Conductivity.
- **Flood Risk Management:**
 - Construction compounds will not be set up in Flood Zone A or B areas.
 - Areas of open ground and soil stockpiles minimised, as sediment laden water can cause environmental damage and clog drainage networks. Existing ground and topsoil only removed when work requires.
 - Appropriate drainage with sufficient capacity discharging to a controlled location following necessary settlement or treatment.
 - Use of attenuation for flood events, such as settlement lagoons or tanks.
 - Treatment system must have capacity to ensure drainage and/or attenuation is not overrun during storm events.
 - Obtain updated modelled water levels from the OPW as well as updated information on the required standard of protection for flood defences.
 - A flood risk compliance procedure will be included in the water quality management plan/flood protection plan.
 - Temporary mitigation measures employed at times where flood risk has increased including use of sandbags and inflatable barriers.
 - Sheet piling and cofferdams required at the piers situated adjacent to the Broadmeadow and Ward Rivers and anywhere where construction activities are to occur on or near flood zones.
 - Monitoring of existing flood defences for stability for surface construction, tunnelling, dewatering, filtration and river works.

- Materials kept in a flood barriered area or at higher levels, with onsite storage kept to a minimum and materials removed offsite prior to a forecasted flood event. Anchoring down of materials that may float away.
- Covering of stockpiles to prevent silt runoff.
- Monitoring of EPA alerts, weather and water levels of nearby watercourses to give advance warning for deployment of temporary flood protection and material mitigation measures.
- Inspection of drainage, silt and water management during flood events. Securing of site fencing to prevent buoyant materials and equipment from being washed away causing damage to the environment and preventing items being carried into the site and impacting construction works.
- Locating of site utilities and isolation points in easily accessible areas protected from flood waters.
- Relocation of plant and equipment during a flood event to protected areas. Plant and equipment holding significant fluids and hazardous materials (e.g. Silt Busters and Water Treatment plants) sealed and emptied where possible.
- Stocking of PPE for dealing with contaminated flood water clean-up.
- Suitable procedures, such as method statements and risk assessments, to protect the workforce carrying out clean-up works.
- Management of any collected flood waters, which may not be able to be discharged without further settlement or treatment, due to contamination. Any discharge into a sewer will require a discharge permit from the Local Authority which will stipulate specific quality standards to be achieved. It may also refuse discharge, resulting in water being treated and removed offsite for further treatment or disposal.
- Section of project at Seatown crosses the Broadmeadow and Ward Rivers and their associated flood plains and will make use of the following measures:
 - Heights of sheet piles extended around excavations.

- Raised capping beam for retained cuttings.
- Permanent flood mitigation measures to be done in advance.
- Use of sheet piles and cofferdams for protection of viaduct piers.
- Use of inflatable barriers to protect haul roads.
- Plant and materials not left on the flood plain.
- Construction of upstand walls around shafts and box structures exposed to unexpected flood events through burst watermain and surface water flooding.
- Mitigation of flood risk at retained cut and cover structures through the use of a raised capping beam and material mitigation and at earthworks structures such as open cuts and embankments through the use of material mitigation and inflatable barriers.
- **Management of Fire Water:**
 - Tankering of contaminated water to an approved facility for disposal.

11.12.84. Operational Phase

11.12.85. The following operational phase mitigation measures are proposed:

- **Water Quality:** No further mitigation measures proposed due to the electrically operated nature of the project. It is stated that regular inspection of operational design discharges will be undertaken as part of the long-term operation and maintenance programme.
- **Flood Risk:** No further mitigation measures proposed as design incorporates specific measures to ensure that the project will not be impacted by flooding or result in any off-site flooding.
- **Management of Fire Water:**
 - Any water contaminated by firefighting operations at above ground structures will be contained within an attenuation pond/tank and discharged in agreement with the EPA, Irish Water and any other relevant stakeholders. In underground stations or along the track an automatic shut off valve on the drainage system will allow firewater to be contained within

the drainage system, prior to pumping it out for appropriate disposal off-site.

- Fire prevention and detection measures will be applied as well as measures to mitigate the impact of the response activities. A Fire Safety Strategy for tunnels will be drawn up in line with best practice.
- Inspection and maintenance of drainage.

11.12.86. **Residual Impacts**

11.12.87. **No significant residual impacts** on hydrology are anticipated as a result of the proposed development.

11.12.88. **Cumulative Impacts**

11.12.89. Potential cumulative hydrology impacts are addressed in Section 30.4.10 of the EIAR. Following a screening exercise, a total of 166 No. projects were screened in for potential cumulative impacts, as listed in Table 30.10 of the EIAR.

11.12.90. Of these, 25 No. projects were screened in for potential negative cumulative impacts due to the potential for runoff related impacts on surface water quality of nearby waterbodies, if unmitigated and if the construction phases coincide. 107 No. other developments were screened in for potential negative cumulative impacts due to the potential for the removal of contaminated soil to result in accidental pollution events to surface waterbodies, should the construction phases coincide. 27 No. other developments were screened in for potential negative cumulative impacts due to the potential for an accidental pollution event to watercourses crossed by each respective development and the proposed development, should the construction phases coincide.

11.12.91. In the operational phase, 161 No. projects were screened in for potential cumulative impacts, due to the potential for accidental pollution events to watercourses crossed by the other developments and the proposed development which result in negative cumulative impacts to water quality of surface waterbodies and/or downstream habitats.

11.12.92. No specific mitigation measures over and above those already proposed for the proposed development are identified for cumulative impacts. The stated reason for this is that, in most cases the mitigation included in the proposed project, together

with standard mitigation measures which would be implemented by the other developments, will be sufficient to reduce cumulative impacts so that they are not significant.

11.12.93. **No significant residual cumulative impacts** on hydrology are identified in the EIAR.

11.12.94. **Oral Hearing**

11.12.95. **Errata**

11.12.96. A number of errata in relation to this chapter were submitted at the oral hearing. I refer the Board to the final Schedule of Errata (SoE) submitted on 27th March 2024 (Ref. OH374). A correction was made to a heading title in Table 18.18 and various minor errors were also corrected in the Flood Risk Assessment (Appendix A18.5). The SoE refers to an update to Table 18.12 of the EIAR (water body status and WFD risk score), based on updated information. However, it appears that the updated table was not actually provided at the hearing. Given that the update would appear to relate to publicly available EPA data on WFD status and risk, I do not consider this omission to be material.

11.12.97. Following an Inspector query regarding inconsistencies between the Biodiversity and Hydrology chapters of the EIAR in relation to the need for in-stream construction works in the Broadmeadow River, the applicant submitted an errata document entitled 'Errata: Chapter 18: Temporary Instream Works During Construction (Broadmeadow River)' on 13th March 2024 (Ref. OH245). This errata document is referenced in the final SoE. The errata document clarifies that temporary in-river construction works will be required only for the removal of the existing pipe and instream supporting structure at the Broadmeadow River and that this will be limited to construction personnel with no heavy machinery in-stream. It is stated that the residual Not Significant impact remains unchanged on the basis that the construction works will be managed in accordance with the CEMP.

11.12.98. **Updates**

11.12.99. ***Swords Pumping Station***

11.12.100. The applicant's submitted utilities drawings show a proposed emergency overflow from the proposed Swords pumping station to the Ward River. At the oral

hearing, the applicant submitted details of a proposed modification arising from ongoing consultation with Uisce Éireann. Instead of the overflow discharging to the river, it would instead be returned to UÉ's existing Swords Wastewater Treatment Works via a connection from the emergency overflow to an existing UÉ foul sewer connecting to the existing Swords WwTW.

11.12.101. The applicant has also agreed with UÉ, post-submission of the application, that an associated proposed attenuation storage tank located within Balheary Park on the route between the pumping station and the WwTW is no longer required. Consequently, under the revised proposal the discharge route from the pumping station crosses the MetroLink alignment and R132 through two rising mains (one for foul water and one for storm water), discharging into an existing UÉ combined sewer connecting to the WwTW.

11.12.102. These proposed modifications are reflected in the updated drawings submitted at the oral hearing (Ref. OH323) and in the document 'Utilities and Infrastructure Amendments: Swords Pumping Station' (Ref. OH344). I note that both the revised normal discharge route and the emergency overflow routes from the pumping station to the WwTW are within the project boundary.

11.12.103. ***Additional Pumping Stations***

11.12.104. The applicant submitted information regarding two additional underground low point sump pumping stations at the oral hearing. The first of these is at Leinster Street South and was stated to have been omitted in error from the application. The second of these is located at Hatch Street and is required as a consequence of the applicant's proposal, as presented at the oral hearing, to lower the tunnel alignment by 5m between St Stephen's Green and Charlemont stations. This localised lowering of the tunnel introduces a new low point, necessitating a sump and associated pumping station.

11.12.105. Drawings of these two pumping stations and EIAR Addendums were submitted at the oral hearing on 6th March 2024 and 20th March 2024 (Ref. OH193 and OH262, respectively).

11.12.106. ***Hydrogeological Updates***

- 11.12.107. Various documents were submitted by the applicant in relation to hydrogeology, particularly with regard to the dewatering assessment. These are addressed further in the hydrogeology section of this report but some are also of relevance to aspects of hydrology.
- 11.12.108. Cumulative Impact Assessment
- 11.12.109. An updated cumulative impacts addendum was submitted to the oral hearing on 28th February 2024 (Ref. OH98). The Addendum comprises a more up-to-date review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application.
- 11.12.110. Where potential cumulative impacts are identified, they are generally associated with the Construction Phase and relate to accidental pollution events during construction or removal of any contaminated soils, should construction be underway at the same time. It is contended that the proposed drainage and spillage mitigation measures outlined in the EIAR and CEMP and the disposal of contaminated materials to licenced sites will mitigate potential cumulative impacts on hydrology.
- 11.12.111. No additional significant residual cumulative impacts on hydrology are identified.
- 11.12.112. Post-Oral Hearing
- 11.12.113. A further cumulative impact assessment update was submitted on 31st January 2025 as part of the applicant's response to the Wild Ireland Defence CLG oral hearing submission (Ref. OH369).
- 11.12.114. In relation to hydrology, the applicant's position remains unchanged from that outlined in the CIA document submitted at the oral hearing – i.e. that there are potential cumulative impacts if developments are under construction at the same time as the MetroLink development as a result of accidental pollution events, but that the mitigation measures within the EIAR and CEMP will mitigate the impacts. No additional significant residual cumulative impacts on hydrology are identified.
- 11.12.115. An EIAR Addendum was also submitted by the applicant as part of their abovementioned response, addressing impacts associated with the proposed PFAS Management Strategy at Dublin Airport. The Addendum notes that current DAA

records indicate that PFAS has been detected in the Sluice River, Mayne River, Turnapin Stream and Santry River in the vicinity of the airport. In order to avoid mobilisation and migration of PFAS contamination, the following additional mitigation measures are proposed for works in, or in proximity to, these watercourses:

- The works site will be delineated and segregated from any adjacent site with a dedicated access route.
- All excavated material will be removed to the PFAS Triage and Holding Centre for appropriate management.
- Any instream works will be undertaken and completed in dry or very low flow conditions. Any potentially contaminated water will be treated as per the methods identified in Section 7 of the PFAS Management Strategy (e.g activated carbon filtration).
- To prevent any cross contamination, dedicated plant and equipment will be used for the activity, stored within a secure location and cleaned regularly during each shift with the water from this process also segregated and stored for suitable disposal.
- Any diversion works and change of flows are to be monitored for any increase levels of PFAS during the full progression of the works. Suitable barriers are to be procured to limit PFAS migration downstream of any inline watercourse works, diverting the river and realigning the river at completion of the instream culvert; and
- Backfilling will be undertaken with clean suitable fill material only.

11.12.116. The Addendum concludes that no likely significant effects from PFAS arising in respect of the proposed project (including the grid connection works) either alone or cumulatively with other projects are likely to arise.

11.12.117. More particularly, with effective implementation of the Management Strategy, it is stated that the proposed development will have imperceptible impacts on water quality in the receiving estuaries and marine environment that forms part of, and supports, the downstream European sites with no possibility of any disturbance effects on any QI or SCI populations within SAC or SPA sites, due to distance. It is also stated that there is an imperceptible cumulative impact on water quality and

imperceptible cumulative impact on water body status with the proposed design and mitigation measures in place.

11.12.118. **Assessment**

11.12.119. Prior to considering the potential hydrological impacts, I consider it useful to outline the positions of the various prescribed bodies with responsibilities or competencies relevant to the water environment, which has evolved over the course of the application lifespan:

11.12.120. **Irish Water (now Uisce Éireann)** made a detailed initial written submission (S133) raising various issues and this was subsequently responded to in writing by the applicant. UÉ did not appear at the oral hearing, however the applicant submitted a copy of a letter from the CEO of UÉ to the CEO of TII at the oral hearing on 27th February 2024 (Ref. OH89). The letter, which states that UÉ agree to its sharing with the oral hearing, states that:

“Uisce Éireann can confirm that it has had positive engagement with TII in relation to the Metrolink Project following on from its submission and TII’s response to same.

Uisce Éireann is confident that agreement can be reached on all of the issues that arise from our submission, and all issues that it is necessary to reach agreement on relative to delivery of the Metrolink project and in the context of Uisce Éireann’s statutory functions.”

11.12.121. No further submission was made by UÉ. Having regard to the abovementioned letter submitted at the hearing, I do not consider it necessary to engage with the majority of the issues raised in the earlier UÉ written submission, on the basis that UÉ have indicated that they have since engaged with TII and are confident that agreement can be reached with regard to matters within their remit. These are generally fine-grained matters of detail that are best addressed between the two parties during the detailed design phase, including potential interactions with UÉ assets and the proposals to discharge construction phase water to sewers, which will require agreement on the capacity of the sewers, pre-treatment and monitoring/reporting requirements etc. I therefore recommend that the Board, if minded to approve the Railway Order, attach a condition requiring the developer to

enter into water and wastewater connection agreements with UÉ, prior to commencement of development.

11.12.122. **Inland Fisheries Ireland (IFI)** did not make a submission and did not appear at the oral hearing. I note from the EIAR that the applicant has consulted with IFI in relation to protection of fisheries habitats and has obtained baseline information from them. Chapter 8 of the EIAR indicates that 3 No. meetings were held with IFI between 2019 and 2021. The proposed construction methodology for works in the vicinity of watercourses and for culverting of watercourses is generally consistent with IFI guidance on these matters, although as detailed in the Biodiversity and AA Sections, I recommend that compliance with this guidance be required by way of condition.

11.12.123. **Waterways Ireland** made an initial submission (S312) in relation to the Royal Canal, noting its importance as an NHA, heritage asset, and role as a navigable waterway. They noted that canal water quality is measured against WFD standards and that no new stormwater discharges are permitted to it and asked that flood risk issues be suitably managed. In relation to the Grand Canal, a copy of an email from Waterways Ireland to TII was submitted at the oral hearing (Ref. OH166) on 5th March 2024, stating that they are aware of the proposed accessibility drop-off enhancement at Charlemont and that they will work with TII in relation to same.

11.12.124. The **Office of Public Works** made a considerable number of submissions in relation to various State-owned properties (S213 – S240, 1FS36) and fully participated in the oral hearing but they did not raise any specific issues with regard to hydrology and their arterial drainage consenting role.

11.12.125. With regard to the **Local Authorities**, detailed initial written submissions were made by Fingal County Council and Dublin City Council (S321 and S71, respectively). Subsequently, agreements with both local authorities were submitted at the oral hearing (Ref. OH147 and OH76, respectively). TII has requested that these agreements be included in the Thirteenth Schedule of the Railway Order, if approved. 'Conditions' 17 – 19 of the DCC agreement and 'conditions' 7 and 12 of the FCC agreement are noted. They comprise relatively standard drainage and sewer related detailed conditions. Further submissions were made by the two local authorities (1FS24 and 1FS20, respectively), but no further water environment

related issues were raised. If the Board is minded to approve the application, I recommend that both agreements be included in the Thirteenth Schedule. Subject to this inclusion, there is no need to separately incorporate the Local Authorities proposed conditions, as this would comprise unnecessary duplication.

11.12.126. Construction Phase

11.12.127. I consider that the potential significant impacts on hydrology during the construction phase are associated with:

- Watercourse crossings, culverts and diversions.
- Impacts on historic culverts.
- Impact on canals.
- Water discharges.
- Flood risk.

11.12.128. ***Watercourse Crossings, Culverts and Diversions***

11.12.129. As detailed above, a number of watercourse crossings, diversions and culverts are proposed as part of the proposed development and I note the detailed construction methodologies for these set out in Appendix A5.10 of the EIAR.

11.12.130. The only substantial watercourse crossing is that of the Ward and Broadmeadow Rivers via a c. 260m long viaduct. This is a 13-span structure which, importantly, does not have piers located in either river, negating the need for in-stream works. This design measure alone will serve to substantially reduce the risk of potential hydrological impacts on these watercourses. The use of a long viaduct, carried on piers rather than an embankment also allows the proposed development to avoid impacts on flood risk by retaining existing morphology and potential flood flows under the viaduct. This is demonstrated in Appendix A18.5, Section 7.2.2.1, where the modelled flood levels with and without the viaduct are set out. It indicates that the viaduct has no impact on peak water levels along either the Broadmeadow or Ward Rivers, including when climate change impacts are included in the modelling. Figure 7.10 in that Appendix compares the flood extents with and without the viaduct, and it can be seen that there is no difference.

- 11.12.131. Construction of the viaduct will require temporary 'bailey' bridges over the two watercourses to facilitate construction traffic. As these are modular items, no impacts on the watercourses are likely. Construction of the viaduct piers will entail the use of watertight cofferdams for foundation construction in the vicinity of the watercourses and the viaduct decks will be supported on pre-cast beams lifted into place from a working platform erected alongside the viaduct. I note that a 5m buffer zone is also proposed along the riverbanks.
- 11.12.132. I am satisfied that the detailed design and mitigation measures proposed for the construction of this viaduct are adequate to ensure that it is not likely to result in negative impacts on hydrology in terms of water quality, flood risk or hydromorphology.
- 11.12.133. While in-stream works will not be required for the viaduct construction, an existing watermain is supported by a concrete pier within the Broadmeadow River, which it is proposed to remove. There was a conflict between the hydrology and biodiversity chapters of the EIAR with regard to this element of the project, and this was clarified by the applicant at the oral hearing, as I have noted above, including provision of details on the construction methodology. I am satisfied that the works to remove the existing pier within the Broadmeadow River are minimal and can be achieved without any significant impact on hydrological factors.
- 11.12.134. With regard to the proposed ditch/watercourse diversions at the Estuary P&R Facility and at Dardistown Depot, I am satisfied that these are justified with regard to the need to create a suitable area for these buildings which have particularly large footprints and a strong locational rationale underpinning their proposed siting. The diversion of watercourses clearly creates the potential for adverse impacts on hydrology, in terms of water quality, hydromorphology, carrying capacity and associated flood risk. I have had regard to the information contained in Chapter 18 and Appendices A18.5 and A5.10 and I am satisfied that the diversions of these ditches and watercourses, which are generally headwaters with minimal natural catchment or floodplain can be achieved with minimal hydrological impacts, with the implementation of the outlined construction methodologies, mitigation measures and compliance with IFI guidance and with OPW consent. Notably, the diverted watercourses will be mostly retained as open channels, which have been sized to

retain flow conditions, except where they interface with MetroLink construction and require culverting, again of suitable size.

11.12.135. A number of culverts are also proposed and I note that there are various discrepancies between the application documents and drawings with regard to the length and dimensions of some of the proposed culverts. For example, Section 18.5.3.1.3 states that:

“At chainages Ch. 5+963 and Ch. 5+762 the proposed Project crosses the Sluice River necessitating the construction of a box culvert with provision for mammal crossing at chainage 5+963, as presented in Diagram 18.8 below. A farm accommodation culvert underpass is also required at Ch. 5+762. The culvert to be constructed at Ch. 5+963 is **up to 26m long, 2.5m high and 2.0m wide internally** incorporating a mammal shelf. The culvert to be constructed at Ch. 5+762 is **up to 50m long, 6.6m high and 5.8m wide internally** incorporating a mammal shelf in a 2.0m wide stream, and a 3.6m wide underpass roadway at a level of +42.3m. The road and stream are divided by a 2.0m wide internal reinforced concrete wall.” [emphasis added.]

11.12.136. However, section 2.3.2 of Appendix A5.10 (Watercourse diversion) states that the culverts will be 3050m and 2665m in length. Those figures appear to be missing a decimal point, when compared to figures given in Section 4.14.10 of the EIAR, which state that the culverts will be 30m and 26m in length. This again appears to be incorrect.

11.12.137. The structures drawings and the alignment drawings are consistent in showing a culvert length of c. 50m and 65m. Importantly, these drawings are also reflected in the Flood Risk Assessment contained in Appendix A18.5 of the EIAR, which includes assessment of carrying capacity and flood risk associated with these culverts.

11.12.138. I consider that the drawings and FRA more accurately reflect the size of the culverts that will be required. Having regard to the clear construction methodology outlined and the compliance with IFI guidance and the obtaining of OPW consent, I do not consider that the discrepancies in the applicant’s documentation materially affect the outline of the assessment.

- 11.12.139. The installation of culverts will necessitate the temporary diversion of the affected watercourses. This is documented in Appendix A5.10. I am satisfied that the methodology for temporary diversions is relatively standard, with reference to NRA and IFI guidance and that it can be achieved without a significant impact on hydrology.
- 11.12.140. The Santry River is carried under the R132 in an existing culvert. The MetroLink alignment will pass over the culverted river on its way southward to Northwood Station, having crossed the M50. Minor channel straightening and scour protection works are proposed immediately downstream of the culvert but again, these minor works can be effectively mitigated through compliance with good practice guidance for works in the vicinity of watercourses.
- 11.12.141. The proposed culverts have been subject to hydrological assessment and design, and the submitted documentation indicates that they will be sufficiently sized to adequately cater for flow conditions with suitable allowances for fluvial events and climate change, without any significant increase in flood risk upstream or downstream. The designs also have due regard to biodiversity considerations, including mammal ledges in new culverts and fisheries protection measures.
- 11.12.142. As noted above, there was a discrepancy between the biodiversity and hydrology sections of the EIAR regarding the need for in-stream works in the Broadmeadow River. At the oral hearing the applicant clarified that in-stream works will be required within the Broadmeadow River to remove an existing pipe and its in-stream concrete support structure. The applicant stated that these works will take 2 days to complete and are limited to a construction operative working from the river to secure lifting equipment to elements of the structure being removed and cutting the pier from the plinth, with no heavy machinery or construction plant operating instream. These works are relatively minimal in extent and duration, and subject to implementation of the CEMP and associated mitigation measures, I am satisfied that there will be no significant impact on the hydrological characteristics of the Broadmeadow River.
- 11.12.143. Finally, I note that the Environmental Protection Division report contained within DCC's initial submission makes reference to a proposed diversion of the culverted River Wad. This appears to be a misreading of the EIAR, which references

the 'River Wad Diversion', i.e. an existing diversion of the River Wad. For the avoidance of doubt, no diversion of the River Wad is proposed as part of the MetroLink project.

11.12.144. In conclusion, I am satisfied having regard to the incorporated inherent design measures and mitigation measures, that the proposed watercourse crossings, culverts and diversions can be constructed without a significant negative residual impact on hydrology.

11.12.145. ***Impacts on Historic Culverts***

11.12.146. A number of submissions from observers living in the Glasnevin area raised the issue of historic culverted watercourses and potential impacts on these. The observers' concerns relate primarily to contended uncertainties around the location and depth of these features and the potential for damage to occur to the culverts, resulting in impacts on their properties as a result of flooding or property damage via settlement or subsidence, with a number of observers stating that their properties, due to their age, have minimal foundations. See, for example, the submissions made by Lorraine Rooney (S171), Nigel Mallen (S209), Prospect ACA (S260) and Lesley Hewson (S168), which refer to numerous such underground watercourses, including the Cemetery Drain which it is stated runs under dwellings in the area, including DeCourcey Square and Prospect Avenue/Square.

11.12.147. Similar issues were raised in the submissions made on behalf of residents of Harcourt Terrace, Dublin 2, by Sudway & Co. (e.g. S85) with regard to the River Steyne which, it is stated, runs under Harcourt Terrace in area AZ4. The submissions contend that the river wasn't considered.

11.12.148. While this topic relates to both hydrology and hydrogeology, I consider it appropriate to address within the context of hydrology, given that the issue relates to artificially culverted watercourses.

11.12.149. Contrary to what is stated by a number of observers, the applicant has identified the historic watercourses referenced in the submissions and these are illustrated in the EIAR.

11.12.150. As noted by the applicant, the proposed tunnel construction in the Glasnevin area is at significant depth, far below the culverted watercourses and as such it is not

likely to have any direct impact on these features or the volume of flow that they carry and consequently on property lying over them. There remains, however, a potential for indirect effects due to vibration or settlement damage to culverts, which due to their historic nature may not be capable of accommodating such movement/vibration. I consider that this issue is best addressed through comprehensive monitoring of tunnelling works, as is proposed, which will allow for the early identification of any impacts in order to apply appropriate mitigation such as ground strengthening works.

11.12.151. I do not consider that any significant impacts on these historic culverts are likely to arise.

11.12.152. ***Impact on Canals***

11.12.153. As noted above, two periods of temporary draining of a portion of the Royal Canal are proposed. While the EIAR stated that sheet piling will be required in order to create the temporary working area within the canal footprint, this was subject of a proposed modification at the oral hearing to L-shaped precast concrete panels sitting on the canal bed to avoid direct impacts on the historic canal structure. The proposed L-shaped panels are shown on the updates to Appendix A5.5 submitted at the oral hearing on 29th February 2024 (Ref. OH118). Maurice Gallagher, on behalf of the applicant, stated at the hearing on 26th February 2024 that this change had been agreed with Waterways Ireland.

11.12.154. I note that while Chapter 18 of the EIAR refers to two closure periods of 3 months and 2 months respectively for the creation and removal of the temporary working area, the detailed Glasnevin Station Construction Report contained in Appendix A5.5 refers to two periods of 3 months each. I do not consider that this is a material difference, noting that in both cases the need for agreement with Waterways Ireland is noted and that outside of these periods, the canal will be traversable during the construction phase.

11.12.155. No discharge of water is proposed to the Royal Canal in the construction or operational phases and noting that the infill proposals have been amended to reduce the impact on the canal structure, I am satisfied that no significant hydrological impact on the canal is likely. Provision has been made for the mitigation of potential

biodiversity and architectural heritage impacts associated with these works and these issues are addressed elsewhere in this report.

11.12.156. In relation to the Grand Canal, I consider that the only potential impacts are associated with the slightly overhanging structure associated with the PRM drop-off area build-out. A construction methodology for these works was submitted at the oral hearing, confirming that no in-stream works would be required and that standard CEMP pollution prevention measures would be put in place. I am satisfied that no significant impacts are likely to arise as a result of this element.

11.12.157. ***Water Discharges***

11.12.158. There are some inconsistencies between various documents submitted with the application regarding the proposed discharge route for water arising at construction sites. Chapter 18 of the EIAR generally states that this water will be discharged to sewer under agreement, with section 18.2.2. stating that:

“...all water arising from the Construction Phase will ultimately be discharged to public foul sewer post treatment under formal consent by Irish Water. No surface water will be discharged to storm water drainage system or open watercourses during the Construction Phase.”

11.12.159. Similarly, Section 18.5.1 states that:

“there are no proposed discharges of waters from the Construction Phase directly into a nearby watercourse. Therefore, the only source during construction is an accidental spillage and/or discharge which is mitigated against in the outline CEMP.”

11.12.160. However, other sections of Chapter 18 of the EIAR and other documents such as Appendix A5.11 ‘Water Management’ and the CEMP refer to discharge of treated water to a watercourse or sewer.

11.12.161. Water collected at construction sites may be high in sediment loading and may contain other pollutants or contaminants. While it is to be treated and monitored prior to discharge, it nevertheless represents a significant potential pollution vector if discharged to watercourses. It appears from the main Hydrology chapter of the EIAR that this is not the intended disposal route, but given the inconsistencies in the submitted application, I recommend that it be clarified by way of condition that all

construction phase water is to be discharged to sewer under agreement and not to watercourses, in the interests of clarity and environmental protection.

11.12.162. With regard to construction phase water arisings, I note that the figures contained in Table 18.18 for estimated daily rate of discharge at various excavated stations and works areas bear no relationship to what should be roughly equivalent figures in the Hydrogeology chapter of the EIAR (allowing for some water re-use on site) and are roughly half of those figures. The text in the EIAR explaining Table 18.18 states that it identifies “the planned discharge point (surface water/storm sewer) for treated/attenuated water and estimated daily rate of discharge to that receiving feature”. It goes on to state that “the impact assessment is based on assessment of the any accidental discharges during construction on the most likely receiving watercourse and attribute rating i.e. whether direct or indirect through drainage”. An errata item presented at the oral hearing sought to correct the column in the Table which is entitled ‘estimated discharge (m3/day) prior to any grouting’ to ‘estimated discharge (m3/day) to sewer (post-mitigation)’.

11.12.163. I find the discharge figures contained in the hydrogeology chapter to be more compelling, given that they are supported by a technical appendix demonstrating how they were derived. As detailed in the hydrogeology section of this report, conditions have been recommended by the Board’s consultants Tyréns in relation to allowable dewatering outside of the station boxes to address issues that they have identified, namely that it should not exceed normal seasonal variations. This condition will be effective in terms of ensuring that excessive construction water requiring discharge to sewer does not arise.

11.12.164. Given the stage that the project is at, and the inherently heterogenous nature of subsurface geological and hydrogeological conditions, it is reasonable that there should be some level of uncertainty regarding water volumes at this stage, despite the extensive ground investigation works undertaken to date. Should the Board approve the RO, then any uncertainties will diminish as detailed design progresses and further ground investigations are undertaken.

11.12.165. Subject to testing, treatment and monitoring as outlined in the EIAR, connection agreements with UÉ and/or the Local Authorities, as relevant, and a condition ensuring that all discharge is to sewer, I am satisfied that no significant

residual hydrological impacts due to water discharges during the construction phase are likely to arise.

11.12.166. ***PFAS Contamination at Dublin Airport***

11.12.167. As detailed above and in more detail in Section 10.2 of this report, the applicant has submitted a PFAS Management Strategy for Dublin Airport, in response to issues raised at the oral hearing regarding historic PFAS contamination at Dublin Airport. The Strategy sets out a worst case scenario for the management of excavated material from the Dublin Airport campus, with all material (including water collected at the sites) assumed to be contaminated with PFAS and taken to a Triage and Material Management Centre within the Dardistown Depot construction site for temporary holding, pending test results.

11.12.168. The objectives of the strategy are to prevent PFAS mobilisation and transfer during construction and operation of MetroLink and to avoid the creation of preferential pathways that could facilitate the transfer or migration of PFAS.

11.12.169. The issue of PFAS contamination is an emerging issue in both an Irish and European context. In relation to Dublin Airport, the applicant notes the publication of a Dublin Airport 2021-2023 Environmental Monitoring Report published by DAA in 2024, subsequent to the oral hearing. That report and further ground investigation works by TII in late-2024 have informed the PFAS Management Strategy.

11.12.170. I note that all extracted material and dewatering from the airport area will be taken to the Dardistown compound, where the applicant has proposed a triage area for the temporary holding of this material pending testing results. Water collected will be treated and discharged to sewer under UÉ consent, following a treatment train which will include a PFAS treatment stage, such as activated carbon filtration. I note that the triage area will have an impermeable surface, will be surrounded by a cut-off interceptor drain to collect any run-off and that stockpiles will be covered to minimise the sediment load in any runoff.

11.12.171. In addition to the PFAS risks associated with excavations in the airport, PFAS has been detected in the Sluice River, Mayne River, Turnapin Stream and Santry River in the vicinity of the airport and thus the diversion and culverting works at these watercourses need to consider the risk of encountering and mobilising PFAS. Additional information is provided in the PFAS Management Strategy in relation to

this, including segregation of these works and use of dedicated plant and equipment, undertaking of in-stream works in dry or very low flow conditions with treatment of any potentially contaminated water prevent any cross contamination and barriers to limit PFAS migration downstream of any in-stream works during the diversion/culverting process and monitoring of works and flows for any increase in PFAS levels.

11.12.172. I am satisfied that the applicant's proposed PFAS Management Strategy is comprehensive, detailed and suitably robust, with its use of a worst case scenario whereby all material arisings in this area are treated as potentially contaminated. The PFAS issue at Dublin Airport is a much wider issue than the MetroLink proposal, however I am satisfied that the proposed strategy, when implemented and monitored, will be sufficient to protect the water environment in this area from increased contamination as a result of the proposed development. I am satisfied that no significant residual impacts arise in relation to this issue.

11.12.173. ***Flood Risk***

11.12.174. I am satisfied that flood risk during the construction phase can be effectively managed with good construction working practices, as set out in the CEMP and I note that none of the many construction compounds are located within areas with significant flood risk.

11.12.175. I have addressed the flood risks associated with the culverts, watercourse diversions etc. in the operational phase assessment.

11.12.176. Operational Phase

11.12.177. In the operational phase, I agree with the applicant's general position that the potential for impacts on hydrology is limited, given the electrically powered nature of the proposed development. I consider that the potential significant impacts are associated with:

- Watercourse crossings, culverts and diversions.
- Water discharges.
- Flood risk.

11.12.178. ***Watercourse Crossings, Culverts and Diversions***

11.12.179. I consider that the greatest potential for impacts on hydrology associated with watercourse crossings, culverts and diversions generally arises during the construction phase, rather than the operational phase, which I have addressed above.

11.12.180. In the operational phase, the impacts are primarily related to impacts on flow conditions (velocity or volume), related flood risk impacts and impacts on ecological factors, particularly with regard to fisheries but also certain mammal species (see biodiversity section of this report).

11.12.181. I have addressed flood risk separately below. With regard to flow conditions, I note that considerable qualitative and quantitative modelling and assessment has been undertaken and I refer to Appendix A18.5, where it is demonstrated that the crossing, culverts and diversion channels have been appropriately sized to cater for the estimated flows with suitable allowances for climate change impacts.

11.12.182. ***Water Discharges***

11.12.183. As noted above, any water that infiltrates the underground tunnels or stations in the operational phase will be collected via an internal drainage system and gravitated to sumps where it will be pumped to the public sewer. I am satisfied that the quantities of water arising are likely be minimal in these underground sections, given the waterproofed concrete construction methods proposed and I am also satisfied that any such water collected is not likely to be contaminated due to the electrified nature of the metro.

11.12.184. The proposed stations generally include toilet facilities for staff, while a number of the interchange stations will also include toilets for public use. These will be connected to the public foul drainage network. There was considerable confusion resulting from the applicant's documentation, drawings and submissions made at the oral hearing regarding which stations would have public toilet facilities and I refer the Board to Section 9.26 where I have addressed this issue. I am satisfied that no significant issues arise with regard to foul drainage, given the proposal to connect to the public system under a connection agreement with UÉ.

11.12.185. In the northern part of the alignment, where areas of retained cut, cut-and-cover and shallow/surface stations are proposed, the alignment has been divided into a series of catchments with water collected within each catchment, attenuated

and discharged to watercourses at greenfield run-off rates via hydrobrakes or similar flow control devices.

11.12.186. I note that it is only proposed to provide attenuation storage for areas where the MetroLink project results in the creation of new impermeable areas – i.e. attenuation storage is not provided for existing impermeable areas. I consider this to be a reasonable approach, given the need to minimise land acquisition, which will ensure that there is no net increase in run-off as a result of the proposed development.

11.12.187. A total of 8 No. discharge points to watercourses are proposed, based on the catchment approach to the alignment (see Table 18.23 of EIAR). I consider this catchment approach a suitable means of addressing drainage requirements while reducing the potential for the spread of any contaminants and limiting discharge volume at any one discharge point. I note that extensive attenuation storage is proposed, including both attenuation ponds and attenuation tanks and the supporting calculations for the design of the drainage system are contained in the Flood Risk Assessment and its appendices. Importantly, the attenuation storage volumes provided for each of the catchments makes provision for a 1% AEP storm plus 20% allowance for climate change and additional freeboard. The central drainage channel along the tracks is also oversized to cater for unforeseen over-design events.

11.12.188. There will generally be no significant potential for pollutants to contaminate this water given the electrified trains, other than at Dardistown Depot and the Estuary P&R Facility where road vehicles could result in accidental spillages of oils, fuels lubricants etc. or spillage of chemicals etc. at the Dardistown Depot. I note that oil/petrol interceptors are proposed at these two locations, prior to discharge.

11.12.189. With regard to firewater, which has the potential to be contaminated with fire suppressant chemicals or other pollutants, I note the proposed use of automated cut-off valves to prevent this being discharged to sewer in the underground section. In the surface/retained cut areas, the design of the drainage system will allow this to be held in the attenuation storage pending disposal in accordance with local authority / UÉ / EPA requirements. Noting these drainage measures and the wider fire safety measures and procedures as outlined in the EIAR and at the oral hearing, I am

satisfied that no likely significant issues arise with respect to firewater as a result of these design measures.

11.12.190. The station entrances and plaza areas will also introduce new impermeable areas, including at the deep stations. I note that extensive SuDS measures are proposed, including swales, green roofs at certain locations, filter strips, ponds etc. while connections to the surface water drainage system are also proposed.

11.12.191. Having regard to the detailed drainage measures proposed and the electrified nature of the metro, I am satisfied that it can be reasonably concluded that no significant residual impacts on hydrology are likely to occur during the operational phase.

11.12.192. ***Consideration of Proposed Modifications to Drainage Proposals***

11.12.193. With regard to the proposed changes at the proposed Swords Pumping Station, as detailed above, I note that while the original proposal for an emergency overflow to the Ward River was shown on drawing No. ML1-JAI-URD-ROUT_XX-DR-Y-02011, it is not entirely clear if that element of the proposal was considered in the EIAR. Notwithstanding this, I consider that the proposed change from an emergency overflow to the river to a piped overflow connection to the Swords WwTW for treatment prior to discharge under controlled conditions is a positive development with regard to the protection of surface water quality and I note that the applicant has proposed this change following ongoing consultation with UÉ. Likewise, I do not consider that the related omission of an associated foul storage attenuation tank within Balheary Park creates any additional or increased impacts with regard to hydrology, since its omission is again on foot of engagement with UÉ.

11.12.194. The Board will note a number of documents submitted by the applicant at the oral hearing, including a Technical Note, entitled 'Metrolink/Mouna Private Rising Main Interface' submitted on 6th March 2024 and a series of associated drawings (Ref. OH182). These drawings were also included as part of the revised drawing pack submitted at the oral hearing on 27th March 2024 (Ref. OH351). The Technical Note and drawings relate to revisions to the design of a diversion that is required for a private foul rising main in the Dardistown area. The revisions relate to issues raised in a submission made and subsequently withdrawn by Mouna Unlimited Company, who operate an industrial undertaking at Dardistown. As the submission

has been withdrawn (with the former observer listed in the applicant's Schedule of Third Party Agreements), I do not consider that this issue requires any detailed consideration by the Board as I consider that the relatively minor amendments proposed by the applicant (i.e. changes to the proposed diversion of an existing private foul sewer) are acceptable and do not give rise to any potential significant additional effects on the water environment beyond those assessed in the EIAR.

11.12.195. With regard to the two additional underground sump pumping stations introduced at the oral hearing, as detailed above, these are not likely to collect a significant amount of additional water, given the impermeable tunnel lining, and any water that does get collected is not likely to be contaminated by hydrocarbons or other pollutants given the electrified nature of the project. Water pumped from the sumps will be discharged via the track drainage system, as with other tunnelled areas and I do not consider that these pumping stations give rise to any potential for significant additional effects on the water environment.

11.12.196. ***Flood Risk***

11.12.197. The application was accompanied by a Flood Risk Assessment ('FRA'; Appendix A18.5 of the EIAR), which follows the standard multi-stage assessment methodology outlined in the Planning System and Flood Risk Management Guidelines for Planning Authorities. I note Section 2.17 of the Guidelines, which states that "transport and strategic utilities infrastructure can be particularly vulnerable to flooding because interruption of their function can have widespread effects well beyond the area that is flooded. This reinforces the need for decisions to locate development in areas at risk of flooding to be fully justified with regard to wider proper planning and sustainable development considerations".

11.12.198. Table 3.1 of the Guidelines outlines the classifications of vulnerability for different types of development. The proposed development would constitute 'essential infrastructure, such as primary transport and utilities distribution' and therefore would be 'highly vulnerable development (including essential infrastructure)'. Table 3.2 of the Guidelines consists of a matrix of vulnerability versus flood zones. 'Highly vulnerable development' would be required to satisfy a Justification Test in Flood Zones A and B, but would be Appropriate in Flood Zone C, with the flood zones defined as follows:

- Flood Zone A: High probability of flooding (Greater than 1% annually for river flooding or 0.5% annually for coastal flooding).
- Flood Zone B: Moderate probability of flooding (Between 0.1% and 1% annually for river flooding and between 0.1% and 0.5% annually for coastal flooding).
- Flood Zone C: Low probability of flooding (Less than 0.1% annually for both river and coastal flooding (i.e. all areas which are not in Zones A or B)).

11.12.199. The applicant's FRA identifies pluvial flooding as a risk along the entire route, due to the capacity of the existing surface water network. The FRA states that it is beyond the scope of the MetroLink scheme to increase the capacity of this network, but it notes the proposed drainage design which incorporates attenuation, flow control and SuDS measures and contends there will be no change to existing run-off rates as a result of the increased impermeable surfaces created by the proposed development. Consequently, it is contended that there will no increase in the risk of pluvial flooding. Having reviewed the details of the proposed drainage network for the proposed development, I accept that conclusion.

11.12.200. Following Stage 1 and 2 assessments, the FRA identified fluvial flood risk as an issue for the following elements of the proposed development:

- Diversion of a tributary of Staffordstown Stream for the P&R Facility at Lissenhall.
- The Broadmeadow and Ward Rivers viaduct.
- The Sluice River and one of its tributaries, which are proposed to be culverted where they cross the alignment.
- Diversion of the Turnapin Stream (a tributary of the River Mayne) for the proposed Dardistown Depot.

11.12.201. The applicant undertook Stage 3 assessments for these elements, including both qualitative and quantitative analysis, and contends that they will not impact on flood levels or risk, due to the conservative designs proposed, which also make allowances for climate change.

11.12.202. With regard to the proposed viaduct over the Broadmeadow and Ward Rivers, the analysis completed for the Stage 3 FRA shows that the viaduct will not impact on flood levels for the two rivers and that sufficient provision has been made to maintain floodplain flows. Similarly, for the proposed culverts over Sluice River and its tributary, the analysis shows that the culverts will not impact on flood levels for the river and its tributary since both culverts have been oversized for 0.1% AEP flood. Two watercourse diversions are proposed, including a tributary of the Staffordstown Stream for the construction of the Estuary P&R Facility at Lissenhall and the Turnapin Stream for the Dardistown Depot. The Stage 3 FRA analysis shows that the diversions have been designed so their banks will not be overtopped by the 0.1% AEP flood.

11.12.203. Coastal flooding was identified as a risk for the proposed Tara Station, with increased risk due to climate change effects. While the street level at the entrance cannot be raised, flood resilience measures are proposed, including the provision of demountable barriers to cater for the 0.1% AEP flood with the HEFS scenario for climate change. A Stage 3 assessment was again undertaken, and the associated qualitative and quantitative analysis is stated to demonstrate that the proposed Tara Station will not impact on flood levels for the River Liffey. I note that it would displace less than 1% of the total flood volume on the floodplain, resulting in negligible impact on fluvial and coastal flood extents.

11.12.204. The wider effects of climate change are also considered within the FRA, which it is noted are likely to result in increased river flow, increased rainfall depths and intensity and increased sea levels. The design of the scheme is stated to be resilient to these climate change effects, particularly through the design of the proposed SuDS measures.

11.12.205. Section 8 of the FRA sets out the applicant's position regarding compliance with the Justification Test for fluvial, coastal and pluvial flood risk and concludes that the proposed development meets requirements of the Test for all three forms of flood risk.

11.12.206. I note the submission from FCC (S321), which states that they are satisfied that the flood history in the area will not impede the project. With regard to pluvial flooding, FCC state that they are satisfied with the availability and capacity of public

surface water drainage facilities to facilitate the project due to the comprehensive SuDS proposals. With regard to fluvial flooding, FCC state that they are satisfied that the risk has been addressed and that with mitigation measures it will not impact on flood levels.

11.12.207. Flood risk was raised as a concern in a number of submissions from observers at various locations along the alignment, including in the Swords area, the Glasnevin area.

11.12.208. GADRA (S99) raised concerns regarding the proximity of the Griffith Park Station to the River Tolka, given its history of flooding. However, given the elevated position of the station above the Tolka, and with reference to the FRA, I am satisfied that no significant flood risk arises.

11.12.209. ACRA and Ballymun Road North Residents Associations, in their written and subsequent oral hearing submission (S1, OH45), raised the issue of existing pluvial and fluvial flooding in the vicinity of the proposed Collins Avenue Station. The Wad River was stated to be of concern locally, since a tributary of it runs along the rear of houses on the west side of Ballymun Road. It was stated that the water table is very high here with regular flooding during periods of heavy rain. The observers submitted a photograph of flooding in a rear garden on Ballymun Road and asked for evidence that the situation will not be made worse by the proposed station construction. They express concern regarding the capacity of the culverted River Wad to take further runoff.

11.12.210. Nick Stokes (Jacobs), on behalf of the applicant, stated that their understanding of the existing flooding issue in this area is that it arises due to the heavy clay soils in the area which are relatively impermeable with poor drainage characteristics. He also stated that the existing drainage network is relatively undersized. Mr Stokes noted that the station design includes for its own drainage network and he outlined the various SuDS measures that are proposed, stating that these will attenuate runoff and ensure that there is no net effect of runoff on the surrounding area.

11.12.211. Teri Hayes (AWN), also on behalf of the applicant, responded to the observers' concerns regarding the potential barrier effect of the station box on groundwater flow and the potential for groundwater related flooding. She noted the

interaction between hydrology and hydrogeology and, with reference to Appendix A19.10, stated that groundwater flow in the area is generally parallel with the MetroLink alignment and that it would not, therefore, act as a barrier to groundwater flow. Reiterating Mr Stokes submission, she stated that the particularly deep layer of clay in this location is the likely cause of the existing flooding, which is therefore pluvial and not groundwater flooding.

11.12.212. Having reviewed the relevant information, including the geological cross-sections contained in Appendix A20.9 which are informed by ground investigations, I am satisfied that the area in the vicinity of the Collins Avenue station is underlain by a thick clay band, which by its nature will have poor drainage characteristics. I find this, allied to the age of the existing drainage network in the area, to be a compelling explanation for existing flooding events that are experienced in the area.

11.12.213. Similar issues were raised in the Swords area with regard to groundwater and potential water table level changes due to the project. These issues are addressed in the hydrogeology section of the report.

11.12.214. It is not reasonably within the scope of the MetroLink project to resolve all existing drainage issues along the alignment as these are ultimately matters outside the remit of TII. What is more important is that the proposed development does not result in an increased flood risk, whether fluvial, pluvial or groundwater related.

11.12.215. I am satisfied that an extensive drainage proposal for the MetroLink infrastructure has been developed, which allows for the management of water in accordance with SuDS principles and which will ensure that the proposed development will not exacerbate any existing flooding experienced in the area. With regard to potential groundwater related flooding, and with reference to the identified groundwater flow direction in the area, I concur with Ms Hayes position that the proposed development will not act as a significant barrier to groundwater movement that would result in increased risk of groundwater-related flooding on either side of the structures.

11.12.216. Having reviewed the detailed FRA, the drainage design and associated calculations and supporting information for the diversions, culverts and viaduct, I am satisfied that the proposed development can be constructed and operated without creating any significant additional risk of flooding.

11.12.217. Water Framework Directive Assessment

11.12.218. The Water Framework Directive 2000/60/EC (WFD) requires all Member States to protect and improve water quality in all waters so that 'Good' water quality status is achieved by 2027 at the latest and it requires that management plans be prepared on a river basin basis. 'Good' surface water status is defined in the Directive as the status achieved by a surface water body when both its ecological status and its chemical status are at least 'good'.

11.12.219. Since lodgement of the application, the 'Water Action Plan 2024: A River Basin Management Plan for Ireland' (WAP) has been published. The WAP is Ireland's third River Basin Management Plan, with the EIAR having considered the earlier draft Plan.

11.12.220. Sections 18.5.3.8 and 18.5.4.9 of the EIAR set out the applicant's WFD assessment for the construction phase and operational phase, respectively, while Section 5.2.2 of the applicant's Planning Report (refer to updated version submitted at the oral hearing on 19th February 2024 (Ref. OH22)) also addresses the WFD.

11.12.221. The surface water body WFD status and risk score set out in Table 18.12 of the EIAR is now outdated, being for the period 2013-2018. While the applicant's Schedule of Errata states that they submitted an updated table at the oral hearing, this does not appear to be the case. Regardless, the table below compares the WFD status and risk for each of the surface water bodies crossed by the proposed development in the 2013-2018 period and the most recent 2016-2021 period, based on publicly available EPA information⁵². It can be seen that while many of the water bodies are unchanged, the Broadmeadow and Ward Rivers have improved from Poor to Moderate, while the Tolka has deteriorated from Moderate to Poor. The lower and upper stretches of the River Liffey have deteriorated and improved, respectively. In general, all natural surface water bodies are at risk of not meeting WFD 'good' status, with the exception of the Sluice River and Liffey Estuary Upper which are 'under review'. The two canals already have a good status and are not at risk. I have also set out the significant issues and pressures identified for the various water bodies.

⁵² www.catchments.ie

Comparison of WFD Status and Risk for the Period 2013-2018 and 2016-2021 and Significant Issues and Pressures							
Code	Name	WFD Status 2013-2018	WFD Risk Score 2013-2018	WFD Status 2016-2021	WFD Risk Score 2016-2021	Significant Issues	Significant Pressures
IE_EA_08 B020800	Broadmeadow River	Poor	At risk	Moderate	At risk	Morphological, Nutrients	Hydromorphology, Agriculture
IE_EA_08 W010610	Ward River	Poor	At risk	Moderate	At risk	Morphological, 'Unknown Impact Type'	Hydromorphology, Urban Run-off
IE_EA_09 S071100	Sluice River	Poor	Under review	Poor	Under review	-	-
IE_EA_09 M030500	Mayne River	Poor	At risk	Poor	At risk	Nutrients, Organic, 'Unknown Impact Type'	Urban Run-off
IE_EA_09 S010300	Santry River	Poor	At risk	Poor	At risk	Nutrients, Organic	Urban Run-off, Urban Wastewater
IE_EA_09T 011150	Tolka River	Moderate	At risk	Poor	At risk	Nutrients, Organic	Urban Run-off, Urban Wastewater
IE_09_AW B_RCMLE	Royal Canal	Good	Under review	Good	Under review	-	-
IE_EA_09L 012360 /	River Liffey Lower /	Moderate / Poor	At risk	Poor / Good	At risk / Under review	Nutrients, Organic	Urban Run-off, Urban Wastewater
IE_EA_090 _0400	Liffey Estuary Upper					-	-
IE_09_AW B_GCMLE	Grand Canal	Good	Not at risk	Good	Not at risk	-	-

11.12.308. I note that, in line with commitments made in the WAP, a large list of potential 'Heavily Modified Water Bodies' (HMWBs) have been identified by DHLGH. The following surface water bodies, crossed by the proposed development, are included in the list of candidate HMWBs: Broadmeadow River, Ward River, Mayne River, Santry River, Tolka River and River Liffey.

11.12.309. The ability to designate certain water bodies as HMWBs arises from the WFD and they are defined as a body of surface water which, as a result of physical alterations by human activity, is substantially changed in character. Water bodies can be designated as HMWBs where the changes necessary for achieving Good Ecological Status (GES) would have significant adverse effects on the wider environment, on navigation, recreation, water storage activities (e.g. drinking-water supply, power generation or irrigation), flood protection, land drainage, or other sustainable human development activities. They can also be designated where the beneficial objectives served by the artificial or modified characteristics of the water body cannot, for reasons of technical feasibility or disproportionate costs, reasonably be achieved by other means, which are a significantly better environmental option.

11.12.310. The main implication of the designation of a water body as a HMWB is that instead of having the standard environmental objective of GES, they have an alternative objective of Good Ecological Potential (GEP). GEP takes account of the changes in aquatic ecology caused by the physical modification.

11.12.311. At the time of completion of this report, while a public consultation exercise had been undertaken, the designation of the abovementioned water bodies as HMWBs had not occurred.

11.12.312. It can be seen that the principal issues and pressures facing the water bodies are nutrient and organic issues related to urban run-off and urban wastewater.

11.12.313. The only water bodies identified as experiencing significant morphological issues and pressures are the Ward and Broadmeadow Rivers. As detailed above, it is proposed to cross these two rivers with an elevated c. 260m long viaduct which retains the alignment clear of the flowpaths and floodplains of these two rivers, which crosses the rivers with a single span and which retains the existing morphology of the rivers.

- 11.12.314. As detailed above, the proposed development incorporates a comprehensive range of design and mitigation measures to protect water quality in waterbodies during both construction and operational phases. Most importantly, in the construction phase there will be no direct discharge to watercourses (subject to a condition removing any lack of clarity in this regard), and measures and protocols are proposed to mitigate the risk and significance of any accidental discharges or spillages. Any such spillage would be a short-term event that would not be likely to be of such a scale and extent to impact on the water status of an affected surface water body for the purposes of the WFD.
- 11.12.315. A number of watercourse culverts, diversions and crossings are proposed, as detailed above. The applicant has outlined a clear methodology for the construction of these, including measures to protect water quality during construction. The submitted information also details how the design of these structures and diversions has had due regard to the size required to maintain flow conditions without impacting on flood risk up or downstream or without degrading water quality.
- 11.12.316. Any potential for dewatering to impact on baseflow to surface water bodies will be limited to the construction phase and will reduce as the excavation progresses and grouting sealing works are completed.
- 11.12.317. In the operational phase, while discharge of collected surface water to watercourses is proposed, the proposed drainage system includes extensive SuDS measures prior to discharge, including hydrobrakes, attenuation storage and hydrocarbon interceptors. The alignment has also been divided into a series of drainage catchments, limiting the potential for spread of any contaminated water, should it arise. In relation to the underground tunnels and station boxes, these are designed to be impermeable, limiting the volumes of water that will require discharge. These measures and the electrified nature of the proposed development means that the risk of accidental spillages of fuels, oils etc. to watercourses is minimal.
- 11.12.318. A submission was made by Sabrina Joyce-Kemper on behalf of herself and Wild Ireland Defence CLG (WID) at the oral hearing on 27th March 2024 (Ref. OH369) which raised the issue of the WFD. The submission contended that the EIAR and NIS assessment must adequately engage with the WFD regarding

cumulative impacts on water bodies and how the project(s) will lead to improvements in the current status of water bodies to help prevent any further deterioration. The submission noted the 'Poor' status of many of the water bodies that will be crossed as part of the MetroLink development and the associated MetroLink cables development.

11.12.319. Firstly, and with reference to the judgment of Humphreys J. in the recent case of Ryanair DAC v An Bord Pleanála⁵³, "the argument that the WFD requires refusal of permission unless any given permission positively contributes to the restoration of good status to any relevant water bodies lacks any authority whatsoever and is clearly unworkable". In fact, as Humphreys J. notes, "the directive only requires that they don't make things worse." Similarly, in this case, there is no requirement under the WFD for the MetroLink project, alone or cumulatively, to improve the status of any water bodies as contended by WID. It should just not make the existing situation worse.

11.12.320. The applicant responded to the WID submission in Section 4 of their response submission received on 31st January 2025, in which they reiterated the EIAR assessment and conclusion, i.e. that with mitigation measures in place, there will be no degradation of current water body status (chemically, ecologically and quantity) and no impact on water bodies' potential to meet the requirements and/or objectives in the RBMP.

11.12.321. With regard to potential cumulative impacts on WFD status or risk, the applicant notes the CIA presented in the EIAR and the oral hearing update. They conclude that the majority of the identified potential negative cumulative impacts on water quality will be avoided or reduced to a level that is not considered a significant residual impact with the implementation of mitigation measures, as detailed above.

11.12.322. With reference to the separate but associated MetroLink cables application, the applicant notes that the EIAR submitted with that application considered potential impacts on water body status and concluded that – with the implementation of mitigation measures – the cables project would not result in a change in WFD status of any groundwater or surface water body or prevent them from reaching good status in the future. Furthermore, no significant residual construction or operational phase

⁵³ [2025] IEHC 74.

impacts on water quality are identified in the cables application. The cumulative assessment contained in the cables application considers there to be Slight cumulative effects with the MetroLink Railway Order application works, due to the timings of the works at intersection areas being unlikely to coincide and being remote from watercourses.

11.12.323. With reference to the PFAS issue at Dublin Airport, as detailed above, I consider that the risks associated with this issue can be effectively managed and mitigated with the implementation of the PFAS Management Strategy which proposes a suitably conservative approach to handling material (solids and water) arising from the airport sites.

11.12.324. In conclusion, I am satisfied, subject to compliance with the identified design and mitigation measures and noting the requirement to gain OPW consent for works to watercourses, that the proposed development can be constructed and operated without negatively affecting the WFD status of any watercourse or surface water body. While the current 'Poor' status of many of the watercourses and the fact that the majority are 'at risk' of not meeting WFD requirements are noted, I am satisfied that the proposed development will not negatively impact water quality or flow conditions in these watercourses and having regard to the design of the diversions, culverts and construction/operational phase drainage measures I am satisfied that the proposed development would not prejudice or undermine any ongoing or future efforts to improve the WFD status of the relevant waterbodies and that the development as proposed would not be contrary to any objectives of the WAP.

11.12.325. **Cumulative Impacts**

11.12.326. In relation to cumulative impacts, I concur with the applicant's assessment that potential cumulative impacts on hydrology are limited to the construction phase, should MetroLink and other projects be under construction at the same time and that the nature of any such potential cumulative impacts would be related to accidental pollution/contamination events. With the implementation of the proposed design and mitigation measures as outlined in the EIAR and CEMP, which generally comprise good practice construction practices for construction sites and for works in the vicinity of watercourses, and the implementation of similar measures on other

construction sites, I am satisfied that no significant cumulative residual impacts are likely to arise.

11.12.327. I refer also to the issue of potential cumulative impacts on WFD status or risk, particularly with regard to the MetroLink cables application, which I have addressed above.

11.12.328. **Conclusion on Hydrology**

11.12.329. I have considered all of the written and oral submissions made in relation to hydrology and the relevant contents of the file including the EIAR and relevant updates provided to the oral hearing. I am satisfied that the potential for significant adverse impacts on hydrology can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on hydrology.

11.13. Land, Soil, Water, Air and Climate – Hydrogeology

11.13.1. Introduction

11.13.2. Hydrogeology is addressed in Chapter 19 of the EIAR. Appendices A19.1 to A19.11 include results of groundwater monitoring, groundwater contour mapping, seepage rate and barrier effect assessments for certain areas where cut & cover excavation is proposed and hydrogeological plans for both the overall project and for Tara Street and Swords Central, more particularly. Figures 19.1 to 19.8 illustrate bedrock geology, aquifer characteristics, WFD information, baseline mapping of wells, karst features and monitoring points, groundwater recharge mapping and hydraulic testing areas.

11.13.3. Methodology

11.13.4. The assessment is stated to have been carried out with reference to guidance from the EPA, TII/NRA, Institute of Geologists Ireland, and the River Basin Management Plan 2018-2021.

11.13.5. The geographical scope defined in the EIAR for the assessment comprised all groundwater bodies located within the area occupied by the proposed alignment as well as the lands within a 500m buffer either side of the centre line.

11.13.6. Baseline data was collated from the EPA, GSI, OSI, IGSL, Teagasc, DCC, FCC, NPWS and other sources, while site-specific data (e.g. water quality, water level data) was collated from historical and new monitoring boreholes along the alignment. Field surveys and walkover assessments were carried out, including static water level monitoring and water quality sampling at historical monitoring well locations and more recently drilled boreholes along the alignment.

11.13.7. Ground investigations for the project included shallow and deep boreholes, trial pits and groundwater level monitoring and quality testing. It is stated that this included: >126 No. groundwater monitoring wells (Phase 1-4); 30 No. for Phase 5; 24 No. Groundwater (continuous) level monitoring wells; 55 No. groundwater quality monitoring wells; 24 No. pumping tests; 76 No. packer tests; 55 No. small scale variable head permeability tests; and 3 No. Infiltration tests.

11.13.8. The parameters tested in the water quality testing included: major anions & cations; metals & other compounds; physic-chemical parameters (e.g. pH, electrical

conductivity, temperature, Total Suspended Solids, Total Dissolved Solids, Turbidity, Redox, Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), fats, oils and grease, colour); Volatile Organic Compounds (VOCs) and Semi VOCs; hydrocarbons; and PFAS and PCBs.

11.13.9. Consultation took place with various statutory and non-statutory bodies, consultees and private individuals.

11.13.10. The appraisal method for assessing impacts utilised the standard approach of classifying the importance of the relevant attributes, quantifying the likely magnitude of any impact on these attributes and determining the significance of the effects utilising a matrix.

11.13.11. Other topics considered in the assessment included groundwater inflow (e.g. at deep excavations) and barrier effects (i.e. damming due to the potential effect of deep/linear structures on groundwater flow). These issues were assessed using computer modelling techniques, as detailed in Appendices A19.8 and A19.9.

11.13.12. **Baseline**

11.13.13. An overview of the baseline geological and hydrogeological conditions is provided below. For a detailed area-by-area description, I refer the Board to Section 19.4 of the EIAR.

11.13.14. At a high level, superficial deposits across the study area consist of made ground, encountered mainly in urban areas; glacial till, encountered across the site, alluvium and glaciofluvial sands and gravels, encountered primarily in the Pre-Glacial Liffey channel which runs approximately NW-SE in the vicinity of O'Connell Street. These deposits are all potentially water-bearing by nature and are underlain by limestones and mudstones of the Lucan Formation, the Tober Colleen Formation, the Malahide formation and Waulsortian Limestones. The glacial tills are generally brown boulder clay or stiffer and harder black boulder clay at greater depths in some areas. The Waulsortian limestone found in area AZ2 is noted to be more prone to karstification effects than other limestones and the potential for developed voids and associated inflows at Dublin Airport Station location is noted. Boreholes at Dublin Airport only indicate 'incipient' epikarst with no significant karst features encountered.

- 11.13.15. Diagram 19.3 of the EIAR provides a useful schematic hydrogeological section of the overall scheme illustrating the above.
- 11.13.16. The bedrock underlying the majority of the proposed alignment is classified as a Locally Important Aquifer which is 'moderately productive only in local zones' (LI) and belongs to the Swords and Dublin Groundwater Bodies (GWB). The EIAR notes that, while Locally Important Aquifers are generally dominated by poor yielding boreholes with yields less than 40m³/d, yields of up to 393m³/d have been recorded north of the River Liffey. The EIAR notes that the GSI considers the aquifer not to have any primary porosity with flow only occurring through fractures and fissures (some of which will have been enlarged by karstification and dolomitisation), with low transmissivities (1-10 m²/d) and a reduction in the permeabilities of the rock type with depth. It also notes that the GSI cites that groundwater flow will predominantly take place close to the surface (i.e. with high velocities possible within the upper weathered and broken rock zone) with additional isolated [possibly conduit] flow commonly recorded along fractures and fissures located at depths of 30m bgl to 50m bgl.
- 11.13.17. The general flow direction of the Swords GWB and Dublin GWB is from west to east towards the coast, although flow paths within the Dublin GWB are also towards the River Liffey and Dublin City. The southeast of Dublin Airport is underlain by bedrock classified as a Poor Aquifer which is 'generally unproductive except for local zones' (PI) and belongs to the Dublin GWB described above. This aquifer type is also part of the Industrial Facility (P0480-02) GWB as reported by the EPA and which is associated with the Dublin Airport facilities.
- 11.13.18. Aquifer vulnerability across the alignment is generally Low to Moderate, increasing to High to Extreme at Dublin Airport, and Moderate to High at Griffith Park.
- 11.13.19. Groundwater recharge along the alignment is generally low, particularly in the northern portions.
- 11.13.20. Groundwater quality along the alignment was monitored and is generally typical of urban or peri-urban settings, with numerous occasional exceedances of various pollutants as detailed in Appendix A20.8.

11.13.21. The baseline review also included extensive reviews of existing groundwater levels along the alignment and a review of data sources on existing groundwater abstraction points, including wells, springs and monitoring boreholes. Pumping tests were also undertaken to better understand inflow conditions and recharge rates.

11.13.22. **Potential Impacts**

11.13.23. **Do-Nothing Scenario**

11.13.24. In the Do Nothing scenario, where the proposed development is not constructed, there would be no resulting impacts on the existing hydrogeological environment along the alignment and the baseline hydrogeological environment would therefore remain the same.

11.13.25. **Construction Phase**

11.13.26. Potential construction phase hydrogeological impacts are associated with:

- Aquifer impact as a result of removal during tunnelling and deep excavations.
- Changes in groundwater recharge characteristics.
- Changes in groundwater quality due to accidental spillages of potentially polluting substances.
- Impact on groundwater as a result of substances injected into the ground during the TBM tunnelling works, such as annulus grout, spoil conditioning additives, main bearing grease and tail seal grease or bentonite.
- Impact to groundwater levels and flow patterns due to a potential 'barrier effect' as a result of cut sections or underground structures intercepting groundwater flow paths.
- Impact on groundwater contributions to identified surface watercourses.
- Impact on sites of ecological importance within water courses crossed by or downstream of the proposed development and which may receive baseflow from groundwater.

11.13.27. The potential impacts on the various factors are as follows:

11.13.28. ***Groundwater Resources***

11.13.29. **Permanent Imperceptible** impact. Project involves localised removal of the bedrock aquifer through tunnelling and deep excavations. All areas have limited recharge coefficients due to low permeability soils or urban settings. Rock to be excavated represents a very small percentage of the overall bedrock aquifer volume. Bedrock aquifers along the alignment are not regionally important aquifers. While they represent groundwater resource potential, the construction will not significantly change the recharge characteristics along the alignment or significantly impact on the natural groundwater regime within the underlying aquifers. No deterioration in water quality of the bedrock aquifers.

11.13.30. ***Groundwater Supplies***

11.13.31. The area within which the project is located is mostly provided by public supply mains, however a number of groundwater abstractions are identified which may be impacted on where groundwater levels at wells are lowered due to construction related dewatering of the aquifer or due to impacts on groundwater quality.

11.13.32. The presence of wells is also identified as a geotechnical risk, as closed-face TBM system can lead to water/mud release at ground level if the pressurised cutterhead intercepts an unknown well without appropriate controls in place.

11.13.33. Impacts on groundwater supplies would be due to short-term lowering of water levels during station/shaft construction which will re-stabilise post construction with no impacts due to tunnelling since it will be sealed from underground flow, unless a groundwater well was directly intercepted by the TBM. This is considered unlikely and should it occur, the well will be decommissioned and a replacement well provided.

11.13.34. The EIAR identifies a Moderate adverse magnitude of impact and a short-term duration, but it does not assign a significance rating. With regard to Table 19.5 of the EIAR, I would consider it to be a **Slight to Moderate adverse short-term** impact, given the LI / PI rating of the aquifers.

11.13.35. ***Groundwater Quality and Discharge of Water***

- 11.13.36. The potential for impacts on groundwater quality is identified due to discharge off-site of groundwater from dewatering of the excavation sites, discharge from the TBM process and localised surface water run-off.
- 11.13.37. Discharges are initially likely to be high in sediment with potentially elevated alkalinity where cement works is on-going and will require adequate attenuation and treatment prior to approved discharge to sewer. Tanker disposal will be used where this option is not available. The potential for accidental 'drainage to ground' related pollution within construction sites is also identified, e.g. hydrocarbons, alkaline water or wheel wash water. Run-off from temporarily stockpiled material could also impact on both groundwater and surface water.
- 11.13.38. Potential impacts are also identified at Dublin Airport due to potential interception of incipient epikarst modifying hydrogeological pathways or drawing-in existing contaminated groundwater in this area. Surface water run-off and infiltration through contaminated stockpiles is also identified as a potential issue.
- 11.13.39. Construction related pollutants that do infiltrate to ground are stated to have limited mobility with the risk to groundwater quality in the LI aquifer of the Swords GWB and Dublin GWB limited to the construction footprint due to the use of secant piles and D-walls at stations reducing lateral mobility of any pollutants.
- 11.13.40. All contaminated water and/or construction process water has the potential to contaminate subsoils and the underlying aquifer (including surface water) if not mitigated. This water will be contained within the site and tankered off-site to a licenced facility for disposal or treatment.
- 11.13.41. Other potential water quality impacts include run-off associated with on-site dampening activities where D-walls are installed, ineffective management of material at batching/bentonite plants resulting in run-off, faecal contamination arising from inadequate treatment of on-site toilets and washing facilities, or re-injection of poorly treated water to ground for the purposes of preventing off-site settlement issues. The encasing of the city drive TBM in concrete to the south of Charlemont is also noted, although the majority of the machine will be dismantled and removed with the remainder thorough cleaned.
- 11.13.42. Table 19.23 of the EIAR sets out the estimated daily rate of discharge from each construction site.

11.13.43. In the absence of design and mitigation measures, the EIAR identifies the potential for impacts on groundwater and surface water quality (and potentially surface water flow regimes) as being Moderate adverse magnitude and Short-term duration, but it does not assign a significance rating. With regard to Table 19.5 of the EIAR, I would consider it to be a **Slight to Moderate adverse short-term** impact, given the LI / PI rating of the aquifers.

11.13.44. ***Groundwater Inflow***

11.13.45. Potential hydrogeological risks associated with groundwater inflow are identified as follows:

- Groundwater inflow into the tunnel section,
- Groundwater inflow into cut sections and within deep station excavations, and
- Substantial water inflows under pressure both during deep excavation and during TBM advance works, as well as SCL tunnelling works.

11.13.46. These issues are addressed as risks, rather than impacts, and no significance rating is assigned to them. In terms of groundwater inflow into the tunnel sections, it notes that this risk is controlled by the use of a closed-face pressurised TBM, continuously adjusted to suit the prevailing conditions and with the tunnel lined continuously so there is no exposed ground. The variable density machine is stated to be capable of coping with changing ground conditions in order to manage risk of inflows under pressure. For the SCL tunnelling, risk of encountering charged geological units will be managed with forward probing and grouting as required. The use of D-walls and toe grouting for controlling potential water inflow paths and managing this risk at deep stations and secant piles and U-sections in cut and cover / retained cut areas is noted, with the objective of ensuring that the full lateral extents of all excavations are 'water-tight'.

11.13.47. ***Groundwater Zone of Influence***

11.13.48. The Zone of Influence (Zol) in terms of groundwater lowering for the stations was modelled using Plaxis-2D modelling.

11.13.49. The predicted dewatering impacts on habitats, watercourses and other such attributes are **temporary to short-term and Imperceptible to Not Significant**, depending on the station. At Tara Station, the predicted impact is **temporary and**

Not Significant to Slight due to historical underground watercourses and proximity to the River Liffey.

11.13.50. In terms of dewatering Zol and ground settlement, the EIAR note that the lowering of groundwater is intrinsically linked to potential changes in ground stability but that this is a function of the thickness and type of overburden potentially drained for example. It refers to Chapter 20 for further details.

11.13.51. ***Groundwater Barrier Effect***

11.13.52. **Slight to Significant Permanent impact.** Potential for a 'barrier effect' to groundwater flow which can impact on adjacent building foundations and utilities or localised groundwater flooding. To avoid the damming risk, tunnel excavation and gradient alteration through the Base of Drift/Upper Weathered Rock (BoD/UWR) is designed to be as reduced as much as practicable but there are long sections of tunnel that run along this hydrogeological interface, especially between Glasnevin and O'Connell Station. Four sections with a potential 'barrier effect' risk were identified, which are illustrated in Figures 19.16 and 19.17 of the EIAR. The risk is generally identified where the groundwater flow paths are cut by the MetroLink alignment at a high angle and proximity to watercourses, including the River Liffey where the water table is close to the surface. Following modelling of these risk areas, a potential 'barrier effect' was identified within the Seatown – Fosterstown area (Ch. 2+800 to 4+800).

11.13.53. ***Groundwater Dependent Terrestrial Ecosystems / Natura 2000 Sites***

11.13.54. **Imperceptible impacts.** The proposed development does not directly overlap with any European site or GWDTE. The only GWDTE in the same GWB as the underground section of the project is >15km away. Hydrogeology of potential ecological receptors with dependence on groundwater has been assessed for drawdown effects, construction-related groundwater pollution and barrier effects.

11.13.55. ***Utilities (e.g. MetroLink HV cables), Roads and Other Diversions***

11.13.56. **Imperceptible to not Significant impacts.** Cables are primarily under public roads. Watercourse crossings will be carried out by open trench method or directional drilling with IFI approval and incorporate design measures to protect the water environment.

11.13.57. ***Water Framework Directive***

11.13.58. **Neutral, Imperceptible to Not Significant and Temporary impacts** on GWBs. With mitigation measures in place there will be no degradation of the current waterbody (chemically, ecological and quantitatively) or its potential to meet the requirements and/or objectives in the RBMP. No discharges of water to ground or to open waterbodies/ watercourses during the construction phase. Mitigation measures will be implemented to protect the hydrogeological (and hydrological) environment. Potential for accidental discharge, however this would only be temporary very short-lived event and quick response time would negate long-term impacts on the water quality status of waterbodies.

11.13.59. Limited dewatering impact on the surrounding hydrogeological environment which will reduce as the features become sealed, including with bottom grouting at the deep station box excavations. Once piling/grouting is complete, the dewatering ZOI becomes small to negligible. Limited dewatering required for areas within the northern section of the route. CEMP will implement strict mitigation measures to ensure the protection of the hydrogeological (and hydrological) environment and no negative impact on current trends or WFD classification of identified waterbodies.

11.13.60. Operational Phase

11.13.61. Potential operational phase hydrogeological impacts are stated to mainly arise from the potential to impact on groundwater levels and quality, through dewatering, impeding groundwater with the 'barrier' effect or discharge of track run-off or other water discharge to ground. In terms of the various hydrogeological factors, the impacts are identified as follows:

11.13.62. ***Groundwater Resources***

11.13.63. **Imperceptible** impacts. All operational phase water will be sourced from public supplies and all contaminated discharge will be to defined sewer or to wastewater treatment plant via tanker. The volume of aquifer to be removed is a very small percentage of the affected GWB aquifer volumes. Similarly, the effects of the land take on recharge to groundwater are negligible compared to the overall area of the relevant catchments.

11.13.64. ***Groundwater Supplies***

11.13.65. **Imperceptible** impacts. The bedrock aquifer within the study area is not used extensively for public water supply with no likely significant risks to a public supply or group water supply. Private supplies and other unrecorded wells will not be significantly affected, since there will be no active long-term dewatering during the operational phase. No significant lowering of regional or local groundwater levels will occur.

11.13.66. ***Groundwater Quality***

11.13.67. **Imperceptible** impacts as there will be no direct discharges to ground/groundwater during the operational phase and consequently no change to the natural groundwater regime or groundwater body status. Some passive drainage features will be provided in areas AZ1 to AZ3 for management of attenuated surface water including infiltration to ground (e.g. swales, conveyance channels and ponds) where underlying soils are suitable. In impermeable soils, outflows to surface watercourses via hydrobrakes will be utilised. Chemical storage (e.g. at Dardistown Depot) will be fully contained and bunded. Any spillages at a MetroLink site or firewater can be contained via the proposed drainage system.

11.13.68. ***Groundwater Protection Response (GPR)***

11.13.69. **Imperceptible long-term impacts** on groundwater bodies, with reference to applicable GPRs. This is due to the limited infiltration to ground during the operational phase, as part of the SuDS design measures, and the discharge of collected water from tracks and tunnels to sewer under formal consent.

11.13.70. ***Groundwater Zone of Influence (ZOI)***

11.13.71. **Imperceptible long-term impacts.** Following completion of construction, groundwater levels will re-stabilise to pre-construction patterns. No active dewatering will occur during operational phase, other than intermittent sump pumping of water collected within the tunnel and stations. This will be treated accordingly prior to disposal to sewer under formal consent or in the case of track/depot drainage to defined watercourses following treatment and attenuation.

11.13.72. ***Groundwater Barrier Effect***

11.13.73. **Imperceptible long-term impacts.** The underground station boxes are insignificant when compared with the scale of the regional hydrogeological regime.

The north-south alignment of the station boxes is similar to the regional scale pattern of groundwater flow towards the River Liffey and will not act as a significant barrier to groundwater flow.

11.13.74. In the Seatown – Fosterstown area of AZ1 there is a possibility of a barrier effect occurring where retaining walls are used in cut sections of the alignment. With the incorporation of design measures such as drainage blankets and piped systems, it is not anticipated that any barrier effect impacts will arise.

11.13.75. ***Groundwater Dependent Terrestrial Ecosystems / Natura 2000 Sites***

11.13.76. **Imperceptible long-term impacts.** The proposed development does not directly overlap with any European site or GWDTE and does not include ongoing active dewatering activities and hence no drawdown effects will occur resulting in no long-term impact on baseflow to watercourses that discharge to the European sites located downgradient. No long-term barrier effect at watercourses located upgradient of and ultimately discharging into European sites.

11.13.77. ***Water Framework Directive***

11.13.78. Neutral, **Imperceptible to Not Significant** and Permanent impacts. Limited discharges of water during the operational phase to open waterbody/watercourse features and no long-term groundwater dewatering is proposed. Discharges will be adequately treated via SuDS measures, hydrobrakes, oil/water interceptor to ensure no long-term negative impact to the WFD water quality status of the receiving watercourse or on groundwater, where there is a potential hydraulic connection. The project will not cause any significant deterioration or change in water body status or prevent attainment or potential to achieve the WFD objectives.

11.13.79. **Mitigation Measures**

11.13.80. Mitigation measures are set out in Section 19.6 of the EIAR. In addition to specific mitigation measures, it states that some of the identified impacts/risks have been mitigated through design (e.g. by changing the vertical alignment where mixed-face geological conditions are encountered, where feasible). It also notes that some mitigation measures contained in the Hydrology and Biodiversity sections of the EIAR are also relevant to the issue of Hydrogeology.

11.13.81. **Construction Phase**

- **Compliance with the CEMP.**
- **Measures to limit groundwater inflow into tunnel sections:**
 - Use of closed-face EPB and Slurry TBM modes to maintain stability and avoid/ limit the degree of groundwater inflow.
 - Watertight design of tunnel lining, with gaskets to deal with prevailing groundwater conditions.
 - Depth of tunnel and continuous sealing of tunnel as the TBM advances mean that it is unlikely that any of the historical watercourses will be affected in terms of adding to groundwater inflow potential.
 - Advance probing for Sprayed Concrete Lining tunnelling to ascertain ground conditions with draining or grouting used to control inflow. Daily review and planning prior to each advance to ensure safety and security.
 - Grouting of tunnel eyes in stations before/after TBM passage to prevent ground or groundwater flowing into the station.
- **Settlement risk analysis for buildings:** i.e. Appendix A5.17.
- **Measures to limit groundwater inflow into cut sections and deep station excavations:**
 - Maintenance of existing phreatic levels by excavating within a water-resistant 'closed box' formed with secant pile walls (for cuts) or D-walls (for station boxes). Walls will be extended deep enough to lengthen the groundwater flow path to minimise ingress, with permeation/fissure grouting around the toe of the walls, if necessary, to further extend the groundwater flow path.
 - Dewatering will be internal to the station box in advance of excavation works and will be undertaken to below base slab formation and maintained until the base slab is cast, fully cured and there is sufficient weight in the box to negate the risk of 'flotation' effects.
 - To control the possible variations in the phreatic level a perimeter of vertical bored holes will be used to monitor the piezometric level outside

the excavation footprint, and to maintain and stabilise the phreatic level by injecting pressurised water where deemed feasible.

- Permeation grouting will be undertaken at the toe of the D-walls to restrict flow into the base of the excavation beneath the toes of the D-walls along fissures in the rock. This consists of the drilling of holes through reservation tubes cast into the D-walls during construction.
- Pumping tests will be carried out in advance of excavation to ensure adequacy of cut-off and that no excessive external drawdown is likely to occur. In the event of an inadequate cut-off being achieved, further permeation grouting will be undertaken.
- If karst features are encountered (e.g. near Dublin Airport) these will be assessed, excavated and backfilled with clean fill material to ensure a continued high permeable zone and effectively sealed over this if required. If encountered during D-walling, then the bentonite support fluid will control the temporary impacts and the concreting of the panel would fill any void, preventing runoff draining into the. The EIAR notes that no evidence of karst had been observed in Metro North and AGI boreholes even though the Waulsortian Formation is identified as being 'prone to karstification processes'.
- In retained cuts and cut & cover sections where secant piled walls are used, this will ensure the impermeability of the excavation during the construction and operational phases. The bottom slab at any cut section will, in addition to transmitting the loads from the track to the natural rock or ground, also resist the associated water pressures at that location. Lining walls will be placed in the inner faces of the piled walls to improve the finishing of the structure and to protect the finished work against water ingress.
- **Drawdown Effects and Zol:** Further monitoring will be undertaken to define groundwater levels at the time of construction and allow monitoring pre-, during and post-construction. Mitigation of modelled impacts associated with interpreted Zol may include re-injection to ground through existing boreholes or newly drilled re-injection well points. This mitigation, where required for

example in order to control the variation of the local water table in anticipation of potential localised settlements and nearby off-site structural damage, is considered very feasible once new wells are carefully positioned, designed, installed, operated, monitored and maintained. In the event where high volumes of groundwater enter the excavation and need pumping out, then this dewatering will be mainly directed to defined sewer following the necessary treatment.

- **Substantial Water Inflows Under Pressure:**

- Groundwater control measures to mitigate impacts associated with dewatering of highly pressurised groundwaters will consist of D-wall/secant pile wall perimeter pumping wells to assist in maintaining dry working conditions during construction, and advance probing ahead of the tunnel face using Best Practice guidelines and methodologies including appropriate risk assessments in order to ensure identification of potential groundwater volumes and pressures as well as prevention of any flooding potential at the TBM with depth.
- Pressurised front will be maintained in the TBM, with a pressure higher than the interpreted groundwater flow pressure.

- **Wells Intercepted by/ or in Vicinity of the Tunnel & Excavations:**

- CEMP will include mitigations against historical unknown or unrecorded groundwater abstraction, monitoring wells, disused wells or unknown shafts such as the Well Drilling Guidelines produced by the Institute of Geologists of Ireland (IGI 2007) for effective borehole decommissioning.
- Risk of TBM-related significant water/mud release at ground level if the pressurised tunnel front cuts through an unknown well will be managed through TBM design and operating parameters to be detailed in the contractor's TBM Management Plan.
- In advance of Detailed Design, risks associated with the interception of unknown wells will be further considered through more in-depth studies and use of surface geophysics where necessary.

- Where known groundwater well locations are intercepted, they will be recorded and tested to confirm existing yield rates in advance of being decommissioned and a replacement supply well will be provided or replaced by a connection to public supply.
- All identified wells outside of the project boundary but within the ZOI which may be impacted by reduced groundwater levels during construction dewatering activities will be monitored for water level on a monthly basis for 12 months before, during and after construction with replacement well or well deepening, where required.
- **Water Quality Management:** Measures put in place to protect the underlying aquifer as well as downgradient surface water features with hydraulic connectivity potential, including:
 - Sediment Erosion and Pollution Control Plan to include measures to manage soil and silt-laden water on site, accidental leaks/spills to ground and water quality monitoring to ensure compliance with EQSs and other standards.
 - Training of construction staff to respond to accidental discharge/leaks and provision of spill kits on site. Incident Response Plan will be in place detailing procedures to be undertaken in the event of spillage of chemical, fuel or other hazardous substances, logging of non-compliance incidents and risks that could lead to a pollution incident.
 - Provision of silt fencing and berms to protect identified water features.
 - Locating of temporary stockpiles outside of buffer zones and isolated from open excavations and storm/combined sewers. Contaminated material, if encountered, will be segregated from clean/inert material, tested and classified as either non-hazardous or hazardous. If it can't be immediately removed, it will be temporarily stored and covered to prevent rainwater infiltrating.
 - In relation to area AZ2, the mitigation measures set out in Soils & Geology with regard to contaminated land are noted.
 - With regard to TBM consumables:

- No annulus grouting will be lost to ground and will remain in the annulus between the cut ground and the tunnel lining.
 - Spoil conditioning additives are a liquid foam with a life of a few hours to a few days that breaks down in the spoil pile. All brands used will be biodegradable with no harmful residual chemicals.
 - Main bearing grease used in the lubrication process and labyrinth seal will be 'lost' in the spoil and removed with the arisings but are biodegradable.
 - Tail seal grease does not come into contact with the ground.
 - Bentonite is blended from naturally occurring materials and is non-hazardous. Very little is left in the ground as it is continuously recycled.
- Impacts due to the burying of the City Tunnel TBM south of Charlemont Station will be mitigated by dismantling and removing most major elements of the TBM, draining all oils and fluids, de-greasing and cleaning the TBM and encasing it in concrete.
 - Site-specific constructability reports will specify how water will be managed from source to final approved discharge point, including details on attenuation and treatment systems proposed. No treated water will be discharged to ground or public sewer without meeting the water quality standards for groundwater and surface water. Pumping of stormwater and/or inflows of groundwater will be through a temporary construction site attenuation tank/siltbuster prior to discharging through a series of treatment tanks with storage (i.e. typically 900m³ attenuation volume, equivalent to one day's discharge where a 'conservative inflow' of ~10l/sec is assumed) as required.
 - Final discharged volumes will occur in a controlled manner following appropriate LA discharge permit criteria and irrespective of whether this discharge is to sewer (as proposed) or watercourse (in the event of accidental release). Monitoring, to include pH, electrical conductivity and suspended solids, will be undertaken on a daily basis to confirm suitability for discharge as per the Outline CEMP. If monitored discharge water

exceeds approved discharge limits, it will be re-circulated and treated accordingly or disposed of to an appropriate disposal facility. There will be no direct discharge to any identified water feature.

- Any firewater arising during the construction phase will be tankered to an approved facility for disposal.
- Where excavations include significant placement of concrete and/or bentonite, there is potential for alkaline discharges to occur. Discharge water will require additional treatment including for pH neutralisation. Continuous pH monitor will be installed on the discharged water from the treatment plant and discharge water exceeding 6-9 pH units will be re-circulated for further treatment, removed off site for appropriate treatment and disposal, or treated on site and discharged to foul sewer with permission from Irish Water. There will be no direct discharge to any identified water feature.
- To minimise the potential for accidental discharge of silt-laden water or contaminated water entering storm drains or watercourses, a 'treatment train' will be incorporated in the construction design, the design of which will depend on the activity at each compound.
- Refuelling of construction vehicles and the addition of oils/lubricants will take place in a designated and controlled area away the buffer zone(s) applied for each site. Prior consultation with IFI and NPWS ahead of commencing any works near watercourses or in areas where groundwater is interpreted to provide baseflow to downstream water features. Consultation will be on-going and form part of the Water Quality Management Plan within the CEMP.
- Protection measures will be put in place to ensure that all hydrocarbons are appropriately handled, stored and disposed of in accordance with the TII document 'Guidelines for the crossing of watercourses during the construction of National Road Schemes'. All chemical, oil storage tank(s) and associated refilling locations will be contained within effectively bunded areas and set back a minimum of 10m from watercourses.

- The majority of construction works areas will need temporary site connections to foul drains for office and welfare foul discharge, either to foul sewer in agreement with Irish Water, or in some cases this water will be collected on site and appropriately disposed of off-site.
- Design measures set out in the ESB Advanced Work Package will be implemented during the installation of underground cables which cross waterbodies and/or drainage ditches, including where potential groundwater baseflow exists. Where the open trench method is used, it will be implemented only with the approval of IFI. Where applicable, such works will take place outside the salmon spawning period from October to April unless otherwise agreed with IFI.
- Construction compounds will not be constructed on lands designated as Flood Zone A or B and all watercourses within compound areas will be fenced off at a minimum distance of 5m.
- **Water Use Management:** Contractors will prepare a Water Management Plan regarding water elimination/minimisation/conservation/efficiency measures and the plan will be reviewed and updated as necessary, including at least every six months.

11.13.82. Operational Phase

- **Management of Discharge Water Quality:** The EIAR states that the proposed hydrology mitigation measures are also applicable to hydrogeology, including:
 - Storage of chemicals on impermeable hardstand and under cover within designed maintenance compounds and regular inspection of operational discharges as part of the long-term operation and maintenance programme.
 - Oil and petrol interceptors prior to outfalls for water collected at the Dardistown Depot, the P&R area, maintenance areas, track drainage and along surface water routes, with no likely discharge to ground.

- Wastewater arising within the tunnel alignment and foul water from Station boxes will be discharged to public foul sewer under consent by Irish Water. No wastewater will be discharged to ground.
- Firewater management procedures outlined for hydrology are also applicable to the hydrogeological environment.
- Regular inspection and maintenance of swales/wetland ponds/infiltration basins to ensure they continue to operate as intended. Design of all attenuation features will include for specific catchment and containment area, hydrocarbon interceptor and hydrobrake to mitigate any impact on receiving water features, including where these potentially interact with groundwater and downstream sites of ecological significance.
- Care will be taken in reworking acceptable and certified as suitable for re-use excavated subsoil material post construction phase in order to minimise the potential for groundwater infiltration and runoff to ground.
- **Mitigation of the ‘Barrier Effect’:** Installation of drainage wells on each side of the cut section and station box locations (i.e. up-gradient and down-gradient) where required. In the Seatown-Fosterstown sector a by-pass system is proposed with pairs of drainage wells every 100m along the alignment, connected by means of a pipe on or under the base slab.

11.13.83. **Residual Impacts**

11.13.84. Following implementation of the mitigation measures, **no significant residual impacts** on hydrogeology are anticipated as a result of the construction and operation of the proposed development.

11.13.85. **Cumulative Impacts**

11.13.86. Potential cumulative impacts on hydrogeology are addressed in Section 30.4.11 of the EIAR. Following a screening exercise, a total of 175 No. projects were screened in for potential cumulative impacts, as listed in Table 30.11 of the EIAR. Many projects were screened in for a number of potential cumulative impacts.

11.13.87. 165 No. projects were screened in for potential cumulative impacts due to the potential removal of contaminated soils if the construction phases coincide. The excavation of contaminated soils and temporary stockpiling of contaminated material

could increase the mobility of contaminants into groundwater in the absence of any mitigation. Unmitigated cumulative impacts are anticipated to be Negative, Temporary to Short-term, Imperceptible to Not Significant. 138 No. projects were screened in for potential cumulative impact relating to the potential for local reduction in recharge of rainwater to ground, particularly where new land take will be required in urban settings, if the construction phases coincide. Unmitigated cumulative impacts are anticipated to be Negative, Permanent and Imperceptible. 89 No. projects were screened in for potential cumulative impacts resulting from short-term dewatering activities if the construction phases coincide. Cumulative impacts are anticipated to be Negative, Temporary, Imperceptible. 150 No. projects were screened in for potential cumulative impacts due to the potential for an accidental pollution/discharge to ground event during construction leading to groundwater discharges to one of the watercourses that will be crossed by each respective project, leading to a potential cumulative impact on downstream habitats due to negative impacts on water quality. Cumulative impacts are anticipated to be Negative, Temporary, Imperceptible to Not Significant.

11.13.88. In the operational phase, a total of 143 No. projects were screened in for potential significant cumulative impacts due to the potential for accidental pollution/discharge to ground resulting in groundwater discharges to one of a number of watercourses that will be crossed by each project, leading to a potential cumulative impact on downstream habitats due to negative impacts on water quality. Cumulative impacts are anticipated to be Negative, Temporary and Imperceptible to Not Significant.

11.13.89. No specific mitigation measures over and above those already proposed for the proposed development are identified for cumulative impacts. The stated reason for this is that, in most cases the mitigation included in the proposed project, together with standard mitigation measures which would be implemented by the other projects, will be sufficient to reduce cumulative impacts so that they are not significant.

11.13.90. **No significant residual cumulative impacts** on hydrogeology are identified in the EIAR.

11.13.91. **Oral Hearing**

11.13.92. Errata

11.13.93. A small number of errata in relation to this chapter were submitted at the oral hearing. I refer the Board to the final Schedule of Errata (SoE) submitted on 27th March 2024 (Ref. OH374).

11.13.94. Updates

11.13.95. ***Tunnel Lowering and Additional Pumping Stations***

11.13.96. At the oral hearing, the applicant proposed lowering the tunnel alignment by 5m between St Stephen's Green and Charlemont stations to avoid impacts on existing buildings. This localised lowering of the tunnel introduces a new low point, necessitating a sump and associated pumping station.

11.13.97. The applicant submitted an EIAR Addendum (Ref. OH193) regarding the tunnel lowering. No significant additional hydrogeological impacts are identified. The two additional underground low point sump pumping stations are at Leinster Street South and Hatch Street 's Green. Drawings of these two pumping stations and EIAR Addendums were submitted at the oral hearing on 6th March 2024 and 20th March 2024 (Ref. OH193 and OH262, respectively). No significant additional hydrogeological impacts are identified.

11.13.98. ***Hydrogeological Updates***

11.13.99. Various documents were submitted by the applicant in relation to hydrogeology, particularly with regard to the dewatering assessment and control of groundwater. These are identified and addressed further in the following sections.

11.13.100. Cumulative Impact Assessment

11.13.101. An updated cumulative impacts addendum was submitted to the oral hearing on 28th February 2024 (Ref. OH98). The Addendum comprises a more up-to-date review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application.

11.13.102. Where potential cumulative impacts are identified, they are primarily related to the construction phase and relate to the potential for cumulative impacts such as the removal of any contaminated soils, possible short-term dewatering effects where basements are proposed and potential nominal local reduction in recharge to ground. Mitigation measures are as per the Hydrogeology Chapter and the CEMP.

11.13.103. **No additional significant residual cumulative impacts** on hydrogeology are identified.

11.13.104. **Post-Oral Hearing**

11.13.105. A further cumulative impact assessment update was submitted on 31st January 2025 as part of the applicant's response to the Wild Ireland Defence CLG oral hearing submission.

11.13.106. In relation to hydrogeology, the potential for construction phase cumulative impacts is identified with respect to a number of projects. The potential impacts are again related to potential cumulative impacts on water quality within on site and downgradient waterbodies due to accidental pollution events during construction in the absence of mitigation as well as impacts relating to contaminated soil and potential nominal local reduction in recharge to ground due to hardstandings. Proposed mitigation is as per the Hydrogeology Chapter of the EIAR and the CEMP. **No additional significant residual cumulative impacts** on hydrogeology are identified.

11.13.107. An EIAR Addendum was also submitted by the applicant as part of their abovementioned response, addressing impacts associated with the proposed PFAS Management Strategy at Dublin Airport. The Addendum notes that current DAA records indicate that PFAS has been detected in groundwater, soils and surface water at the airport, including in the Sluice River, Mayne River, Turnapin Stream and Santry River. As per the EIAR, no discharge of construction phase water to watercourses is proposed and the Management Strategy includes for PFAS pre-treatment of collected water on-site prior to discharge to sewer under UÉ agreement. In order to avoid mobilisation and migration of PFAS contamination, the following additional mitigation measures are proposed for works in, or in proximity to, these watercourses:

- The works site will be delineated and segregated from any adjacent site with a dedicated access route.
- All excavated material will be removed to the PFAS Triage and Holding Centre for appropriate management.

- Any instream works will be undertaken and completed in dry or very low flow conditions. Any potentially contaminated water will be treated as per the methods identified in Section 7 of the PFAS Management Strategy (e.g activated carbon filtration).
- To prevent any cross contamination, dedicated plant and equipment will be used for the activity, stored within a secure location and cleaned regularly during each shift with the water from this process also segregated and stored for suitable disposal.
- Any diversion works and change of flows are to be monitored for any increase levels of PFAS during the full progression of the works. Suitable barriers are to be procured to limit PFAS migration downstream of any inline watercourse works, diverting the river and realigning the river at completion of the instream culvert; and
- Backfilling will be undertaken with clean suitable fill material only.

11.13.108. The Addendum concludes that no likely significant effects from PFAS arising in respect of the proposed project (including the grid connection works) either alone or cumulatively with other projects are likely to arise.

11.13.109. More particularly, with effective implementation of the Management Strategy, it is stated that the proposed development will have imperceptible impacts on water quality in the receiving estuaries and marine environment that forms part of, and supports, the downstream European sites with no possibility of any disturbance effects on any QI or SCI populations within SAC or SPA sites, due to distance. It is also stated that there is an imperceptible cumulative impact on water quality and imperceptible cumulative impact on water body status with the proposed design and mitigation measures in place.

11.13.110. **Assessment**

11.13.111. This section should be read in conjunction with the soils and geology and hydrology sections of this report and the consultant's report prepared by Tyréns Group AB, contained in Appendix 1.

11.13.112. **Construction Phase**

- 11.13.113. Tyréns note in Section 5.1 of their report that the hydrogeological impact from the works is one of the major impacts from the construction, as the major structures of the MetroLink are to be constructed beneath the existing water table. They note the potential for settlement and building damage, due to settlement of any layers of compressible soils which may be exposed to groundwater lowering outside the station boxes and from the SCL works such as the Charlemont intervention tunnel.
- 11.13.114. They consider that the settlement risk is particularly present south of the River Liffey in area AZ4 where the groundwater water level is near the existing ground surface and where fills may be present and at Glasnevin Station, where a particularly large excavation is to be made and where the ground conditions are complex.
- 11.13.115. The other main hydrogeological issue identified by Tyréns is the movement of contamination in the soils and groundwater, with this risk particularly present at works sites in the vicinity of Dublin Airport, due to the risk of hydrocarbons in the groundwater from aviation fuels and also from PFAS. There is also a general risk of the movement of contaminants in the ground and groundwater at all the sites where significant dewatering is to be carried out, i.e. the deep stations, intervention tunnels, and cut & cover and retained cut areas. While some of these contaminants have been identified by the applicant, Tyréns note that there is always a risk of unexpected contaminated ground and groundwater being encountered.
- 11.13.116. With regard to the hydrogeological receiving environment, Tyréns consider that the hydrogeological investigations carried out were extensive and in line with normal practice, but note the need to supplement this during design development by the Design & Build Contractor.
- 11.13.117. Tyréns note that all the overlying soils and underlying limestone appear to have significant permeability, with the boulder clays having permeable beds within the sequence and superficial soils being present in many areas of the alignment. They consider that, if groundwater inflows were allowed to occur during construction, this would allow any dewatering drawdown from the excavations to spread and lower the groundwater level through the boulder clays and up into the superficial soils, with the same mechanism occurring during the construction of the SCL works, such as the intervention tunnels and the pumping sumps. They consider that the superficial soils and fills in the city centre may be susceptible to settlements if significant

groundwater lowering occurs and that such groundwater lowering should be avoided. They note that this risk was identified by the applicant.

11.13.118. Tyréns consider that the key hydrogeological issues and impacts along the route are as follows:

11.13.119. In the southern part of area AZ4, passing through the city centre and in the vicinity of the Liffey, Tyréns note that groundwater levels are near the surface and that any significant groundwater lowering outside the station boxes gives a potential risk of settlements.

11.13.120. North of the city centre, the terrain raises with the groundwater level further below ground level, giving less risks of settlements. Tyréns consider that main issues relate to existing watercourses and the movement of existing contaminants.

11.13.121. At Glasnevin, Tyréns note the scale of the large open excavation to be constructed which will need to be pumped for a considerable period. They consider that the impact from this groundwater lowering will be substantial, unless adequately mitigated by grouting or other means. Unmitigated, the drawdown will be large with a consequential large impact on the aquifer which will affect existing groundwater levels, potentially leading to settlement and the movement of existing contamination.

11.13.122. From the Northwood portal northwards to Dardistown (AZ3) and the section from Estuary Roundabout to Dublin Airport North Portal (AZ1), which are constructed using retained cuts and cut & cover sections, Tyréns consider that there are potential impacts from the movements of existing contaminants in the groundwater and from the long term 'barrier effect' resulting from the long retaining walls influencing groundwater flow.

11.13.123. In area AZ2 Tyréns note that, while the Dublin Airport station is landside, part of the tunnel alignment is airside and both the station construction and the intervention tunnels give rise to a risk of moving pollutants that may be airside. They note the potential for hydrocarbons, de-icing chemicals and firefighting chemicals (including PFAS) that may have migrated into the more permeable layers beneath the Airport.

11.13.124. In the sections that are essentially constructed at grade or elevated i.e. the northern section of area AZ1, north of Estuary Roundabout, and the elevated/at

grade sections of area AZ3, Tyréns advise that the project should not have an impact on hydrogeology.

- 11.13.125. In terms of general project-wide risks, Tyréns note the potential for the movement of existing contaminants in the groundwater. They note that the applicant has collected data regarding existing known groundwater contamination, as set out in Appendices A20.6 and A20.8, but advise that this risk cannot be completely mitigated, as not all sources of pollution are known and their extent may be uncertain. While Dublin Airport is an obvious risk area, they consider it likely that other sources of pollution will be encountered, such as old industries, dry cleaners and abandoned fuel tanks where mobile pollutants may have percolated to some depth in the aquifers.
- 11.13.126. Tyréns advise that this is a common risk and problem in the construction of urban metros that can give rise to unforeseen contaminated spoil and groundwater that needs to be treated prior to disposal.
- 11.13.127. Other potential risks associated with groundwater lowering along the alignment include impacts on wetlands, springs, wells and other groundwater abstractions, in terms of quantity and quality.
- 11.13.128. A number of submissions from observers in the vicinity of Charlemont Station, including the CDCG, contend that the hydrogeological assessment was inadequate as it was not based upon local borehole logs and that the nearest groundwater level data was 550m from the station site. TII's response was that this was incorrect and that local bore hole logs had been used to inform the hydrogeological impact assessment. They refer to EIAR Figure 19.6 which identifies the location of the borehole at Charlemont and state that pump tests and groundwater samples were undertaken at this location to inform the baseline and assessment.
- 11.13.129. While Figure 19.6 is very high level and does not clearly show the borehole location, I note Appendix A19.3 'Groundwater Monitoring Record Sheets', which shows a photograph of the groundwater monitoring well that was installed at the Charlemont Station site, close to Dartmouth Road, and to the rear of the houses on Dartmouth Square West. The related data in the various parts of this appendix make clear that groundwater data was obtained from this borehole on a number of

occasion. The soils and geology assessment also made use of data from a number of boreholes in the vicinity of the Charlemont site.

11.13.130. I am satisfied therefore, that the baseline description and assessment in respect of Charlemont did make use of site-specific groundwater data.

11.13.131. ***Groundwater Dewatering***

11.13.132. With regard to groundwater dewatering requirements, Tyréns note that the Plaxis software used for the predictions of groundwater inflow uses a 2D model and they advise that, whilst a common method, this does not take into account 3-dimensional effects or interactions between the sites. They also note that no predictions of the groundwater inflows from the SCL construction works were made (e.g. Charlemont intervention tunnel, Albert College Park shaft and intervention tunnel, the SCL works at Dublin Airport and SCL pumping sumps in Area AZ4).

11.13.133. Tyréns consider that the model predictions appear to use reasonable permeability values, validated by pumping tests, but that, as they do not use a range of values, there is a risk of abstraction rates exceeding the predicted rates. With reference to the desk study of previous dewatering projects in Dublin (Appendix A19.6), they caution that there is little experience of such deep excavations in Dublin, as the identified deep basement construction projects are not as deep as the proposed metro stations.

11.13.134. With regard to the hypotheses and assumptions underpinning the modelling with and without a grout plug, Tyréns note discrepancies between EIAR documentation with regard to the depth of grouting and consider that the assumed permeability of the base plug is one or two orders of magnitude lower than could be expected from fissure grouting in weak rocks, such as limestone. They consider that the predictions using the base plug hypothesis are not a reliable estimate of the groundwater inflow rates.

11.13.135. Tyréns note that the expected groundwater abstraction rates for the stations set out in EIAR Table 19.23 are consistent with the predictions given in Appendix A19.8 'Seepage Rates Assessment in Stations Executed with Cut & Cover Method (Plaxis2D Modelling)' for the hypothesis without a grout plug (e.g. c. 600m³/day at Glasnevin, c. 200m³/day at Charlemont and c. 32m³/day at Dublin Airport), but that other documents provide significantly different abstraction rates, such as Appendix

A5.11 'Water Management', which states an assumed rate of 43m³/day for the deep stations. With regard to the EIAR information, Tyréns therefore consider that there is uncertainty regarding control of dewatering and expected inflow rates and that the inflow figures in Table 19.23 do not assume a base grout plug will be used which is not consistent with statements and commitments made by the applicant that no groundwater lowering will occur outside the station boxes.

11.13.136. The applicant's approach to dewatering and, in particular, the measures they propose for cutting off groundwater inflows were discussed and questioned by Tyréns at the oral hearing on 22nd February 2024, 29th February and 5th March 2024 and the applicant presented a number of additional documents regarding these issues, including:

- Glasnevin Construction Sequencing (Ref. OH75).
- 'Metrolink Permeabilities Targeted with Grout Bottom Plug to Avoid Upwelling in Station Boxes' (Ref. OH92).
- Supplemental Note: Dewatering Assessment in Station Boxes and SCL Tunnels' (Ref. OH172).
- 'Supplemental Note: Dewatering Assessment in Station Boxes and SCL Tunnels (Version 2)' (Ref. OH189).

11.13.137. Tyréns questioned the applicant's specialists regarding their intentions for grouting, and in particular whether a grout plug at the base of the excavation or a grout curtain formed by toe grouting was proposed. Tyréns consider that the applicant's responses were not clear and that there was some confusion regarding whether jet grouting or fissure grouting was to be used. The abovementioned document OH172 presented a different basis for justifying an abstraction rate of 0.5l/s (43 m³/day), assuming the use of toe grouting and different cut-off depths than stated in Chapter 19 and Appendix A19.8.

11.13.138. The document OH172 states that a pumping test will be carried out after construction of the diaphragm wall and toe grouting, with a grout plug implemented if abstraction rates are too high. Tyréns note that the implementation of a grout plug at that time could have major programme consequences, possibly taking one year to implement.

11.13.139. A revised version of the document was subsequently submitted, OH189, which removed reference to the 43m³/day abstraction rate, provided further arguments for fissure grouting at the base of the excavation and states at Section 1.1 that:

“Lowering of the water table will not take place outside of the station boxes.”
[applicant’s emphasis.]

11.13.140. Tyréns consider that this commitment will be challenging to achieve and consider it likely that it will require a grout blanket beneath the station base rather than toe grouting as implied in the EIAR.

11.13.141. The revised document also contains a description of how groundwater will be managed for the construction of the Charlemont intervention tunnel using probe drilling and fissure grouting and states that “this approach will prevent any requirement for dewatering and hence the potential for water table lowering outside of any of the planned intervention tunnels”. Tyréns consider that the methods described are in line with good practice but note that no target was set for the inflow.

11.13.142. With particular regard to the proposed Glasnevin Station, Tyréns note that this is the largest and most complex station, with complex ground conditions and interfaces to the Royal Canal and two existing rail lines that will have to be constructed around. Given the large station footprint, they identify that there are likely to be considerable difficulties in controlling the groundwater lowering and that the applicant’s commitment not to lower groundwater outside of the station box will be difficult to achieve.

11.13.143. Having extensively questioned the applicant at the oral hearing in relation to dewatering issues and groundwater control measures, Tyréns consider that uncertainties remain as to how the applicant would achieve the stated abstraction rates and what approach would be adopted at station boxes, i.e. curtain grouting (toe grouting) or a grout plug. Given the challenging nature of the commitment not to lower the water table outside of the station boxes, Tyréns consider that the applicant’s proposed Expert Panel should be involved in the ‘sign off’ of the groundwater control measures.

11.13.144. In order to address these issues, Tyréns have recommended a number of conditions, should the Board decide to grant the Railway Order. These conditions, slightly edited for clarity, are as follows:

- (a) The developer shall take such measures for controlling groundwater dewatering from the deep station construction as are necessary to ensure that no groundwater lowering shall occur outside the station boxes as stated in the document 'Dewatering Assessment in Station Boxes and SCL Tunnels (Version 2)' submitted at the oral hearing on 6th March 2024. This requirement shall be applied to all deep stations.
- (b) The developer shall take such measures for controlling the groundwater dewatering from the Sprayed Concrete Lining works (e.g. Charlemont Intervention Tunnel, Albert College Park Intervention Shaft and tunnels and area AZ4 pumping sumps) as are necessary to ensure that no groundwater lowering occurs, as stated in the document referenced in part (a) of this condition.
- (c) The definition of "no groundwater lowering" shall be that no groundwater lowering occurs outside the normal seasonal variation of groundwater levels as determined by at least 1 year of pre-excavation monitoring.
- (d) The Expert Panel shall review and approve the groundwater control measures to be adopted by the contractor prior to implementation.
- (e) The Expert Panel shall follow the execution and monitoring of the groundwater control works and shall have the power to instruct the developer to carry out any additional measures that the Expert Panel consider necessary to ensure that no groundwater lowering occurs outside the station boxes and SCL works.

11.13.145. With the imposition of these conditions, Tyréns conclude that the groundwater control measures and dewatering, both generally and at the more complex station locations such as Glasnevin, are acceptable.

11.13.146. I agree with Tyréns assessment of the dewatering issue. While the proposed methodology for deep station box construction and SCL works is standard for urban metro construction and is generally acceptable, the applicant has presented

conflicting information regarding dewatering and the lowering of groundwater levels outside of the station boxes. Given that the settlement and building damage assessment assumes no dewatering outside of the station box (see below), it is important that these matters be appropriately controlled. Given the Design & Build approach to the project, I agree with Tyréns recommendation that the Expert Panel to be constituted by the applicant should have oversight and approval of the measures to be taken to ensure that no groundwater lowering occurs beyond normal seasonal variations.

11.13.147. To be clear, this will allow for some groundwater lowering, given the likely extent of seasonal variation but it will ensure that effects on the surrounding area will be limited to an acceptable level.

11.13.148. ***Dewatering Related Settlement and Building Damage***

11.13.149. Tyréns note that the issues of settlement and building damage are primarily addressed in Appendix A5.17 of the EIAR. With regard to dewatering related settlement, they note Section 4.7 of that document which states that:

“No external dewatering (outside of the site boundaries) will be permitted during the construction of the station boxes, that increases the impact due to settlement on others, beyond the natural ground water fluctuation. Any settlement due to the short-term lowering of the water table outside of the station box will therefore be constrained to within the site boundaries. Similarly, no dewatering outside the cut and cover tunnel sections or other retained cuttings will be permitted that increases the impact due to settlement on others.”

11.13.150. Consequently, Appendix A5.17 makes no assessment of groundwater lowering on settlement and building damage.

11.13.151. As noted above, the ‘Supplemental Note: Dewatering Assessment in Station Boxes and SCL Tunnels (Version 2)’ document submitted by the applicant at the oral hearing makes a similar statement.

11.13.152. Tyréns note that the statements made appear to be in contradiction with the predicted Zone of Influence set out in the EIAR for groundwater drawdown during deep station construction and that the boundaries for the Property Owners Protection

Scheme would not cover the predicted Zol from the dewatering activities. However, given the commitment made by the applicant at the oral hearing that no groundwater lowering will occur outside the construction works, Tyréns consider that the Zol will not be relevant and that, subject to the commitment made and the proposed conditions as outlined above, settlement/building damage should not occur from groundwater lowering.

11.13.153. With regard to the risk of settlement caused by dewatering during TBM tunnelling works, which was a particular concern of observers in the Glasnevin area, I refer to Section 10 of the Tyréns report where they address tunnelling matters. They consider that the evaluation of the proposed TBM type performed as part of the EIAR is acceptable and that the recommended variable density TBM type will reduce the risks associated with constructing a tunnel in the variable ground conditions by only allowing closed mode TBM drive. This closed mode TBM operation mitigates the risk of loss of face-pressure in the tunnel face, and hence the risk of settlement or creating sinkholes and ensures that the groundwater table can be controlled during the tunnel drive so as not to result in settlement. Furthermore, as the permanent water-tight tunnel lining is placed as the TBM progresses, there is no opportunity for significant levels of groundwater ingress in the tunnelled areas behind the TBM.

11.13.154. ***Dublin Airport Contamination***

11.13.155. In order to construct the Dublin Airport station box and the associated intervention tunnels, chambers and shafts, Tyréns note that groundwater lowering will be necessary. Having regard to the presence of existing contamination, including hydrocarbons and PFAS compounds, in various parts of the Airport campus, Tyréns recommend that the applicant should be required to reduce the dewatering volumes to as low as reasonably possible, in order to reduce the risk of mobilising and spreading contaminants in the ground and groundwater.

11.13.156. Tyréns note that the handling of groundwater is a particular risk for the SCL works, such as the caverns to connect the intervention tunnels to the main tunnel and the shafts (i.e. DASP and DANP), with consequent potential for the movement of contaminants.

11.13.157. In order to ensure that no major dewatering and groundwater abstraction occurs from these works, Tyréns recommend the following condition:

- The developer shall implement groundwater control measures to limit the abstraction at Dublin Airport Station and associated tunnels, caverns and shafts to a maximum of 32m³/day and shall implement the measures set out in the PFAS Management Strategy for Dublin Airport, submitted to the Board on the 31st January 2025.

11.13.158. With regard to the smaller intervention and ventilation tunnels at Dublin Airport, while Section 5.5.4 of the EIAR states that these will be constructed via closed-face TBM, the submitted cross-sectional drawings show these tunnels as having an elliptical cross section, thus implying that they would be constructed with the SCL technique. This was queried by the Board's representatives at the oral hearing and the applicant subsequently stated at the oral hearing that these tunnels were to be constructed by TBM and revised drawings were submitted (Ref. OH91). However, when questioned, Maurice Gallagher on behalf of the applicant stated on 6th March 2024 that the applicant wished to retain the option of SCL for these tunnels.

11.13.159. I also note that while chapter 5 of the EIAR states that the tunnels will be constructed by closed-face TBM, Section 4.7 of Appendix A5.13 states that they "are likely to be built using a close-face TBM".

11.13.160. Given the importance of controlling and minimising impacts on groundwater at Dublin Airport due to the contamination issue, Tyréns consider that the use of a closed-face TBM is the most suitable means of preventing groundwater inflow to the two smaller tunnels, due to the pressurised nature of operation. In contrast, groundwater inflow is more difficult to control with a SCL tunnel. In order to ensure that there is no lack of clarity on the construction method for the two smaller tunnels, Tyréns have recommended the following condition:

- The TBM type to be used to construct the ventilation and evacuation tunnels in Dublin Airport shall be a closed-face TBM.

11.13.161. I agree with the imposition of these conditions, should the Board decide to grant the Railway Order. Strict limits on dewatering of excavations at Dublin Airport

are an important means of limiting the zone of influence and thus minimising the mobilisation of any existing contaminants in the groundwater or soils.

11.13.162. With regard to the PFAS Management Strategy, more generally, as detailed in Section 10.2 of this report, I consider that it presents a comprehensive worst case scenario, whereby all soil/stone and collected groundwater removed from the Dublin Airport excavation areas (tunnels, station and portals) is assumed to be contaminated with PFAS and brought to a segregated Triage and Material Management Centre at the Dardistown Depot site, where it will be temporarily held in separate stockpiles, covered and on an impermeable surface surrounded by cut-off drains and berms, pending testing results. If the material is not contaminated, it will be treated as normal spoil and if it is contaminated, it will be exported to Europe for treatment and disposal. The collected groundwater and surface water will be subject to multi-level treatment, including activated carbon filtration, prior to discharge to sewer under UÉ agreement.

11.13.163. Subject to additional conditions on groundwater control, as detailed above, I consider the applicant's approach to be suitably conservative and appropriate to the current stage of the project. There are inherent uncertainties with regard to the exact extent and nature of the historic PFAS contamination at Dublin Airport and it is appropriate that a worst case scenario be developed and assessed.

11.13.164. ***Discharge of Dewatering Water***

11.13.165. Tyréns note the applicant's proposals to discharge dewatering water to the sewer system and not to adjacent watercourses. They note, however, their experience that it is typical on such projects to keep the collected dewatering groundwater separate from general site drainage water, as it is essentially clean water, and to discharge it into suitable watercourses and surface recipients after treatment in order to reduce the load on the sewer system. In this instance, they note that the applicant will be required to enter into a connection agreement with Uisce Éireann and that any issues such as allowable discharge rates and pre-treatment requirements will be dealt with in the consenting process with UÉ.

11.13.166. I agree with this position however, as detailed in the hydrology section of this report, there are inconsistencies in the application documentation regarding the intended disposal route for water, including references to discharges to watercourses

and I have recommended a condition requiring water be discharged to sewer in order to remove any lack of clarity in this regard.

11.13.167. While the EIAR also discusses the use of groundwater recharge, it is not entirely clear if the applicant is intending to carry this out. By way of comparison, Tyréns note that in constructing the Copenhagen Metro, where there are similar ground and groundwater conditions to Dublin, strict controls are applied to groundwater lowering with a requirement that any lowering in the city centre shall not exceed the normal seasonal variation. Their experience is that this has proved to be successful in controlling the risks and managing potential claims from groundwater lowering induced building damage. Groundwater recharge is used in Copenhagen as a means of controlling groundwater level and to limit the movement of contamination in the groundwater. Given the similar ground conditions in Copenhagen and Dublin, Tyréns consider it likely that groundwater recharge could be successfully used in Dublin, if it is needed.

11.13.168. Operational Phase

11.13.169. In the operational phase, I agree with the applicant's assessment that the potential for significant impacts on hydrogeology are limited and are primarily related to impacts on groundwater levels and quality through dewatering, the 'barrier effect' impeding groundwater flow and potential discharges of contaminated water to ground.

11.13.170. ***Groundwater Levels and Quality***

11.13.171. Tyréns note that all the underground structures are designed to be watertight and advise that there are no issues regarding permanent lowering of the groundwater. I agree, noting that no substantial level of dewatering will be required during the operational phase, with tunnels, station boxes and other underground structures likely to experience minimal infiltration of groundwater. This will ensure, therefore, that there is no significant impacts on groundwater levels or quality outside of the MetroLink structures. Any water which does infiltrate the underground stations or tunnels will be collected in low point sumps and discharge to sewer under UÉ consent. Since no dewatering is required in the operational phase, there will be no operational phase impacts on wells, baseflow dependent watercourses or groundwater dependent ecosystems.

- 11.13.172. The scale of the project relative to the scale of the GWB is very small, and I am satisfied that the minor loss of aquifer and associated impacts on groundwater recharge as a result of the underground structures will not be significant.
- 11.13.173. With regard to groundwater quality impacts, I note the electrified nature of the project and that no direct discharges to ground are proposed and I consider that there is no real potential for groundwater contamination from normal metro operation, subject to normal good practice in terms of the storage of chemicals and hydrocarbons at the Dardistown Depot, Estuary P&R Facility and at stations, where relevant. As detailed in the Hydrology section of this report, discharges to watercourses will occur in the operational phase in areas AZ1 and AZ3, but these will pass through extensive SuDS measures, attenuation storage, hydrocarbon interceptors and flow control devices. The SuDS measures include swales and ponds with infiltration to ground but given the nature of the water being collected and discharged, no significant impacts on hydrogeology are likely. In the event of a spillage or fire event, I note that the proposed drainage system can contain firewater or pollutants for removal to a suitable facility.
- 11.13.174. ***‘Barrier Effect’***
- 11.13.175. Tyréns advise that the only issue with regard to the permanent groundwater situation is the potential ‘barrier effect’ caused by the MetroLink structures blocking natural groundwater flows. They note that the applicant has identified the importance of the issue and has examined its effect in EIAR Appendix A19.9 ‘Barrier Effect Assessment with Visual Modflow Software: Seatown-Fosterstown, Dardistown, and O’Connell St’. Tyréns consider that the issue is only likely to arise in portions of the retained cut and cut-and-cover sections of the alignment through the Swords area in AZ1. This ‘barrier effect’ and the potential for groundwater flooding was also a concern of residents’ associations in the Swords area (e.g. Seatown Villas Residents and Estuary Court Residents).
- 11.13.176. Tyréns consider that the applicant’s proposal to address the ‘barrier effect’ issue by installing wells every 100m on either side of the trough, with piped connections and drainage below the retained cut is acceptable and they state that it is a normal approach to this issue. They consider that it will be able to satisfactorily deal with the barrier risk, if designed in accordance with good practice. Tyréns also

consider that the applicant's response to the concerns raised by Estuary Court Residents (S89) regarding increased groundwater levels increasing the flooding risk are acceptable and they consider that the drainage design to resolve the 'barrier effect' can resolve these matters in the detailed design.

11.13.177. ***Groundwater Flooding***

11.13.178. Concerns regarding potential groundwater related flooding and exacerbation of existing groundwater flooding by the proposed development were raised by ACRA and Ballymun Road North Residents Associations, in their written and subsequent oral hearing submission (S1, OH45).

11.13.179. This issue is addressed in the hydrology section, as the existing flooding events appear to be linked to culvert and pluvial flooding issues, rather than groundwater.

11.13.180. Water Framework Directive Assessment

11.13.181. I refer to my outline of the WFD requirements and the updated WAP which I have set out in the Hydrology section of this report and which I will not repeat here to avoid unnecessary duplication. Similarly, with regard to issues raised by Sabrina Joyce-Kemper in the submission made on behalf of herself and Wild Ireland Defence CLG (WID) at the oral hearing on 27th March 2024 (Ref. OH369) regarding the nature of the obligations created by WFD and the issue of cumulative impacts, I refer to my assessment in the Hydrology section.

11.13.182. Sections 19.5.3.10 and 19.5.4.8 of the EIAR set out the applicant's WFD assessment for the construction phase and operational phase, respectively, while Section 5.2.2 of the applicant's Planning Report (refer to updated version submitted at the oral hearing on 19th February 2024 (Ref. OH22)) also addresses the WFD.

11.13.183. The groundwater body WFD status and risk score set out in Table 19.14 of the EIAR is now outdated, being for the period 2013-2018. While the applicant's Schedule of Errata states that they submitted an updated table at the oral hearing, this does not appear to be the case. Regardless, the table below compares the WFD status and risk for each of the relevant groundwater bodies in the 2013-2018 period and the most recent 2016-2021 period, based on publicly available EPA

information⁵⁴. It can be seen that there is no changes to WFD status or risk. The two main groundwater bodies (Swords and Dublin) are 'Good' WFD status, with Swords GWB identified as not as risk while the Dublin GWB is under review. The small GWBs associated with industrial facilities in Swords and Dublin Airport (which are subsets of the regional GWBs but delineated separately due to the presence of licensed facilities) have a 'Poor' status and are at risk. No significant issues and pressures are identified for the Swords and Dublin GWBs, while the significant pressures for the industrial facility GWBs are related to industry, with chemicals being the significant issue.

Comparison of WFD Status and Risk for the Period 2013-2018 and 2016-2021 and Significant Issues and Pressures								
Area	Code	Name	WFD Status 2013-2018	WFD Risk Score 2013-2018	WFD Status 2016-2021	WFD Risk Score 2016-2021	Significant Issues	Significant Pressures
AZ1	IE_EA_G_011	Swords GWB	Good	Not at risk	Good	Not at risk	-	-
	IE_EA_G_008	Dublin GWB	Good	Review	Good	Review	-	-
	IE_EA_G_062	Industrial Facility (P0014-03 / P0060-01)	Poor	At risk	Poor	At risk	Chemical, Chemical Quality Diminution For SW	Industry
	IE_EA_G_086	Industrial Facility (P0480-02)	Poor	At risk	Poor	At risk	Chemical, Chemical Quality Diminution For SW	Industry
AZ2	IE_EA_G_086	Industrial Facility (P0480-02)	Poor	At risk	Poor	At risk	Chemical, Chemical Quality	Industry

⁵⁴ www.catchments.ie

							Diminution For SW	
	IE_EA_G_008	Dublin GWB	Good	Review	Good	Review	-	-
AZ3 – AZ4	IE_EA_G_008	Dublin GWB	Good	Review	Good	Review	-	-

11.13.184. I note the conclusions of the hydrogeology assessment above, including: the proposal to discharge all construction phase water to sewer under appropriate consent, rather than to watercourses; the proposals, as supplemented by the proposed conditions, to appropriately control groundwater lowering at the excavation sites to minimise impacts on aquifers and potential mobilisation of existing contamination (including PFAS contamination at Dublin Airport); the pollution prevention measures proposed; and the lack of any significant hydrogeological impacts in the operational phase due to the watertight nature of the subsurface structures, the electrified nature of the development, the extensive SuDS proposals in aboveground areas; and the proposals for mitigating the 'barrier effect' in area AZ1 which the Board's consultants consider to be acceptable.

11.13.185. Having regard to these conclusions and noting the current 'Good' status of the Swords and Dublin GWBs, I am satisfied, subject to compliance with the identified design and mitigation measures and subject to additional conditions regarding groundwater control measures to avoid excessive dewatering of groundwater or mobilisation of contaminants, that the proposed development can be constructed and operated without negatively affecting the WFD status of any groundwater body.

11.13.186. In relation to the small industrial facility related GWBs, which are separately identified for WFD purposes, but which are subsets of the regional GWBs, I note the current 'Poor' status of these and that they are at risk of not meeting WFD requirements. However, I am satisfied that the proposed development will not negatively impact these groundwater bodies. I am also satisfied that the proposed development would not prejudice or undermine any ongoing or future efforts to improve or maintain the WFD status of the relevant groundwater bodies and that the development as proposed would not be contrary to any objectives of the WAP.

11.13.187. **Cumulative Impacts**

11.13.188. In relation to cumulative impacts, I concur with the applicant's assessment that potential cumulative impacts on hydrogeology are primarily limited to the construction phase, should MetroLink and other projects be under construction at the same time and that the nature of any such potential cumulative impacts would be primarily related to accidental pollution/contamination of soils and groundwater, mobilisation of existing contaminants, reductions in groundwater recharge in urban areas or increased dewatering if other deep excavations (e.g. basements) are under construction in the vicinity of MetroLink works. With the implementation of the proposed design and mitigation measures as outlined in the EIAR and CEMP, the imposition of the recommended conditions, and the implementation of similar mitigation measures on other construction sites, I am satisfied that no significant cumulative residual impacts on hydrogeology are likely to arise.

11.13.189. **Conclusion on Hydrogeology**

11.13.190. I have considered all of the written and oral submissions made in relation to hydrogeology and the relevant contents of the file including the EIAR and relevant updates provided to the oral hearing. I am satisfied that the potential for significant adverse impacts on hydrogeology can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on hydrogeology.

11.14. Land, Soil, Water, Air and Climate – Air Quality

11.14.1. Introduction

11.14.2. Air Quality is addressed in Chapter 16 of the EIAR. A series of related maps showing dust distance buffers, air monitoring locations and various pollutant impact ratings for different scenarios are included in Figures 16.1 – 16.15⁵⁵. Appendices A16.1 – A16.4 include air quality standards, site-specific potential for dust impacts, a detailed air modelling report and a Dust Management Plan.

11.14.3. Methodology

11.14.4. While the proposed development is not a road scheme, the applicant utilised the TII Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes (2011) and more recent UK government guidance ('LA 105 – Air Quality (Highways England 2019)) for the stated reason that this provides an applicable methodology for the assessment of the likely effects created by road traffic redistribution and construction vehicles. The methodology included:

- Review of applicable guidelines to define the significance criteria.
- Baseline air quality review, including NO₂, PM₁₀ and PM_{2.5}.
- Predictive qualification and impact assessments of the likely construction phase dust impacts and committed mitigation measures to ensure no significant residual dust impacts.
- Calculations to assess the potential air quality impacts associated with construction and operational phase road traffic movements.
- Identification of mitigation measures.

11.14.5. The study area defined for the air quality assessment for both construction and operational phases was as follows:

- Traffic emissions – Human Health/Ecology: 200m from affected road link (i.e. roads that experience a significant change in traffic numbers, road alignment or speed band).

⁵⁵ I note that Figures 16.6 onwards incorrectly reference 'NO₂ impact' in the legend, rather than PM_{2.5} and PM₁₀, as appropriate.

- Dust – Human Health/Nuisance: 350m from site boundary.
- Dust – Ecology: 50m from site boundary.

11.14.6. Section 16.3.2 of the EIAR sets out the relevant guidelines, policy and legislation that were considered in the assessment. This includes guidance from the EPA, TII, IAQM, WHO, EC and the Air Quality Regulations. With regard to larger dust particles which can result in nuisance dust deposition, the EIAR notes, in the absence of an Irish statutory limit, that the German TA Luft standard is commonly utilised.

11.14.7. The operational phase air quality assessment focuses on the change in distribution of road vehicles due to the project and the resultant potential impact on local air quality. As the MetroLink project is electrified there are no significant local emissions during the operational phase to assess. The construction phase air quality assessment focuses on the impact of the redistribution of local road traffic and additional construction vehicles using the same methodology as the operational phase as well as assessing potential emissions of construction related dust.

11.14.8. For the construction phase, the following 2 No. traffic impact scenarios have been modelled, based on a worst-case month with the emissions modelled as if the traffic continued in this state for an entire year:

- Peak southern construction traffic impact (predicted to occur in 2028).
- Peak northern construction traffic impact (predicted to occur in 2028).

11.14.9. For the operational phase, 2 No. traffic impact scenarios are considered:

- **Scenario A:** The 'Do Committed Minimum' scenario which includes additional transport schemes that are under construction or committed⁵⁶ to be implemented post the base-year of the NTA's Eastern Regional Model.
- **Scenario B:** The 'Likely Future' scenario which considers the enhanced transport network scenario proposed under the NDP and the NTA's Transport Strategy for the GDA and the implications for usage of MetroLink.

11.14.10. For each of the abovementioned 4 No. modelling scenarios, the following 3 No. models are assessed:

⁵⁶ 'Committed' refers to schemes that have planning permission and also have a funding commitment.

- **Do Nothing (DN):** Models the baseline traffic data in 2020 as a benchmark to compare future year assessments.
- **Do Minimum (DM):** Models the traffic data in the relevant future year without the project.
- **Do Something (DS):** Models the traffic data in the relevant future year and includes the project and resultant private vehicle redistribution on the road network.

11.14.11. The emissions modelling was undertaken using Atmospheric Dispersion Modelling system (ADMS) – Roads Dispersion Model for a peak construction year of 2028 and an opening year of 2035. Detailed modelling of the 2050 design year was not undertaken, on the basis that the increasing electrification of the national vehicle fleet would see a reduction in emissions between 2035 and 2050, despite an overall increase in vehicle numbers. 2035 is therefore considered to be the worst case for modelled impacts.

11.14.12. With regard to impacts on ecology, the EIAR notes that TII Air Quality Guidelines require consultation with the Project Ecologist for impacted roads which pass within 2km of a designated area of conservation but goes on to state that the potential for impacts on an ecological site is highest within 200m of the proposed Project and when significant changes in AADT occur. It notes that IAQM and DMRB guidance on this issue identify NO_x emissions as the most likely source of significant impacts from road traffic, allowing for other pollutants to be scoped out. The EIAR therefore assesses nitrogen deposition where there is a designated national or European Site within 200m of the project and there is a significant change in AADT flows.

11.14.13. With regard to construction dust, the EIAR notes that sensitivity depends on the duration of dust deposition, the dust generating activity, and the nature of the deposit, with a higher tolerance likely to be shown if only short periods of dust deposition are expected and the dust generating activity is either expected to stop or move on. The EIAR classifies receptor sensitivity to nuisance dust as high, medium and low in line with IAQM guidance. This is based on: level of amenity enjoyment expected; effect on appearance or value of property; and expected duration of

occupation of property/land. Table 16.11 of the EIAR comprises a matrix of sensitivity based on the number of receptors and distance from source.

- 11.14.14. The EIAR also defines receptor sensitivity with regard to human health impacts from PM₁₀ emissions, again as per IAQM guidance. This is based on the annual mean PM₁₀ concentration, receptor sensitivity (based on duration of exposure) and the number of receptors affected and is set out in Table 16.12. An additional dust-related issue identified for sites with hospitals within the area is exposure to aspergillus fungus which has the potential to be made airborne during demolition or excavation works.
- 11.14.15. The sensitivity of the receiving environment to dust related ecology impacts is also considered with reference to IAQM guidance. This is based on the distance from the source to locations with an international, national or local designation where the designated features may be affected by dust soiling (e.g. due to a reduction in photosynthesis or chemical changes such as to soil acidity). The EIAR notes that impacts will often be reversible once the works are completed and dust deposition ceases. Designated sites within 50m of the boundary of the site or within 50m of the route used by construction vehicles on public highways up to a distance of 500m from a construction site entrance can be affected, according to the IAQM guidance.
- 11.14.16. Table 16.14 of the EIAR provides a summary of the sensitivity of each of the main construction site compounds to the three types of dust impacts, i.e. dust nuisance, human health and ecology.
- 11.14.17. The criteria for appraising the magnitude of dust emissions for each site compound is set out for demolition, earthworks, construction and trackout (i.e. the transport of dust and dirt from the construction/demolition site onto the public road network) activities in Tables 16.15 to 16.18 as per IAQM guidance and based on the scale of the activities. In order to determine the level of dust mitigation required the magnitude for each dust generating activity was considered, along with the sensitivity of the area. Each site compound and station box is considered individually in Appendix A16.2.
- 11.14.18. The appraisal method utilised for assessing local air quality impacts is TII's 'Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes', and the significance criteria are detailed in Tables 16.20

and 16.21 of the EIAR. The significance criteria are based on PM₁₀ and NO₂, on the basis that these pollutants are most likely to exceed the annual mean limit values (40µg/m³) but are also applied to PM_{2.5}.

11.14.19. For regional air quality impacts, while the project has no tailpipe emissions, contributions due to construction related traffic and the redistribution of traffic in both the construction and operational phases are assessed, utilising the NTA's Environmental Appraisal Module. This is based on the ENEVAL software and provides information on pollutants including NO₂, PM₁₀, CO₂ and VOCs for the different traffic scenarios on a regional basis. Impacts are assessed by comparing the percentage change against the Do-Minimum for each scenario.

11.14.20. For ecology, the EIAR notes that the Air Quality Regulations outline an annual critical level for NO_x for the protection of vegetation and natural ecosystems and that the CAFE⁵⁷ Directive defines 'Critical Levels' as "a level fixed on the basis of scientific knowledge, above which direct adverse effects may occur on some receptors, such as trees, other plants or natural ecosystems but not on humans". TII's Ecological Guidelines refer to the United Nations Economic Commission for Europe (UNECE) definition of a 'Critical Load' as "a quantitative estimate of an exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge". The guidance states that where the predicted environmental concentration is less than 70% of the long-term critical level/load, the process contribution is likely to be insignificant. Based on updated UNECE guidance, the assessment uses the most stringent published critical load of 5 to 10 kilograms of nitrogen per hectare per year (kg(N)/ha/yr).

11.14.21. **Baseline**

11.14.22. The baseline air quality study included both a desk study of publicly available data sources (e.g. EPA monitoring) and site-specific monitoring studies over a one-year period (September 2018 to September 2019) at locations along the alignment. This included NO₂, dust deposition, PM_{2.5} and PM₁₀, with the locations and types of monitoring set out in Table 16.6 of the EIAR.

⁵⁷ Ambient Air Quality and Cleaner Air for Europe Directive 2008/50/EC.

11.14.23. NO₂ diffusion tube monitoring results over the 12 month period were generally below the applicable EU limit value (40µg/m³), with some exceptions. The overall average bias adjusted concentration (i.e. applying an adjustment factor due to use of diffusion tube sampling rather than continuous analysers) was 28.1µg/m³. Concentrations ranged from 47.8µg/m³ at Prospect Road/Lindsay Grove, adjacent to the proposed Glasnevin Station (i.e. an area which experiences traffic congestion) to 12.8µg/m³ at the proposed Estuary P&R facility (currently a rural area, albeit close to the R132). With regard to particulate matter, PM₁₀ and PM_{2.5} concentrations at the Lissenhall, Old Airport Road and Ballymun Road monitoring locations were significantly below the annual mean limit value and the maximum number of daily exceedances was at the Ballymun Road monitoring location which is heavily trafficked (10 exceedances, compared to the 35 allowable exceedances per year). Dust deposition monitoring at 12 No. locations in the study area found that none of the locations exceeded the annual German TA Luft limit value of 350mg/m²/day. The highest concentration occurred on St Mobhi Road with dust deposition values of 93% of the limit value, however this is stated to have been skewed by a single particularly high month. Excluding that data point results in concentrations at that location reducing to 66% of the limit value. The dust deposition results set out in Table 16.28 of the EIAR indicate that the level vary significantly from month to month.

11.14.24. **Potential Impacts**

11.14.25. **Do-Nothing Scenario**

11.14.26. For the Do-Nothing (DN) scenario, the EIAR models four separate road networks, due to the variations in traffic impacts in the two construction phase and two operational phase scenarios. Predicted annual mean concentrations of NO₂, PM₁₀, PM_{2.5} and the number of exceedances of the 24-hour PM₁₀ objective, at selected worst-case existing air quality sensitive receptors are presented in the EIAR, with the full air quality modelling results contained in Appendix A16.3 and illustrated in the associated figures.

11.14.27. For the '**Construction Phase Southern Peak Scenario**', in the 2020 baseline year, some areas have annual mean concentrations of NO₂ above the relevant national air quality objective, with 56 No. exceedances concentrated on the N1 between Granby Row and R802 junctions, Phibsborough to Glasnevin at the

Finglas Road Junction; in proximity to the M50, on the R110 Crumlin Road, R137 and R114. However annual mean NO₂ concentrations did not exceed 60µg/m³⁵⁸ at any locations indicating that exceedances of the NO₂ 1-hour mean are unlikely to occur. Traffic congestion is considered to be the source of the high concentrations. Annual mean PM₁₀ and PM_{2.5} concentrations are below the relevant national air quality objectives in 2020 for all modelled receptors, with no more than 1 No. exceedance of the 50µg/m³ limit value for maximum 24-hour PM₁₀ concentration, compared to the threshold of 35 daily exceedances in any one year.

11.14.28. For the '**Construction Phase Northern Peak Scenario**', in the 2020 baseline year, annual mean concentrations of NO₂ are above the relevant national air quality objective at 40 No. modelled locations, which is stated to be likely due to high volumes of traffic and congestion, however annual mean NO₂ concentrations do not exceed 60µg/m³, again indicating that exceedances of the NO₂ 1-hour mean are unlikely to occur. Annual mean PM₁₀ and PM_{2.5} concentrations are below the relevant national air quality objectives in 2020 for all modelled receptors, with no more than 1 No. exceedance of the 50µg/m³ limit value for maximum 24-hour PM₁₀ concentration, compared to the threshold of 35 daily exceedances in any one year.

11.14.29. For the Do-Nothing modelling for the '**Operational Phase Scenario A**', the current air quality environment experienced within the study area remains unchanged. The Operational Phase Scenario A is overall negligible in terms of the annual mean NO₂, PM₁₀ and PM_{2.5} concentrations at all modelled receptors. There are, however, 4 No. residential properties in close proximity to the M50 and close to R104 and N1, where the NO₂ annual mean limit value is predicted to be exceeded in the DN scenario.

11.14.30. For the Do-Nothing modelling for the '**Operational Phase Scenario B**', the current air quality environment experienced within the study area again remains unchanged. The Operational Phase Scenario B is overall negligible in terms of the annual mean NO₂, PM₁₀ and PM_{2.5} concentrations. There are 2 No. residential

⁵⁸ It is not explained in the EIAR, but this 60µg/m³ figure comes from TII's Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes, which states that the hourly mean standard is unlikely to be exceeded at roadside locations unless the annual mean is above 60µg/m³. This figure is used as a proxy, given the difficulty in predicting exceedances of the 1-hour standard.

properties in close proximity to the M50 which exceed the NO₂ annual mean limit value in the DN scenario.

11.14.31. Construction Phase

11.14.32. ***Traffic***

11.14.33. Air quality impacts potentially arise from construction traffic along public roads and the redistribution of private vehicle traffic due to construction. The EIAR states that the assessment undertaken utilising a number of conservative and worst case assumptions regarding construction traffic volumes, phasing, vehicle emission rates etc.

11.14.34. The traffic volumes for the base scenario are based on the 2028 Do Minimum (DM) flows predicted along the local road network, with the construction traffic, including HGVs, staff vehicles, deliveries and earthworks haulage added to the base traffic volumes for the Do Something (DS) scenario. The redistribution of private vehicles due to construction works is also included in the DS. In order to determine the impacts, the EIAR compares ambient air concentrations for the base (i.e. Do Minimum) scenario and the Do Something (i.e. base plus construction) scenario.

11.14.35. In the **2028 DM ‘Construction Phase Southern Peak Scenario’** annual mean concentrations of NO₂ exceed the relevant national air quality objective for 5 No. modelled receptors, located at Georges Quay, Phibsborough, North Circular Road, M50 and R108 Glasnevin, a reduction from the 56 No. in the DN scenario. Annual mean NO₂ concentrations did not exceed 60µg/m³ at any locations indicating no exceedances of the NO₂ 1-hour mean are likely to occur. The exceedances of the annual mean limit value occurred at similar locations as the DN scenario. Annual mean PM₁₀ and PM_{2.5} concentrations are below the relevant national air quality objectives for all modelled receptors, with no more than 1 No. exceedance of the 50µg/m³ limit value for maximum 24-hour PM₁₀ concentration, compared to the threshold of 35 daily exceedances in any one year.

11.14.36. In the **2028 DS ‘Construction Phase Southern Peak Scenario’** annual mean concentrations of NO₂ exceed the relevant national air quality objective for the same 5 No. modelled receptors as the DM, which again is a decrease from the DN. Annual mean NO₂ concentrations did not exceed 60µg/m³ at any locations indicating that exceedances of the NO₂ 1-hour mean are not likely to occur. Annual mean PM₁₀

and PM_{2.5} concentrations are below the relevant national air quality objectives for all modelled receptors, with no more than 1 No. exceedance of the 50 µg/m³ ambient limit value, compared to the threshold which allows 35 daily exceedances in any one calendar year.

11.14.37. Comparing the change in pollutant concentration between the DM and DS for the 2028 'Construction Phase Southern Peak Scenario', the proposed development results in a negligible impact in terms of annual mean NO₂ concentration for the majority of receptors, although a small number of receptors are identified as having a **slight adverse** impact due to traffic redistribution. The proposed development is considered to be overall neutral in terms of annual mean PM₁₀ and PM_{2.5} concentrations, with all receptors experiencing a **negligible** impact.

11.14.38. In the **2028 DM 'Construction Phase Northern Peak Scenario'** annual mean concentrations of NO₂ exceed the relevant national air quality objective at 1 No. modelled receptor at Glasnevin, a reduction from the 39 No. exceedances in the DN scenario. Annual mean NO₂ concentrations did not exceed 60µg/m³ at any locations, indicating that no exceedances of the NO₂ 1-hour mean are likely to occur. Annual mean PM₁₀ and PM_{2.5} concentrations are below the relevant national air quality objectives for all modelled receptors, with no more than one exceedance of the 50µg/m³ limit value for maximum 24-hour PM₁₀ concentration, compared to the threshold of 35 daily exceedances in any one year.

11.14.39. In the **2028 DS 'Construction Phase Northern Peak Scenario'** annual mean concentrations of NO₂ exceed the relevant national air quality objective at the same 1 No. modelled receptor as the DM. Annual mean NO₂ concentrations did not exceed 60µg/m³ at any locations, indicating that exceedances of the NO₂ 1-hour mean are unlikely to occur. Annual mean PM₁₀ and PM_{2.5} concentrations are below the relevant national air quality objectives for all modelled receptor for all modelled receptors, with no more than one exceedance of the 50µg/m³ limit value for maximum 24-hour PM₁₀ concentration, compared to the threshold of 35 daily exceedances in any one year.

11.14.40. Comparing the change in pollutant concentration between the DM and DS for the 2028 'Construction Phase Northern Peak Scenario', the proposed development results in a **negligible** impact in terms of annual mean NO₂ concentration for the

majority of receptors, although a small number of receptors are identified as having a **slight adverse** or **slight beneficial** impact due to traffic redistribution or road closure, respectively. The proposed development is considered to be overall neutral in terms of annual mean PM₁₀ and PM_{2.5} concentrations, with all receptors experiencing a **negligible** impact.

11.14.41. **Ecology**

11.14.42. The EIAR considers the potential impact of the proposed project on nearby ecologically sensitive areas during the construction phase due to annual mean NO_x concentration and due to nitrogen deposition. The focus on this pollutant is consistent with IAQM and DMRB guidance on this matter, which describe NO_x emissions as the most likely source of significant impacts from road traffic.

11.14.43. For the **2028 'Construction Phase Southern Peak Scenario'** annual mean NO_x concentration is compared to a critical level for each of the designated habitat sites, and the following locations are identified as exceeding the critical level of 30µg/m³ past the 200m assessment zone:

- Malahide Estuary SPA SAC pNHA;
- Royal Canal pNHA (Glasnevin Eastern and Western Side);
- Royal Canal pNHA (Drumcondra Eastern and Western Side);
- Grand Canal pNHA (M50 Viaduct Eastern and Western Side);
- Liffey Valley pNHA (M50 Eastern and Western Side);
- Royal Canal pNHA (M50 Eastern and Western Side);
- Royal Canal pNHA (Emmett Bridge Eastern and Western Side);
- Royal Canal pNHA (Sallys Bridge Eastern and Western Side);
- Royal Canal pNHA (Dolphins Barn Eastern and Western Side);
- Grand Canal pNHA (La Touche Bridge Eastern and Western Side); and
- Santry Demesne pNHA (Swords Road Western Side).

11.14.44. The EIAR states that these exceedances are mainly due to a busy road and in the case of the Grand Canal pNHA the busy road runs parallel to the canal, leading to contributions not decreasing with distance. There is a contribution at some

intersections with Grand Canal pNHA due to the proposed project of above 1% of the critical level and the EIAR states that, therefore, the Project Ecologist was consulted (see Table 16.35 of EIAR).

11.14.45. The EIAR compares Nitrogen deposition rates with the lower and higher critical loads for the designated habitat sites. All sites are stated to be below the lower critical load, with the exception of the Grand Canal pNHA and Liffey Valley pNHA intersections of the M50. However, at these locations, nitrogen deposition drops below the lower critical load within 10m from the road and it is stated that the contribution due to the proposed project is not the cause of the exceedance.

11.14.46. The EIAR concludes that the ecological likely effects associated with the construction phase traffic emissions in the 2028 'Construction Phase Southern Peak Scenario' will overall be **negative, slight and short-term**.

11.14.47. For the **2028 'Construction Phase Northern Peak Scenario'** annual mean NO_x concentration is identified as exceeding the critical level of 30µg/m³ within 200m of the project for the following locations:

- Royal Canal pNHA (Glasnevin Eastern and Western Side),
- Royal Canal pNHA (Drumcondra Eastern and Western Side)
- Malahide Estuary SPA SAC pNHA M1 crossings.

11.14.48. With regard to Nitrogen deposition for the 2028 'Construction Phase Northern Peak Scenario', all sites are stated to be below the lower critical load for the designated habitat site with no exceedances of the critical level of 30µg/m³ directly linked to the project.

11.14.49. The EIAR concludes that the ecological likely effects associated with the construction phase traffic emissions in the 2028 'Construction Phase Northern Peak Scenario' will be **negative, slight and short-term**.

11.14.50. ***Regional Air Quality Assessment***

11.14.51. The EIAR assesses the potential changes in regional air emissions due to the traffic impacts of the proposed project during its construction phase, using the NTA's Environmental Appraisal Tool.

11.14.52. Pollutant emissions produced in both the DM and DS scenarios during both the 2028 Southern Peak and the Northern Peak Scenarios indicates that the project is overall detrimental during the construction phase, with increases in emissions of all pollutants modelled. These generally result from the construction vehicles making deliveries to the site and the redistribution of vehicles and are stated to be worst-case due to the assumptions made. The EIAR contends that the change in concentrations is within the traffic model and assessment tool margin of variability and that, in accordance with the EPA Guidelines, the regional unmitigated likely effects associated with the construction phase traffic emissions for both the Southern Peak and Northern Peak Scenarios are overall **neutral, not significant and short-term**.

11.14.53. ***Dust***

11.14.54. The EIAR states that the greatest potential impact on air quality during the construction phase is from construction dust emissions (including both PM₁₀ and PM_{2.5}) and the potential for nuisance dust. It notes that dust deposition typically occurs in close proximity to each site and potential impacts generally occur within 350m of the route used by construction vehicles on the public road, up to 500m from the site entrance.

11.14.55. The EIAR notes that the potential for dust emissions can vary substantially day to day, depending on the activities being undertaken and the prevailing meteorological conditions. The main activities with the potential to generate dust include:

- Vegetation clearance.
- Demolition works.
- Concrete and bentonite batching.
- Truck movements (i.e. dust trackout or resuspension).
- Excavation of material.
- Blasting.
- Stockpiling of material.
- Removal of TBM spoil.

- 11.14.56. The likely dust emission magnitude for activities at each aboveground construction site and the potential MetroLink grid connection routes are described in Appendix A16.2 of the EIAR and summarised in Table 16.44 of the EIAR. The resultant mitigation requirement (i.e. high, medium or low levels of mitigation) with respect to nuisance dust, health impacts and ecological impacts are set out in Tables 16.45 to 16.47, taking into account the sensitivity of the location and the activities to be conducted. The assessment found that a 'high' level of dust mitigation is required for nearly all of the sites. Given the interconnected nature of the sites, the EIAR considers that a 'high' level of dust mitigation should be provided at all locations.
- 11.14.57. The EIAR also addresses the issue of aspergillus fungus under the heading of dust. Aspergillus is present in soil and has the potential to be made airborne during the demolition or excavation phases of the project and the EIAR notes that it is of particular concern near hospital wards. It is proposed to undertake pre-construction surveys at relevant locations, such as hospitals, to identify if measures such as sealing of windows is required.
- 11.14.58. With reference to the EPA Guidelines, the EIAR considers that the likely effects associated with the construction phase dust emissions pre-mitigation are overall **negative, not significant and medium-term**.
- 11.14.59. Operational Phase
- 11.14.60. ***Traffic***
- 11.14.61. Given that the proposed MetroLink is electrically powered, the EIAR considers that the most significant potential impacts on air quality in the operational phase are associated with the alterations to Do-Minimum (DM) traffic flow patterns, noting that the P&R facility is the only location with parking.
- 11.14.62. In the **2035 DM Operational Phase Scenario A**, the impact of the proposed development is overall Negligible in terms of the annual mean NO₂, PM₁₀ and PM_{2.5} concentrations at all modelled receptors with the exception of one receptor (OP_SA_151) located within 20m of the M50 where exceedance of the European AQS is predicted for annual mean concentration of NO₂. Annual mean NO₂ concentrations did not exceed 60µg/m³ at any locations indicating that no exceedances of the NO₂ 1-hour mean are likely to occur. Annual mean PM₁₀ and PM_{2.5} concentrations are below the relevant national air quality objectives for all

modelled receptors, with no more than three exceedances of the 50µg/m³ ambient limit value for maximum 24-hour PM₁₀ concentration, compared to the threshold of 35 daily exceedances in any one year.

11.14.63. In the **2035 DS Operational Phase Scenario A**, the impact of the proposed development is overall Negligible in terms of the annual mean NO₂, PM₁₀ and PM_{2.5} concentrations at all modelled receptors, again with the exception of the same one receptor as in the DM scenario, which represents a reduction on the DN scenario, which had 4 No. exceedances. Predicted annual mean NO₂ concentrations did not exceed 60µg/m³ at any locations indicating that exceedances of the NO₂ 1-hour mean are unlikely to occur. Annual mean PM₁₀ and PM_{2.5} concentrations are below the relevant national air quality objectives for all modelled receptors, with no more than three exceedances of the 50µg/m³ ambient limit value for maximum 24-hour PM₁₀ concentration, compared to the threshold of 35 daily exceedances in any one year.

11.14.64. Comparing the change in pollutant concentration between the DM and DS for the 2035 Operational Phase Scenario A, the proposed development results in a **negligible** impact in terms of annual mean NO₂ concentration for the majority of receptors. The greatest impact is an increase of 0.83µg/m³ at receptor OP_SA_151 which as noted above is in close proximity to the M50 with an already high background concentration above 40 µg/m³. The significance is identified as **slight adverse**. The proposed development is considered to be overall neutral in terms of annual mean PM_{2.5} concentrations, with all receptors experiencing a **negligible** impact.

11.14.65. The EIAR therefore considers that the likely effects due to the Operational Phase traffic emissions in Scenario A will overall be **negative, not significant and long-term**.

11.14.66. In the **2035 DM Operational Phase Scenario B**, the impact of the proposed development is overall Negligible in terms of the annual mean NO₂, PM₁₀ and PM_{2.5} concentrations at all modelled receptors with the exception of one receptor (OP_SB_AQ150) located within 20m of the M50 where exceedance of the European AQS is predicted for annual mean concentration of NO₂. Annual mean NO₂ concentrations did not exceed 60µg/m³ at any locations indicating that no

exceedances of the NO₂ 1-hour mean are likely to occur. Annual mean PM₁₀ and PM_{2.5} concentrations are below the relevant national air quality objectives for all modelled receptors, with no more than eight exceedances of the 50µg/m³ ambient limit value for maximum 24-hour PM₁₀ concentration, compared to the threshold of 35 daily exceedances in any one year.

11.14.67. In the **2035 DS Operational Phase Scenario B**, the impact of the proposed development is overall Negligible in terms of the annual mean NO₂, PM₁₀ and PM_{2.5} concentrations at all modelled receptors, again with the exception of the same one receptor as in the DM scenario, which represents a reduction on the DN scenario, which had 2 No. exceedances. Predicted annual mean NO₂ concentrations did not exceed 60µg/m³ at any locations indicating that exceedances of the NO₂ 1-hour mean are unlikely to occur. Annual mean PM₁₀ and PM_{2.5} concentrations are below the relevant national air quality objectives for all modelled receptors, with no more than eight exceedances of the 50µg/m³ ambient limit value for maximum 24-hour PM₁₀ concentration, compared to the threshold of 35 daily exceedances in any one year.

11.14.68. Comparing the change in pollutant concentration between the DM and DS for the 2035 Operational Phase Scenario B, the proposed development results in a **negligible** impact in terms of annual mean NO₂ concentration for the majority of receptors. The greatest impact is an increase of 0.82µg/m³ at receptor OP_SB_29 which is located in close proximity to the Estuary P&R facility, but due to the low background concentration at this location, the significance is identified as **negligible**. The proposed development is considered to be overall neutral in terms of annual mean PM_{2.5} concentrations, with all receptors experiencing a **negligible** impact.

11.14.69. The EIAR therefore considers that the likely effects due to the Operational Phase traffic emissions in Scenario B will overall be **negative, not significant and long-term**.

11.14.70. **Ecology**

11.14.71. The EIAR considers the potential impact of the proposed project on nearby ecologically sensitive areas during the operational phase due to annual mean NO_x concentration and due to nitrogen deposition.

11.14.72. For **Operational Phase Scenario A** annual mean NO_x concentration is compared to a critical level for each of the designated habitat sites, and the following locations are identified as exceeding the critical level of 30µg/m³ within 200m of the project:

- Grand Canal pNHA (M50 Viaduct Eastern and Western Side);
- Liffey Valley pNHA (M50 Western Side);
- Royal Canal pNHA (M50 Eastern and Western Side);
- Santry Demesne pNHA (Swords Road Western Side);
- Malahide Estuary SPA SAC pNHA; and
- North Dublin Bay pNHA and South Dublin Bay and River Tolka Estuary SPA.

11.14.73. The EIAR states that these exceedances are due to current traffic volumes. However, due to the proposed project impact being above 1% of the critical level in some cases (see Table 16.52 of EIAR), the EIAR states that the Project Ecologist was consulted.

11.14.74. The EIAR compares Nitrogen deposition rates with the lower and higher critical loads for the designated habitat sites. All sites are stated to be below the lower critical load, with the exception of the Grand Canal pNHA, where the EIAR states that nitrogen deposition drops below the lower critical load within 10m from the road.

11.14.75. The EIAR concludes that the ecological likely effects associated with the Operational Phase Scenario A traffic emissions will overall be **negative, not significant and long-term**.

11.14.76. For **Operational Phase Scenario B**, annual mean NO_x concentration is identified as exceeding the critical level of 30µg/m³ within 200m of the project for the following locations:

- Royal Canal pNHA (M50 Viaduct Eastern and Western Side);
- Liffey Valley pNHA (M50 Western Side);
- Grand Canal pNHA (M50 Viaduct Eastern and Western Side);
- Malahide Estuary SPA SAC pNHA;

- North Dublin Bay pNHA and South Dublin Bay and River Tolka Estuary SPA; and
- Bog of the Ring pNHA.

11.14.77. The EIAR states that these exceedances are due to current traffic volumes. However, due to the proposed project impact being above 1% of the critical level at the Bog of the Ring pNHA (see Table 16.56 of EIAR), the EIAR states that the Project Ecologist was consulted.

11.14.78. With regard to Nitrogen deposition for Operational Phase Scenario B, all sites are stated to be below the lower critical load, with the exception of the Grand Canal pNHA and Royal Canal pNHA, where the EIAR states that nitrogen deposition drops below the lower critical load within 10m from the road.

11.14.79. The EIAR concludes that the ecological likely effects associated with the Operational Phase Scenario B traffic emissions will overall be **negative, not significant and long-term**.

11.14.80. ***Regional Air Quality Assessment***

11.14.81. The EIAR assesses the potential changes in regional air emissions due to the traffic impacts of the proposed project during the opening year. Pollutant emissions produced in both the DM and DS scenarios during both Operational Phase Scenarios A and B indicates that the project is overall beneficial during the operational phase, with reductions in emissions of all pollutants. The reductions are stated to be due to a predicted modal shift, with decreased private car usage in the DS scenario compared to the DM scenario. The EIAR contends that the regional unmitigated likely effects associated with the operational phase traffic emissions for both Scenarios A and B are overall **beneficial, not significant and long-term**.

11.14.82. ***Other Operational Phase Impacts***

11.14.83. With regard to the proposed ventilation shafts, the EIAR states that there will be no significant emissions to air and that the emissions from ventilation shafts in normal operation will be akin to warm air. During a fire event, it is stated that the materials for the rolling stock, wiring systems etc. will be selected to comply with strict regulations to avoid irritating or toxic emissions to ensure tenable evacuation conditions and to minimise the potential for toxic fumes being emitted from the

ventilation shafts. The EIAR considers the potential likely effects of emissions from the ventilation shafts as being **neutral, not significant and long-term**.

11.14.84. With regard to the potential for indirect significant effects on air quality associated with the power generation required to operate the Metro, the EIAR notes that the then current Climate Action Plan 2021 had set a national target of meeting up to 80% of electricity demand by renewables by 2030. With regard to the remaining fossil fuel power, the EIAR states that the emissions for those suppliers will be carefully controlled by the EPA under Industrial Emissions Directive licensing, ensuring that no significant air quality impacts occur. It is also proposed to set a Net Zero sustainability target for operational energy by the 2050 design year through the purchase of certified low or zero carbon electricity, through the use of solar PV and offsetting. The potential likely effects of emissions from the operational power requirements are stated to be **neutral, not significant and long-term**.

11.14.85. Other sources of potential operational phase emissions include 2 No. 146kW boilers and a number of radiant tube heaters (18 x 300kW and 1 x 200kW) for heating indoor spaces at the proposed Dardistown Depot. With regard to the Medium Combustion Plant Directive, (EU) 2015/2193, the EIAR notes that the Directive does not apply to the radiant tube heaters due to their use to heat workspaces, while the output of the boilers, being less than 1MW, would be below the Directive's threshold for the purposes of calculating the total rated thermal input of a combination of plants. The impacts due to emissions from this depot plant and equipment are therefore considered to be **not significant**. Diesel-powered rail maintenance vehicles required on an infrequent basis for maintenance works are not considered a significant emission source. Potential impacts due to dust emissions from replenishing of the rolling stock sand boxes (used for improved braking) at the depot are considered **not significant** as it will be undertaken at the depot using nozzles and piped connections from an enclosed silo at designated locations where dust emissions can be carefully controlled.

11.14.86. **Mitigation Measures**

11.14.87. **Construction Phase**

11.14.88. Section 16.6.1 of the EIAR sets out a series of mitigation measures for the construction phase, including:

- **Dust Mitigation Measures:** Compliance with the CEMP; preparation of an Air Quality Management Plan for each worksite for approval to the relevant planning authority, to include dust and emissions mitigation measures including asbestos and aspergillus. The plan will include: inventory and timetable of activities which may give rise to emissions/dust; alert levels and alert system to be used; details of control measures; details of dust monitoring arrangements, location of sensitive receptors, monitoring locations, and monitoring equipment to be used; and details of the air quality reporting requirements.

Other dust mitigation measures are contained in Appendix A16.4 of the EIAR (Dust Management Plan), including: material handling and stockpiling designed and laid out to minimise exposure to wind; use of water misting or sprays as required; blasting by specialised contractors with a specific blasting dust management plan; liaison with local authorities and community groups; hoarding around the construction compounds; and collection of rainwater for general site use. In the event of dust nuisance occurring outside the site boundary, movements of materials likely to raise dust will be curtailed and satisfactory procedures implemented to rectify the problem before the resumption of construction operations.

- **Asbestos Mitigation Measures:** Asbestos surveys of buildings to be demolished and removal by a suitably permitted/licensed waste contractor to a suitably licensed facility. HSA to be contacted where necessary.
- **Aspergillus Mitigation Measures:** Survey and prevention works in proximity to sensitive buildings, including the Mater Hospital. Prevention works will involve sealing windows to the facades that are in close proximity to the hospital, as part of an Aspergillus Prevention Plan prepared with regard to the National Guidelines for the Prevention of Nosocomial Invasive Aspergillosis During Construction/Renovation Activities and the HSE National Guidelines for the Prevention of Nosocomial Aspergillosis. The dust mitigation measures will also be considered as aspergillus mitigation measures as they will minimise the potential for spread of the fungal spores.

- **Traffic Mitigation Measures:** While no significant impacts were identified as a result of vehicle emissions, it is proposed to: prevent idling of vehicles; monitor traffic to ensure use of the designated haul routes; manage traffic through the CEMP and Temporary Traffic Management Plans; scheduling to minimise number of deliveries required and their emissions; and ensuring that construction vehicles conform to the latest EU emissions standards. The mitigation measures required to control dust from HGV movements and site deliveries include: use of wheel washes; inspection of roads outside the site for cleanliness with cleaning as necessary; covering of truck loads with tarpaulin and inspection of trucks before entrance onto public roads to ensure no potential for dust emissions.

11.14.89. Operational Phase

11.14.90. No specific mitigation measures are proposed for the operational phase, given the lack of significant impacts identified.

11.14.91. Residual Impacts

11.14.92. Following implementation of the mitigation measures, **no significant residual impacts** on air quality are anticipated as a result of the construction and operation of the proposed development.

11.14.93. Cumulative Impacts

11.14.94. Potential cumulative air quality impacts are addressed in Section 30.4.8 of the EIAR. Following a screening exercise, a total of 60 No. projects were screened in for potential cumulative impacts, as listed in Table 30.8 of the EIAR. Of these, 48 No. projects were screened in for potential significant cumulative dust impacts that could arise if their Construction Phase occurred at the same time as that for the proposed project, while 5 No. projects (all strategic housing developments) were screened in for potential increases in traffic emissions in the local area if their Construction Phase occurred at the same time as that for the proposed project.

11.14.95. In the operational phase, 11 No. projects were screened in for potential positive cumulative impacts with the proposed project. These were all transport projects, including BusConnects, DART+ and Luas expansion, as these developments also aim to improve the public transport network by making it more

connected and therefore have the potential to reduce private vehicles dependence and an associated reduction in GHG emissions.

11.14.96. No specific mitigation measures over and above those already proposed for the proposed development are identified for cumulative impacts. The stated reason for this is that, in most cases the mitigation included in the proposed project, together with standard mitigation measures which would be implemented by the other developments, will be sufficient to reduce cumulative impacts so that they are not significant.

11.14.97. **No significant residual cumulative impacts** on air quality are identified in the EIAR.

11.14.98. **Oral Hearing**

11.14.99. **Errata**

11.14.100. No errata relating to air quality were identified by the applicant.

11.14.101. **Updates**

11.14.102. Dr Avril Challoner (AWN Consulting) made a submission at the oral hearing on 19th February 2024 (Ref. OH30) on behalf of the applicant in relation to updates to the air quality and climate assessments due to legislation and guidance published since lodgement of the application. Air quality related updates included the Ambient Air Quality Standards Regulations 2022, EU's proposed updated Air Quality Directive, Clean Air Strategy for Ireland 2023, and TII guidance on Air Quality Assessment.

11.14.103. The Ambient Air Quality Standards Regulations 2022 replace the Air Quality Standard Regulations 2011, whose limit values were utilised in the EIAR air quality assessment. While both sets of Regulations were to give effect to the CAFE Directive, the 2022 Regulations include additional measures including a requirement that the public be informed "in good time" of ambient air quality, changes of limit values and air quality plans. There is also a potential requirement under the 2022 Regulations for a 'Short-Term Action Plan' to be put in place by DCC or FCC to protect sensitive receptors should EPA monitoring data indicate the risk of the respective limit values, or target values or alert thresholds being exceeded.

- 11.14.104. Dr Challoner's submission outlines the monitoring proposals for construction phase dust, PM₁₀, PM_{2.5} and NO₂ emissions, which will include 6 months of pre-construction monitoring at all sites to establish a baseline prior to construction works. Trigger levels will be used to alert TII and the contractor to a potential peak in particulate concentrations and it is stated that these trigger levels were successfully used at the Rotunda Hospital during Luas Cross City works. Where trigger levels are breached, a series of steps including identification of the source of exceedance and potential stoppage of works will take place, and the contractor will be required to put appropriate controls and management in place to reduce dust impacts.
- 11.14.105. Dr Challoner noted the proposal (COM/2022/542) for an updated Air Quality Directive⁵⁹, which contains limit values for the protection of human health to be attained by 1 January 2030 that more closely aligns with WHO limit values published in 2021. Dr Challoner noted that the proposed updated Directive reinforces the need for public transport measures to improve air quality and move people away from private fossil fuel vehicles.
- 11.14.106. Similarly, the Clean Air Strategy for Ireland 2023 commits to achieving the 2021 WHO Air Quality Guidelines Interim Target 3 (IT3) by 2026, the IT4 targets by 2030 and the final targets by 2040.
- 11.14.107. Dr Challoner also drew the Board's attention to new guidance documents and standards published by TII, including 'Air Quality Assessment of Specified Infrastructure Projects' (PE-ENV-01106) and 'Air Quality Assessment Standard for Proposed National Roads' (PE-ENV-01107). The updated Guidelines allow for future changes in air quality limit values within the significance criteria when considering the impact of a project, rather than significance criteria based on set concentrations as with the previous guidance. With the transition towards lower WHO limit values, this can result in a smaller change due to a project, at a lower overall concentration, having the potential for a non-neutral effect.
- 11.14.108. Appendix 2 of the submission contains a sensitivity analysis, comparing the current EU limit values and 2011 TII Guidance against the updated significance

⁵⁹ The Ambient Air Quality Directive (EU) 2024/2881 subsequently entered into force on 10th December 2024.

criteria in the 2022 TII Guidance using the applicable WHO target values for that year (see Table 14 of said Appendix or the table below).

11.14.109. In the construction phase, in both the 2028 northern and southern peak scenarios there is an increase in the number of both adverse and beneficial impacts for NO₂ (slight, moderate and substantial), but no change to PM_{2.5} or PM₁₀ impacts. The impacts are stated to be temporary in duration and the conservative basis of the modelling was noted.

11.14.110. In the operational phase, again there are some additional slight and moderate adverse impacts in both 2035 opening year scenarios, as well as additional moderate and substantial beneficial impacts, relating to NO₂ and PM_{2.5}. Effects are considered to be long-term and localised. Dr Challoner noted that the use of 2019 background air quality data for all modelled years is a worst-case assumption, given that the implementation of the Clean Air Strategy for Ireland and Climate Action Plans should result in a reduced background for future year assessments and potentially reduced significance of impacts.

11.14.111. Dr Challoner made a further submission at the oral hearing on 7th March 2024 (Ref. OH197), providing an ecology related addendum to the EIAR. This included updates based on the abovementioned updated TII guidance documents which revise the methodology for assessing ecological receptors and provide for the inclusion of ammonia (NH₃) within modelling. The addendum also included other updates to the modelling, including more fine-grained background pollutant data which has recently become available and adding the elevations for bridges at locations along the M50 and M1 to ensure vehicle emissions dispersion from elevated positions were captured.

11.14.112. Having updated the modelling, the addendum concludes that the ecological impacts associated with both the construction and operational phase remain unchanged, i.e. **not significant**.

11.14.113. Cumulative Impact Assessment

11.14.114. An updated cumulative impacts addendum was submitted to the oral hearing on 28th February 2024 (Ref. OH98). The Addendum comprises a more up-to-date review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application.

11.14.115. Where potential cumulative impacts are identified, they are generally associated with the Construction Phase and relate to cumulative dust impacts and construction traffic impacts should construction be underway at the same time. It is contended that the proposed dust mitigation measures outlined in the EIAR and CEMP will mitigate potential cumulative dust impacts and that monitoring will confirm dust concentrations are within guideline values. Construction phase traffic management will also be utilised to reduce potential impacts.

11.14.116. No additional significant residual cumulative impacts on air quality are identified.

11.14.117. **Post-Oral Hearing**

11.14.118. A further cumulative impact assessment update was submitted on 31st January 2025 as part of the applicant's response to the Wild Ireland Defence CLG oral hearing submission.

11.14.119. In relation to air quality, the applicant's position remains unchanged from that outlined in the CIA document submitted at the oral hearing – i.e. that there are potential cumulative impacts if developments are under construction at the same time as the MetroLink development, but that the dust mitigation measures, and traffic management measures will mitigate the impacts. No additional significant residual cumulative impacts on air quality are identified.

11.14.120. An EIAR Addendum was also submitted by the applicant as part of their abovementioned response, addressing impacts associated with the proposed PFAS management strategy at Dublin Airport. While there is potential for construction phase air quality impacts associated with dust at the Triage and Material Management Site, it is contended that the Dust Management Measures outlined in the EIAR will ensure that there are no additional significant residual impacts. With regard to the additional traffic movements associated with the PFAS management strategy, no additional significant impacts are identified, with reference to the conservative approach taken to traffic modelling in the EIAR assessment.

11.14.121. **Assessment**

11.14.122. One of the most common environmental issues raised in the submissions made by observers along the entire proposed MetroLink alignment was construction

phase air quality impacts, particularly with regard to dust, construction traffic emissions and associated mitigation and monitoring. These concerns were raised with regard to both residential and commercial receptors, particularly those near the proposed station locations. Aspergillus risk and other matters such as asbestos and particulates were also raised.

11.14.123. Construction Phase

11.14.124. ***Traffic Related Impacts***

11.14.125. With regard to construction traffic emissions and increased emissions due to traffic redistribution during the construction phase, this was an issue raised by many observers in the more built-up areas of the alignment, such as Collins Avenue, Glasnevin and Mater, which already experience high levels of traffic.

11.14.126. I consider that the air quality assessment methodology utilised by the applicant, and as supplemented by the updated information submitted at the oral hearing, is in accordance with good practice guidance for the assessment of air quality impacts, including that produced by TII (in their road development guise) and the IAQM. In particular, I note the range of conservative assumptions built into the assessment, such as the use of the worst-case month for construction and modelling it over a full year, the use of 2020 background pollutant concentrations which are likely to be higher than those in the 2028 peak construction year and the use of older fleet projections, which are being increasingly electrified with consequent reductions in tailpipe emissions. As a result of these factors and the wider implementation of the stringent and progressive commitments made in the CAP and the Clean Air Strategy for Ireland, I am satisfied that actual air quality impacts are likely to be lower than those predicted in the EIAR.

11.14.127. In addition to the use of conservative assumptions, I note that a validation exercise was undertaken, comparing calculated and measured pollutant concentrations for a 2020 base year. This allowed a model adjustment factor to be derived, which could be applied to future year modelling to ensure consistency between theoretical and real world scenarios.

11.14.128. With regard to the baseline air quality environment, the baseline monitoring was done in 2018/2019, i.e. 6 – 7 years ago. While this is obviously quite some time ago, I note that, importantly, it was prior to the disruption caused by the Covid-19

pandemic. EPA monitoring data for 2020 showed a substantial reduction in pollutants of up to 50% at some monitoring stations where car traffic had dominated prior to Covid restrictions. Covid restrictions continued into 2021 and that is, again, likely to be an atypical year. Looking at longer term EPA monitoring results, the concentrations for the various pollutants are relatively stable over time and there is no reason to believe that the applicant's baseline monitoring results are obsolete in any material way. In fact, as noted above, they serve to provide a conservative input to the future year analysis.

11.14.129. Notwithstanding this, I note and welcome the applicant's commitment, referenced in Dr Challoner's submission at the oral hearing (Ref. OH30), to undertake 6 months of pre-construction monitoring at all sites, to allow for any changes in baseline air pollutant concentrations to be identified and project related impacts to be mitigated, as required.

11.14.130. The Board should note that, since the oral hearing, Directive (EU) 2024/2881 of the European Parliament and of the Council on ambient air quality and cleaner air for Europe ('the Ambient Air Quality Directive') has come into effect and has to be implemented by national regulations by December 2026, with the CAFE Directive 2008/50/EC being repealed at that time. At the time of completion of this report, the required national regulations had not yet been introduced.

11.14.131. The table below collates the various limit values / targets from the current CAFE Directive, the still-to-be-implemented Ambient Air Quality Directive for 2030 and the WHO Global Air Quality Guidelines 2021 targets. It is notable that the endpoint of the WHO guidelines' targets, which progressively reduce over time, are even more stringent than the Ambient Air Quality Directive.

11.14.132. The Board should note that the figures contained in the WHO guidelines comprise policy guidance only, while those within the Directives are/will be mandatory. Notwithstanding this, the Clean Air Strategy for Ireland 2023 commits to achieving the WHO guidelines IT3 targets by 2026, the IT4 targets by 2030 and the final targets by 2040. The Strategy notes that meeting these extremely stringent WHO targets "will be challenging and will require legislative and societal change, especially with regard to both PM_{2.5} and NO₂".

Pollutant	Limit type (for protection of human health)	CAFE Directive 2008/50/EC ($\mu\text{g}/\text{m}^3$)	Ambient Air Quality Directive 2024/2881 ($\mu\text{g}/\text{m}^3$)	WHO IT3 - 2026 ($\mu\text{g}/\text{m}^3$)	WHO IT4 – 2030 ($\mu\text{g}/\text{m}^3$)	WHO Final Target – 2040 ($\mu\text{g}/\text{m}^3$)
NO₂	24-hour limit	-	50	50	50	25
	Annual limit	40	20	30	20	10
PM₁₀	24-hour limit	50	45	75	50	45
	Annual limit	40	20	30	20	15
PM_{2.5}	24-hour limit	-	25	37.5	25	15
	Annual limit	25	10	15	10	5

11.14.133. Based on the baseline monitoring results contained in the EIAR, it is likely that the current baseline air quality may be close to or exceed the forthcoming Ambient Air Quality Directive limit values in some cases, for example for receptors in the vicinity of busy roads such as the M50. Improving air quality in order to meet these lower limit values will therefore be a major society-wide challenge beyond the scope of the MetroLink project. However, it is clear that one of the key methods of improving air quality, particularly in terms of reducing NO₂ and particulate matter, will be shifting private car trips to non-air polluting sustainable public transport modes, such as the MetroLink.

11.14.134. As detailed above, Dr Challoner's submission to the oral hearing on behalf of the applicant contains a sensitivity analysis, comparing the EIAR scenario (i.e. CAFE Directive and 2011 TII guidance) against the updated 2022 TII guidance significance criteria and the WHO's IT3 target values, which would be applicable in the 2028 peak construction phase.

11.14.135. This sensitivity analysis indicates a range of additional impacts for both the northern and southern peak construction phases, both positive (due to traffic redistribution) and negative, as a result of the lower NO₂ limit. There is no substantive change for particulate matter. While there is a net increase in moderate adverse impacts, this is primarily due to the baseline figures (which are

conservatively assumed to be constant) being already close to or exceeding the limit value. These impacts are stated to be temporary in duration.

11.14.136. Having reviewed the applicant's assessment, as supplemented by the information submitted at the oral hearing, I concur with their updated conclusion that there will be a range of both adverse and beneficial temporary impacts during the peak construction phase on individual receptors, due to traffic distribution and due to the baseline air quality in certain areas already being close to the WHO IT3 limit values committed to by the Clean Air Strategy for Ireland. The more stringent Ambient Air Quality Directive will likely result in further receptors experiencing air quality in excess of the limit values, again due to the baseline situation, rather than the MetroLink project. I do note, however, the conservative assumptions made in the assessment, and the wider need for society-wide action to meet air quality commitments, which will reduce the baseline air quality environment, and the range of measures proposed, including policies to prevent vehicle idling, monitoring to ensure use of designated haul routes, active management of traffic via the STMP, CEMP and Temporary Traffic Management Plans and other good practice measures, such as efficient scheduling of deliveries and use of vehicles that conform to EU emissions standards. I also note that the additional climate action commitments made by the applicant at the oral hearing, particularly in relation to the replacement of diesel for construction plant with HVO and the use of electric plant where feasible.

11.14.137. Having regard to the likely over-estimation of adverse impacts, the temporary nature of the impacts and the purpose of the construction phase – i.e. to construct an electrified metro railway which is consistent with climate action and clean air quality goals – I conclude that the proposed development will not have unacceptable impacts on air quality during the construction phase as a result of traffic-related emissions.

11.14.138. ***Dust***

11.14.139. With regard to dust, it must be stated, at the outset, that it is unavoidable that the construction phase will result in dust generation, given the extent of site clearance, demolition, excavation and construction works required and the associated HGV movements. Given the scale of these works and the multiple

concurrently active construction sites across the city, I consider it appropriate that a conservative 'high' level of dust mitigation should be provided at all MetroLink works locations, as committed to in the EIAR.

- 11.14.140. While a metro system is a novel form of development in an Irish context, the dust generating activities at any particular construction compound or aboveground works location along the alignment are generally similar to any large urban development involving excavation and construction works and transport of materials, albeit of a greater scale and extent. The control of dust from such sites and from associated construction traffic is a well understood process and is typically achieved via good practice construction methodologies and protocols and effective monitoring.
- 11.14.141. Having reviewed the EIAR, CEMP and associated documentation, including the updates submitted at the oral hearing, I am satisfied that the mitigation measures proposed are comprehensive, extensive and represent good practice. In particular I note the use of site hoardings, wheel wash systems, covering of loads, dust suppression (e.g. damping down and misting sprays) and road cleaning outside sites. Site-specific Air Quality Management Plans detailing these mitigation measures will also be prepared for each worksite by the contractor and submitted to DCC/FCC for approval. TII, in their response to the submissions, also note their obligations under Health and Safety legislation to protect their own workforce from dust, which will also avoid public health impacts outside of the sites.
- 11.14.142. The only exceptional construction activity from an air quality perspective is the requirement for blasting in certain locations. While this activity is commonly utilised at a much larger scale in quarries, my understanding is that it is very rarely used in urban areas in Dublin. I note the commitment to utilise specialist blasting contractors for this activity who will prepare a site-specific blasting dust management plan. As with more common construction methodologies, the measures for controlling dust from blasting are well understood and are likely to be broadly similar – i.e. the use of water and covering of material with the potential to generate fugitive dust. In addition, as detailed elsewhere in this report, Tyréns have recommended that blasting should not be permitted at the city centre stations.
- 11.14.143. I note that the IAQM guidance document on dust, which was referenced in the EIAR has since been replaced by the updated Guidance on the assessment of dust

from demolition and construction 2024. Dr Challoner's oral hearing submission addressed the implications of the new guidance. While there are various changes to assessment criteria and criteria for assigning a magnitude rating, the dust mitigation measures for high risk sites (i.e. which the applicant has proposed for all MetroLink works sites) remains unchanged.

11.14.144. With the high level of dust mitigation proposed, I am satisfied that, if correctly implemented, fugitive dust emissions can be effectively mitigated to an acceptable level so as not have a significant nuisance, ecological or human health impact on receptors in the vicinity. While dust impacts are temporary by nature, given the prolonged construction phase at station box locations, there may be numerous occurrences or extended periods where dust nuisance could arise over the course of the construction phase. Therefore, key to the successful implementation of the mitigation measures will be an effective monitoring regime, including clear lines of communication with local communities, transparent sharing of monitoring data and robust protocols for addressing complaints in a timely manner. I consider that ongoing real-time (or near real-time) reporting of dust deposition monitoring results during the construction phase should form part of the overall monitoring regime, with information shared with relevant stakeholders and the public via a website. The issue of construction phase monitoring, which is relevant to a number of environmental factors, is addressed in Section 9.15 of the planning assessment section of this report.

11.14.145. I note that as part of the applicant's Air Quality Management Plans for each work site and associated monitoring regime, alert levels will be set, above which dust generating works at the site will cease until the issue is resolved. This protocol is stated to have been used successfully at the Rotunda Hospital during Luas Cross City works. I consider this to be a reasonable and proactive commitment to minimising dust effects on surrounding receptors.

11.14.146. In addition to the large number of residential receptors who raised concerns regarding potential dust impacts, a number of submissions related to the impact of dust on commercial properties, particularly with regard to food businesses. Stephen Troy, who operates Troys Butchers on Moore Street made written submissions (Refs. S304, 1FS41) and an oral submission to the oral hearing on 19th March 2024, in which he outlined his negative experience with the Luas Cross City construction

project and the impact that he contends it had on his business. Mr Troy expressed concern that the dampening down of dust would lead to mud being walked into his shop and he noted the strict food safety measures that he is required to comply with. In response, Dr Challoner reiterated the applicant's proposals for dust management and mitigation. Paul Brown, on behalf of TII also stated that works would be supervised by TII and the Independent Monitoring Engineer, that vehicles would be covered and that streets would be kept clean. Similar concerns were raised with regard to commercial properties in the vicinity of the Mater Station, including coffee shops, a florist and a pharmacy.

11.14.147. While the concerns of city centre traders are noted, particularly regarding their negative 'lived experience' of TII's Luas Cross City construction works, the dust control measures proposed in this instance are of an appropriately high standard, suitable for large construction sites in urban areas. When properly implemented and monitored, these measures are likely to be effective in controlling dust to an acceptable level. Given the number and extent of large-scale concurrent construction sites associated with the project, I again note that a comprehensive monitoring, public liaison and complaints management system will be critical to the successful implementation of the mitigation measures.

11.14.148. Given the proximity of Troys Butchers to what will be a key haulage route for the O'Connell Street Station and noting that food businesses, particularly those handling raw meat, are clearly a very sensitive receptor from the perspective of dust and air quality impacts during construction, I recommend a condition be included requiring that a dust monitoring location be provided as close to the junction of Moore Street and O'Rahilly Parade as feasible (i.e. close to Troys Butchers and other food businesses, including outdoor food stalls, in a location where there will be high MetroLink related HGV traffic). Alert and notification procedures form part of the dust mitigation and monitoring measures. Subject to the implementation of these measures, I do not consider that there will be a significant impact in terms of air quality or dust deposition at this location.

11.14.149. Air quality concerns were also raised by Hertz Europe Service Centre Ltd. who operate a commercial premises adjacent to the proposed Seatown Station in Swords. Hertz, in their initial written submission (S115) and their subsequent oral hearing submission on 20th March 2024, contend that construction dust has the

potential to create serious issues for their sensitive IT equipment, including servers and cooling units. In responding to this submission, the applicant noted both their standard proposed dust mitigation measures and that the air intake location for the servers is significantly remote from the construction site, resulting in no significant risk. Notwithstanding this, the applicant committed to undertaking dust monitoring at the air intake location with alert levels set to ensure that dust levels are kept sufficiently low at this location. I consider this to be a reasonable commitment to avoid any impact on this premises.

11.14.150. With regard to the proposals for PFAS management at Dublin Airport, the applicant has provided a worst case assessment whereby all material arising in the Airport area would be taken to a triage centre at Dardistown and held pending testing, after which it would be exported for treatment/disposal if contaminated. I concur with the applicant's position that standard dust control measures, as set out in the EIAR will be adequate in terms of avoiding issues with spoil transport and stockpiling resulting in airborne mobilisation of dust. I also concur that the additional emissions associated with HGV movements and export of material have been assessed on a worst case scenario and are not likely to result in any significant air quality impacts.

11.14.151. ***Aspergillus***

11.14.152. The issue of aspergillus was also raised with regard to construction phase dust emissions. This issue is also addressed in the Human Health section of this report. The potential for airborne mobilisation of aspergillus to arise as an issue is generally limited to the initial site clearance, demolition and excavation phases of work, since it is a fungus found in soil. Aspergillus is a common concern where site clearance and soil removal is required in an urban area and it is of particular concern in the vicinity of healthcare facilities or receptors with existing health issues.

11.14.153. I note that both the Rotunda and Mater Hospitals, the two hospitals closest to the proposed development, submitted letters at the oral hearing to the effect that their issues of concern with regard to the project have been addressed (Refs. OH956 and OH115, respectively). Notwithstanding this, other parties have raised the issue of aspergillus, including Prospect ACA (S260), GADRA (S99), Berkeley Road Area Residents' Association (BRARA; 1FS6) and District 7 Community Alliance (1FS18).

The issue was also raised at the oral hearing by a number of observers. TII, in their response, noted that the general population is exposed to aspergillus during routine activities such as gardening and that it typically does not affect healthy individuals, although it can have adverse respiratory effects on immunocompromised individuals. TII contend that aspergillus surveys are not warranted or necessary, on the basis that the absence of aspergillus in a sample may provide a false sense of assurance since it may not be representative of the overall site. Instead, TII restate their position that it is more effective to apply a high level of dust mitigation and monitoring, which would be the same situation as if surveys returned positive samples for aspergillus.

11.14.154. As with dust, aspergillus risk and the measures required to control and mitigate the risks are well understood and essentially overlap with dust control measures. The applicant has identified appropriate mitigation measures to deal with this issue, such as the sealing of certain windows in the Mater Hospital and has identified and undertaken to comply with applicable HSE guidelines on this matter. Subject to implementation of the mitigation measures, I am satisfied that risks associated with aspergillus will not be significant. This issue is clearly a matter of concern for numerous people with existing health conditions living in the vicinity of proposed construction sites, and while I am satisfied that the issue can be adequately mitigated, I consider that, as with dust and other environmental factors, a robust monitoring and communications plan will be key to establishing the effectiveness of the mitigation measures and reassuring local communities in relation to this matter.

11.14.155. I note in this regard that BRARA, in their further submission, welcomed TII's commitment to engage with the community around dust mitigation measures (as contained in Section 6.3 of the CEMP) and that TII, in response, confirmed that they will engage with community groups prior to construction phase in relation to dust mitigation measures.

11.14.156. **Asbestos**

11.14.157. With regard to potential asbestos containing materials present in buildings to be demolished, this is clearly a potentially serious issue given the known health impacts associated with inhalation of airborne asbestos fibres. However, I am

satisfied that pre-demolition surveys and removal of any such material by a specialist licensed contractor, as proposed by the applicant, will be adequate to mitigate this risk to an acceptable level. In any event, asbestos is a notifiable substance and is therefore the subject of a separate legal code.

11.14.158. ***Ecology***

11.14.159. In relation to impacts on ecological receptors due to air quality issues, such as nitrogen deposition, NO_x and ammonia, these issues are primarily addressed in the biodiversity and AA sections of this report, as relevant. In terms of this air quality section, I note and concur with the assessment undertaken in the EIAR, as updated at the oral hearing to reflect more recent guidance on this matter (Ref. OH197). That is to say, the air quality impacts on ecological receptors during both the construction and operational phase are not likely to be significant.

11.14.160. Operational Phase

11.14.161. ***Traffic Related Impacts***

11.14.162. In the operational phase, given the nature of the proposed development, i.e. an electrified railway which is underground for a substantial portion of its alignment, I concur with the applicant that no significant adverse direct air quality impacts are likely to arise during normal operation of the MetroLink and that potential impacts on air quality are primarily indirect impacts associated with changes to traffic flows.

11.14.163. The EIAR concluded that the likely effects due to operational phase traffic emissions would be negative, not significant and long-term for both scenarios A and B.

11.14.164. However, I again note the abovementioned sensitivity analysis submitted at the oral hearing, which compares the EIAR scenario against the updated 2022 TII guidance significance criteria and the WHO's IT4 target values, which would be applicable in the 2035 opening year.

11.14.165. This sensitivity analysis indicates that the halving of the NO₂ limit value results in a range of additional impacts for both operational phase scenarios A and B, both positive and negative, due to traffic redistribution. I note that in Scenario B, the likely future scenario, the changes result in both moderate and substantial beneficial effects on a number of receptors, with a moderate adverse impact on others. Again,

this is primarily due to the baseline figures being already close to or exceeding the limit value in many cases (see the existing baseline and DN tables in Appendix A16.3). These impacts are stated to be long-term in duration and localised.

11.14.166. With regard to these operational phase impacts associated with redistributed traffic emissions, I again note the many conservative assumptions built into the assessment, such as the use of 2019 background pollutant concentrations to represent 2035 (i.e. background air pollutants are likely be lower by the opening year than in 2019 due to the need to comply with the Clean Air Strategy for Ireland and the Ambient Air Quality Directive) and the use of older fleet projections in the modelling, which do not take account of the larger proportion of electric vehicles that is likely to be in place by the opening year.

11.14.167. It can be seen from the tables in Appendix A16.3 that the proposed development, considered alone (i.e. DS-DM) has a generally negligible impact on annual mean concentrations of the key pollutants. The issues identified in the documentation submitted at the oral hearing are ultimately demonstrative of the need to address baseline air quality in the Dublin area to meet the forthcoming requirements of the Ambient Air Quality Directive and commitments made in the Clean Air Strategy.

11.14.168. The proposed development will encourage a substantial modal shift from road-based private car travel to railway-based public transport and due to this and the conservative nature of the assessment undertaken, I do not consider that the small number of localised adverse moderate impacts in the operational phase to be reason for refusing to approve the railway order.

11.14.169. ***Ventilation Shafts***

11.14.170. A number of submissions raised concerns regarding the ventilation shafts and the potential for harmful emissions from these during both normal operation and in a fire event in a tunnel or underground station.

11.14.171. Hampstead Residents CLG, in their submission (S111) and oral hearing submission (OH61) raised the issue of warm air extracted from ventilation grilles associated with the Albert College Park Intervention Shaft causing visible plumes when it meets the cold air outside. The applicant provided a written response to this submission (Ref. OH148) in which they stated that the ventilation systems at this

location will only be used in the event of an emergency or service incident, with no air movement during normal operation that could create plumes. In what are stated to be rare events of overheating in the tunnel, the applicant stated that it would be necessary to partially activate one of the three Albert College Shaft fans with such an event only lasting a few minutes. I am satisfied that no significant air quality impacts, are likely to arise from the operation of the ventilation systems, both generally, and the specific ventilation fans at Albert College Park. Given their infrequent use during normal operation, no significant issues with regard to visible plumes are likely to arise.

11.14.172. A number of written and oral submissions, such as that made by Hampstead Residents CLG in their second oral hearing submission (Ref. OH219) expressed concerns regarding air quality impacts in fire scenarios.

11.14.173. In the event of a fire, smoke would be extracted via certain ventilation shafts along the route. With appropriate fire management plans and modern safety protocols, major fire events are clearly highly unlikely to occur, with smoke ventilation consequently being unlikely to be required. I refer the Board to the oral hearing submission made on behalf of the applicant by Sandeep Upadhyia on 19th February 2024, which provides a detailed overview of the fire safety and emergency strategies for MetroLink (Ref. OH38). In accordance with European standards, all rolling stock will be low combustibility, as will all materials used for internal finishes in stations. Mr Upadhyia, in responding to the abovementioned Hampstead Residents CLG submission of 12th March 2024, noted the low probability of fire, the multiple layers of mitigation, the provision of water mist systems and in relation to the Albert College Intervention Shaft, particularly, he noted that it is a mid-station shaft, and as such would not generally get used for exhaust purposes. The reason for this is that trains are required to have minimum 4 minutes running capability in the event of an onboard fire, which enables them to reach the next station.

11.14.174. The consenting of the MetroLink from a fire safety and emergency management perspective is a matter for other consenting authorities and not the Board. In terms of assessing air quality impacts for the purposes of this Railway Order application, I am satisfied that significant negative impacts as a result of fire events are not likely to occur.

11.14.175. ***Electrical Power Generation Emissions***

11.14.176. With regard to potential indirect effects associated with the electricity generation required to operate the metro, I note the additional commitment made at the oral hearing to enter into a CPPA to use renewable energy for 100% of operational power (an increase from the 80% figure in the EIAR). I also note that the proposed development includes solar PV arrays, such as on the roof of the Dardistown Depot buildings, to generate a small percentage of the required energy on-site. I am satisfied, therefore, that no significant indirect impacts on air quality due to emissions associated with electrical power generation are likely to arise.

11.14.177. ***Other Operational Phase Emissions***

11.14.178. In terms of other operational phase air quality impacts, I note the proposed use of large boilers and space heaters in the Dardistown Depot and the occasional use of diesel powered rail maintenance vehicles. I concur with the EIAR that these not likely to result in significant impacts on air quality.

11.14.179. Cumulative Impacts

11.14.180. In relation to cumulative impacts, I concur with the applicant's assessment that cumulative impacts on air quality may arise during the construction phase should construction coincide with certain medium to large-scale developments in the study area. Ultimately however, with the implementation of the proposed mitigation measures, which generally comprise good practice construction practices, and the implementation of similar measures on other construction sites, no significant cumulative residual impacts are likely to arise.

11.14.181. **Conclusion on Air Quality**

11.14.182. I have considered all of the written and oral submissions made in relation to air quality and the relevant contents of the file including the EIAR and relevant updates provided to the oral hearing.

11.14.183. While there will be adverse impacts on individual receptors during the construction phase due to traffic related emissions, these will be temporary in nature and are likely to be over-estimated, due to the conservative nature of the assessment undertaken. These adverse impacts are not capable of being fully mitigated within the confines of the proposed development, since they are primarily

due to the baseline air quality in certain areas being already close to or in excess of WHO guidelines. Traffic redistribution will also result in positive temporary impacts on air quality for certain receptors during the construction phase. I am satisfied that the potential for all other significant adverse construction phase impacts on air quality, such as dust, aspergillus and asbestos can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

11.14.184. In the operational phase, there will again be moderate adverse impacts on individual receptors due to traffic related emissions, which again are not capable of being fully mitigated within the confines of the proposed development, since they are primarily due to the baseline air quality in certain areas being close to or in excess of WHO guidelines, reflecting the wider necessity for society-wide action to improve air quality. There will also be positive impacts on individual receptors due to traffic redistribution. Noting the conservative basis of the operational phase assessment, and the purpose of the proposed development to provide a zero emission alternative to car travel, I consider that the operational phase impacts are not, therefore, unacceptable and would not warrant refusal of the Railway Order. In relation to other potential operational phase impacts on air quality, I am satisfied that significant adverse impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

11.14.185. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on air quality that would warrant refusal of the Railway Order.

11.15. Land, Soil, Water, Air and Climate – Climate

11.15.1. Introduction

11.15.2. Climate is addressed in Chapter 17 of the EIAR.

11.15.3. Methodology

11.15.4. The climate impact assessment methodology is based on guidance contained in the UK Highway Agency's 'Design Manuals for Roads and Bridges (DMRB) - LA 114 Climate' which advises that the assessment of a proposed road scheme should describe the likely significant effects on the environment resulting from both the impact of a project on climate arising from Greenhouse Gas (GHG) emissions; and the vulnerability of a project to climate change (climate adaptation). While the proposed development is not a road scheme, the EIAR states that this guidance has been utilised for other recent Irish major infrastructure projects such as BusConnects and DART+ West.

11.15.5. The stated methodology for the climate impact assessment included:

- Review of baseline GHG emissions.
- Review of guidelines to define the significance criteria.
- Calculations and impact assessments relating to the likely construction phase climatic impacts of the project.
- Calculations to assess the potential climatic impacts associated with operational phase electrical power requirements, including maintenance.
- Assessment of the design adaptation and vulnerability of the project to climate change.
- Schedule of mitigation measures required to reduce identified potential climatic impacts, where necessary.
- Comparison of predicted residual impact against Ireland's non-ETS 2030 target of 33,381.3Kt CO₂eq⁶⁰ and the 2030 transport sectoral carbon budget.

⁶⁰ As set out in Commission Implementing Decision (EU) 2020/2126 of 16 December 2020 on setting out the annual emission allocations of the Member States for the period from 2021 to 2030 pursuant to Regulation (EU) 2018/842 of the European Parliament and of the Council.

11.15.6. With regard to assessing the significance of potential impacts, the EIAR notes that the abovementioned LA 114 Climate recommends that the assessment of projects as Significant should only occur “where increases in GHG emissions will have a material impact on the ability of Government to meet its carbon reduction targets”. The EIAR also notes Institute of Environmental Management and Assessment (IEMA) guidance on this matter which states, inter alia, that when evaluating significance, all new GHG emissions contribute to a negative environmental impact, however some projects will replace existing development or baseline activity that has a higher GHG profile. Therefore, the significance of a project’s emissions should be based on its net impact over its lifetime. The impact significance criteria both in terms of GHG emissions and the vulnerability of the proposed project to climate change are set out in Section 17.3.5 of the EIAR.

11.15.7. **Baseline**

11.15.8. With regard to existing baseline GHG emissions, the EIAR notes that EPA data published in 2022 predicts that Ireland exceeded (without the use of flexibilities) its 2021 annual limit set under the EU’s Effort Sharing Decision (EU 2018/842) by 2.71 Mt CO₂eq, with transport having the second highest proportion of emissions (20.3%). The dominant source of transport GHG emissions was road transportation (95.3%), compared to 1.1% for railways. Total overall national emissions in 2021 were estimated to be 59.88 Mt CO₂eq.

11.15.9. For the 2035 Opening Year, Ireland’s total projected GHG emissions, with additional measures in place, are 49,7542Kt CO₂eq with transport emissions accounting for 7,818Kt CO₂eq (16% of total emissions). The 2040 figures are 51,071Kt CO₂eq and 7,059Kt CO₂eq (14% of the total), respectively. No data is available post-2040 and thus the EIAR states that a comparison with the design year of 2050 is not directly possible.

11.15.10. With regard to the vulnerability of the proposed project to climate change, the EIAR notes the evolving baseline climate, with increases in rainfall, increases in frequency and intensity of storms, increases in temperature and reductions in frost and ice days.

11.15.11. **Potential Impacts**

11.15.12. **Do-Nothing Scenario**

11.15.13. In the 'Do-Nothing' scenario, the GHG emissions would remain largely unchanged and the climatic impact would be adverse as the project would not provide a sustainable public transport method reducing the reliance on private transport and assisting the transition to climate neutrality. The vulnerability of the existing environment to climate change would remain largely unchanged from what it is currently.

11.15.14. Construction Phase

11.15.15. In the construction phase, potential climatic impacts will be associated with works such as site clearance, piling, tunnel boring, earthworks and station works, which all have the potential to generate GHG emissions.

11.15.16. Utilising the TII Carbon Tool, the EIAR anticipates that the project will result in total construction phase GHG emissions of 1,017Kt CO₂eq over an 9.25-year period, which is equivalent to an annualised total of 0.32% of Ireland's non-ETS 2030 target. Over the predicted 60-year lifespan⁶¹ the annualised emissions due to the initial construction and ongoing maintenance of the project will reach at most 0.044% of Ireland's non-ETS 2030 emissions target.

11.15.17. In addition to the direct impacts from the construction works, the potential for GHG impacts from the redistribution of traffic and construction related traffic is identified. Modelling of the worst-case construction year was undertaken using the NTA Environmental Appraisal Module indicates an overall increase of 14.37Kt CO₂eq annually due to the construction phase traffic, equivalent to a 0.36% increase in CO₂eq relative to the Do Minimum scenario. The EIAR notes that the carbon budget for the transport sector in 2030, two years after the worst-case construction peak, is 6,000Kt CO₂eq and that the increase therefore equates to 0.2% of the 2030 transport sector carbon budget.

11.15.18. An assessment of the impact of climate change on the proposed project was undertaken, particularly with regard to flood risk, increased temperature, snow/ice, geotechnical impacts and storms. No potential significant impacts were identified.

11.15.19. The sum of the total construction phase transport related emissions and embodied carbon, including future maintenance, is stated to be 1,149Kt CO₂eq,

⁶¹ Note: the 60-year lifespan was subsequently corrected to 80 years at the oral hearing. See below.

equating to annualised emissions over the predicted 60-year lifespan of at most 0.049% of Ireland's non-ETS 2030 emissions target or 0.27% of the 2030 transport sector carbon budget. The EIAR considers these to be conservative figures, due to some double counting of traffic emissions and use of the worst-case construction traffic movement period over the full 9.25-year period.

11.15.20. The EIAR states that the capital carbon is **significant**, and that mitigation will be required in order to minimise the contribution of the embodied carbon due to construction materials and to offset construction phase traffic.

11.15.21. Operational Phase

11.15.22. Maintenance during the operational phase is estimated to give rise to GHG emissions of 25.7Kt CO₂eq over the predicted 60-year lifespan. This is stated to be 0.001% of Ireland's non-ETS 2030 emissions target or 0.006% of the 2030 transport sector carbon budget. The EIAR states that mitigation will be required to minimise maintenance-related embodied carbon.

11.15.23. Two operational phase traffic impact scenarios are considered in the EIAR:

- **Scenario A:** The 'Do Committed Minimum' scenario which includes additional transport schemes that are under construction or committed⁶² to be implemented post the base-year of the NTA's Eastern Regional Model.
- **Scenario B:** The 'Likely Future' scenario which considers the enhanced transport network scenario proposed under the NDP and the NTA's Transport Strategy for the GDA and the implications for usage of MetroLink.

11.15.24. For Scenario A in the 2035 Opening Year, the proposed development results in an overall decrease of 12.8Kt CO₂eq compared to Do Minimum GHG emissions, equivalent to a 0.298% reduction. There is no set carbon budget for the transport sector for 2035 currently but noting that the 2030 carbon budget for the sector is 6,000Kt CO₂eq, the proposed development equates to a reduction of 0.2% of the carbon budget. In the 2050 Design Year, the proposed development results in an overall decrease of 13.83Kt CO₂eq compared to Do Minimum GHG emissions,

⁶² i.e. schemes that have planning permission and also have a funding commitment.

equivalent to a 0.77% reduction. The EIAR considers the predicted impact to climate for Scenario A, prior to mitigation, to be **long-term, positive, and significant**.

11.15.25. For Scenario B in the 2035 Opening Year, the proposed development results in an overall decrease of 12.1Kt CO₂eq compared to Do Minimum GHG emissions, equivalent to a 0.281% reduction. This would again equate to a reduction of c. 0.2% of the transport sector carbon budget. In the 2050 Design Year, the proposed development results in an overall decrease of 2.17Kt CO₂eq compared to Do Minimum GHG emissions, equivalent to a 0.281% reduction. The EIAR considers the predicted impact to climate for Scenario B, prior to mitigation, to be **long-term, positive, and significant**.

11.15.26. The electrical power required to operate the MetroLink system is estimated to be 94.6GWh in the Opening Year, increasing to 116GWh by 2050. The EIAR contends that, as the power demand increases, it will be offset by decreases in the carbon intensity of the grid as fossil fuels are replaced with renewables. In this regard the EIAR notes the aim that the national grid will be net carbon zero by 2050, in line with climate action legislation.

11.15.27. Equating MetroLink electricity consumption to carbon emissions, the EIAR notes that the ESB's projected carbon intensity figure for electricity generation for 2030 is 66gCO₂/kWh and is projected to reach 0gCO₂/kWh by 2036.

11.15.28. In the Opening Year, therefore, it is predicted that emissions from MetroLink power consumption will be 28.0Kt CO₂ annually or 0.35% of the total predicted 2030 Emission Ceiling for Transport Sector, based on the 2020 carbon intensity. Using the ESB's projected 2030 carbon intensity, this reduces to 6.24Kt CO₂ annually, equating to 0.1% of the 2030 Emission Ceiling for Transport Sector. On a per passenger km basis, using the 2030 carbon intensity figures, this would be 0.000038g CO₂ per passenger km, which the EIAR compares to the average electric car emission rate in 2021 of 8.07g CO₂ per km based on single occupancy.

11.15.29. As current projections are for the energy supply to reach 0g CO₂/kWh by 2036, the emissions associated with operational power by 2050 are projected to be 0 Kt CO₂.

11.15.30. An assessment of the embodied carbon associated with the manufacture of the rolling stock is also contained in the EIAR, with reference to calculations

undertaken for a comparable Sydney Metro project which had upstream and core emissions of 0.34g CO₂eq per passenger km. The EIAR states that the project aims to further reduce the rolling stock embodied carbon with future improvements in technology, energy efficiency and sustainable practices.

- 11.15.31. An assessment of the impact of climate change on the proposed project during the operational phase was also undertaken and considered flood risk, increased temperature, snow/ice, geotechnical impacts and storms. No potential significant impacts were identified.
- 11.15.32. In summary, the total Opening Year Operational Phase emissions due to transport related emissions, operational power demands and land use change is - 6.64Kt CO₂eq for Scenario A and -5.88Kt CO₂eq for Scenario B, i.e. a net reduction in emissions. Over the predicted 60-year lifespan the annualised emissions due to the project's ongoing operation will reduce CO₂eq emissions between 0.11% and 0.10% of the 2030 transport carbon budget.
- 11.15.33. The sum of the unmitigated total Opening Year Operational Phase and annualised Construction Phase emissions is 9.96Kt CO₂eq for Scenario A and 10.72Kt CO₂eq for Scenario B. Over the predicted 60-year lifespan the annualised emissions due to the project will reach at most 0.03% of Ireland's non-ETS 2030 emissions target or 0.18% of the 2030 transport carbon budget.
- 11.15.34. The EIAR states that while the capital carbon is **significant**, the project's ability to transport people will be **significant** in the operational phase. It notes that mitigation is required to minimise the contribution of the embodied carbon from the construction of the project and therefore the overall significance rating.
- 11.15.35. **Mitigation Measures**
- 11.15.36. The proposed mitigation measures are set out in Section 17.6 of the EIAR.
- 11.15.37. **Construction Phase**
- 11.15.38. Monitoring and reporting of embodied carbon is proposed, with the aim of seeking further ways to minimise climate impacts, including contractual obligations to ensure compliance with the most recent CAP and sectoral targets and GHG monitoring commitments in the outline CEMP to include embodied carbon, water usage, power and fuel usage and waste generation. The aim to produce 10% of

electricity on-site through renewable sources will also be monitored. It is stated that further mitigation will be put in place where monitoring shows the project is not meeting its targets.

11.15.39. Proposed mitigation measures to minimise emissions from construction vehicles and generators etc. include:

- Prevent idling of vehicles.
- Monitoring of traffic to ensure use of designated haul routes.
- All plant and machinery will be maintained and serviced regularly.
- Efficient scheduling of deliveries to minimise emissions.
- Construction vehicles should conform to the latest EU emissions standards and where reasonably practicable, their emissions should meet upcoming standards prior to the legal requirement date for the new standard.
- Implementation of Scheme Traffic Management Plan, Construction Traffic Management Plan and Mobility Management Plan to reduce traffic impacts on local roads and resultant traffic congestion and increased emissions and to support sustainable travel for staff and minimise construction impacts on pedestrians, cyclists and bus services.

11.15.40. Proposed measures to mitigate embodied carbon include:

- Whole-life Carbon Management Plan to inform the detailed design, build and operation.
- Deliver a reduction in capital and embodied carbon against baseline during detailed design.
- Measures to manage construction and operational surface water and stormwater runoff.
- Update Climate Change Risk Assessments for all assets and implement measures to mitigate identified impacts.

- Construction and Demolition Waste Management Plan to minimise waste sent to landfill. An overall recovery rate of 95% for C&D wastes (excluding soils and stones) is predicted⁶³.
- Lifecycle assessments for major asset components and implementation of recommendations to influence procurement of low carbon / sustainable materials and equipment.
- Procure materials for major asset components that have verified Environmental Product Declarations.
- Specify use of low carbon materials with a minimum of 20% secondary and recycled content and replacement, where feasible, of concrete containing ordinary Portland cement with concrete containing ground granulated blast furnace slag.
- Reduction in mains water use through rainwater harvesting, water re-use and efficiency systems and devices.
- Re-use and local sourcing of materials where possible.
- Require high recycling rates with an aspiration to achieve zero waste directly to landfill and audits prior to demolition/excavation to review for material that can be reused on site.
- Collection and re-use of rainwater and pumped water from excavations on site, providing at least 25% of the water required during construction phase.
- Diversion of waste materials from landfill / incineration to re-use onsite or offsite or recycling of material.
- Consideration of portable solar panels with battery packs, and (potentially) wind generators as alternatives to diesel power, where generators are required.

11.15.41. Proposed measures to mitigate against climate change vulnerability include those for managing flood risk and extreme weather events, as incorporated in the Outline CEMP, and include:

⁶³ Note: The EIAR references the Article 27 notification to the EPA. Please refer to Sections 9.19 and 11.19 for the updated position on spoil and waste as presented at the oral hearing.

- Consideration of extreme weather events with utilisation of meteorological forecast data to inform program management, environmental control, and impact mitigation measures. A Severe Weather Management Plan will be considered in order to ensure mechanisms are in place should this impact arise.
- The Electricity & Gas Networks Sector Climate Change Adaptation Plan prepared under the National Adaptation Framework (NAF) considers future climate change impacts on energy infrastructure and aims to reduce vulnerability by building resilience in the energy sector. Resilience built in the energy sector will assist with ensuring the availability of a stable electrical supply for the MetroLink.
- A Water Management Plan, Sediment Erosion and Pollution Control Plan, Groundwater Monitoring Plan and Construction Flood Protection Plan.
- Waterproofing of excavations with watertight retaining walls (diaphragm walls) to prevent water inflow into the station and the risk of settlement; flood protection barriers around sites with deep excavation; use of robust systems such as attenuation barriers around shaft and tunnel entrance; construction flood protection will form part of the Outline CEMP.

11.15.42. Operational Phase

- Maintenance phase GHG emissions will primarily consist of replacement of bitumen, cables, fence posts and lighting columns containing material due to their shorter lifespan as well as other consumables that require replacement such as steel tyres, windows, seats, bogie parts. These materials will be sourced based on the IEMA GHG Management Hierarchy principles and old parts will be reused or recycled, in as far as practicable.
- Implementation of a whole-life Carbon Management Plan.
- Achieve Net Zero for operational energy by the design year with a stretch aspiration to be close (>80%) to Net Zero at start of operation through energy efficiency, innovation, green power purchases and offsetting residual emissions.

- Maintain measures to support project's resilience for a 1 in 1000-year flood event +40% for climate change.
- Regular maintenance to ensure drainage systems are not blocked by debris during heavy storms.
- Reduction in mains water use through the use of rainwater harvesting, water re-use and efficiency systems and devices.
- Wastewater from the vehicle washing plant will be treated and recycled in-situ to reduce water usage.
- Require operations to achieve high recycling rates with an aspiration to achieve zero waste directly to landfill.
- Up to 10% of the power requirement will come from on-site solar PV power generation.
- Transition to zero carbon emission vehicles and increased biofuel substitution will reduce the impact of any demand created by the P&R Facility that creates additional journeys.
- Reduce energy requirements through recycling of kinetic energy when braking into electricity for return to the traction power line (potentially 0.119MW or 0.6% of the energy needed to run the stations).
- Monitoring and reporting of operational carbon to seek further ways to minimise climate impacts and to ensure effectiveness of mitigation measures.

11.15.43. Proposed measures to mitigate against climate change vulnerability include designed-in measures such as:

- Design for surface water management and flood risk takes account of climate change.
- Electricity & Gas Networks Sector Climate Change Adaptation Plan Prepared under the NAF considers future climate change impacts on energy infrastructure and aims to reduce vulnerability by building resilience in the energy sector, in turn providing indirect resilience to the project's power supply.

- Transport Climate Change Sectoral Adaptation prepared under the NAF aims to ensure that adaptation measures will enable continued services and maintained infrastructure from the impacts of future climate change for the transport sector.
- Risk due to changing temperatures during operation mitigated through the use of a HVAC system to ensure comfort and fresh air and prevent equipment over-heating.
- Preparation of a Major Incident Management and Severe Weather Team Plan to ensure critical MetroLink infrastructure is protected from the impacts of severe weather.
- Overhead line equipment will be designed to take into account a range of minimum and maximum temperatures for current and future climate conditions. Overhead wires will be automatically tensioned to adjust for additional loading from ice, snow, or wind.
- Monitoring of climate adaptation and resilience measures to ensure effectiveness. If not effective, then they should be reviewed and updated.

11.15.44. **Residual Impacts**

11.15.45. **Construction Phase**

11.15.46. The residual construction phase embodied carbon within the construction and maintenance materials and regional traffic impacts are set out in Table 17.27 of the EIAR. Total Construction Phase GHG emissions, post-mitigation, are estimated to be 1,149Kt CO₂eq over a 9.25-year period, equivalent to an annualised total of 0.37% of Ireland's non-ETS 2030 emissions target or 2.0% of the 2030 transport sector carbon budget. Applied over the predicted 60-year lifespan⁶⁴ of the project, the annualised emissions will be at most 0.049% of Ireland's non-ETS 2030 emissions target, or 0.27% of the 2030 transport sector carbon budget. The EIAR again notes that IEMA guidance on impact significance criteria states that it must be taken from the project as a whole over its lifecycle rather than individual phases.

11.15.47. **Operational Phase**

⁶⁴ Again, this was subsequently corrected to 80 years at the oral hearing. See below.

11.15.48. The residual total Opening Year operational phase transport related emissions and operational power demands are set out in Table 17.28 of the EIAR. The total for Scenario A is -12.26Kt CO₂eq, which is equivalent to an emissions reduction of 0.037% of Ireland's non-ETS 2030 emissions target or a reduction of 0.135% in the 2030 transport sector carbon budget. For Scenario B, the total is -11.49Kt CO₂eq, which is equivalent to an emissions reduction of 0.034% of Ireland's non-ETS 2030 emissions target or a reduction of 0.126% in the 2030 transport sector carbon budget. In both Scenarios the savings in GHG emissions are a result of modal shift and the reduction occurs while providing a significant increase (more than 50,000,000) in public transport journeys annually. Further reduction in emissions will arise as a result of the mitigation measure to purchase 90% of operational power for traction and stations from a certified renewable energy supplier.

11.15.49. Taking the annualised construction emissions and the operational emissions together, the sum of the Opening Year emissions for Scenario A is 4.27Kt CO₂eq, which is at most 0.013% of Ireland's non-ETS 2030 emissions target or 0.071% of the 2030 transport sector carbon budget. In the 2050 Design Year, these figures would fall to 2.7Kt CO₂eq, 0.008% and 0.045% respectively. For Scenario B, the sum of the Opening Year emissions is 5.03Kt CO₂eq, which is at most 0.015% of Ireland's non-ETS 2030 emissions target or 0.084% of the 2030 transport sector carbon budget. In the 2050 Design Year, these figures would increase to 14.35Kt CO₂eq, 0.043% and 0.239% respectively.

11.15.50. The stated reason for the difference between Scenarios A and B is that, in Scenario B, other planned public transport projects such as BusConnects and DART+ are included within the 'Do Minimum' Scenario with the result that roads are less congested due to increased public transport capacity meaning that the public are more likely to travel in their private vehicles as there may be a lower journey time benefit of shifting to public transport.

11.15.51. Based on the IEMA guidance, the EIAR considers this residual climate impact for Scenario A, due to the combined construction and operational phases, to be **long-term, Negligible, and Not Significant**. For Scenario B, the likely effect is stated to be, **long-term, Minor Adverse and Not Significant** due to the high embodied carbon associated with the construction phase.

- 11.15.52. If the construction-related carbon emissions are considered over the construction years, rather than spread across the lifetime of the project, the EIAR contends that both Scenario A and Scenario B will be **Significant and beneficial** in the long term, as the project causes GHG emissions to be avoided and assists in Ireland achieving net zero by 2050.
- 11.15.53. Having regard to the EPA's EIA guidance which uses different significance criteria to the IEMA guidance, the EIAR states that there would be a **long-term, Significant and adverse** likely effect to climate during the construction phase and a **long-term, beneficial and Significant** likely effect to climate during the operational stage.
- 11.15.54. The EIAR concludes by stating that the project will support the then current CAP, the Climate Act and other relevant policy by enabling sustainable mobility and delivering a sustainable transport system.
- 11.15.55. **Cumulative Impacts**
- 11.15.56. Potential cumulative climate impacts are addressed in Section 30.4.9 of the EIAR. It states that the major transport projects were identified as those with the potential for cumulative significant impacts on greenhouse gas emissions. A total of 21 No. of these transport projects, which were screened in, are listed in Table 30.9 of the EIAR.
- 11.15.57. No likely significant cumulative impacts with other developments were identified during the construction phase. For the operational phase, 9 No. other public/active transport developments were screened in due to the potential for improvements in connected public transport infrastructure which could reduce private car dependency and lead to a reduction in greenhouse gas emissions. 11 No. other roads developments were also screened in for the potential for improvements in connected public transport infrastructure for the same reasons. It is stated that the operational cumulative impact has the potential to be beneficial with respect to Ireland's ability to achieve future GHG emission targets.
- 11.15.58. No specific mitigation measures over and above those already proposed for the proposed development are identified for cumulative impacts.
- 11.15.59. **Oral Hearing**

11.15.60. Errata

11.15.61. The Schedule of Errata submitted at the oral hearing (see final version Ref. OH374) identified a number of errors in the EIAR climate assessment. Of particular note is that the references to an operational lifespan of 60 years should read 80 years, and that the emissions data has been modelled on this basis. An error was also made with regard to soil sent to landfill. It is stated this error was conservative and will not affect significance.

11.15.62. Updates

11.15.63. Dr Avril Challoner (AWN Consulting) made a detailed submission at the oral hearing on 19th February 2024 (Ref. OH30) on behalf of the applicant in relation to updates to the air quality and climate assessments. She contended that the proposed development continued to be consistent with and supported by the then-current CAP 2023, the then-Draft CAP 2024, the Government's Long-term Strategy on Greenhouse Gas Emissions Reductions 2023 and the relevant Local Authority CAP's.

11.15.64. Dr Challoner also outlined a number of proposed additional climate related mitigation measures, which are in addition to those set out in the EIAR:

- Corporate Power Purchase Agreement (CPPA) to use renewable electricity for 100% of construction stage power, including TBM power.
- CPPA to use renewable electricity for 100% of operational power (i.e. an increase from the 90% committed to in the EIAR).
- Use, where practicable, of low carbon concrete with an embodied carbon equivalent to a 50% GGBS replacement.
- Use of Hydrotreated Vegetable Oil (HVO) instead of fossil fuels in construction plant and equipment.
- Procurement only from suppliers that meet the CAP requirements for 10% reduction in embodied carbon by 2025.

11.15.65. Dr Challoner stated that these additional mitigation measures represent a saving of up to 51.7% compared the total figure of 1,017kt CO₂ in the EIAR for

embodied carbon. In addition to the use of HVO, she stated that TII will mandate the use of electric construction plant and equipment, where feasible.

11.15.66. Dr Challoner's submission also outlined the implications of TII's updated Carbon Tool for the climate assessment. The updated assessment, which is contained in Appendix 1 of her submission, indicates a change of less than 1% in the overall emissions due to the use of the updated Carbon Tool.

11.15.67. Dr Challoner concluded that the MetroLink project satisfies the criteria set out in section 15 of the Climate Action and Low Carbon Development Act 2015, as amended.

11.15.68. Cumulative Impact Assessment

11.15.69. An updated cumulative impacts addendum was submitted to the oral hearing on 28th February 2024 (Ref. OH98). The Addendum comprises a more up-to-date review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application.

11.15.70. Section 30.2.5 of the Addendum addresses Climate cumulative impacts and notes that TII Guidance document PE-ENV-01104 - Climate Guidance for National Roads, Light Rail, and Rural Cycleways (Offline & Greenways)⁶⁵ states that:

"...the cumulative impact assessment in EIAR requires that the impact from a project is assessed cumulatively with other projects being brought forward in a defined geographical and temporal boundary. However, as the identified receptor for GHG Assessment is the global climate and impacts on the receptor from a project are not geographically constrained, the normal approach for cumulative assessment in EIA is not considered applicable."

"As GHG emissions are inherently cumulative, the cumulative impact for this assessment must be demonstrated via the project's alignment to any sectoral carbon budgets and Ireland's 2050 net zero target."

11.15.71. The Addendum contends that the assessment contained within Dr Challoner's abovementioned submission at the oral hearing (Ref. OH30) demonstrates that the

⁶⁵ Published subsequent to lodgement of application.

MetroLink project aligns with the transport sectoral carbon budget and Ireland's 2050 net zero target.

11.15.72. **Post-Oral Hearing**

11.15.73. A further cumulative impact assessment update was submitted on 31st January 2025 as part of the applicant's response to the Wild Ireland Defence CLG oral hearing submission.

11.15.74. In relation to climate, and again with reference to recent TII climate guidance, the applicant's position remains unchanged from that outlined in document submitted at the oral hearing – i.e. that the proposed development aligns with the sectoral carbon budget in respect of transport and Ireland's 2050 net zero target.

11.15.75. An EIAR Addendum was also submitted by the applicant as part of their abovementioned response, addressing impacts associated with the proposed PFAS management strategy at Dublin Airport. Additional GHG emissions calculations for the worst-case scenario where 100% of material excavated would need to be exported to Norway and Belgium for disposal and treatment, respectively, results in c. 1,813 tonnes CO₂eq associated with Irish HGV transport/handling (reduced by 678 tonnes CO₂eq with the proposed use of HVO fuels) and between 3,280 – 3,620 tonnes CO₂eq associated with international shipping and HGV transport. The overall GHG emissions associated with PFAS management are stated to result in a less than 1% increase in MetroLink emissions and no change of the predicted significance of impact.

11.15.76. **Assessment**

11.15.77. **Construction Phase**

11.15.78. A number of submissions raised matters relating to climate impacts during the construction phase. Ciaran Cuffe (MEP at the time) in his written submission (Ref. S44), stated that low carbon concrete should be specified for the development, while a number of submissions including those by Justin Marden (S156) and Thomas Herlihy (S298) raised the embodied carbon of the construction phase, both in terms of the structures and the earth moving, plant and vehicular traffic etc., while others such as Kathleen Shields (Ref. S160) raised the issue of the carbon cost of demolishing the College Gate apartments and Markievicz Leisure Centre. Duncan

Stewart made a detailed submission (Ref. OH354) at the oral hearing on 27th March 2024, on behalf of the Association of Combined Residents Associations (ACRA), in relation to the embodied carbon emissions from the construction of the proposed development and CO₂ emissions from electrical use during its operation.

11.15.79. Given the nature of the proposed development, I consider that the greatest potential for significant adverse impacts on the climate arises during the construction phase and is associated with GHG emissions and embodied carbon (both in terms of demolition of existing buildings and construction of the MetroLink structures).

11.15.80. It is clear, and unavoidable, that the construction of a primarily sub-surface metro line and its associated station boxes and other infrastructure will require the use of a large amount of plant and machinery over a prolonged construction phase as well as the use of large quantities of concrete, steel and other materials that have an associated carbon cost. However, the proposed development is also a key sustainable transport project that is referenced in and supported by all relevant transport, planning and climate action policy (as detailed in Section 9.2) and is intended to assist in driving a modal shift from the private car to electrified high quality public transport and to assist the achievement of Ireland's climate objectives.

11.15.81. In considering climate impacts, I note both the IEMA guidance referenced in the EIAR and the European Commission's Technical guidance on the climate proofing of infrastructure in the period 2021-2027, which states that:

"Most projects will have an impact on GHG emissions, compared to the Baseline, through their construction, operation, and eventual decommissioning and through indirect activities that occur because of the project. This should be seen in the context of the project not as an isolated event but as a set of different and complementary interventions – in particular stemming from a plan. This might mean that a certain specific project does not have an individual net GHG reduction effect but is [an] integral part of an overall plan that reduces emissions".

11.15.82. Having considered the guidance on climate assessment, it is entirely appropriate in my opinion to 'amortise' the high initial carbon cost of the project over the long operational lifetime of the project, given the operational phase benefits of the project from a climate perspective. In this regard, the Boad will note that the

applicant corrected the lifespan from 60 years to 80 years at the oral hearing for the purposing of calculating annualised carbon emissions. Noting that underground metro systems in many cities such as London and Paris are in operation for well in excess of 100 years at this stage, I consider that the 80 year figure remains reasonably conservative. There is clearly a step-by-step pathway to be followed in the transition to a climate neutral economy and for this reason climate policy and legislation makes provision for sectoral carbon budgets – i.e. there is an acceptance that carbon emissions are part of, but not the whole story, with regard to achieving climate action objectives. The proposed development will have to comply with the transport sector carbon budget, but rather than an overly narrow focus on construction phase emissions and embodied carbon, the key issue is whether it is aligned with and supports the climate transition and the ultimate achievement of climate action objectives.

11.15.83. With regard to the proposed demolition of the Markievicz Leisure Centre, College Gate apartments and other residential and commercial buildings along the alignment, while the loss of what are mostly modern, good quality habitable buildings has a substantial carbon cost, it must be set against the positive climate benefits of a high capacity public transport corridor that is well integrated into the wider public transport network and which is likely to be transformative for more sustainable land uses along its alignment in the longer term. I note that the carbon cost associated with the demolition works has been considered in the carbon calculations undertaken by the applicant.

11.15.84. Duncan Stewart, in his oral hearing submission, noted the climate emergency and the much greater embodied carbon associated with an underground metro compared with DART style surface rail. He queried whether assessment of the carbon impacts had been undertaken, with his essential point being that the ‘massive’ financial and carbon cost of MetroLink would detract from alternative methods of meeting the need for improved public transport in Dublin. It appears that Mr Stewart may not have been aware of the climate chapter of the EIAR and the subsequent update submission made by Dr Challoner at the outset of the hearing. In response to his submission, the applicant outlined the carbon assessment undertaken. Ultimately, I consider that Mr Stewart’s approach is flawed in its focus on the ‘upfront’ carbon cost associated with construction, rather than considering the

lifecycle, climate policy and the wider consequences of the project for sustainable development. Points made by Mr Stewart with regard to the value for money of MetroLink versus an equivalent spend on alternative projects is not a matter within the remit of the Board.

- 11.15.85. A number of submissions raised the issue of atmospheric CO₂ removal by existing trees and the effect that their felling will have. In particular, the OPW raised this issue with regard to the loss of trees in St Stephen's Green. A substantial number of trees are to be felled along the route alignment, however I note that considerable replacement planting is proposed. The biodiversity impacts of this loss of trees are addressed elsewhere in this report, but I do not consider that the net loss of mature trees will have a significant impact on CO₂ levels in the study area.
- 11.15.86. With regard to the proposals for PFAS management at Dublin Airport, the applicant has provided a worst case assessment whereby all material arising in the Airport area would be exported for treatment/disposal and has quantified the GHG emissions associated with this, including both shipping and road transport. I concur with the applicant's conclusion that the additional potential GHG emissions associated with this element of the project (c. 1% of the overall emissions for the project) would not change the significance of the impacts on climate.
- 11.15.87. With regard to the use of low carbon concrete, I note that the applicant has made commitments regarding the use, where practicable, of low carbon concrete with an embodied carbon equivalent to a 50% GGBS⁶⁶ replacement. This commitment is included in the final SAEC submitted at the oral hearing (Ref. OH376). This is a substantial additional commitment which will meaningfully reduce embodied carbon given the quantities of concrete that will be required. I do not recommend that the Board impose additional requirements by way of condition regarding the type of concrete to be used, given the technical criteria that will need to be met for the long-term durability and structural integrity of the underground structures.
- 11.15.88. With regard to electrical power use, the applicant made additional commitments at the oral hearing to enter into Corporate Power Purchase Agreements (CPPA) to use electricity generated from renewables for 100% of both

⁶⁶ Ground Granulated Blast Furnace Slag.

construction stage and operational phase power. This includes the power required to operate the TBM, which will be substantial. A commitment was also made to utilise Hydrotreated Vegetable Oil instead of fossil fuels in construction plant and equipment. These are positive additional commitments, and I do not consider that they require specific conditions to be imposed, since they are included in the final SAEC. The applicant also stated that they will mandate the use of electric plant and equipment where feasible, although the carbon reductions associated with this measure are not incorporated into the total given the lack of certainty on feasibility at the current time. I note that this commitment is not included in the final SAEC, which I consider to be reasonable, given the lack of certainty on the availability and feasibility of such electric machinery at this time. In any event, I do not consider that this measure would be likely to materially change the significance rating for the climate impacts.

11.15.89. I note that the EIAR compares GHG emissions against those for Ireland set out in Implementing Decision (EU) 2020/2126 of 16th December 2020 on setting out the annual emission allocations of the Member States for the period from 2021 to 2030. However, this Implementing Decision has since been amended by Implementing Decisions 2023/1319 and 2024/1884, with the effect that the allocations for the years 2026 to 2030 are to be established on the basis of a linear trajectory starting on the average of the GHG emissions in 2021, 2022 and 2023 for each Member State, following a comprehensive review to be conducted in 2025 by the Commission and European Environment Agency. Until this comprehensive review is carried out, the annual emission allocations for each Member State for the years 2026 to 2030 remain undetermined.

11.15.90. Notwithstanding the fact that Ireland's emissions allocation for 2030 is currently undetermined, this does not change the fundamental downward ratcheting of allocations year-by-year in order to meet the commitments under the Paris Agreement.

11.15.91. Considering the construction phase alone, there would be a negative impact on climate, due to the high level of embodied carbon associated with the works. However, as I have addressed above, recent climate guidance identifies the need to instead consider lifecycle impacts on climate and the taking of a wider view on

whether the proposed development is consistent with climate action goals. This is addressed further below.

11.15.92. Operational Phase

11.15.93. Issues raised in the written and oral submissions with regard to GHG emissions and climate are generally related to the embodied carbon and construction phase emissions, as addressed above, rather than operational phase emissions. Where operational phase traffic emissions were raised by observers, this was generally in the context of local air quality impacts, rather than wider climate impacts.

11.15.94. A number of the written submissions expressed support for the proposed development on climate grounds, particularly with regard to supporting a modal shift to sustainable transport and assisting the transition to a climate neutral economy. This included Fáilte Ireland (S92), who noted that the proposed development would help to decarbonise the transport sector and aid in climate action. Similar points were made by others, including James Wickham (S138) and Sadhbh O'Neill (S273). Fingal County Council, in their further submission (1FS24) stated that the project will support Fingal in becoming climate resilient, reducing private car use and enable a reduction in transport related carbon emissions in line with sustainable mobility. Other submissions, including a number of those from observers seeking that the metro be extended to south west Dublin or an alternative terminus location, noted the scale of carbon emissions from the transport sector currently, and the ability of public transport projects such as the metro to reduce this.

11.15.95. The proposed development will be fully electrically powered and I note the additional commitment made by the applicant at the oral hearing to enter into a CPPA to use renewable electricity for 100% of operational power, rather than the 90% committed to in the EIAR. A number of other additional commitments were made by the applicant, as outlined in Dr Challoner's submission to the oral hearing (Ref. OH30). These are summarised above and are reflected in the final SAEC (Ref. OH376) submitted at the oral hearing on 27th March 2024. The commitment to meet 10% of operational power needs from on-site renewable energy is also notable, and the large solar array proposed on the Dardistown Depot roofs likely to represent the majority of this generation capacity.

11.15.96. I also refer the Board to the applicant's written response to the submissions, which draws together a number of key statistics demonstrating the positive operational phase impacts of the proposed development from a climate perspective:

- It will provide over 1 billion carbon neutral, fully electrified, passenger trips by 2050, encouraging some 700,000 people within a 10-minute cycling distance from a station to undertake 20,000 cycling trips per day and 120,000 walking trips per day.
- It will save the equivalent of almost 3,000 lifetimes of time spent sitting in traffic congestion (based on the original 60 years of operation).
- It will create the opportunity for the diversion of 6.8 million private vehicle journeys per annum in the early years, growing to 12 million by 2045, with a total of c. 360 million car trips diverted by 2055.

11.15.97. The proposed development will have a positive impact on carbon emissions in the operational phase due to the modal shift and the electrified nature of the development. In considering significance, however, the high embodied carbon from the construction phase cannot be ignored and lifecycle analysis is therefore appropriate. This is considered in the section below.

11.15.98. A number of written/oral submissions contended that the proposed development would encourage air travel and associated CO₂ emissions. While the proposed development links Dublin Airport to the city centre, it will not act as a significant driver for airport passenger growth in my opinion, since passenger numbers at the airport are currently the subject of separate planning and aviation regulation controls and in the absence of any such regulatory controls I consider that passenger numbers are ultimately a factor of airport capacity (i.e. runway and terminal capacity) and wider social and economic factors etc. There is no basis to conclude that improved public transport access to the airport would significantly drive airport passenger numbers. It will, however, shift a large number of trips accessing the airport from road-based transport modes to a more sustainable near zero emission electrified transport mode.

11.15.99. GADRA, in their further submission (1FS25) refer to the 'Ballymun Decarbonising Zone', express their view that the MetroLink works at Ballymun align with the Zone objectives, and request that the construction and operation of the

proposed intervention shaft in Albert College Park adhere to the same environmental standards as the Ballymun site. The identification of Decarbonising Zones (DZs) in each local authority area is a requirement of the Climate Action Plan and Dublin City Council, in their Dublin City CAP 2024-2029 (DCCAP), identify two DZs in Ballymun and in Ringsend and Poolbeg. Albert College Park is not located within the Ballymun DZ, as mapped in the DCCAP, but as noted above the applicant has proposed a wide range of measures to reduce carbon emissions during both the construction and operational phases such as the use of renewable energy, replacement of diesel with HVO and electric plant and use of low carbon concrete, where practicable. I am satisfied that the proposed works at Albert College Park would be consistent with the DZ objectives.

11.15.100. With regard to the climate resilience of the proposed development and the potential for impacts associated with climate change on the operation of the proposed development, I consider that increased flood risk due to climate change is the most likely potential impact. I note that a detailed Flood Risk Assessment was undertaken by the applicant and is addressed elsewhere in this report. Having regard to the mitigation measures proposed and the incorporated design measures, I consider that the proposed development is sufficiently climate resilient, particularly when compared to alternative road-based transport modes which are far more susceptible to a range of climate impacts. I do not consider that there is a significant residual risk of climate change related impacts on the ongoing operation of the metro, compared to the more likely effects on road traffic which the metro will go some considerable way to displacing.

11.15.101. The proposed development is a high capacity, high frequency public transport project, which will integrate with other transport modes, such as DART, bus and Luas services and link the fast-growing town of Swords and Dublin Airport to the city centre. The project will support modal shift from private cars to electrified public transport and is also likely to act as a driver for more compact and more sustainable urban development in the vicinity of stations. I am satisfied that the operational phase, considered alone, would have a positive impact on climate.

11.15.102. Lifecycle Consideration of Impacts

11.15.103. In considering the significance of the residual climate impacts, the EIAR has regard to both EPA guidance and IEMA guidance. Given the nature of construction works required for large infrastructural projects, and the inherent high level of embodied carbon, I consider the IEMA's approach, which is based on lifecycle consideration with an annualised application of the embodied carbon, to be a more useful and clear-sighted way to approach the issue of climate impact. I note that the recent TII guidance on climate (PE-ENV-01104, as identified above) also utilises this approach.

11.15.104. In particular, I note that the IEMA guidance (also quoted in the TII climate guidance document) states that "the crux of significance regarding impact on climate is not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050".

11.15.105. The EIAR considers the residual climate impact due to the combined construction and operational phases, to be long-term, Minor Adverse and Not Significant in Scenario B (likely future scenario), which is due to the high embodied carbon associated with the construction phase.

11.15.106. The subsequently published TII climate guidance document defines a long-term, Minor Adverse and Not Significant impact as follows:

- The project's GHG impacts are mitigated through 'good practice' measures.
- The project has complied with existing and emerging policy requirements; and
- Fully in line to achieve Ireland's trajectory towards net zero.

11.15.107. Dr Challoner's submission at the oral hearing (Ref. OH30) provides updates to the predicted impacts, based on updated baseline information, the abovementioned TII guidance, a more conservative approach to waste, updates to TII's carbon model and other updates such as the NTA's GDA traffic model. This changes the emissions to a degree, depending on whether 'actual traffic flows' or 'demand traffic flows' are used, albeit that both show the proposed development resulting in a reduction in emissions when the additional commitments are added. However, the significance of the impacts remains unchanged.

11.15.108. On the basis of the additional commitments made, the 80 year life, and other matters, the updated assessment submitted by the applicant at the oral hearing now predicts an annualised carbon saving in Scenario B in the 2035 opening year of 5.27kt CO₂eq, or 0.088% of the 2030 transport carbon budget. This is based on the 'actual' traffic flows, using the updated NTA traffic model which was updated on foot of the adoption of GDATS.

11.15.109. Considering the 'demand' traffic flows scenario (i.e. considering the higher level of demand on the road network than it can facilitate with consequently higher emissions), a much larger saving of 177.84kt CO₂eq arises in Scenario B 2035 opening year, representing c. 3% of the 2030 transport carbon budget. The applicant contends that the use of an actual scenario in the EIAR was a conservative and worst case approach to identifying the beneficial impacts of the MetroLink project.

11.15.110. Having regard to the proposed mitigation measures and the substantial additional commitments made at the oral hearing which reduce embodied carbon by 51.7% compared to the EIAR figures, my consideration of climate policy contained in Section 9.2 and my conclusion that the proposed development is consistent with, and supportive of, Ireland's trajectory towards net zero, I would concur with the applicant's overall assessment of significance. That is to say, there will be no significant residual effects on climate as a result of the proposed development. This is a somewhat conservative conclusion, and I note that there is potential for greater beneficial impacts on climate in the longer term, as modal shift increasingly occurs.

11.15.111. Cumulative Impacts

11.15.112. With regard to cumulative impacts, I concur with the TII guidance referenced in the updated cumulative impact assessments submitted at and following the oral hearing. Unlike many of the other environmental factors, GHG emissions, being unconstrained gaseous emissions to the atmosphere, are globally cumulative by their nature and in terms of their impact on the climate. The important issue with regard to cumulative impact assessment, therefore, is whether the project is aligned with sectoral carbon budgets and national climate objectives (i.e. the net zero 2050 target). As outlined above and in Section 9.2, I consider that the applicant has adequately demonstrated that the project is consistent with, supported by and supportive of climate action policy and as a high capacity electrified public transport

project that will support a modal shift from private car to public transport, its construction can be readily accommodated within the sectoral carbon budget for the transport sector.

11.15.113. **Conclusion on Climate**

11.15.114. I have addressed the Board's duties under section 15 of the Climate Action and Low Carbon Development Act 2015, as amended ('the Climate Act') in Section 9.5 of the planning assessment section of this report. In that section, I conclude that a decision by the Board to approve the Railway Order would be consistent with its duties under the Climate Act and would assist the State in meeting its national climate objective.

11.15.115. In conclusion, I have considered all of the written and oral submissions made in relation to climate impacts and the relevant contents of the file, including the EIAR and relevant updates provided to the oral hearing. I am satisfied that the potential for significant adverse impacts on the climate can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on the climate.

11.16. Land, Soil, Water, Air and Climate – Airborne Noise and Vibration

11.16.1. Introduction

11.16.2. Airborne noise and vibration are addressed in Chapter 13 of the EIAR. The associated appendices A13.1 – A13.8 include supporting documentation, including baseline noise and vibration monitoring reports and construction and operational phase modelling results. Figures 13.1 – 13.4 identify monitoring locations, construction noise assessment locations and operational noise contours for day-time and night-time. Since airborne and groundborne noise are addressed in separate chapters of the EIAR, Table 13.4 of the EIAR identifies which chapter the various noise sources are assessed in.

11.16.3. Methodology

11.16.4. Construction Phase

11.16.5. The EIAR notes the **lack of Irish statutory standards for construction noise and vibration limit values**, and instead sets out a list of relevant Irish, British and European guidance on these matters (see Section 13.2.2 of EIAR). British Standard (BS) 5228 (2009 +A1 2014) Code of Practice for Noise and Vibration Control of Construction and Open Sites - Part 1: Noise and Part 2: Vibration are of particular relevance. It also notes the lack of Irish statutory standards for environmental noise in the operational phase and again sets out non-statutory guidance and international standards.

11.16.6. The study area for the construction phase noise and vibration assessment covers a considerable geographical area, given the scale of the project, extending to between 50m to 300m from construction works. Within this, the EIAR focuses on sensitive receptors (**Noise Sensitive Locations; NSLs**) within 100m of construction areas, which are most affected. Beyond 300m, the EIAR states that screening from existing buildings will reduce construction noise levels at NSLs to well below threshold values. Figure 13.2 of the EIAR consists of a number of sheets identifying the representative construction noise assessment locations along the alignment.

11.16.7. The study area for the operational phase assessment extends up to 100m from operational noise sources with the potential to impact NSLs, which include ventilation systems serving the underground stations/intervention shaft, above ground

substations, and changes in road traffic along the surrounding road network. For the overground sections of rail line, an extended study area of 300m is utilised.

11.16.8. The characterisation of the baseline noise and vibration environment utilised both a desk study of available data sources, such as EPA noise mapping, and measured noise and vibration surveys.

11.16.9. **Construction Compounds**

11.16.10. The EIAR notes that noise from the sites will be dynamic in nature and fluctuate at any one location over the full duration of the project. The assessment is stated to include construction noise levels for the key work stages that are representative of the likely worst-case scenarios, using expected plant types and numbers and site layout. The construction noise calculations undertaken as part of the assessment are stated to be used to identify the likely significant effects and to inform the requirement for noise mitigation and the approach for controlling and managing significant effects. The EIAR states that, should the project be approved, then prior to the commencement of any construction works, a detailed noise assessment for each work site will be undertaken based on the most up to date information for each.

11.16.11. The calculations for construction noise are stated to have been performed in accordance with to BS 5228-1, using the plant sound power level method, using SoftNoise, a proprietary noise calculation package. Input data to the noise model included OS mapping, compound layout plans, plant equipment list and numbers, operating on-time per period, site hoarding plans, plant sound power data and average daily HGV movements.

11.16.12. For each construction compound / work area, a **construction noise level (CNL)** has been calculated at each receiver location at each floor height. For buildings with multiple calculation points at varying floor heights, the highest CNLs has been extracted for the purpose of the impact assessment. All results are expressed as $L_{Aeq, T}$ and include a façade correction.

11.16.13. **Construction Traffic**

11.16.14. The assessment of potential noise impacts relating to HGV movements along the surrounding road network serving each of the construction compounds considers

the change in traffic noise level as a result of changes in traffic flow (volume and fleet mix). The worst case peak construction traffic scenario is assessed, including both MetroLink related construction traffic and traffic re-distribution along surrounding roads.

11.16.15. ***Construction Vibration***

11.16.16. Construction phase vibration is noted to be primarily related to drilling and blasting, mechanical excavation of rock, piling and diaphragm wall construction, which the EIAR addresses separately in the Groundborne Noise & Vibration chapter. Other potential vibration sources are stated to be significantly less, such as the intermittent use of hydraulic breakers or breaker mounted excavators to break through made ground or user of vibration during ground compaction activities.

11.16.17. Operational Phase

11.16.18. Operational phase potential noise sources and activities include aboveground rail, depot activities, ventilation plant, substations, public address (PA) systems, car parking and traffic noise at the Park & Ride Facility and changes to road traffic noise on the surrounding road network.

11.16.19. ***Aboveground Railway Noise***

11.16.20. Predictive noise calculations associated with above ground sections of the MetroLink rail line were conducted in accordance with the RMR (Dutch Housing, Spatial Planning and the Environment 2012) using SoftNoise acoustic modelling software, considering the likely train and track types and the propagation to receptor points, taking account of various factors. While it is proposed to operate on a long loop / short loop mode of service (whereby not all trains will run to Estuary during the off-peak period), the EIAR considers the worst case of one long loop and it also considers the proposed operational hours of 05:30 to 00:30 (i.e. not 24 hour service).

11.16.21. Receiver locations have been positioned at the closest NSLs to the overground sections of the proposed alignment which have the potential to experience perceptible changes to their noise environment. (see Table 13.11).

11.16.22. ***Dardistown Depot***

11.16.23. The operational phase noise impact assessment also considers Dardistown Depot, which will operate on a 24/7 basis and which includes maintenance building

activity, substation, mechanical plant, train wash, rail movements etc. The assessment was informed by measurements of activities associated with Irish Rail's Fairview and Inchicore depots.

11.16.24. ***Changes in Traffic Flow***

11.16.25. The assessment of traffic noise impacts due to changes in traffic flows during the operational phase considers the change in traffic noise levels between the Do Minimum and Do Something traffic scenarios as a result of increased or reduced traffic on the road network.

11.16.26. ***Fixed Airborne Noise Sources***

11.16.27. Numerous fixed noise sources are identified, such as ventilation shafts, substations, PA systems and other line-side equipment. As this will form part of the detailed design at procurement stage, the assessment focuses on setting a range of allowable operational noise levels to ensure no significant increase in the existing noise environment, using guidance from BS 4142 and BS 8233. The methodology adopts set noise emission targets relative to the site boundary to ensure that noise levels at NSL's are appropriate.

11.16.28. ***Operational Vibration***

11.16.29. Operational phase vibration associated with the rail line is addressed in the Groundborne Noise and Vibration chapter of the EIAR and is not considered further in terms of airborne vibration, given that there are no other sources of significant vibration.

11.16.30. Method for Assessment of Impacts

11.16.31. ***Construction Phase***

11.16.32. The EIAR states that, as construction works will be less than seven years at any one location, and are varied over the course of the project, they can be considered short term impacts in accordance with the EPA Guidelines.

11.16.33. The EIAR notes guidance contained in BS 5228-1 regarding typical fixed noise limits commonly applied for major construction projects, rather than relating it to the prevailing baseline noise levels. It notes that for other large scale infrastructure projects such as DART Underground and Metro North, the Board applied similar

fixed noise limits to those in Section E.2 of BS 5228-1 for residential and other sensitive receptors. These limit values are as follows:

- Residential receptors: Upper noise limits for construction noise of 75dB ($L_{Aeq,12hr}$) during the day; 65dB ($L_{Aeq,4hr}$) during the evening; or 55dB ($L_{Aeq,8hr}$) during the night, or above the existing ambient if this is higher.
- Commercial receptors (i.e. offices, industrial facilities and sport clubs) which are less noise sensitive: 75dB ($L_{Aeq,T}$) daytime (12hr) & Saturday AM (6hr).
- Mobile working areas with temporary to short term durations, such as utility diversion works and ESNB cable re-routing works: 75dB ($L_{Aeq,T}$) daytime (12hr) & Saturday AM (6hr).

11.16.34. The EIAR notes Dublin City Council's 'Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition' ('DCCGPG'), which outlines a risk assessment methodology for construction activities. The scale of the MetroLink project would see it classed as a high-risk category site based on the applicable risk factors, and the DCCGPG document identifies that for such sites, the 'ABC Method' detailed in BS 5228-1 shall be used to determine acceptable noise levels for day, evening and night time work. Fingal County Council does not have an equivalent noise risk assessment procedure.

11.16.35. The '**ABC method**' detailed in BS 5228-1 assigns each NSL into a specific category A, B or C, based on the existing rounded ambient noise levels in the absence of construction noise. A **construction noise threshold (CNT)** value is then set that, if exceeded at that location, indicates a potential significant noise impact is associated with the construction activities, depending on context. The table below sets out the CNT values which, when exceeded, signify a potential significant effect.

Threshold of Potential Significant Effect			
Source: BS 5228-1 (replicated in EIAR)			
Assessment Category & Threshold Value Period (L_{Aeq})	Construction Noise Threshold (CNT) (dB)		
	Category A	Category B	Category C

Daytime (07:00 – 19:00) and Saturdays (07:00 – 13:00)	65	70	75
Evenings & Weekends (19:00 – 23:00 weekdays) (13:00 - 23:00 Saturdays) (07:00 – 23:00 Sundays)	55	60	65
Night-time (23:00 to 07:00)	45	50	55
Notes: Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are less than these values. Category B: threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are the same as category A values. Category C: threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are higher than category A values. If the ambient noise level exceeds the Category C threshold values given in the table (i.e. the ambient noise level is higher than the above values), then a potential significant effect is indicated if the total LAeq,T noise level for the period increases by more than 3 dB due to site noise			

11.16.36. The determination of significance depends on the calculated construction noise level, the prevailing baseline noise environment and the duration and extent of the works, with CNTs varying across the project for different sites and receptors. The EIAR acknowledges that, due to the nature, scale and duration of the project, the CNTs will be exceeded during certain construction phases, particularly at NSLs which form the boundary with large work sites and particularly for areas with the lowest Category A CNT.

11.16.37. The Table below, which replicates Table 13.13 of the EIAR, sets out how the significance ratings were applied by the applicant. It is stated to be derived from Table 3.16 of the UK's DMRB Noise and Vibration and adapted to include the relevant significance effects from the EPA Guidelines.

11.16.38. In accordance with the DMRB guidance, construction noise and construction traffic noise impacts are stated to constitute a **significant** effect where a Major or Moderate magnitude of impact will occur for a duration exceeding:

- Ten or more days or night in any 15 consecutive day or nights; and
- A total number of days exceeding 40 in any six consecutive months.

Construction Noise Significance Ratings			
Range of Construction Noise Level	Guidelines for Noise Impact Assessment Significance (DMRB)	EPA EIAR Significance Effects	Determination
Below or equal to baseline noise level	Negligible	Not Significant	Depending on CNT, duration and baseline noise level
Above baseline noise level and below or equal to CNT	Minor	Slight to Moderate Note 1	
Above CNT and below or equal to CNT +5dB Note 2	Moderate	Moderate to Significant	
Above CNT +5 and below or equal to CNT +15dB	Major	Significant to Very Significant	
Above +15dB		Very Significant to Profound Note 3	
Note 1: CNLs at the upper end of this range will result in higher potential impacts, therefore this range is categorised as slight to moderate, acknowledging that values approaching the CNT are greater than slight. In accordance with DMRB, noise levels below the CNT are deemed ‘Not Significant’. Note 2: Where night-time CNLs are calculated above Category C values, a significant effect is determined. Increasing magnitudes of impact depend on the scale above 55 dB $L_{Aeq,8hr}$ in accordance with Table 13.13. Note 3: The DMRB does not distinguish beyond a ‘Major’ impact. For the purposes of distinguishing between a Very Significant and Profound Impact, CNLs exceeding the CNT by +20dB are categorised as Profound.			

11.16.39. The EIAR states that, due to the nature and duration of the project, even where all reasonable measures have been taken to reduce noise levels, at some locations residual levels mean widespread community disturbance or interference with sleep is likely to occur and that in such circumstances, TII will consider whether the provision of further Noise Insulation (NI) or Temporary Relhousing (TRH) will be appropriate at locations where eligibility for either has been established, as per the 'Airborne and Groundborne Noise Mitigation Policy' included at Appendix A14.6.

11.16.40. The criteria used for rating the significance of construction traffic noise impacts and vibration impacts are also set out in this section of the EIAR. I note that the UK DMRB is again used for the construction traffic impacts.

11.16.41. ***Operational Phase***

11.16.42. For operational rail noise, given the lack of applicable national guidance specifying airborne noise limits, the applicant reviewed other rail projects such as Luas, UK projects and environmental noise guidance. The proposed airborne noise operational rail thresholds are set out in Table 13.18 of the EIAR, with the significance rating dependent on the increase above the threshold or baseline, as outlined in Table 13.19.

11.16.43. For operational phase road traffic noise impacts, the UK DMRB guidance is again used.

11.16.44. For fixed noise sources, the assessment makes use of BS 4142 (BSI 2014 + A1 2019).

11.16.45. For operational phase vibration, no further consideration is given in the airborne noise and vibration chapter, with the issue instead addressed in groundborne noise and vibration.

11.16.46. **Baseline**

11.16.47. **Noise**

11.16.48. Noise surveys were undertaken at locations representative of the nearest NSLs. This included long-term surveys (c. one week duration) at 52 No. locations and short-term (attended day-time measurements) at 73 No. locations. Details are provided in Appendices A13.1 and A13.2 of the EIAR, with the baseline noise survey locations show in Figure 13.1.

11.16.49. The noise survey results for unattended survey locations are presented in terms of the 16hr daytime period (07:00 – 23:00hrs) for the LAeq and LA90 parameters and the eight-hour night-time period (23:00 – 07:00hrs) in terms of the LAeq and LA90 parameters. The derived L_{den} for each day is also presented. For attended surveys, the survey results are presented as the average daytime LAeq and LA90 parameters over the three-hour survey periods and the calculated L_{den}.

11.16.50. **Area AZ1 (Northern Section)**

11.16.51. The noise survey results indicate that a high noise environment is experienced at sensitive locations in closest proximity to the proposed development, with road traffic on the R132 being the dominant noise source at all locations, as well as overhead aircraft movements to/from Dublin Airport in the southern parts of this area. The baseline for each sub-area is as follows:

- **Estuary:**

- **Daytime:** Average ambient noise levels of 58 – 68dB LAeq,16hr at the unattended survey locations and 58 – 70dB LAeq, 15mins at the attended survey locations. Background noise levels of 55 – 63dB LA90,16hr at the unattended survey locations and 45 – 66dB LA90, 15mins at the attended survey locations.
- **Night-time:** Average ambient noise levels of 54 – 62dB LAeq,8hr. Average background noise levels of 47 – 51dB LA90,8hr.
- **L_{den}:** 61 – 71dB L_{den} for the unattended survey locations and 68 – 71dB L_{den} at attended survey locations.

- **Estuary to Seatown:**

- **Daytime:** Average ambient noise levels of 64 – 73dB LAeq,16hr at the unattended survey locations and 59 – 65dB LAeq, 15mins at the attended survey locations. Background noise levels of 55 – 64dB LA90,16hr at the unattended survey locations and 53 – 63dB LA90, 15mins at the attended survey locations.
- **Night-time:** Average ambient noise levels of 59 – 67dB LAeq,8hr. Average background noise levels of 46 – 51dB LA90,8hr.

- **L_{den}:** 68 – 76dB L_{den} for the unattended survey locations and 59 – 67dB L_{den} at attended survey locations.
- **Seatown to Swords Central:**
 - **Daytime:** Average ambient noise levels of 57 – 73dB L_{Aeq,16hr} at the unattended survey locations and 53 – 69dB L_{Aeq, 15mins} at the attended survey locations. Background noise levels of 53 – 62dB L_{A90,16hr} at the unattended survey locations and 49 – 62dB L_{A90, 15mins} at the attended survey locations.
 - **Night-time:** Average ambient noise levels of 53 – 65dB L_{Aeq,8hr}. Average background noise levels of 45 – 49dB L_{A90,8hr}.
 - **L_{den}:** 60 – 75dB L_{den} for the unattended survey locations and 57 – 71dB L_{den} at attended survey locations.
- **Swords Central to Fosterstown:**
 - **Daytime:** Average ambient noise levels of 57 – 65dB L_{Aeq,16hr} at the unattended survey locations and 53 – 70dB L_{Aeq, 15mins} at the attended survey locations. Background noise levels of 50 – 60dB L_{A90,16hr} at the unattended survey locations and 45 – 60dB L_{A90, 15mins} at the attended survey locations.
 - **Night-time:** Average ambient noise levels of 54 – 57dB L_{Aeq,8hr}. Average background noise levels of 55 – 67dB L_{A90,8hr}.
 - **L_{den}:** 61 – 67dB L_{den} for the unattended survey locations and 57 – 72dB L_{den} at attended survey locations.
- **Fosterstown to Naul Road:**
 - **Daytime:** Average ambient noise levels of 58dB L_{Aeq,16hr} at the unattended survey location and 49 – 65dB L_{Aeq, 15mins} at the attended survey locations. Background noise levels of 53dB L_{A90,16hr} at the unattended survey location and 46 – 60dB L_{A90, 15mins} at the attended survey locations.
 - **Night-time:** Average ambient noise level of 56dB L_{Aeq,8hr}. Average background noise levels of 51dB L_{A90,8hr}.

- **L_{den}**: 63dB L_{den} for the unattended survey location and 54 – 67dB L_{den} at attended survey locations.

11.16.52. **Area AZ2 (Airport Section)**

11.16.53. The baseline noise environment is dominated by aircraft overhead noise and airport ground activities, as well as road traffic.

- **Daytime:** Average ambient noise levels were 61dB L_{Aeq,16hr} at the unattended survey location and 60dB L_{Aeq,15mins} at the attended survey location. Background noise levels were 57dB L_{A90,16hr} at the unattended survey location and 55dB L_{A90,15mins} at the attended survey location.
- **Night-time:** Average ambient noise levels were 58dB L_{Aeq,8hr}. Average background noise levels were 52dB L_{A90,8hr}.
- **L_{den}**: 65dB for the unattended survey location and 62dB at attended survey location.

11.16.54. **Area AZ3 (Dardistown to Northwood)**

11.16.55. The noise survey results indicate a moderate to high noise environment is experienced at the noise sensitive locations in closest proximity to the proposed development, with the noise environment dominated by aircraft noise from Dublin Airport in addition to road traffic along major roads in the area, including the R108 Ballymun Road, M50 Motorway and Santry Avenue.

- **Daytime:** Average ambient noise levels of 59 – 66dB L_{Aeq,16hr} at the unattended survey locations and 65 – 72dB L_{Aeq,15mins} at the attended survey locations. Background noise levels of 54 – 60dB L_{A90,16hr} at the unattended survey locations and 58 – 65dB L_{A90,15mins} at the attended survey locations.
- **Night-time:** Average ambient noise levels of 55 – 61dB L_{Aeq,8hr}. Average background noise levels of 49 – 52dB L_{A90,8hr}.
- **L_{den}**: 63 – 69dB L_{den} for the unattended survey locations and 61 – 74dB L_{den} at attended survey locations.

11.16.56. **Area AZ4 (Northwood to Charlemont)**

11.16.57. The noise survey indicates a range of noise environments are experienced, depending on the proximity to roads or urban activities.

- **Ballymun to Griffith Park:**

Road traffic along the R108 Ballymun Road, St Mobhi Road and adjacent surrounding roads is the dominant noise source in addition to localised suburban activities within schools, parks and local commercial areas.

- **Daytime:** Average ambient noise levels of 51 – 70dB $L_{Aeq,16hr}$ at the unattended survey locations and 48 – 69dB $L_{Aeq,15mins}$ at the attended survey locations. Background noise levels of 46 – 62dB $L_{A90,16hr}$ at the unattended survey locations and 43 – 62dB $L_{A90,15mins}$ at the attended survey locations.
- **Night-time:** Average ambient noise levels of 43 – 63dB $L_{Aeq,8hr}$. Average background noise levels of 39 – 50dB $L_{A90,8hr}$.
- **L_{den}:** 53 – 73dB L_{den} for the unattended survey locations and 52 – 72dB L_{den} at attended survey locations.

- **Glasnevin/Whitworth:**

A number of survey locations are influenced by railway noise in addition to local residential activities set back from road traffic. Other locations are dominated by road traffic.

- **Daytime:** Average ambient noise levels of 49 – 57dB $L_{Aeq,16hr}$ at the unattended survey locations and 46 – 71dB $L_{Aeq,15mins}$ at the attended survey locations. Background noise levels of 41 – 47dB $L_{A90,16hr}$ at the unattended survey locations and 40 – 62dB $L_{A90,15mins}$ at the attended survey locations.
- **Night-time:** Average ambient noise levels of 45 – 52dB $L_{Aeq,8hr}$. Average background noise levels of 37 – 42dB $L_{A90,8hr}$.
- **L_{den}:** 53 – 60dB L_{den} for the unattended survey locations and 50 – 71dB L_{den} at attended survey locations.

- **Mater Hospital/Eccles Street/Berkeley Road:**

The baseline noise environment is dominated by road traffic along Berkley Road, Eccles Street, North Circular Road and the surrounding road network.

Other noise sources include the Mater Hospital campus and suburban activities.

- **Daytime:** Average ambient noise levels of 53 – 63dB $L_{Aeq,16hr}$ at the unattended survey locations and 58 – 69dB $L_{Aeq,15mins}$ at the attended survey locations. Background noise levels of 49dB $L_{A90,16hr}$ at the unattended survey locations and 51 – 61dB $L_{A90,15mins}$ at the attended survey locations.
- **Night-time:** Average ambient noise levels of 54 – 61dB $L_{Aeq,8hr}$. Average background noise levels of 42 – 47dB $L_{A90,8hr}$.
- **L_{den} :** 62 – 68dB L_{den} for the unattended survey locations and 59 – 71dB L_{den} at attended survey locations.

- **O'Connell Street:**

The baseline noise environment is dominated by road traffic along O'Connell Street, Parnell Street, the Luas Green Line in addition to traffic along the surrounding road network. Other sources include retail and commercial units, pedestrian movements and plant noise.

- **Daytime:** Average ambient noise levels of 58 – 67dB $L_{Aeq,16hr}$ at the unattended survey locations and 59 – 64dB $L_{Aeq,15mins}$ at the attended survey locations. Background noise levels of 54 – 61dB $L_{A90,16hr}$ at the unattended survey locations and 55 – 56dB $L_{A90,15mins}$ at the attended survey locations.
- **Night-time:** Average ambient noise levels of 56 – 63dB $L_{Aeq,8hr}$. Average background noise levels of 49 – 54dB $L_{A90,8hr}$.
- **L_{den} :** 63 – 71dB L_{den} for the unattended survey locations and 61 – 65dB L_{den} at attended survey locations.

- **Tara Street:**

The baseline noise environment is dominated by road traffic along Tara Street, Townsend Street, Parnell Street, the DART rail line in addition to traffic along the surrounding road network. Other sources include retail and commercial units in addition to pedestrian movements and plant noise.

- **Daytime:** Average ambient noise levels of 63 – 64dB $L_{Aeq,16hr}$ at the unattended survey locations and 67 – 70dB $L_{Aeq,15mins}$ at the attended survey locations. Background noise levels of 57 – 59dB $L_{A90,16hr}$ at the unattended survey locations and 57 – 62dB $L_{A90,15mins}$ at the attended survey locations.
- **Night-time:** Average ambient noise levels of 58 – 61dB $L_{Aeq,8hr}$. Average background noise levels of 51 – 56dB $L_{A90,8hr}$.
- **L_{den}:** 66 – 68dB L_{den} for the unattended survey locations and 68 – 72dB L_{den} at attended survey locations.

- **St Stephen's Green:**

The baseline noise environment is dominated by road traffic along the surrounding road network. Other sources include Luas Green Line trams, retail and commercial units in addition to pedestrian movements and plant noise.

- **Daytime:** Average ambient noise levels of 62dB $L_{Aeq,16hr}$ at the unattended survey location and 66 – 71dB $L_{Aeq,15mins}$ at the attended survey locations. Background noise levels of 54dB $L_{A90,16hr}$ at the unattended survey location and 59 – 60dB $L_{A90,15mins}$ at the attended survey locations.
- **Night-time:** Average ambient noise levels of 59dB $L_{Aeq,8hr}$. Average background noise levels of 50dB $L_{A90,8hr}$.
- **L_{den}:** 66dB L_{den} for the unattended survey location and 68 – 71dB L_{den} at attended survey locations.

- **Charlemont:**

The baseline noise environment is dominated by road traffic along the surrounding road network, Luas Green Line trams, retail and commercial units.

- **Daytime:** Average ambient noise levels of 57 – 61dB $L_{Aeq,16hr}$ at the unattended survey locations and 63 – 64dB $L_{Aeq,15mins}$ at the attended survey locations. Background noise levels of 41 – 44dB $L_{A90,16hr}$ at the

unattended survey locations and 52 – 55dB LA90,15mins at the attended survey locations.

- **Night-time:** Average ambient noise levels of 50 – 54dB LAeq,8hr. Average background noise levels of 38 – 39dB LA90,8hr.
- **Lden:** 59 – 63dB Lden for the unattended survey locations and 65 – 67dB Lden at attended survey locations.

11.16.58. The EIAR also compares the measured baseline noise levels across the alignment with EPA noise mapping for the equivalent areas and considers that they generally align.

11.16.59. Vibration

11.16.60. Baseline vibration surveys were undertaken at areas where existing vibration sources potentially form part of the baseline environment, namely at representative survey locations in the vicinity of existing rail/Luas lines that are adjacent to the project. 3 No. locations were monitored, of which are within area AZ4, due to the absence of any potential significant baseline vibration levels in area AZ1, AZ2 or AZ3. The 3 No. monitoring locations were at Coke Oven Cottages (close to railway line), O'Connell Street, (close to Luas Green Line) and Charlemont (close to Luas Green Line embankment). Measured vibrations at all three locations indicated a **low vibration environment in both daytime and night-time**. Additional vibration surveying undertaken at sensitive buildings are addressed elsewhere in the context of groundborne vibration.

11.16.61. Potential Impacts

11.16.62. Do Nothing

11.16.63. In the do-nothing scenario, there will be no change in the noise and vibration environment.

11.16.64. Construction Phase

11.16.65. Construction phase impacts are detailed in Section 13.5.2 of the EIAR, with the calculated results for all modelled receivers included in Appendix A13.7.

11.16.66. The results assume standard 2.4m high site hoarding around compounds (except for Glasnevin, where a 3m hoarding is assumed) and that the majority of

station and the shaft construction sites will be constructed using top-down methods, with construction of a roof slab in advance of excavation, which inherently reduces noise once it is in place. It also assumes the use of blasting and breakers for rock breaking.

11.16.67. For each modelled construction compound, a CNT has been established for each modelled receiver location based on the baseline noise environment with the CNL at each receiver location compared against the CNT to determine the potential for significant impacts. Due to the duration of works, where calculated CNLs are above the CNT, a potential significant effect is determined. It is stated that an exception to this is for track laying works along the aboveground section of the alignment along the R132, due to the fast progression rate.

11.16.68. Where calculated CNLs are below the baseline noise level or the relevant CNT, the impact is determined to be Not Significant to Slight to Moderate. An exception of this is at NSLs with high night-time ambient noise levels, where a significant effect is assigned to CNLs exceeding 55 dB $L_{Aeq,T}$ to recognise the potential for significant effects above this level.

11.16.69. **Area AZ1 (Northern Section)**

11.16.70. Noise impacts within area AZ1 are presented for 4 No. sub-sections: Estuary to Seatown; Seatown Station to Malahide Road Roundabout; Malahide Road Roundabout to Pinnock Hill; and Pinnock Hill to Dublin Airport North Portal.

11.16.71. Table 13.39 of the EIAR predicts **moderate to significant** and **significant to very significant** adverse impacts for the area between Seatown West and Seatown Station, where the alignment is provided as cut and cover and retained cut. At the sensitive receptor locations (shown in Figure 13.2 Sheets 1 to 3), which include commercial and residential properties, noise levels of between **76-85dB** are predicted during sequential linear works that will take place on weekdays and Saturday mornings. The duration of these impacts is predicted to be short-term.

11.16.72. Table 13.40 of the EIAR predicts **significant** and **significant to very significant** adverse impacts in the area between Estuary and Seatown, during tracklaying works that will take place at night-time. At the sensitive receptor locations (shown in Figure 13.2 Sheets 1 to 3) noise levels of between **55-61dB** are predicted.

The progression of tracklaying is projected at a rate of approximately 100m per day or night and predicted impacts are expected to last for one night at any one location.

- 11.16.73. Table 13.41 predicts **moderate to significant** and **significant to very significant** adverse impacts on sensitive receptor locations (shown in Figure 13.2 Sheet 3) in the vicinity of Seatown Station during site establishment works, piling, excavation, capping, concrete works and finishing works that will take place on weekdays and Saturday mornings. Noise levels of between **76-85dB** are predicted and, in particular noise levels at the Hertz Building and North Dublin Corporate Park are predicted to exceed the CNT during different stages of construction. Section 13.5.2.3.2 of the EIAR outlines that further mitigation will be required to reduce noise impacts at this location.
- 11.16.74. Table 13.42 of the EIAR predicts **significant to very significant** adverse impacts at sensitive receptor locations between Seatown and Malahide Road roundabout during sequential linear cut and cover and retained cut works that will take place on weekdays and Saturday mornings. Noise levels of between **76-84dB** are predicted. 13.5.2.3.2 of the EIAR outlines that further mitigation will be required to reduce noise impacts at this location.
- 11.16.75. Table 13.43 of the EIAR predicts **significant** adverse impacts at noise sensitive receptors locations between Seatown and Malahide Road roundabout during tracklaying works that will take place at night-time. At the sensitive receptor locations (shown in Figure 13.2 Sheets 3 to 4) noise levels of between **56-60dB** are predicted. The progression of tracklaying is projected at a rate of approximately 100m per day or night and predicted impacts are expected to last for one night at any one location.
- 11.16.76. Table 13.44 of the EIAR predicts **moderate to significant** and **significant to very significant** adverse impacts at sensitive receptor locations between Malahide Road roundabout and Pinnock Hill during sequential linear cut and cover and retained cut works that will take place on weekdays and Saturday mornings. Noise levels of between **71-85dB** are predicted. Section 13.5.2.3.3 of the EIAR outlines that further mitigation will be required to reduce noise impacts at this location.
- 11.16.77. Table 13.45 of the EIAR predicts **moderate to significant** and **significant** adverse impacts at sensitive receptor locations between Malahide Road roundabout

and Pinnock Hill during tracklaying works that will take place during the night-time. At the sensitive receptor locations (shown in Figure 13.2 Sheets 5 to 6) noise levels of between **51-60dB** are predicted. The progression of tracklaying is projected at a rate of approximately 100m per day or night and predicted impacts are expected to last for one night at any one location.

11.16.78. Table 13.46 of the EIAR predicts **moderate to significant** and **significant to very significant** adverse impacts at sensitive receptor locations during retained cut works associated with construction of Fosterstown Station. At the sensitive receptor locations (shown in Figure 13.2 Sheets 6 to 7), which include commercial and residential properties, noise levels of between **66-75dB** are predicted. Section 13.5.2.3.4 of the EIAR outlines that further mitigation will be required to reduce noise impacts at this location.

11.16.79. Table 13.47 of the EIAR predicts **moderate to significant** adverse impacts at noise sensitive receptor locations between Pinnock Hill and the Dublin Airport North Portal, arising from cut and cover and retained cut works that will take place on weekdays and Saturday mornings. At the sensitive receptor locations (shown in Figure 13.2 Sheets 6 to 8) noise levels of between **66-75dB** are predicted.

11.16.80. Table 13.48 of the EIAR predicts **significant** and **significant to very significant** adverse impacts at noise sensitive receptors between Malahide Road Roundabout and Pinnock Hill during tracklaying works that will take place at night-time. At the sensitive receptor locations (shown in Figure 13.2 Sheets 6 to 8) noise levels of between **56-65dB** are predicted. The progression of tracklaying is projected at a rate of approximately 100m per day or night and predicted impacts are expected to last for one night at any one location.

11.16.81. No significant adverse construction vibration impacts are predicted in Section AZ1.

11.16.82. In the case of construction traffic, **moderate to significant** adverse impacts are predicted at Feltrim Road, where noise levels of **65dB LAeq, 16hr** are predicted, arising from traffic management measures and related redistributed traffic temporarily onto this road. This prediction is based on a worst case month and with multiple work sections taking place concurrently.

11.16.83. **Area AZ2 (Dublin Airport)**

- 11.16.84. Noise impacts within area AZ2 are presented for 3 No. sub-sections: Dublin Airport North Portal; Dublin Airport Station; and Dublin Airport South Portal.
- 11.16.85. Table 13.51 of the EIAR predicts **significant** adverse impacts at a halting site north-east of Dublin Airport (shown on Figure 13.2 sheets 8 to 9), related to TBM breakthrough works at the Dublin Airport North Portal, which will include night-time working. Noise levels of between **56-60dB** are predicted. The assessment notes, however, that as part of the planning permission for the Dublin Airport northern runway, this halting site is to be relocated from its current location.
- 11.16.86. Table 13.52 predicts **moderate to significant** and **significant to very significant** adverse impacts at Our Lady Queen of Heaven Church at Dublin Airport during multiple stages of construction. Noise levels of between **71-80dB** are predicted. Section 13.5.2.4.2 of the EIAR outlines that further mitigation will be required to reduce noise impacts at this location.
- 11.16.87. No significant adverse construction vibration impacts are predicted in Section AZ2.
- 11.16.88. ***Area AZ3 (Dardistown to Northwood)***
- 11.16.89. Noise impacts within area AZ3 are presented for 4 No. sub-sections: Dardistown Depot; M50 Viaduct and Rail Embankment Construction; Northwood Station; and Northwood Portal.
- 11.16.90. Table 13.54 of the EIAR predicts **moderate to significant** adverse impacts for Santry Lodge and St. Annes (shown on Figure 13.2 Sheet 15) during construction of the M50 Viaduct and embankment and finishing works for the embankment, which will take place on weekdays and Saturday mornings. Noise levels of between **71-75dB** are predicted. Section 13.5.2.5.2 of the EIAR outlines that further mitigation will be required to reduce noise impacts at this location.
- 11.16.91. Table 13.55 of the EIAR predicts **significant to very significant** adverse impacts for Santry Lodge, St. Annes and 1-3 Old Ballymun Road (shown on Figure 13.2 Sheet 15) during tracklaying works that will take place during day, evening and night-time working. Noise levels of between **61-65dB** are predicted. The progression of tracklaying is projected at a rate of approximately 100m per day or night and predicted impacts are expected to last for one night at any one location.

- 11.16.92. Table 13.56 of the EIAR predicts moderate to significant adverse impacts for an apartment complex at Old Ballymun Road (shown on Figure 13.2 Sheet 16) during ground level excavation works that will take place on weekdays and Saturday mornings. Noise levels of between **71-75dB** are predicted. Section 13.5.2.5.4 of the EIAR outlines that further mitigation will be required to reduce noise impacts at this location.
- 11.16.93. Table 13.57 of the EIAR predicts **significant** and **significant to very significant** adverse impacts for sensitive receptor locations (shown on Figure 13.2 Sheet 16) during TBM works that will be undertaken at the Northwood Portal site during night-time working hours once the TBM is launched. Noise levels of **61-70dB** are predicted. Section 13.5.2.5.5 of the EIAR outlines that further mitigation will be required to reduce noise impacts at this location.
- 11.16.94. No significant adverse construction vibration impacts are predicted in Section AZ3.
- 11.16.95. **Area AZ4 (Northwood to Charlemont)**
- 11.16.96. Noise impacts are presented for each of the 9 No. City station sites and the Albert College Park intervention shaft.
- 11.16.97. Table 13.59 of the EIAR predicts **moderate to significant** and **significant to very significant** adverse impacts and sensitive receptor locations (shown on Figure 13.2 Sheet 18) in the vicinity of Collins Avenue Station during multiple stages of construction that will take place on weekdays and Saturday mornings. Noise levels of between **66-90dB** are predicted. Section 13.5.2.6.2 of the EIAR outlines that further mitigation will be required to reduce noise impacts at this location.
- 11.16.98. Table 13.60 of the EIAR predicts **moderate to significant** adverse impacts at sensitive receptor locations in the vicinity of the Albert College intervention shaft (shown on Figure 13.2 Sheet 19), related to ground level excavation works that will take place on weekdays on Saturday mornings, and **moderate to significant** and **significant** adverse impacts that are related to sprayed concrete lining (SCL) works that will place 24/7. Noise levels of 66-75dB are predicted for the ground level excavation works and noise levels of 51-60dB are predicted for the SCL works. Section 13.5.2.6.3 of the EIAR outlines that further mitigation will be required to reduce noise impacts at this location.

- 11.16.99. Table 13.61 of the EIAR predicts **moderate to significant** and **significant to very significant** adverse impacts at sensitive receptor locations in the vicinity of Griffith Park Station (shown on Figure 13.2 Sheets 20 and 21) during multiple stages of construction. Significant and significant to very significant adverse impacts are predicted, related to operation of a concrete batching plant at this location. Noise levels of **66-80dB** are predicted for the construction works and levels of **51-62dB** are predicted for batching plant activities.
- 11.16.100. Table 13.62 of the EIAR predicts **moderate to significant** and **significant to very significant** adverse impacts at sensitive receptor locations in the vicinity of Glasnevin Station (shown on Figure 13.2 Sheets 22 and 23) during multiple stages of station construction that will take place on weekdays and Saturday mornings. Noise levels of **66-80dB** are predicted. Section 13.5.2.6.5 of the EIAR outlines that further mitigation will be required to reduce noise impacts at this location.
- 11.16.101. Table 13.63 of the EIAR predicts **significant, significant to very significant** and **very significant to profound** adverse impacts at sensitive receptor locations (shown on Figure 13.2 Sheets 22 and 23), related to Iarnród Éireann track lowering works at Glasnevin Station that will include night-time working. Noise levels of **55-75dB** are predicted. Section 13.5.2.6.5 of the EIAR states that works taking place within 200m of a property that is located along the track have the potential to cause a temporary, significant impact, however, as the works progress the impacts will become less significant at that property and the impacts will follow the work progress linearly along the track.
- 11.16.102. Table 13.64 of the EIAR predicts **moderate to significant** and **significant to very significant** adverse impacts for sensitive receptor locations in the vicinity of Mater Station (shown on Figure 13.2 Sheets 24 and 25) related to multiple stages of construction that will take place on weekdays and Saturday mornings. Noise levels of **66-85dB** are predicted. Section 13.5.2.6.6 of the EIAR outlines that further mitigation will be required to reduce noise impacts at this location.
- 11.16.103. Table 13.65 of the EIAR addresses the impact of construction of the O'Connell Street Station in the scenario where there is no oversite development in place and it predicts **moderate to significant** and **significant to very significant** adverse impacts on sensitive receptor locations (shown on Figure 13.2 Sheet 26).

Noise levels of **71-80dB** are predicted. Section 13.5.2.6.6.1.0 of the EIAR outlines that further mitigation will be required to reduce noise impacts at this location.

- 11.16.104. In respect of the scenario where the oversite development is delivered in tandem with construction of O'Connell Street station, Section 13.5.2.6.6.1.1 of the EIAR outlines that this scenario is assessed within the EIAR noise chapter associated with application ABP-318316-23.
- 11.16.105. Table 13.66 predicts **moderate to significant** and **significant to very significant** adverse impacts for sensitive receptor locations in the vicinity of Tara Station (shown on Figure 13.2 Sheet 27) related to multiple stages of construction that will take place on weekdays and Saturday mornings. Noise levels of **71-85dB** are predicted. The EIAR assessment outlines that further mitigation will be required to reduce noise impacts at this location.
- 11.16.106. Table 13.67 of the EIAR predicts moderate to significant adverse impacts for sensitive receptor locations in the vicinity of St. Stephen's Green Station related to piling/D-wall and ground level excavation works that will take place on weekdays and Saturday mornings. Noise levels of **76-80dB** are predicted. The assessment outlines that further mitigation will be required to reduce noise impacts at this location.
- 11.16.107. Table 13.68 of the EIAR predicts **moderate to significant** and **significant to very significant** adverse impacts for noise sensitive receptors in the vicinity of Charlemont Station during multiple stages of construction that will take place on weekdays and Saturday mornings. Noise levels of **66-85dB** are predicted. The assessment outlines that further mitigation will be required to reduce noise impacts at this location.
- 11.16.108. Table 13.69 addresses noises associated with utility diversion works across the alignment and predicts that noise levels will progressively reduce from a peak of **84dB** within 10m of a works site, to **70dB** at a 50m remove, **64dB** at a 100m remove, **60dB** at a 150m remove and **56dB** at a 150m remove. The assessment outlines that a CNT value of 75dBL_{Aeq} daytime is likely to be exceeded at distances of up to 30m from a works boundary and that mitigation will be required in this range.
- 11.16.109. Regarding construction traffic noise, Table 13.71 of the EIAR predicts a **significant adverse impact** at Eccles Street where a noise level of **69dBL_{Aeq}, 16hr** is

predicted, arising from traffic flows and traffic management measures along this road.

11.16.110. Operational Phase

11.16.111. ***Changes in Road Traffic Noise – Route-Wide***

11.16.112. No adverse significant noise impacts are associated with changes in traffic volumes or traffic re-distribution in the operational phase, for both assessment years of 2035 and 2050.

11.16.113. See sections below for areas AZ1 and AZ3, with regard to traffic noise changes and cumulative noise impacts with rail and other sources.

11.16.114. ***Fixed Sources and Stations – Route-Wide***

11.16.115. The following fixed sources of operational phase plant are noted:

- **HV Substations at Dardistown and North Portal:** 110kV transformers in the outdoor compound are identified as the noisiest components of the substations (40dB(A) at 5m from boundary of the substation compound). See sections below for areas AZ2 and AZ3.
- **MV, Traction Power and Auxiliary Power Substations:** Enclosed structures with minimal breakout beyond the unit. Traction power substations will be underground with the exception of 1 No. at Estuary, and 2 No. at Fosterstown and Dardistown. See sections below for areas AZ1 and AZ3.
- **Tunnel Ventilation System (TVS):** Used in both normal operation for air renewal and preventing over-heating and in fire emergencies for exhausting smoke. There are three main elements: Ventilation shafts, Over Track Exhaust systems (OTE) and Tunnel Jet Fans which all have the potential to emit high levels of noise to the surrounding environment if unattenuated. The plant associated with these systems are housed within back of house plant rooms below ground level within the stations and will not generate any measurable airborne noise emissions at ground level.

The potential noise source from the TVS relates to breakout noise from ventilation shafts and grilles at surface level. An acoustic study found that, during a tunnel emergency situation, noise levels at 10m from the external

grille are below 55dB LAeq. The EIAR considers this value to be acceptable for emergency use, noting that in a day-to-scenario, this level would pose potential significant noise impacts particularly during night-time periods without specific attenuation. It is stated that the further design development will be undertaken, including choice of systems, attenuation, updated baseline surveys, and calculations of noise levels at nearest NSLs to ensure that the system does not exceed the relevant design criteria.

- **Public Address (PA) Systems:** The PA system will be designed in accordance with best practice design principles to minimise noise breakout from underground stations to the surrounding environment. Surface and retained cut stations are sufficiently separated from NSLs such that noise from PA systems will be substantially masked by the prevailing noise environment in the area and screened by the station buildings and retained structures. No significant impacts identified.

11.16.116. ***Maintenance of Railway***

11.16.117. Typical maintenance activities include: condition-monitoring of assets; inspection and maintenance of electrical and mechanical equipment; rail re-profiling/grinding and other heavy-duty operations using diesel-powered rail-mounted vehicles; preventative maintenance; refurbishment and replacement of assets; and general housekeeping. Maintenance schedules will cover both day and night to minimise impacts on services, with weekend maintenance undertaken in cases where more extensive work is required. Where rail maintenance activities are scheduled over night-time periods along above ground sections of the alignment in AZ1 and AZ3, advance notice will be provided to affected residents. Areas where these activities pose the highest potential impact are along the R132 and Northwood at surface and elevated sections of the alignment with a limited number of NSLs in proximity. Maintenance activities within retained cut sections will be substantially screened from adjacent NSLs by the alignment depth. No significant impact is identified.

11.16.118. ***Area AZ1 (Northern Section)***

- **Changes in Road Traffic Noise:** Potential cumulative impacts identified along the R132 resulting from above ground sections of the MetroLink rail line

adding to the ambient traffic noise level. Residential properties located east and west of the R132 experience high road traffic noise levels and in order to ensure traffic noise levels are not increased at these locations where boundary walls are to be removed to facilitate construction and operation of the alignment, equivalent structures will be required along the road or property boundary. With reinstated boundary treatments, road traffic noise level will remain unchanged between the Do Minimum and Do Something Scenarios.

- **Airborne Rail Noise:** The highest operational daytime rail noise impacts are **Moderate** impacts on NSLs in proximity to the rail viaduct at Broadmeadow, namely the Bostik industrial/commercial facility and the upper floors of a Montessori building. These impacts occur during both daytime generally, and during the peak AM hour.

With regard to night-time noise impacts, these do not exceed Slight. However, in the peak night-time hour a **Moderate** impact is identified at the Emmaus Retreat Centre, adjacent to Estuary Station. Mitigation is recommended at the Emmaus Centre, given its proximity to the station, rail alignment and the P&R facility and the night-time peak hour predicted impacts.

11.16.119. ***Area AZ2 (Dublin Airport)***

11.16.120. Operational noise sources in this section relate to fixed plant items, including the HV substation to the east of the Dublin Airport North Portal (DANP), ventilation systems at Dublin Airport Station and an intermediate ventilation shaft south of the station. Given the high ambient noise levels and distance to NSLs no significant impacts are identified.

11.16.121. ***Area AZ3 (Dardistown to Northwood)***

- **Airborne Rail Noise: Significant** daytime rail noise impact at property known as St Anne's, the closest NSL in proximity to the rail viaduct between the M50 Viaduct and Northwood Station. This impact occurs during both daytime generally, and during the peak AM hour. Impacts at other NSLs are Slight.

With regard to night-time noise impacts, the impact at St Anne's is **Moderate to Significant**, and again Slight to Not Significant at all other NSLs. In the peak night-time hour, the impact is **Significant** at this NSL, and Slight to Not

Significant for all others. Mitigation measures to reduce operational rail noise at the identified NSL are proposed.

- **Dardistown Depot Noise:** Operational noise levels at Dardistown Depot are a combination of rail noise emissions from rail movements in and out of the depot and along the retained cut mainline section, maintenance and stabling activities within the buildings, fixed roof mounted plant, substations and train washing equipment all operating simultaneously as a worst-case scenario. No Significant noise impacts are identified at the nearest NSLs.

11.16.122. ***Area AZ4 (Northwood to Charlemont)***

11.16.123. As the Metrolink alignment will be in tunnel within area AZ4, the primary operational noise sources relate to station and ventilation tunnel systems. It is stated that the specific noise level from ventilation systems will be calculated as part of the further design development and calculated to the nearest sensitive areas with specific attenuation designed for each system to not exceed the relevant design criteria for each location. This will include updated baseline noise surveys.

11.16.124. ***Vibration***

11.16.125. Operational vibration levels associated with the proposed alignment are assessed in the Groundborne Noise and Vibration chapter of the EIAR. It is stated that there are no other sources in the operational phase with the potential to generate significant vibration levels.

11.16.126. **Mitigation Measures**

11.16.127. Mitigation measures are set out in Section 13.6 of the EIAR and are summarised below.

11.16.128. **Construction Phase**

- **Mitigation through Design:** Station and shaft construction methodology incorporates an inherent mitigation measure by partially enclosing excavation and construction works beneath the roof slabs (i.e. 'top-down' construction).
- **CEMP:** Contractor(s) will be required to update the outline CEMP prior to the commencement of construction to incorporate any conditions imposed as part

of the Railway Order. The CEMP will be a working document that is updated as the project progresses.

- **General:**

- Contractor(s) will be required to take specific noise abatement measures to the extent required and comply with the recommendations of BS 5228–1 (BSI 2014a).
- Plant will be required to comply with European Communities Noise Emissions by Equipment for Use Outdoors (Amendment) Regulations 2006 (S.I. No 241/2006).
- The CEMP will include a Construction Noise and Vibration Management Plan (CNVMP) which will be based on the proposed airborne and groundborne noise and vibration mitigation measures and the Outline CEMP and which will be a live document. This will involve a detailed investigation of potential noise and vibration impacts associated with each construction compound. The assessment will identify through modelling and calculation, predicted construction noise levels, identification of potential exceedance of CNTs, identification of required noise mitigation measures specific to each work area to minimise noise and vibration impacts so far as is reasonably practicable.
- A baseline noise study will be undertaken prior to commencement to characterise the prevailing noise environment at impacted NSLs and inform the relevant CNTs.
- The key principals for proposed noise mitigation are:
 - Noise control at Source: Selection of quiet plant, site layout, attenuation at source, operational controls (hours and periods).
 - Noise Control along Pathway: Localised screening to plant items, enclosures, site buildings, site hoarding and noise barriers.
 - Noise Control at Receiver: Noise Insulation (NI) and Temporary Rehousing (TRH).

- **Selection of Quiet Plant:**

- The potential for any item of plant to result in exceedance of construction noise thresholds will be assessed prior to being brought onto the site and the least noisy item of plant will be selected wherever practicable. Should a particular item of plant already on the site be found to exceed the construction noise thresholds, the first action will be to identify whether the item can be replaced with a quieter alternative.
- Contractor(s) will evaluate the choice of piling, excavation, breaking or other working method taking into account various ground conditions and site constraints. Where alternative lower noise generating equipment that would economically achieve, in the given ground conditions, equivalent structural/excavation/breaking results, these will be selected to control noise emissions, where deemed feasible.
- The following low noise and/or vibration construction methodologies will be used:
 - Non-percussive piling methodologies.
 - Rock breaking undertaken using milling equipment, with peckers avoided in station and shaft compounds.
 - Blasting will be undertaken where it has been demonstrated that the related vibration thresholds for building damage will not be exceeded. High intermittent audible noise and vibration but momentary effects compared to manual rock breaking.
- **Noise Control at Source:** Where replacing a noisy item of plant is not a viable option, noise control “at source” will be followed, including:
 - For static plant (e.g. compressors, generators, motors, pumps, ventilation fans etc.), the units will be surrounded by acoustic lagging or enclosed within acoustic enclosures providing air ventilation, as required to ensure CNTs are not exceeded, particularly when operational at night.
 - Where practicable, equipment powered by mains electricity shall be used in preference to equipment powered by ICEs or generators.
 - For mobile plant items (e.g. dump trucks, cranes, excavators etc.) the installation of an acoustic exhaust, utilizing an acoustic canopy to replace

the normal engine cover and/or maintaining enclosure panels closed during operation can reduce noise levels by up to 10dB.

- Reverse alarms from mobile plant within construction compounds will be broadband to reduce tonal elements.
- For piling plant, noise reduced by enclosing the driving system in an acoustic shroud. For steady continuous noise (e.g. diesel engines), noise reduced by fitting a more effective exhaust silencer system or utilising an acoustic canopy to replace the normal engine cover.
- For concrete mixers, control measures will be employed during cleaning to ensure no impulsive hammering is undertaken at the mixer drum.
- Mobile and stationary plant will be switched off or throttled back when not in use. Trucks and concrete vehicles will not be permitted to queue outside site compounds with engines left idling. Construction vehicles in lorry holding areas will be required to switch engines off when stationary.
- Percussive tools (e.g. pneumatic concrete breakers, ground breaking tools) noise control measures include fitting mufflers or sound reducing equipment and ensuring any air line leaks are sealed;
- For materials handling, contractor(s) will ensure that best practice site noise control measures are implemented including that materials are not dropped from excessive heights and drop chutes/dump trucks are lined with resilient materials.
- Reduction of resonance effects in panel work or cover plates through stiffening or application of damping compounds; rattling and grinding noises can be controlled by fixing resilient materials in between the surfaces that are in contact.
- Regular maintenance of all items of plant and vehicles.
- Noise levels associated with surface construction works including utility diversions and ESNB routing will be restricted to the fixed noise limits set for the project. The impact from works outside of construction site hoarding boundaries will be controlled using the best practicable means and restricting significant noise and vibration generating activities to daytime

hours where possible. Localised screening of noisy plant items to sufficiently reduce noise from these works when operating at distances of up to 30m from NSLs.

- **Construction Working Hours:**

- Controls on the periods and working hours during which the construction works will take place.
- Construction mostly limited to daytime hours only Monday to Friday and Saturday mornings to limit the duration over which NSLs are exposed to noise impacts.
- Weekend and night-time working will be required at certain stages during the project at surface level (e.g. during concrete pours, batching plants, SCL, tracklaying, MEP fit out and track lowering). Compounds where 24/7 work and likely out of hours work required are identified and assessed in the EIAR.
- Construction activities will be considered with respect to their potential to exceed CNTs at NSLs and will be scheduled according to their noise level, proximity to sensitive locations and possible options for noise control.
- Where night-time activities are required at surface level, activities with highest noise emissions will be scheduled during day-time periods and/or day-time shifts will set up the relevant sites for night-time periods to avoid unnecessary use of mobile plant, cranes, and material handling to occur during night-time periods.

- **Screening:**

- 2.4m high construction site hoarding around all construction compounds and linear work areas along the R132, with enhanced construction hoarding, acoustic screening or enclosures at a number of construction compound locations, as identified in Table 13.85 of the EIAR. The proposed hoarding height is 4m at these locations, with the exception of

the eastern boundary⁶⁷ of the Charlemont compound, where 7m high hoarding is proposed.

- Prior to commencement of works at each compound, contractor(s) will conduct an individual site assessment as part of the CNVMP to verify the height and position of noise screening based on the most up to date construction methodologies and input data.
- Enclosed working areas are proposed at the following locations to reduce night-time noise impacts. The enclosures will achieve a minimum sound reduction index of 24dB R_w with acoustic internal lining of the structure to reduce reverberant noise build up. Openings will be located away from NSL boundaries as far as practicable:
 - Northwood Portal: Enclosed structure will be constructed around the surface working area prior to the operation of the TBM.
 - Albert College Park: During SCL night-time support works, surface activities will be enclosed within an acoustically clad steel framed building.
 - Griffith Park: During track laying first fit concrete works, the batching plant operations will be enclosed within an acoustically clad steel framed building.
 - Charlemont: During SCL night-time support works, surface activities will be enclosed within an acoustically clad steel framed building.
- Within construction compounds, acoustic screens, sheds and enclosures will be required around plant and equipment which have the potential to result in exceedance of the CNTs. These will be as per Annex B of BS 5228–1 (BSI 2014a) and can effectively reduce noise emissions by 10dB(A). These will be required around plant items including handheld pneumatic breakers and breaker mounted on excavators and drill bits when operating at ground level.
- Demountable enclosures to screen operatives using hand tools.

⁶⁷ The EIAR incorrectly states northern boundary. That was corrected in the errata submitted at the oral hearing.

- Placement of site buildings between the site and NSLs to assist with breaking the line of sight between source and receiver and contribute to the overall level of noise reduction from a site. A detailed review of each site compound will be undertaken as part of the CNVMP.
- **Liaison with the Public:** Contractor will provide proactive community relations, notify the public and vibration sensitive premises before the commencement of any works forecast to generate appreciable levels of noise or vibration, explaining the nature and duration of the works, and will distribute information circulars informing people of the progress of works and any likely periods of significant noise and vibration. A noise liaison officer will be appointed during construction works. All noise complaints will be logged and followed up in a prompt fashion by the liaison officer.
- **Monitoring:** Contractor to carry out noise and vibration monitoring at representative NSLs. A full monitoring and auditing programme will form part of the CNVMP which will be agreed with the Local Authorities prior to commencement. As a minimum the monitoring programme will include an alert system for threshold exceedances, remote access and a platform for sharing monitoring results between the contractor, TII, DCC and FCC.
- **Noise Insulation, Temporary Rehousing and Temporary Relocation:** Where all reasonable measures have been taken, but residual noise levels are such that widespread community disturbance or interference with sleep is likely to occur, it is stated that TII will consider whether the provision of further noise insulation or Temporary Rehousing will be appropriate at eligible locations as outlined in the 'Airborne and Groundborne Noise Mitigation Policy' (Appendix A14.6). As noise insulation will only control internal noise levels, external areas will remain impacted. It is stated that this option will also result in indirect impacts to residents, due to alternative ventilation systems or temporary relocation, and that this option should only be considered where all other reasonably practicable measures have been implemented.

Where temporary relocation of noise sensitive activities for the duration of the phase of works is recommended, a consultation process will be established between TII, the contractor and the building occupants/owners.

The CNVMP will set out a detailed analysis of each construction compound relating to noise levels, durations and number of properties impacted and the planned approach for managing same. It is re-iterated that prior to any construction work commencing on any of the main work sites a detailed acoustic impact assessment will be undertaken which will involve a baseline noise study, model of the contractors final site layout, plant and equipment models, numbers and on-site location and the inclusion of all available on-site noise control measures.

- **Construction Traffic:** Restrictions to speed limits, maintenance of road surfaces and vehicles. Coverings on vehicles will be securely fastened before leaving site to avoid excessive 'rattling'.

11.16.129. Operational Phase

11.16.130. The following operational phase mitigation measures are proposed:

- **Noise Barriers:**
 - **Estuary:** 2m high noise barrier north-east of the Emmaus Retreat centre along the boundary of the realigned Ennis Lane (between Chainage 1+150 and 1+480) to provide noise screening from rail activities, road traffic and vehicle activity from the park and ride facility.
 - **Northwood:** Noise barriers along the east and west of the rail embankment south of the M50 Motorway. To the east, the barrier will be constructed along the rail edge at the top of the embankment between chainage 9+770 to 9+900. To the west, barriers will be constructed from the ground level at base of embankment to achieve a height of 1.8m above the rail level between chainage 9+800 to 9+940 and between chainage 9+970 to 9+980.
- **Railway Maintenance:** Advance notice will be provided to affected residents for scheduled night-time rail maintenance activities along above ground sections.
- **Ventilation Systems:** To mitigate noise associated with the tunnel ventilation systems, it is stated that the following options will be considered: selection of low noise rated equipment; reduction of induct flow rates; reduction of

elements in the airflow; in-duct attenuators; orientation of grilles and louvres away from sensitive receptors; acoustic louvres; and anti-vibration mountings and couplings to control vibration.

- **Public Address Systems:** To mitigate break-out of noise, it is stated that the following options will be considered: Minimise the operational period of the system; careful selection/location of speakers; Speaker zoning, so that announcements are made to the required location only; Reducing broadcast levels; Installation of ambient noise sensing equipment; staff training; centralised recording of announcements; and screening of speakers.

11.16.131. **Residual Impacts**

11.16.132. **Construction Phase**

11.16.133. According to Section 13.7.1.1 of the EIAR, where the implementation of on-site mitigation resulted in residual significant adverse impacts, models were updated to include enhanced hoarding, as per Table 13.85 of the EIAR, and in a large number of instances, the construction site was reduced below the applicable CNT. Exceptions to this are discussed in the EIAR and the assessment is summarised below.

11.16.134. ***Area AZ1 (Northern Section)***

11.16.135. At Seatown Station, noise levels at the adjacent Hertz service centre building are predicted to remain more than 5dB above the CNT, so a residual **very significant** adverse impact is identified.

11.16.136. Table 13.86 of the EIAR identifies that noise sensitive receptors along the R132 are predicted to remain above the CNT in the weekdays and Saturday mornings scenario, following the inclusion of on-site control measures and enhanced hoarding heights. At most of the sensitive receptor locations, the assessment predicts that following application of the Noise Mitigation Policy, the impact will be reduced to moderate. An exception to this is at Airside Business Park, where residual **significant to very significant** adverse impacts are identified during linear works. In this case, temporary relocation of west facades of the upper floor are recommended.

11.16.137. ***Area AZ2 (Dublin Airport)***

11.16.138. Residual noise levels are calculated to be controlled to below the CNT and/or below the upper construction limit at all sensitive receptor locations, except for the Our Lady Queen of Heaven church where a residual **moderate to significant** adverse impact is predicted during piling and excavation works.

11.16.139. **Area AZ3 (Dardistown to Northwood)**

11.16.140. Residual noise levels are calculated to be controlled to below the CNT and/or below the upper construction limit at all sensitive receptor locations, except for the M50 viaduct, where a residual **moderate to significant** impact is predicted during embankment construction at one location, and at the Northwood portal. For the portal site, Section 13.7.1.1.3 of the EIAR states that an acoustic enclosure will be installed prior to the commencement of 24/7 works at this site for TBM support and 24/7 batching plant works. The Section further predicts the following installation of the enclosure, night-time impacts will be controlled to operate at or below the CNTs.

11.16.141. **Area AZ4 (Northwood to Charlemont)**

11.16.142. Residual noise levels are calculated to be controlled to below the CNT and/or below the upper construction limit at all sensitive receptor locations, with the exception of a small number of individual locations.

- Collins Avenue Station: Residual **moderate to significant** adverse impacts at Our Lady of Victories Church (in circumstances where the church is occupied) during piling works that will take place on weekdays and Saturday mornings.
- Albert College Park intervention shaft: Whilst night-time noise levels are not predicted to trigger a significant impact, the assessment nevertheless points out that where night-time activities are continual and will result in exceedance of the CNT for periods exceeding of ten or more days of working in any 15 consecutive days or for a total of days exceeding 40 in any six-month period, then the compound will require an enclosure.
- Glasnevin Station: Table 13.87 predicts that residual **significant to very significant** adverse impacts will arise at Cross Gun Quay Apartments during piling works and ground level and lower ground level excavation works but the assessment states that the noise levels will remain below the NI trigger value. In the case of The Court apartments, the assessment also predicts residual

significant adverse impacts during all stages of construction but states that following implementation of the Noise Mitigation Policy the impact would reduce to moderate.

Track lowering and alignment works that will take place at night-time at Glasnevin Station are predicted to give rise to residual **significant** to **profound** adverse impacts at noise sensitive locations. The assessment states that following implementation of the Noise Mitigation Policy the impact would reduce to moderate.

- Mater Station: Residual **moderate to significant, significant** or **very significant** adverse impacts are predicted at sensitive receptor locations during multiple stages of construction arising from works undertaken on weekdays and Saturday mornings. The assessment states that following implementation of the Noise Mitigation Policy the impacts would reduce to moderate.
- Tara Street Station: Noise levels that exceed the daytime threshold for the majority of the construction are predicted along the east facades of the Irish Times Building and residual impact is predicted to be **significant** adverse. The assessment states that the Noise Mitigation Policy will be implemented where eligibility is established.
- Charlemont Station: Table 13.90 of the EIAR predicts residual **moderate to significant** and **very significant** adverse impacts on sensitive receptors during all stages of station construction. The assessment states that following implementation of the Noise Mitigation Policy the impact would reduce to moderate.

11.16.143. Operational Phase

- 11.16.144. In the operational phase, rail noise impacts are generally not significant. A **negative, moderate, long-term** residual impact is calculated at the Bostik industrial / commercial building to the west of the Broadmeadow viaduct and at a Montessori building at Balheary, Swords at the upper floor of the building along a corridor area. At ground floor level, where classrooms and external play areas are located, the residual noise impact is Slight. These residual impacts occur during both daytime generally, and during the peak AM hour.

11.16.145. With regard to the operational noise levels from the fixed noise sources, no significant residual impacts are anticipated.

11.16.146. **Cumulative Impacts**

11.16.147. Potential cumulative impacts associated with airborne noise and vibration are addressed in Section 30.4.5 of the EIAR. It states that the list of 176 'other developments' have been reviewed, of which 33 No. were screened in for potential cumulative airborne noise and vibration impacts prior to implementation of any mitigation measures. The relevant developments are listed in Table 30.6 of the EIAR.

11.16.148. No specific mitigation measures over and above those already proposed for the proposed development have been identified for cumulative impacts, as in most cases it is stated that the mitigation included in the proposed development, together with standard mitigation measures which would be implemented by the other developments, will be sufficient to reduce cumulative impacts so that they are not significant.

11.16.149. Potential residual **moderate to significant cumulative** adverse impacts are identified with a number of projects, should the construction phases overlap. These include: the Greater Dublin Drainage project, BusConnects projects, DART+ projects and a number of residential and commercial developments.

11.16.150. **Oral Hearing**

11.16.151. **Errata**

11.16.152. A considerable amount of errata relating to airborne noise and vibration was submitted over the course of the oral hearing. This primarily related to updates and corrections to various Tables contained in Chapter 13 of the EIAR and its associated appendices. On the opening day of the oral hearing TII submitted a Schedule of Errata (SoE) (Ref. OH9) that includes multiple references to the Chapter 13 assessment and which included, as Appendix 10, an updated EIAR Appendix A13.7 assessment in relation to Charlemont Station. After this, TII submitted a Final Schedule of Errata on 27th March 2024 (Ref. OH374) that captures all further errata submissions following the opening day of the hearing.

- 11.16.153. The errata related primarily to Seatown Station, Fosterstown Station, Northwood Portal, Griffith Park Station, Glasnevin Station, Mater Station, O'Connell Street Station, Tara Station and Charlemont Station.
- 11.16.154. Updates
- 11.16.155. The applicant provided a number of updated and additional assessments at the oral hearing, including an updated Cumulative Impacts Addendum Report (Ref. OH98) that was submitted to the oral hearing on 28th February 2024, a document entitled 'Errata Update – Chapter 13 Mater Station Construction' (Ref. OH122) on 3rd March 2024, a document entitled 'Noise Control from Fixed Installations' (Ref. OH168) that was submitted on 5th March 2024, a document entitled 'Airborne Rail Noise Effects at Glasnevin During MetroLink Project' (Ref. OH181) that was submitted on 6th March 2024 and a Schedule of Additional Environmental Commitments, which was updated at numerous stages over the course of the oral hearing.
- 11.16.156. The Cumulative Impacts Addendum Report comprises an updated review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application. It assesses potential cumulative impacts with a substantial number of additional developments and identifies the potential for **moderate to significant** cumulative impacts with permission Ref. ABP-313331-22 (SHD development at Fosterstown North, Swords), F23A/0781 (development at Dublin Airport), ABP-318559-23 (development at Merrion Court and Merrion Row, Dublin 2), ABP-317840-23 (SHD development at Cross Guns Bridge, Dublin 7), ABP-316119-23 (DART+ South West project), ABP-314232-22 (DART+ West project), F23A/0083 (hotel development at Travelodge, Pinnock Hill, Swords) and ABP-314610-22 (BusConnects Ballymun/Finglas to City Centre project) in the event that construction phases overlap. In all cases, the assessment states that following the implementation of proposed mitigation there will be no residual cumulative significant adverse impacts.
- 11.16.157. 'Noise Control from Fixed Installations' sets out the criteria and their application to control operational noise associated with fixed installations such as ventilation shafts, trackside equipment, power supply infrastructure and PA systems.

- 11.16.158. 'Airborne Rail Noise Effects at Glasnevin During MetroLink Project' presents an analysis of rail noise in the vicinity of Glasnevin Station in a number of separate scenarios.
- 11.16.159. **Post-Oral Hearing**
- 11.16.160. A further cumulative impact assessment (CIA) update was submitted on 31st January 2025 as part of the applicant's response to the Wild Ireland Defence CLG oral hearing submission. In relation to airborne noise and vibration, the potential for construction phase cumulative impacts is again noted, if construction phases overlap and projects are not sufficiently set back from each other and/or screened by existing buildings.
- 11.16.161. Potential **moderate to significant** cumulative impacts are identified in relation to ABP-320806-24 (Residential development at Fosterstown, Swords), however; the assessment again states that following the implementation of proposed mitigation there will be no residual cumulative significant adverse impact.
- 11.16.162. The CIA states that no specific mitigation measures over and above those already proposed for the proposed Project have been identified for cumulative impacts. In most cases the mitigation included in the proposed Project, together with standard mitigation measures which would be implemented by the other developments, will be sufficient to reduce cumulative impacts so that they are not significant.
- 11.16.163. An EIAR Addendum was also submitted by the applicant as part of their abovementioned response, addressing impacts associated with the proposed PFAS Management Strategy at Dublin Airport, including a proposed Triage and Material Management Centre (TMMC) at Dardistown. It concludes that the strategy will not generate any significant noise or vibration impacts on its surrounding environment due to the low noise generating activities and distance to the nearest noise sensitive locations and that any additional traffic movements associated with transporting material to and from the TMMC are equivalent to those set out in the EIAR. It concludes that there is no change in construction noise or vibration impacts, construction traffic noise impacts or operational noise impacts over and above those described in the EIAR.
- 11.16.164. **Assessment**

- 11.16.165. This section should be read in conjunction with the consultant's report prepared by Tyréns Group AB, contained in Appendix 1. The issue of groundborne noise and vibration is considered separately in Section 11.17.
- 11.16.166. The issue of airborne noise, particularly during the construction phase, was one of the most commonly raised issues across the entire alignment. The concerns were raised by both commercial and residential receptors and related to both construction-related noise at works sites and associated noise in the wider area due to construction traffic etc. A number of observers also raised concerns regarding operational phase airborne noise. This included railway noise in the retained cut portions of area AZ1 and noise associated with ventilation fans, escalators, PA systems etc. in the vicinity of the deep stations and intervention shaft.
- 11.16.167. Alignment Wide Issues
- 11.16.168. ***TII's Approach to Noise Assessment***
- 11.16.169. A number of observers, including for example Caitriona and Ciaran Byrne (S33), Barry and Aileen Dempsey (S15) and the various Charlemont and Dartmouth Community Group (CDCG) submissions (S40, S41 and S42) question the adequacy of the EIAR noise assessment. Of particular note, the CDCG submissions object to TII's proposal to undertake further assessment of noise impacts prior to construction but following the determination of this application, and proposed mitigation which is considered to be "loose and often unimplementable". Seatown Villas Residents and Estuary Court Residents Association, who both appeared at the oral hearing on 21st February 2024, also questioned the reliability of TII's noise assessment approach, with particular reference to assumptions made regarding noisy plant items.
- 11.16.170. TII's approach to the assessment of noise impacts is primarily based on the guidance contained in BS5228-1 'Code of Practice for Noise and Vibration Control on Construction and Open Sites'. In response to questioning by Tyréns at the oral hearing, TII made the point that the use of BS5228-1 as part of noise impact assessments is in line with best practice and is an approach that has been widely adopted on other infrastructure projects in Ireland. I note in this regard that use of BS5228-1 is also in accordance with Dublin City Council's 'Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition', which

requires its application in the determination of acceptable noise levels for medium and high risk sites.

11.16.171. Section 6.3 of BS5228-1 advises that for large infrastructure projects that involve the preparation of an EIAR, construction noise is sometimes assessed by comparing the predicted construction noise (plus ambient noise) with the pre-construction ambient noise. This is essentially the approach that TII has taken, and I note in this respect that Section 13.2 of the EIAR outlines that the impact assessment is based on (a) baseline surveys that characterise the existing noise and vibration environments and (b) application of predictive calculations relating to construction and operational phase impacts.

11.16.172. Predictive noise calculations are also based on the BS5228-1 guidance, the Plant Sound Power Level Method, which provides for the application of representative noise levels in circumstances where there is an absence of sufficient data on the activity and I note from Section 13.2.5.1.3 of the EIAR that calculations have been performed using a proprietary noise calculation package (SoftNoise Predictor Version 2021) which implements the calculation method of BS 5228-1.

11.16.173. In assessing the noise impact of the development, TII has applied the 'ABC Method' outlined within BS5228-1, which calls for categorisation of noise sensitive locations (i.e. categories A, B or C) based on existing rounded ambient noise levels in the absence of construction noise and the subsequent application of a noise threshold, any exceedance of which may indicate a potential significant noise impact.

11.16.174. I can understand the observers desire to have a full picture and understanding of all noise levels and sources associated with the project at this stage, but I accept as reasonable TII's position that construction methods and schedules may be subject to refinement and technological or methodological advances in the period before construction commences. TII has committed to undertaking further baseline surveys and updated noise modelling, before the commencement of development and after the appointment of a contractor. It may be a number of years before construction commences and I consider it to be a matter of good engineering practice that further assessment would be undertaken, since the baseline noise environment could change materially in the intervening period. This approach also appears to me to be supported by BS2558-1, with reference to Annex E, Section

E.1, which expressly provides for further assessment (in the context of rights to mitigation) after a contractor has been appointed and when detailed method statements and programme information are available.

11.16.175. Importantly, the applied noise threshold has been established and will not change and TII has outlined a range of mitigation measures (which are discussed as relevant in the following sections) that will be applied, based on the significance and duration of predicted impacts.

11.16.176. Regarding mitigation proposals, TII states that following ‘unmitigated’ modelling it undertook further modelling that included implementation of enhancing site hoardings (primarily 4m high) and localised screening, which they say are “deemed practicable and can be defined as part of this assessment”. This approach is, again, consistent with BS5228-1 which allows for assumptions to be made regarding the noise attenuating effectiveness of site hoardings at preliminary assessment stages. Section F.2.2.2.1 of the document states:

“In the absence of spectral data, as a working approximation, if there is a barrier or other topographic feature between the source and the receiving position, assume an approximate attenuation of 5 dB when the top of the plant is just visible to the receiver over the noise barrier, and of 10 dB when the noise screen completely hides the sources from the receiver. High topographical features and specifically designed and positioned noise barriers could provide greater attenuation. Subtract the attenuation from the value of LAeq, T calculated at the point of interest. Where the point of interest is 1 m from the façade of a building, make an allowance for reflection by adding 3 dB to the calculated (free field) levels.”

11.16.177. Therefore, and to conclude on this issue, I am satisfied that TII’s approach to the assessment of noise impacts is consistent with the guidance contained within BS5228-1 and, further, I consider it is an appropriate method of assessment in the context of the MetroLink project.

11.16.178. As is discussed in the following sections, Tyréns recommend that TII should be obligated to undertake additional noise modelling and that this modelling should be used to communicate the noise impacts from upcoming activities to affected receptors and that the modelling results should be published in an online format.

Tyréns also recommend that the results of noise monitoring should be published online, on a daily basis.

11.16.179. ***TII's Approach to Noise Mitigation***

11.16.180. As part of its noise mitigation strategy, TII has prepared an 'Airborne Noise & Groundborne Noise Mitigation Policy', contained at Appendix A14.6 of the EIAR. The Policy provides for the application of increasing levels of noise mitigation at affected residential properties, ranging from soft interventions, to noise insulation and to temporary rehousing, dependent on circumstances and where eligibility has been demonstrated. This eligibility relates to exceedances of specified noise levels (specified in Appendix A of that document) for:

- (a) a period of 10 or more days in any 15 consecutive day or nights; or
- (b) a total number of days exceeding 40 in any six consecutive months.

11.16.181. According to the Policy, noise insulation may consist of the installation of secondary glazing plus supplementary ventilation on eligible facades or blinds where there is a need to control heat. It is proposed that temporary rehousing will be provided for a maximum of 4 weeks.

11.16.182. Temporary rehousing is an occasionally utilised measure for large-scale infrastructural developments in urban areas, for circumstances where noise cannot be adequately mitigated, due to the nature of the works and/or their proximity to sensitive receptors. In this instance, I note that the Noise Mitigation Policy is primarily based on the BS5228-1 guidance, Section E.4 of which outlines that where all reasonable measures have been taken to reduce the noise levels, but levels are still such that widespread community disturbance or interference with activities or sleep is likely to occur, there are two further provisions that can be made if the construction activities are likely to continue for a significant period of time either continuously or sporadically: noise insulation or rehousing.

11.16.183. Temporary rehousing of people is clearly an emotive and generally unpopular measure among those potentially affected, particularly where families with children or the elderly are involved. This can only ever be a voluntary scheme, and while an offer of rehousing can be made, there is no obligation on affected parties to accept. This is clearly disruptive for those affected, and is regrettable, but I accept that it may

be necessary given the scale and nature of the construction work to be undertaken and the proximity to sensitive receptors. The threshold levels at which this bespoke mitigation becomes available is consistent with the BS5228-1 guidance and, in this respect, it is likely to be effective in protecting sensitive residential receptors from periods of prolonged, excessive noise.

11.16.184. Notwithstanding its acceptability in principle, I have concerns regarding the adequacy of the temporary rehousing proposals contained within the Policy, which, as I have outlined, is to be capped at a period of 4 weeks. The rehousing time limit does not appear to be grounded in the duration of predicted impacts and in a number of predicted impact instances, it is clear to me that the 4-week rehousing period would not cover the duration of the impact. Indeed, taking the example of the criteria that requires an affected property to be affected by noise levels above the CNT for more than 40 days in any six consecutive months, adherence to the 4 week limit means that the period of rehousing will not cover the time period of noise impact that necessitated relocation in the first place. Another example, from the MetroLink project, is the case of 10-11 Cambridge Terrace, which are predicted to experience residual significant to very significant impacts during multiple stages of construction of Charlemont Station (which according to Appendix A5.2 of the EIAR will take 8.5 years to complete) and which are identified by the EIAR noise assessment as eligible for the Noise Mitigation Policy.

11.16.185. It is also unclear whether TII proposes a single temporary relocation or whether it would be necessary to require relocation to be offered on multiple occasions, which would clearly be disruptive to peoples' lives.

11.16.186. In the circumstances, I am of the view that TII's obligations in respect of temporary rehousing should be linked to the period for which the relevant construction noise threshold is predicted to be breached, rather than an arbitrary time-capped period that is not linked to any identified impact. I acknowledge, as has been pointed out by observers, that rehousing for a prolonged period may have an adverse impact in its own right but I consider the suggested approach strikes a reasonable balance between protecting the health and amenity of affected residents and facilitating the delivery of this important public infrastructure project. As such, I recommend the Board attach the following condition, in the event that it grants the Railway Order:

- The temporary rehousing policy contained within Appendix A14.6 of the EIAR, 'Airborne Noise and Groundborne Noise Mitigation Policy', shall be revised to remove the maximum 4 week duration for temporary housing. The duration of rehousing shall be tied to the duration of the works which result in noise levels exceeding the relevant trigger values plus an appropriate short period on either side. Rehousing shall be offered in the following circumstances:
 - A noise level 10 dB(A) above any of the Noise Insulation Trigger noise levels presented in Table 1 of Appendix A for the corresponding times of the day; or
 - A noise level 10 dB(A) above the existing airborne noise level for the corresponding times of the day, whichever is higher, and
 - for a period of 10 or more days of working in any 15 consecutive days or
 - for a total of days exceeding 40 in any six-month period.

11.16.187. By way of comparison, I note that Section E.4 of BS5228-1 advises that if the nature of the construction activities means that rehousing would be necessary for a significant extent of time, e.g. in excess of six months, then there might be advantages in offering permanent rehousing.

11.16.188. A point that I would bring to the Board's attention is that there is a discrepancy between the Noise Mitigation Policy, EIAR and statements made by TII at the oral hearing. The NMP is primarily intended for residential property (Section 3.1 refers) but the Chapter 13 Airborne Noise and Vibration relies upon its application to non-residential properties (for example the Mater Hospital and St. Joseph's Church) in order to mitigate predicted significant impacts. When queried on the issue at the oral hearing, on 21st February 2024 TII advised that it will be applied to non-residential property on a case-by-case basis.

11.16.189. Area AZ1 (Northern Section)

11.16.190. The EIAR assessment predicts a range of significant adverse impacts in the area between Estuary and the DANP during linear works, between Estuary and Pinnock Hill during track laying works and at Seatown and Fosterstown stations during construction.

- 11.16.191. The combination of EIAR Tables 13.39, 13.42, 13.44 and 13.47 indicate that linear works (related to cut and cover and retained cut sections) between Estuary and the DANP will be highly disruptive during weekday and Saturday morning working hours, with noise levels of up to 75/85dB predicted for sensitive receptors (in the unmitigated scenario). This disruption affects both housing and commercial property in the vicinity. I note that in the supporting text that accompanies each of the above-mentioned tables, the EIAR points out that a 300m metre linear working area has been modelled and which incorporates multiple activities operating simultaneously. TII consider the assessment to be conservative and representative of the worst-case scenario.
- 11.16.192. The SoE submitted on the opening day of the oral hearing identifies errors in relation to the Seatown Station and Fosterstown Station noise assessments. Table 0.2 of the Errata document revises predicted noise level at the Hertz Service Centre during installation of guide walls and piling mats but does not revise the predicted impact magnitude and Table 0.3 amends the description of concrete works to 'excavation/capping beams & propping' at Fosterstown.
- 11.16.193. Noise levels of the level predicted are clearly very high and the EIAR assessment is unclear on how long affected parties may be exposed to them. In this respect I note that Appendix A5.2 of the EIAR discusses the construction programme on an area-by-area basis and provides a helpful indication of the duration of these works in sequential areas of the alignment. For example, it outlines that cut and cover works between Estuary and Seatown will take 69 months to complete and retained cut works in the same section will take 51 months to complete.
- 11.16.194. In view of the lack of detail regarding the duration of exposure of affected parties to predicted noise levels, I asked TII a series of questions at the oral hearing regarding the issue. Using the example of Seatown Villas, where Table 13.39 predicts noise levels of 76-85dB during cut and cover and retained cut works, I asked TII to clarify the duration of exposure of affected receptors to the predicted noise levels. In responding, on 26th February 2024 TII's noise expert Jennifer Harmon advised that the duration of exposure is expected to be of the order of 6 months at any one property, taking account of the variety of activities taking place within the 300m linear working area.

- 11.16.195. Having given consideration to both the level of noise predicted and the duration of exposure, I consider the impact is significant to very significant adverse. I acknowledge that the predicted impact is in the unmitigated scenario and that consideration therefore needs to be given to TII's proposed mitigation.
- 11.16.196. Proposed mitigation comprises a mix of standard construction practices (noise control at source, pathway or receptor; control of working hours and screening); a commitment to monitor the effectiveness of implemented mitigation and to communicate with the public regarding noise issues; and a bespoke Noise Mitigation Policy.
- 11.16.197. According to Section 13.7.1.1 of the EIAR, further modelling was undertaken which included localised screening and enhanced hoarding around construction site boundaries. The effect of this mitigation on linear works in area AZ1 is shown in Table 13.86 but there is no indication of the residual noise level. The section identifies that noise levels at Seatown Villas, Estuary Court, Chapel Lane and Ashley Avenue will remain above the CNT and that the Noise Mitigation Policy will be implemented where eligibility is established, which is a clear indication of a residual significant impact.
- 11.16.198. Following the application of the Noise Mitigation Policy, the residual noise impact is predicted to be reduced to moderate.
- 11.16.199. Similarly, residual significant to very significant adverse impacts are identified at Airside Business Park during linear works and the noise assessment recommends "temporary relocation of west façades of upper floor", following which the impact is predicted to be temporary, short term, but with no specific impact magnitude identified.
- 11.16.200. I have previously discussed the Noise Mitigation Policy in detail and, subject to the suggested amendment regarding the duration of temporary rehousing, I consider it will be effective in mitigating the impact of noise on sensitive receptors. It is clear that, notwithstanding the implementation of mitigation, construction of the cut and cover and retained cut sections will involve high levels of time, over prolonged periods and TII acknowledges impacts cannot be mitigated by standard forms of mitigation. I consider TII's approach is appropriate, in the circumstances and in the

context of the benefits that delivery of MetroLink will provide to the affected communities once operational.

- 11.16.201. In the case of track laying works, the alignment runs in close proximity to housing on both sides of the R132 between the Estuary and Malahide Road roundabouts. In the context of the predicted noise levels of up to 60/65dB and given that track laying works will take place on a 24/7 basis, I agree with the EIAR that the impact will be significant or very significant adverse. However, I acknowledge that the EIAR assessment states that tracklaying will progress at a rate of c. 100m per day or night and that the predicted impacts will therefore be typically experienced for a 1-night duration for any given sensitive receptor in proximity to the works.
- 11.16.202. According to Table 13.85 of the EIAR, TII proposes to install an enhanced 4m site hoarding around various work sites between Estuary Roundabout and Nevinstown West, following the implementation of which the impact of night-time track laying is predicted to be reduced to moderate adverse. TII further commit that prior to the commencement of the construction works at each compound, the contractor will conduct an individual site assessment as part of the CNVMP to verify the height and position of screening to control noise impacts based on the most up to date construction methodologies and input data.
- 11.16.203. The inclusion of screening of this nature accords with advice provided by BS5228-1 and subject to appropriate specification and siting I am satisfied that the impact would be reduced to the level of moderate.
- 11.16.204. Regarding proposed noise impacts associated with station construction at Seatown and Fosterstown, it can be seen from EIAR Tables 13.41 and 13.46 that multiple stages of construction give rise to noise above the relevant CNT. Again, the EIAR is unclear on the duration of the relevant construction stages or the duration of the predicted noise impact but based on the construction stages discussed in both tables it can be reasonably estimated that the relevant works will take multiple months to complete.
- 11.16.205. In the case of Seatown Station, the modelled noise sensitive receptors are commercial properties, the Hertz Call Centre building that is adjacent to the station and North Dublin Corporate Park that is to its south. I agree with the EIAR

assessment, that the identified impacts range from moderate to significant to significant to very significant.

11.16.206. Similar to other locations in AZ1, TII undertook further modelling that included localised screening and enhanced hoarding around the construction site boundaries and in the case of North Dublin Corporate Park no residual significant impact is identified. For the Hertz building I note that a residual significant to very significant impact is predicted, where noise levels are modelled to remain more than 5dB above the CNT. In acknowledging the residual impact, the EIAR states that consultation will be undertaken between TII, the contractor and the building occupants where eligibility has been established for further intervention measures in line with the Noise Mitigation Policy.

11.16.207. Hertz made a submission on the application and also appeared at the oral hearing, in both instances raising the issue of noise and its impact on business operations at the site. In response to the submissions, TII proposed that a Trigger Action Plan (TAP) would be implemented for this site. According to document 'Risk Management Plan – 'Trigger Action Plan'' (Ref. OH175), each TAP is building-specific and will set out the project's site-specific commitments in relation to the management of temporary construction noise and vibration effects. I am satisfied that this approach, which will allow for a more refined and detailed assessment of noise, in the context of the specific Hertz operation, will be effective in ensuring that significant adverse impacts are unlikely to arise. I note that, in their oral hearing appearance on 21st March 2024, Hertz advised that engagement between the parties had resulted in resolution of a number of Hertz's concerns including related to daily operations. It thus appears to me that Hertz's concerns regarding noise may have been addressed. TII committed to the implementation of the TAP at the Hertz site in document Ref. OH125.

11.16.208. In the case of Fosterstown Station, similar to other locations, TII undertook further modelling that included specified mitigation and, by reference to Appendix A13.7 of the EIAR, no residual significant impact is identified.

11.16.209. Table 13.49 of the EIAR predicts a moderate to significant noise impact, related to construction stage traffic routeing along Feltrim Road. I note that the EIAR assessment states that the impact relates to redistribution of traffic along this road

and that there are no construction vehicles along the road. Section 13.6.1.3 acknowledges that mitigation measures to reduce noise from construction traffic are limited to restricting speed limits, maintaining road surfaces and ensuring all vehicles are properly maintained.

11.16.210. I accept that rerouting of traffic is necessary, in order to facilitate construction, and that there are limited means by which mitigate noise impacts. The EIAR is unclear on how long traffic will be rerouted along Feltrim Road but it will be for a temporary period and, in view of the wider benefits accruing from the delivery of this major public transport project, I consider the temporary impact is acceptable.

11.16.211. For the operational phase, the assessment identifies that housing on the east and west sides of the R132 already experiences high noise levels associated with road traffic. It identifies that in order to ensure these noise levels are not increased, boundary walls for each estate are required along the new kerb line of the R132. As I have outlined elsewhere, TII amended landscaping proposals in Area AZ1 at the oral hearing and, of relevance to this issue, proposed that boundary walls at Estuary Court, Seatown Villas and Ashley Avenue would be reinstated to match the existing situation. I am satisfied therefore, that there will be no significant noise issue arising from R132 traffic.

11.16.212. In terms of rail noise, the assessment identifies moderate impacts for properties in the vicinity of the Broadmeadow viaduct in day-time/night-time peak scenarios and for single properties at Estuary (Emmaus Centre) and Fosterstown (unnamed house) during night-time/night-time peak scenarios. In the case of the Emmaus Centre, noise mitigation is recommended, and this takes the form of a 2m high barrier to the north east of the centre.

11.16.213. The residual impact, according to Table 13.91 of the EIAR, is predicted to be slight arising from installation of this barrier. I agree that the installation of a noise barrier is likely to be effective in ensuring the operational noise impact is not significant.

11.16.214. Area AZ2 (Dublin Airport)

11.16.215. A significant noise impact is predicted for a halting site to the north of Dublin Airport during TBM works at the DANP, during night-time works. I note the EIAR comment, that the halting site is to be relocated as part of consented airport

development and as such this site is unlikely to be occupied during construction. This is a reasonable assumption, in my view.

11.16.216. In circumstances where the halting site remains occupied at the commencement of construction, the assessment identifies that noise levels around 5dB above the CNT will be experienced during night-time works and I agree that the impact will be significant. However, this will be for a temporary and short-term period, during TBM breakthrough works. No direct mitigation is identified by the EIAR but in view of the fact that breakthrough will take place below ground and the construction site will be enclosed by a standard construction hoarding I am satisfied that, similar to other locations, noise attenuation of 10dB can be reasonably expected and the residual impact on the halting site will thus not be significant.

11.16.217. Table 13.52 of the EIAR predicts that Our Lady Queen of Heaven Church, which is north-west of the Dublin Airport Station, will experience noise levels above the CNT during multiple stages of construction and I agree that impacts will range from moderate to significant to significant to very significant. Having considered the further modelling results in Appendix A13.7 I note that moderate to significant impacts are predicted for 'Church (windows)' during piling and excavation stages only. Noting that the predicted noise levels in these stages remain below the CNT and in particular noting the noisy environment in which the Church is located, I am of the view that the predicted impact is acceptable.

11.16.218. Section 13.5.3.2.3 of the EIAR states that each of the underground stations, including Dublin Airport, incorporates tunnel ventilation shafts (TVS) at both ends of the stations and that noise modelling has indicated that emergency operation of these shafts may pose a potential significant noise impact. The document 'Noise Control from Fixed Installations' (Ref. OH168) submitted to the oral hearing on 5th March 2024 contains a commitment that the appointed contractor will be required to design and construct fixed installations such that noise levels during normal operations do not exceed 5dB over the measured baseline level. In accordance with advice contained within BS 4142:2014+A1 2019, airborne noise arising from fixed installations is not significant if the predicted value does not exceed 5dB above the measured baseline.

- 11.16.219. I am satisfied that the proposed approach will be effective in ensuring that operation of the TVS will not give rise to significant noise impacts at sensitive receptor locations in the vicinity of the underground stations.
- 11.16.220. No significant noise impacts are predicted during operation.
- 11.16.221. Area AZ3 (Dardistown to Northwood)
- 11.16.222. According to Table 13.54 of the EIAR, construction of the M50 viaduct and rail embankment that leads down to the Northwood portal is predicted to give rise to noise levels up to 5dB above the CNT at the residential property known as St. Annes and at Santry Lodge, which TII identifies is currently in use as a homeless hostel. I agree that in both instances the impact would be moderate to significant. I note that the EIAR assessment predicts that this impact will be residual, notwithstanding the implementation of proposed mitigation.
- 11.16.223. The EIAR assessment is unclear on the duration of this impact, however; I note that Section 13.5.2.5.2 states that the impact arises during piling and foundation works. With reference to information provided by TII in relation to the duration of piling activities in other areas and having regard to advice provided in the Tyréns report regarding the duration of piling works at specified locations, it can be reasonably estimated that these works will take a number of months to complete.
- 11.16.224. The noise levels predicted are high, but they are necessary as part of the construction of the project and as I have outlined in the Heritage section of my report, I accept that the viaduct and embankment cannot be relocated. I therefore consider the impact is acceptable.
- 11.16.225. Table 13.55 of the EIAR predicts noise levels of up to 10dB above the CNT at both St. Anne's and Santry Lodge and also at 1-3 Ballymun Road during tracklaying works. As with previously discussed locations in area AZ1, I acknowledge that the EIAR assessment states that tracklaying will progress at a rate of c. 100m per day or night and that the predicted impacts will be experienced for a 1-night duration typically for any given sensitive receptor in proximity to the works. I agree that subject to implementation of proposed mitigation, a significant impact is unlikely.
- 11.16.226. For the operational phase, Table 13.80 of the EIAR predicts significant adverse impacts at St. Annes in the daytime and night-time peak hour scenarios and

a moderate to significant impact in the night-time scenario. I note that the EIAR identifies that the impact will be experienced by noise sensitive properties between the M50 viaduct and Northwood station, which includes other residential properties.

11.16.227. TII proposes to install a noise barrier along the rail embankment and, by reference to drawing No. ML1-JAI-ARL-SC07_GF-DR-X-00113, I note that it is described as a 1.8m timber noise barrier. Table 13.91 of the EIAR predicts the residual impact in this area will be slight and I agree with this prediction, subject to appropriate specification of the noise barrier. I note that such barriers are used by TII throughout the country in motorway schemes, and that they are known to be effective in mitigating noise.

11.16.228. Construction of Northwood Station, according to Table 13.56, is predicted to give rise to moderate to significant impacts for the Blackwood Court apartment complex on the south side of Northwood Avenue, with the subject noise associated with excavation works above the roof slab. I note that the assessment states that impacts are predicted for upper floors within the building. In view of the prediction of noise levels up to 5dB over the CNT, I agree that the impact would be moderate to significant.

11.16.229. The residual impact assessment does not predict a significant impact for these apartments, but I am unclear on how this conclusion has been reached, when the impact is stated to relate to upper floors and, thus, site hoardings are unlikely to provide substantial attenuation of noise from the building. In the absence of identified mitigation that would reduce the impact, I consider the residual impact should remain at moderate to significant.

11.16.230. In saying this, and with reference to Appendix A13.7, I note that the modelled daytime noise level is 1dB over the CNT and thus the exceedance is marginal. Given the EIAR assessment has been undertaken on a conservative basis, and given there is a likelihood at predicted noise levels will reduce as the construction programme is further developed and refined and further modelling is undertaken, I consider there is a likelihood of noise impacts at this location being reduced below the CNT level. In these circumstances, I consider the predicted impact is acceptable.

11.16.231. Area AZ4 (Northwood to Charlemont)

11.16.232. Works in area AZ4 include the underground tunnel from Northwood to Charlemont, 9 No. underground stations, an intervention shaft at Albert College Park and an intervention tunnel at Charlemont.

11.16.233. ***City-wide Issues***

11.16.234. I note from the Tyréns report that a recommendation has been made that bentonite recycling plants at the Northwood Portal site and the Collins Avenue, Mater, St. Stephen's Green and Charlemont Stations should be contained within an acoustic structure, in order to reduce noise from what are known to be noisy construction elements. I agree that an acoustic structure at these sites will provide a high level of noise attenuation from what would otherwise be a source of high noise levels over prolonged periods of construction and I recommend the imposition of the condition as recommended by Tyréns.

11.16.235. ***AZ4(a): From Northwood Portal as far as Collins Avenue Station***

11.16.236. Northwood portal is located south west of Northwood Station and on the western side of the R108. According to Table 13.57 it will have significant and significant to very significant impacts on housing in the vicinity during night-time TBM works.

11.16.237. The SoE submitted on the opening day of the oral hearing identifies errors in relation to Table 13.57. Table 0.4 of the Errata document presents additional receptor locations, predicted construction noise levels and predicted impact magnitudes, related to noise emanating from the batching plant. It predicts impacts ranging between moderate to significant and significant to very significant for properties at Northwood Green, Northwood Nursing Home and the Blackwood Court apartment complex.

11.16.238. In view of the predicted noise levels, I agree with the EIAR impact magnitude classification. I also note that Blackwood Court apartments are also identified as affected by portal operations (discussed in the preceding section), so there is some stacking of impacts at this location.

11.16.239. Importantly, the Portal site is also the location for spoil removal from the City tunnel and for other associated tunnelling elements and I note that the assessment includes noise arising from these works. The duration of the predicted impact is likely

to be for a prolonged period. TII acknowledge this in their mitigation strategy, where the EIAR states that an enclosed structure will be constructed around the surface working area of the Portal site prior to commencement of 24/7 works and that it will achieve a weighted sound reduction index of 24dB.

11.16.240. This bespoke mitigation is likely to be highly effective in reducing noise from the portal site and I note from the Tyréns report that they consider it will provide “a high level of noise attenuation”. EIAR Appendix A13.7 indicates that the residual impact, taking account of this acoustic structure, predicts night-time noise levels of 43dB during TBM works, which is well below the CNT.

11.16.241. As I have outlined previously, the Tyréns Report recommends that the Board should impose a condition requiring that the bentonite recycling plant at the Portal site should also be contained within this enclosure.

11.16.242. No significant noise impacts are predicted in respect of the construction of Ballymun Station.

11.16.243. ***AZ4(b): Collins Avenue Station and Tunnel as far as Griffith Park Station***

11.16.244. At Collins Avenue Station, noise levels of up 15dB above the CNT are predicted during enabling works, piling/D-wall works and ground level excavation works. EIAR Table 13.59 presents a summary of the predicted significant impacts. I agree that the impact on affected sensitive receptors will be moderate to significant and significant to very significant.

11.16.245. As with other construction sites, TII undertook further modelling, which included localised screening and enhanced hoarding around construction site boundaries. I note there is a contradiction between Section 13.7.1.1.4 of the EIAR and Appendix A13.7, whereby Section 13.7.1.1.4 identifies a residual moderate to significant impact at the church during piling works as the sole significant residual impact, however; Appendix A13.7 identifies a broader range of residual moderate to significant and significant to very significant impacts on both Our Lady of Victories Church and Albert College Court during multiple phases of construction.

11.16.246. Having considered Appendix A13.7 in particular, it is clear to me that Our Lady of Victories Church and Albert College Court are likely to experience elevated noise levels for prolonged periods and the impact will range between moderate to

significant and significant to very significant. For the Church, I note from Section 13.7.1.1.4 of the EIAR that there will be no evening or Sunday construction activities at the site and I further note from Section 5.2 of the CEMP (Ref. OH348) a CNVMP will be prepared and this will include for specific working hour measures at sensitive locations including church events such as mass or funeral events. I consider these undertakings will have a beneficial effect in limiting noise disturbance during church services. For residential properties, as with other locations, there will be access to bespoke mitigation under the Noise Mitigation Policy, where eligibility is established.

11.16.247. I have previously discussed the Noise Mitigation Policy in detail and, subject to the suggested amendment regarding the duration of temporary rehousing, I consider it will be effective in mitigating the impact of noise on sensitive receptors. It is clear that, notwithstanding the implementation of mitigation, construction of underground stations such as Collins Avenue Station will involve high levels of noise, over prolonged periods and TII acknowledges that impacts cannot be fully mitigated by standard forms of mitigation. I consider TII's approach is appropriate, in the circumstances and in the context of the benefits that deliver of MetroLink will provide to the affected community once operational.

11.16.248. A number of observers expressed concern regarding construction noise, including Frances Maguire (S97 and OH218) and ACRA & Ballymun Road North Residents Associations (S1, S252, OH45 and OH215) and included in their issues were concerns regarding the height of construction hoardings. Table 13.85 of the EIAR states that enhanced 4m hoardings will be erected around the north, south and east site boundaries of the construction site. I acknowledge that the structures will be imposing and will in themselves have an impact on visual amenity, but they perform an important noise attenuating function, which I consider outweighs their visual impact.

11.16.249. According to EIAR Table 13.60, housing in the vicinity of the Albert College Park Intervention Shaft will experience moderate to significant noise impacts during ground level excavation and moderate to significant and significant impacts during SCL works that it is proposed to take place on a 24/7 basis. I agree that the impact on affected sensitive receptors will be moderate to significant and significant.

- 11.16.250. In respect of the SCL works, mitigation is proposed in the form of an acoustically clad steel framed building that will control airborne noise breakout and which will achieve a minimum sound reduction index of 24dB R_w.
- 11.16.251. The EIAR does not present the results of further modelling (i.e. the predicted residual impact). In the case of ground level excavation, in view of the unmitigated modelling results (where CNT exceedances of up to 5dB are predicted, I acknowledge that application of the 10dB screen allowance provided for by BS5228 would bring the modelled noise levels to within the relevant CNT and thus a significant impact would be avoided.
- 11.16.252. For SCL works, in view of the prescribed level of noise attenuation that will be incorporated into the acoustic enclosure, I am satisfied that it will be effective in ensuring there is no significant noise impact during SCL works.
- 11.16.253. The Tyréns report advises that, while SCL are necessary to undertake on a 24 hour basis, they do not need to be undertaken on a 7 day per week basis. As detailed in the Hours of Construction section of this report, I accept Tyréns recommendation that SCL works should be restricted to a 24 hour/ 5.5 day basis to provide a degree of weekend respite to nearby NSLs. Tyréns also recommend that blasting should not be used for this intervention shaft. As I have outlined previously, I agree with this recommendation as blasting introduces unnecessary risks and impacts in close proximity to sensitive receptors. I have therefore recommended this condition should be imposed by the Board, as part of any grant of the Railway Order.
- 11.16.254. Hampstead Residents CLG made multiple submissions on the application (S111, 1FS27 and 2FS6) and they also appeared at the oral hearing (OH61, OH219 and OH387). These submissions included multiples issues regarding noise. For the construction phase, on a number of occasions they questioned the appropriateness of TII's use of baseline survey results from locations UT32 and AT27 and expressed the view that the EIAR assessment is flawed as these locations are unrepresentative of baseline conditions at Hampstead Avenue. For the operational phase, they queried the level of detail provided regarding breakout noise from ventilation shafts and grilles at surface level.
- 11.16.255. Regarding the baseline surveys, in the Response to Submissions document TII stated that it is not practical to survey every affected property and that baseline

noise levels were measured at an extensive range of locations across the alignment to establish representative noise levels at noise sensitive locations. In circumstances where noise levels were not measured specifically at a property or building, the most appropriate representative location was assigned, in this case UT32 and AT27. TII state that AT27 was deemed to be suitable for comparative purposes as it is set back at a similar distance from the R108 road as properties along Hampstead Avenue and was in the low range of noise levels expected along Hampstead Avenue. UT32 was deemed to be suitable because it is a similar distance from the road as specified receptor locations.

11.16.256. Regarding the benefit and usage of the established baselines, TII state that they are required in order to establish the relative significance of predicted noise levels, in accordance with the ABC Method contained in BS5228-1 and they also point out that further baseline noise surveys will be undertaken prior to the commencement of construction works, and Hampstead Avenue can be included as a baseline monitoring location. In this respect I note that Reference 4.1 of the Final Schedule of Additional Environmental Commitments outlines a commitment to undertake further baseline monitoring at this location.

11.16.257. As I have outlined previously, TII's approach to the noise impact assessment is primarily grounded in the BS5228-1 ABC Method. I accept that in a city environment such as this it is impractical to expect TII to survey all sensitive receptor locations and the choosing of representative locations is both practical and efficient. As TII point out, utilising representative location AT27 placed some of Hampstead Avenue into the quietest/most sensitive category (Category A) and other parts into Category B. With this in mind, I am satisfied that TII has not selected a representative location that could be construed as being used to allow for greater noise levels.

11.16.258. It should also be noted that the assessment has been carried out at an early stage of design maturity, when not all details of the equipment, phasing and working methods are known. TII's commitment to undertaking further updated baseline monitoring is consistent with BS5228-1, Section E.1 of which provides for further assessment of noise impact later in the process after a contractor has been appointed and detailed method statements and programme information are

available. The Tyréns report also points out that this approach is normal for large projects such as this.

11.16.259. Regarding the level of detail provided regarding breakout noise from ventilation shafts and grilles at surface level, I have previously outlined that an acoustic study undertaken by TII found that during a tunnel emergency situation, noise levels at 10m from the external grille are below 55dB L_{Aeq}. TII consider this is acceptable for emergency use but that it would pose potential significant noise impacts, particularly during night-time periods without specific attenuation. The document 'Noise Control from Fixed Installations' (Ref. OH168) submitted to the oral hearing on 5th March 2024 contains a commitment that the appointed contractor will be required to design and construct fixed installations such that noise levels during normal operations do not exceed 5dB over the measured baseline level. In accordance with advice contained within BS 4142:2014+A1 2019, airborne noise arising from fixed installations is not significant if the predicted value does not exceed 5dB above the measured baseline.

11.16.260. I am satisfied that this approach will be effective in ensuring that these fixed plant elements do not generate significant noise during operation.

11.16.261. Regarding the Hampstead Residents request for a 'dark and quiet site at night', TII confirmed that night-time works will be undertaken underground during the SCL tunnel construction and that this will necessitate an element of support activity at ground level. EIAR Section 13.6.1.2.4 states that surface activities will be enclosed within an acoustically clad steel framed building that will achieve a minimum sound reduction index of 24dB R_w. This, taken together with the previously discussed monitoring programme, will control noise emissions from this compound during night-time works. Further to this point, as noted above, it is recommended that SCL works should be limited to a 24 hours / 5.5 day basis, rather than the 24/7 works sought by TII.

11.16.262. **AZ4(c): Griffith Park Station and Tunnel as far as Glasnevin Station**

11.16.263. Table 13.61 of the EIAR identifies that Whitehall College of Further Education and Scoil Mobhi National School, which share the same grounds to the east of Griffith Park Station, will each experience moderate to significant or significant to very significant impacts during multiple stages of construction and that housing at St.

Ita's Road and St. Mobhi Road will experience moderate to significant, significant or significant to very significant impacts during ground level excavation and concrete batching works that will take place at night-time.

11.16.264. The SoE submitted on the opening day of the oral hearing identifies errors in relation to Table 13.61. Table 0.5 of the Errata document presents additional receptor locations, revised and newly predicted noise levels and newly predicted impact magnitudes in respect of the additional receptor locations. It predicts significant and moderate to significant impacts for housing at St. Mobhi Road arising from operation of the batching plant.

11.16.265. In view of the predicted noise levels, I agree with the EIAR classification of impacts.

11.16.266. As with other locations, TII undertook further modelling that incorporates localised screening and enhanced hoarding around construction site boundaries. It can be seen from Appendix A13.7 that residual significant impacts are predicted at Whitehall College during multiple stages of construction and residual moderate impacts are predicted at Scoil Mobhi during piling works and ground level excavation works. Residual significant impacts are predicted for housing on Mobhi Road during night-time concrete batching works.

11.16.267. Both Whitehall College and Scoil Mobhi are on grounds owned by the OPW and I note that TII has committed to the preparation of a TAP for this site, as it has for a number of OPW-owned sites along the alignment. As I have outlined previously, each TAP is building-specific and will set out the project's site-specific commitments in relation to the management of temporary construction noise and vibration effects. I am satisfied that this approach will be effective in ensuring there is no significant noise impact during construction.

11.16.268. In relation to the night-time batching works, Section 13.7.1.1.4 of the EIAR states that an acoustic enclosure will be installed prior to the commencement of 24/7 batching plant works and that with a suitably designed enclosure in place, night-time impacts will be controlled to operate at or below the CNTs. Subject to appropriate specification, I am satisfied that the construction of an acoustic enclosure will be effective in ensuring noise levels during night-time works do not have a significant impact. I would again highlight that TII has committed to monitoring during

construction and that this monitoring information will be publicly available. The effectiveness of mitigation measures and performance relative to CNTs will therefore be demonstrated through monitoring.

11.16.269. ***AZ4(d): Glasnevin Station and Tunnel as far as Mater Station***

11.16.270. Glasnevin Station is a particularly constrained station involving an extremely complex interface of the metro line and the two railway lines at different depths, at a location immediately adjacent to the Royal Canal and the busy R108. Section 13.5.2.6.5 of the EIAR outlines that construction of the interchange station involves a range of complex overlapping phases occurring within the overall project boundary to the north and south of the existing rail lines and to the west of the proposed station. I note that the impact assessment assumes the provision of a 3m high construction hoarding along the north and south boundaries, whereas for all other stations the impact assessment was undertaken on the basis of a standard 2.4m high hoarding.

11.16.271. Each of the ten construction stages modelled in Table 13.62 gives rise to impacts ranging between moderate to significant to significant to very significant at multiple sensitive receptors, including housing at Dalcassian Downs (including The Court apartment complex) and Cross Gun Quay Apartments. Table 13.63 identifies that track lowering works, which will take place over a number of possessions which include weekend and night-time working are similarly predicted to give rise to impacts ranging from significant to very significant to very significant to profound at multiple sensitive residential receptors.

11.16.272. The SoE submitted on the opening day of the oral hearing identifies errors in relation to Table 13.62. Table 0.6 of the Errata document presents a number of revisions and updates to the table, in respect of multiple stages of construction. In particular it identifies receptors, noise levels and impact magnitudes for Stage 4 'South Station Piling & North – South excavation works ground level (Including batching plant)', predicting moderate to significant and significant to very significant impacts for housing at Dalcassian Downs (including The Court), Cross Gun Quay Apartments, 3 Shandon Mills and Prospect Lodge.

11.16.273. I agree with the EIAR impact magnitude classification in view of the predicted noise levels.

11.16.274. As with other stations, TII undertook further modelling that incorporates localised screening and enhanced hoarding (4m high) around construction site boundaries. Section 13.7.1.1.4 outlines that incorporation of these measures would maintain noise levels below the CNT level in the majority of cases. Exceptions to this are at The Court apartments, for 'all activities', and Cross Gun Quay apartments during piling works and ground level and underground excavation. I note from Table 13.87 that in the case of The Court, the assessment points out that the Noise Mitigation Policy will be applied where eligibility is established, but that at Cross Gun Quay apartments construction noise levels will maintained below the noise insulation trigger value.

11.16.275. A large number of the submissions received from observers commenting on this area of the development include noise concerns. Examples include the Management Company on Behalf of The Court (S175, OH84 and OH232), which submits that mitigation is designed to reduce rather than eliminate impacts and requests that a noise monitoring scheme be implemented and a scheme of noise profiling (when noise is likely to happen, duration of same and issues of exceedances) should be implemented; Claire Dunne (S45, OH85 and OH233) expresses concern that construction hoardings will impede access to daylight; Fiona O'Kelly (S96) highlights human health impacts associated with the prospect of temporary rehousing; Mark Campbell and Aimee O'Farrell (S182) request that noise limits for evening and night-time working should be reduced by 5-10dB; and Vincent Harrison and others (i.e. residents of Coke Oven Cottages) (S309, S310, OH240) question TII's noise assessment methodology, object to proposed night-time working and also submit that there is a lack of clarity in terms of the noise attenuation and mitigation being proposed for both the construction and operational phases.

11.16.276. Glasnevin Station was the focus of detailed discussion at the oral hearing, including a presentation related to construction sequencing (Ref. OH75) and EIAR Appendix A5.5, 'Glasnevin Construction Report', also discusses the construction programme in detail. In the case of The Court apartments, EIAR Appendix A5.2, 'Construction Programme Including Tunnel Elements', outlines that the construction programme will take approximately 102 months (8.5 years) to complete, with The Court affected for 'all activities' and I consider the residual impact will be at least very significant.

11.16.277. For Cross Gun Quay apartments, the duration of piling and excavation works is not clearly stated by the EIAR and I have therefore given consideration to expert commentary within the Tyréns Report that I consider is useful in establishing the magnitude of impact. Section 13 of the Report outlines that in order to maintain the overall construction programme, activities will need to be overlapped and sequenced, and piling/D-wall works may take 2-3 years to complete and will overlap with excavation and concreting works. I would again stress that this is an estimation by Tyréns, but it nevertheless provides a guide to the likely duration of exposure to predicted noise levels and in this context I agree that the impact will be significant to very significant.

11.16.278. It is clear from the assessment that construction of Glasnevin Station will be highly disruptive to housing in closest proximity for prolonged periods and the traditional mitigation measures (screening and hoarding) will have a limited effect in reducing noise. Consideration needs to be given to the crucial role that Glasnevin Station plays in the MetroLink project, providing direct interchange with two commuter rail lines and a BusConnects corridor and it is important to acknowledge that the Station is necessarily fixed in terms of its location due to the location and alignment of these rail lines. The provisions of the Noise Mitigation Policy are therefore very important to reducing the duration of exposure to excessive noise. Whilst I am sympathetic to observer concerns regarding the impact of temporary rehousing, it is clear to me that such extensive mitigation may be necessary in order to allow for station construction. Temporary rehousing has been implemented as part of other international metro projects and the Board will be aware that it is proposed as part of the consented Dart+ South West project (ABP-316119-23), so TII is following an established path in dealing with the issue. In this context I agree that following implementation of the Noise Mitigation Policy, the impact would be reduced to the level of moderate. I have already addressed the basis for and provisions of the Noise Mitigation Policy earlier in this section.

11.16.279. I agree with the submission of the Management Company on Behalf of The Court that communication of noise levels and their duration is important to mitigating the impact on affected residents. The issue is highlighted in the Tyréns Report, which, in acknowledging that it may be impossible to fully mitigate all impacts, points out that in many cases the most realistic solution may be simply to seek to gain

acceptance from the affected parties through the implementation of the best practical mitigation measures together with good communication. BS5228-1 also identifies the importance of good public relations and communications where receptors will be significantly affected. I agree with the Tyréns recommendation that, should the Board decide to grant the Railway Order, that a condition should be included requiring additional noise modelling to be undertaken and that this modelling should be used to communicate the noise impacts from upcoming activities to affected receptors and that the modelling results should be published in an online forum. Tyréns also recommend that the results of monitoring should be published online, on a daily basis. I consider this approach will allow affected residents to plan around noisy works and to better appreciate the extent and duration of these construction phases and may contribute to greater acceptance of disruption during construction.

11.16.280. I would also point out that TII has committed to the provision of dedicated Local Liaison Officers, attached to key information centres, whose responsibility will be to engage with residents, businesses, and the public and to provide a point of contact in relation to project issues. Details of this aspect of the project are contained in the document 'Stakeholder Engagement Plan' submitted at the oral hearing (Ref. OH124).

11.16.281. I acknowledge that the provision of high construction hoardings in close proximity to apartments at The Court will have an impact on residential amenity, but they perform an important noise attenuating function, which I consider outweighs the impact. I consider they are an important aspect of the mitigation proposals.

11.16.282. Regarding the track lowering works for the MGWR and GSWR, the EIAR points out that the former will take 21 months to complete and with the latter taking 5 months. According to Section 13.7.1.1.4 of the EIAR works that occur within 200m of a property that is located along the track have the potential to cause a temporary, significant impact, however, as the works progress the impacts will become less significant at that property and the impacts will follow the work progress linearly along the track. The Section further states that mitigation measures are limited for these works due to the non-static nature of the sites and the plant involved. In terms of the duration of exposure to predicted noise, I note that TII's response to Vincent Harrison and others' initial submission outlines that realignment will be undertaken sequentially and that track lowering behind properties will be undertaken in a 2-week

period within the overall possession schedule. This is indicative of a short-term impact. Notwithstanding, by reference to the residual noise levels depicted in Appendix A13.7, I agree that the impact on affected housing will vary between moderate to significant and very significant to profound for the period of exposure.

11.16.283. As with noise impact arising from station construction, I agree that subject to implementation of the Noise Mitigation Policy the impact would be reduced to the level of moderate.

11.16.284. The Vincent Harrison and others submissions contain detailed criticisms of TII's noise modelling methodology, which I have considered. I have also considered TII's response to this submission, in their Response to Submissions document. I do not share the observer's concerns regarding the timing of the baseline surveys, since for a large proportion of the time period between the undertaking of the surveys and the submission of the application there were Covid-19 restrictions in place and these are likely to have had a suppressing effect on baseline noise levels. I am also satisfied that the survey location utilised by TII is representative of the noise environment at Coke Oven Cottages and I note that use of this location resulted in Coke Oven Cottages being placed into the quietest/most sensitive noise category (Category A). I am therefore satisfied that TII's approach has not resulted in misclassification or down-playing of predicted impacts.

11.16.285. In any case, and as TII points out, notwithstanding the baseline survey results, the predicted noise levels at this location are at a level that indicates eligibility for access to the Noise Mitigation Policy. I have discussed the Noise Mitigation Policy in detail above but would outline here that TII's approach of committing to updating the airborne noise modelling predictions at least 6 months prior to commencement of construction and using the results as a basis for engagement with affected parties is consistent with BS5228-1, which provides for further assessment of likely eligibility for noise insulation or temporary rehousing at a later stage in the process, when a contractor has been appointed and construction method statements and programme information are available. I consider this is good engineering practice as (a) the baseline environment may have changed in the intervening period and (b) new technologies may become available that would allow construction to be undertaken in a less noisy manner.

11.16.286. As with other locations predicted to experienced prolonged and significant noise, I sympathise with the overarching theme of the observers' submissions but TII's approach is established practice for large infrastructure projects and I agree that subject to implementation of the Noise Mitigation Policy, the impact would be reduced to the level of moderate.

11.16.287. Similar concerns were raised by Shandon Mill Owners Management Company CLG (S278 and OH239) and are addressed within the Tyréns report. I note that Tyréns similarly outline that noise during track lowering cannot be significantly mitigated and that access to the Noise Mitigation Policy may be available.

11.16.288. Regarding the observer concerns that night-time working is unacceptable or that specified night-time working noise limits should be imposed, I accept that attempts to control or limit working hours in the manner proposed will prolong the construction phase and, further, would prolong the period of closure of the heavy rail lines. I also accept TII's position that there is limited means by which to reduce noise emanating from construction works/sites, particularly during track lowering works where the works are of a non-static nature. I therefore do not consider it would be appropriate or reasonable to attempt to further restrict construction, in the manner sought.

11.16.289. At the oral hearing, the applicant submitted a document entitled 'DART+ West in Advance of MetroLink' (Ref. OH28), which outlines the implications of the now-approved DART+ project proceeding in advance of MetroLink. With regard to noise and vibration, the applicant notes that a reduced level of excavation works for track lowering will be required, since the DART+ project includes some track lowering, but that this is offset with the impacts of temporarily removing the DART+ overhead line equipment. The overall additional airborne noise & vibration impacts compared to those assessed in the MetroLink EIAR are contended to be not significant. I consider this conclusion to be reasonable.

11.16.290. ***AZ4(e): Mater Station and Tunnel as far as O'Connell Street Station***

11.16.291. According to Table 13.64 of the EIAR impacts ranging between moderate to significant and significant to very significant are predicted at sensitive properties in the vicinity of the station site for all stages of construction. I note from the EIAR

assessment that the nearest noise sensitive receptors to the station site are the Mater Hospital to the north, St Joseph's Church to the south/east, and residential properties along Berkeley Road. The residential properties identified by Table 13.64 are those along Berkeley Road and Berkeley Street, in closest proximity to the station site.

- 11.16.292. The SoE submitted on the opening day of the oral hearing identifies errors in relation to Table 13.64. Table 0.7 of the Errata document revises predicted construction noise levels for a number of the receptor locations, but this does not affect the predicted impact magnitudes.
- 11.16.293. A further document, 'Errata Update – Chapter 13 Mater Station Construction' (Ref. OH122), was submitted at the oral hearing on 3rd March 2024 that identifies and corrects additional errors in Table 13.64 in respect of the enabling works, piling works and finishing/fit out phases in respect of predicted noise levels and the relevant predicted impact magnitudes.
- 11.16.294. In view of the predicted noise levels, I agree with the EIAR assessment that there will be impacts ranging between moderate to significant and significant to very significant.
- 11.16.295. As with other locations, TII undertook further modelling that incorporates localised screening and enhanced hoarding around construction site boundaries. The results of this further monitoring are discussed in EIAR Table 13.89, which identifies that each of the Mater Hospital, St. Joseph's Church and housing at 12-17 and 19-22 Berkeley Road will qualify for the Noise Mitigation Policy, following which the impacts are predicted to reduce to the level of moderate. At the other affected locations, following the implementation of the standard mitigation, noise levels are predicted to be below the CNT.
- 11.16.296. In the case of the Mater Hospital, Jarlath Fitzsimons SC appeared on their behalf at the oral hearing on 29th February 2024 and made a brief submission to confirm that an agreement had been reached with TII in relation to the issues of concern (Ref. OH115). The documents 'Trigger Action Plan Note 2: Applicable Locations' (Ref. OH190) and Final Schedule of Additional Environmental Commitments (Ref. OH376) also outline that a TAP will be prepared for the Mater

Hospital. It thus appears to me that the Mater Hospital's concerns have been addressed.

11.16.297. A large number of the submissions received from observers commenting on this area of the development include noise concerns. Examples include Andrew Conlon and Maeve Fitzpatrick (S9, 1FS4 and OH241) who raise concerns about living conditions and the adequacy of proposed mitigation and seek monitoring of noise levels in a publicly accessible manner; Berkeley Road Services and Traders Association (S19) who raise concerns regarding business disruption due to noise and the anti-business effect of site hoardings; Brendan Flanagan (S26, OH86 and OH244) expresses concern regarding business disruption due to noise, objects to the erection of site hoardings adjacent to his business for any period of time and the construction of a ventilation shaft outside of his shop's front door; District 7 Community Alliance (S66, 1FS18 and OH247) express concerns regarding the impact of noise on businesses, in particular those at 12-22 Berkeley Road; and Jonathan Healy (S154) seeks the appointment of a project liaison officer who can engage with affected communities on issues such as noise.

11.16.298. Construction of the Mater Station and specific issues associated with noise were discussed in detail at the oral hearing on 27th February 2024 when, amongst others, Andrew Conlon, Maeve Fitzpatrick (owners of 19 Berkeley Road) and Brendan Flanagan (owner and proprietor of a pharmacy at 18 Berkeley Road) appeared. At issue for both parties is the proposed construction of a ventilation shaft on the west side of Berkeley Road that is in close proximity to both properties and which necessitates the construction of 4m high site hoardings in front of both buildings. As part of their submission, Andrew Conlon and Maeve Fitzpatrick requested that the hoardings would be transparent at the upper section so that they do not completely block light from the ground floor of their home.

11.16.299. In responding to questions from both parties, TII acknowledged the significant noise impact that shaft construction will have and advised that construction of the shaft will take 6-12 months, at an early stage of the construction programme, following which the hoarding will be taken down and the construction site will thereafter be confined to the opposite side of Berkeley Road.

- 11.16.300. The request for a transparent upper section for the site hoardings was not addressed but by reference to a commitment given at Glasnevin, there is no issue with facilitating this request. In view of the direct impact that this hoarding will have on 19 Berkeley Road, I consider a condition should be attached requiring that the top 2m of the hoardings shall be transparent.
- 11.16.301. As I have outlined in Section 10.8, I accept TII's position that the shaft cannot be constructed on the trafficable road surface and that the constrained nature of the station site requires that the shaft be constructed in this location. In view of the predicted noise level at 19 Berkeley Road, the impact will be significant to very significant while construction is ongoing (and this is also the case for adjoining buildings, including Mr Flanagan's property) but the shaft construction period is relatively short, in the context of the wider station construction programme, and TII pointed out that 19 Berkeley Road will be eligible for additional mitigation under the Noise Mitigation Policy. I agree that subject to implementation of the Noise Mitigation Policy, the impact at 19 Berkeley Road would be reduced to the level of moderate.
- 11.16.302. In Mr Flanagan's case, he pointed out that maintaining the site hoardings in place for 6-12 months would obstruct visibility of and access to his pharmacy business at 18 Berkeley Road. As with other locations where I have discussed amenity impacts associated with these tall hoardings, I am sympathetic to Mr. Flanagan's concerns and agree that the hoardings are themselves an impactful aspect of construction, however; they serve an important noise attenuating function and I consider this outweighs such impacts. I would also point out that they are temporary installations and will be removed following construction.
- 11.16.303. Regarding noise from the wider station site during the construction phase, similar to the Glasnevin Station construction phase, It is clear from the assessment that construction noise will be disruptive to properties in closest proximity for prolonged periods and the traditional mitigation measures will have a limited effect in reducing noise. Housing at 12-22 Berkeley Road is identified as experiencing residual significant impacts during piling works and further mitigation proposals are identified under the Noise Mitigation Policy, following which the impact is predicted to reduce to the level of moderate. I have already pointed out that TII is following an established path, in terms of the Noise Management Policy proposals, and I agree

that subject to implementation of the Noise Mitigation Policy the impact would be reduced to the level of moderate.

11.16.304. I would bring to the Board's attention that Mr. Flanagan's property at 18 Berkeley Road, although not identified by the impact assessment, will experience similar impacts to the properties on either side during piling works and, in view of the absence of further proposals under the Noise Mitigation Policy, the residual impact will remain at the level of significant. Moderate to significant impacts are also likely during station excavation.

11.16.305. Properties at 5-11 Berkeley Road, which are primarily in commercial occupancy, are also identified as experiencing significant to very significant impacts during station piling works and moderate to significant impacts during station excavation. As with 18 Berkeley Road, in the absence of further proposals under the Noise Mitigation Policy, the residual impact for commercial occupiers will remain at these levels.

11.16.306. I acknowledge the impact in each of the above-discussed instances. However, whilst some disruption to business may arise, commercial property is less sensitive to noise than residential property and in view of the wider benefits to the community (including commercial occupiers) that will accrue from construction of the Mater station, I consider the impact is acceptable. I would also reiterate there is a realistic possibility of noise levels being reduced, as part of further noise modelling that will be undertaken following appointment of a contactor.

11.16.307. St. Joseph's Church is predicted to experience significant to very significant impacts during multiple stages of construction, which is reflective of the fact that the church site abuts the station site and station construction encroaches to within very close proximity of the church building. As with other locations, the noise modelling results indicate that standard mitigation measures will have a limited effect in reducing noise and the residual noise impact on the church during enabling works, piling, excavation works and finishing/fit-out will be significant to very significant. As with my assessment of impacts at Collins Avenue (Our Lady of Victories Church) I note from Section 13.7.1.1.4 of the EIAR that there will be no evening of Sunday construction activities at the site and I further note that Section 5.2 of the CEMP (Ref. OH348) a CNVMP will be prepared and this will include for specific working

hour measures at sensitive locations including church events such as mass or funeral events. I consider these undertakings will have a beneficial effect in limiting noise disturbance during church services.

11.16.308. Regarding the request that noise data would be available to the public, I have previously discussed this in the context of Glasnevin and have recommended that a condition should be included requiring additional noise modelling to be undertaken and made available to the public and that the results of noise monitoring should be published daily. I consider this approach will allow affected residents and commercial occupiers to plan around noisy works and to better appreciate the extent and duration of these construction phases and may contribute to greater acceptance of disruption during construction.

11.16.309. For the operational phase, TII advised at the oral hearing on 27th February 2024 that the ventilation fans are only likely to operate in peak morning and evening periods. I have previously outlined that TII has committed to further design development, including choice of systems, attenuation, updated baseline surveys, and calculations of noise levels at nearest NSLs, to ensure that the ventilation system does not exceed the relevant design criteria. I am satisfied that this approach will be effective in ensuring that these fixed plant elements do not generate significant noise during operation.

11.16.310. ***AZ4(f): O'Connell Street Station and Tunnel as far as Tara Station***

11.16.311. The EIAR noise assessment addresses potential impacts in two separate scenarios: with no oversite development (Scenario A) and with the oversite Dublin Central development under construction (Scenario B). I note that Scenario B assumes that the station box will be constructed by the Dublin Central contractor, with additional phases of the oversite development under construction at the same time, and that noise impacts associated with this scenario have been assessed within the noise chapter of the EIAR prepared for the Dublin Central planning application (Ref. ABP-318316-23).

11.16.312. Table 13.65 of the EIAR summarises Scenario A and identifies that a number of properties in the vicinity of O'Connell Street Station will experience noise impacts ranging between moderate to significant and significant to very significant during construction up to the point where the roof slab is cast in place. The affected

properties are primarily commercial, in terms of occupancy, and I note that the Table only identifies only Greeg Court (located at the corner of Moore Street and Parnell Street) as a residential property. Excavation below the roof slab is predicted to give rise to moderate to significant impacts at one location, Jurys Inn (the Board will note that this hotel is now known as the Leonardo Hotel).

- 11.16.313. The SoE submitted on the opening day of the oral hearing identifies errors in relation to Table 13.65. Table 0.8 of the Errata document presents additional receptors, additional and revised noise levels and impact magnitudes related to the demolition phase. Of particular, it downgrades predicted impact magnitudes at a number of locations.
- 11.16.314. In view of the predicted noise levels, I agree with the EIAR impact magnitude classifications.
- 11.16.315. According to Section 13.5.2.6.6.1.1 of the EIAR the assessment undertaken as part of ABP-318316-23 identified similar noise impacts calculated for Scenario B compared to Scenario A for the station box element of construction.
- 11.16.316. As with other locations, TII undertook further modelling that incorporates localised screening and enhanced hoarding around construction site boundaries and, according to Section 13.7.1.1.4 residual noise levels are predicted to be controlled below the CNT and/or the upper noise limit at all modelled locations.
- 11.16.317. Given the primarily commercial nature of properties in the vicinity of O'Connell Street, and particularly in view of the busy city centre location of the site, I consider adjacent properties are likely to be robust to elevated noise levels. In view of the EIAR assessment and subject to appropriate specification of the proposed construction hoardings, I am satisfied that significant impacts are unlikely. In saying this, I note that as part of its commitment to undertake further monitoring TII has committed to further consideration of hoardings heights.
- 11.16.318. Cumulative impacts arising from Scenario B are discussed further below.
- 11.16.319. **AZ4(g): Tara Station and Tunnel as far as St Stephen's Green Station**
- 11.16.320. Table 13.66 of the EIAR identifies that properties in the vicinity of Tara Station will experience moderate to significant and significant to very significant impacts during construction. However, and by reference to Appendix A13.7 of the EIAR, I

note that the noise model results indicate a number of additional significant impacts during the demolition phase.

- 11.16.321. TII acknowledged this issue on the opening day of the oral hearing, in the SoE. This document outlines elevated impact classifications for a number of the buildings discussed in Table 13.66, reflective of the Appendix A13.7 model results, and also identifies significant impacts at a number of additional buildings during demolition.
- 11.16.322. In view of the predicted noise levels, I agree with the EIAR impact magnitude classifications.
- 11.16.323. As with other locations, TII undertook further modelling that incorporates localised screening and enhanced hoarding around construction site boundaries. In view of the errors in the original assessment, I have given consideration to the residual noise model results contained in Appendix A13.7 and note that residual moderate to significant impacts are predicted during all construction phases (this applies to the Irish Times building during all phases and to a number of properties during demolition, piling and ground level excavation works) and residual significant to very significant impacts are predicted for the Irish Times building during demolition works.
- 11.16.324. In the case of the Irish Times building, Section 13.7.1.1.4 of the EIAR outlines that given the proximity of the building and the range of calculated levels exceeding the upper fixed noise limit for the majority of the Construction Phase, application of the Noise Mitigation Policy will be implemented where eligibility has been established. I note in this respect that Section 5 of the document acknowledges that other properties may be particularly sensitive to noise.
- 11.16.325. In the case of the Irish Times Building, I am satisfied that subject to implementation of the Noise Mitigation Policy, the impact would be reduced to the level of moderate.
- 11.16.326. In the case of the buildings predicted to experience moderate to significant impacts during demolition, piling and ground level excavation works, I note from Appendix A13.7 that the CNT exceedance is of a marginal nature (up to 3dB over the CNT) and I consider there is a realistic possibility of the predicted noise levels

falling below the CNT when TII undertake further noise modelling ahead of construction and after the appointment of a contractor.

11.16.327. Consideration should also be given to the interchange that Tara Station will provide between MetroLink and Dart services. Ultimately, whilst I acknowledge that moderate to significant noise impacts will be experienced for prolonged periods, I consider the impacts are outweighed by the significant long-term positive impacts of providing a metro station at this particularly strategic city centre location. As has been set out elsewhere, it will enhance the integration of the public transport network in an area that it is rapidly evolving into a relatively high-density mixed use district.

11.16.328. The Esprit Investments Ltd (S88) submission, which relates to property on Townsend Street and to the south east of the station site, raised concerns regarding noise and disruption during construction and submitted that there is no clarity or estimate provided in relation to the duration of works.

11.16.329. In its response to the submission, TII acknowledge that at receptor location 15 (164 Townsend Street), which is adjacent to the Esprit site, the predicted (unmitigated) impact is moderate to significant and significant to very significant impact during some of the work phases.

11.16.330. I consider it reasonable that the noise predictions for receptor location 15 can be applied to the Esprit lands, given the close proximity of both sites. Having considered the residual noise levels contained in Appendix A13.7 I note that a moderate to significant impact is predicted during piling works and no significant impacts are predicted during other stages of construction. As with similarly affected properties in the vicinity of the station, I consider the impacts are outweighed by the significant long-term positive impacts of providing a metro station at this particularly strategic city centre location.

11.16.331. ***AZ4(h): St Stephen's Green Station and Tunnel as far as Charlemont Station***

11.16.332. According to Table 13.67 of the EIAR five of the modelled locations are predicted to experience noise levels during construction that exceed the CNT during different phases of works. Predicted impacts are at the level of moderate to significant at each location and for each phase. I note from the EIAR assessment that sensitive receptors in the vicinity of St. Stephen's Green Station comprise a

mixture of office and commercial buildings along St Stephens Green, hotels and residential properties set back further on adjacent roads.

11.16.333. As with other locations, TII undertook further modelling that incorporates localised screening and enhanced hoarding around construction site boundaries and, according to Section 13.7.1.1.4 of the EIAR, residual noise levels are predicted to be controlled below the CNT and/or the upper noise limit at all modelled locations.

11.16.334. Given the primarily commercial nature of properties in the vicinity of St. Stephen's Green Station, and particularly in view of the busy city centre location of the site, I consider adjacent properties are likely to be robust to elevated noise levels. In view of the EIAR assessment and subject to appropriate specification of the proposed construction hoardings, I am satisfied that significant noise impacts are unlikely.

11.16.335. The KW Real Estate (owner of the Shelbourne Hotel) submission (S165) expresses concern regarding potential impacts on hotel operations and outlines that it is incumbent on TII to ensure that noise impacts during construction are appropriately mitigated.

11.16.336. I note, from Appendix A13.7 that no significant noise impacts are predicted at the Shelbourne Hotel during construction. Similarly, in its response to the submission TII point out that airborne noise levels at the Shelbourne Hotel are predicted to be between 62-68dB LA_{eq,T} at various stages of construction and that this is below the applicable CNT. From the information available to me, I am satisfied that significant noise impacts at the Shelbourne are unlikely to arise.

11.16.337. Irish Life Assurance PLC made multiple submissions on the application and appeared at the oral hearing in relation to the Cadenza Building, located at the junction of Earlsfort Terrace and Adelaide Road. The oral hearing submissions include a technical submission by Allegro Acoustics (Ref. OH286) primarily concerning groundborne noise impacts. I note that the Cadenza Building is at a considerable remove from any MetroLink sources of airborne noise. The issue of groundborne noise and vibration is discussed in Section 11.17 of this report.

11.16.338. ***Area AZ4(i): Charlemont Station and Intervention tunnel***

- 11.16.339. The EIAR assessment outlines that construction of Charlemont Station involves a range of overlapping phases and that the station site is immediately adjacent to a (completed) oversite development (i.e. the 2 Grand Parade development, also referred to as the Hines development). Table 13.68 of the EIAR presents the modelled results of six construction stages and identifies that for each construction stage there are a number of receptor locations where the predicted noise level exceeds the CNT. The affected properties are predicted to experience impacts ranging between moderate to significant and significant to very significant prior to mitigation.
- 11.16.340. On the opening day of the oral hearing TII submitted an errata document 'Appendix A13.7 – Charlemont Station' (Ref. OH12) that updates and corrects inaccurate referencing of receptor locations (for example 'Cambridge Square' was originally identified as a receptor location whereas it should have been identified as 'Cambridge Terrace'). The document also presents revised impact magnitudes for a number of the receptor locations in 'unmitigated' and 'mitigated' scenarios.
- 11.16.341. The SoE submitted on the opening day of the oral hearing also identifies errors in relation to Table 13.68 (the SoE erroneously identifies the relevant table as 13.66). Table 0.10 of the Errata document presents additional receptors, revised noise levels and CNT levels and revised impact magnitudes related to multiple stages of the construction phase of Charlemont Station. Further errata were also identified and I refer the Board to the final SoE submitted on 27th March 2024 (Ref. OH374).
- 11.16.342. The Charlemont Station noise assessment is both voluminous and complex, in large part due to the errata documents submitted, and has proven to be both time consuming to analyse and difficult to accurately ascertain the predicted impacts. I note that the Charlemont and Dartmouth Community Group (CDCG) further submissions on the application similarly highlight difficulties they have had in analysing the information provided, describing the documentation as "untransparent and indeed conflicting". Indeed, it appears to me that there are ongoing inconsistencies and errors in the assessment. For example, for individual houses at Dartmouth Square there are multiple construction stages where Appendix A13.7 predicts noise levels greater than 15dB above the CNT during multiples stages,

which following the adopted methodology equates to very significant to profound impact and not the significant to very significant that has been identified.

- 11.16.343. Having considered each of the EIAR assessment and the various errata documents, rather than repeating information here, I refer the Board to the abovementioned tables and EIAR sections and I briefly summarise the noise assessment as follows: properties in closest proximity to the station site (i.e. at Dartmouth Square West, Dartmouth Road, Cambridge Terrace and Grand Parade) are predicted to experience impacts ranging between moderate to significant and significant to very significant during multiple, if not all, stages of construction and, at one location, Dartmouth Square West, very significant to profound impacts are predicted at individual houses during multiple phases (as I have outlined, Appendix A13.7 identifies noise levels of greater than 15dB above the CNT during multiple stages at individual houses). Housing that does not directly address the station site (i.e. at other parts of Dartmouth Square, Cambridge Terrace and Harcourt Terrace) is predicted to experience moderate to significant and/or significant to very significant impacts during specified construction stages.
- 11.16.344. For the noisiest phase of construction, CNLs of up to 25dB above the relevant CNT are predicted for the worst affected receptors.
- 11.16.345. As with all other locations across the alignment, TII undertook further modelling that incorporates localised screening and enhanced hoarding around construction site boundaries. The results of this are presented in the original EIAR Appendix A13.7 and EIAR Table 13.90 and are also presented in the updated Appendix A13.7 'mitigated scenario'. Table 13.90 outlines that noise levels at 10-11 Cambridge Terrace and 2 Grand Parade are predicted to exceed the CNT during 'all activities'. Both properties are identified as being eligible for additional mitigation under the Noise Mitigation Policy, following which the noise impact is predicted to reduce to the level of moderate.
- 11.16.346. As with other similarly affected properties along the alignment, I agree that subject to implementation of the Noise Mitigation Policy the impact would be reduced to the level of moderate for both properties. Indeed, I note that Section 13.7.1.1.4 of the EIAR provides a detailed outline of the nature of investigative work that TII

proposes to undertake at 2 Grand Parade in respect of the building's noise insulation properties.

11.16.347. Section 13.7.1.1.4 of the EIAR states that at all other locations, residual noise levels are maintained at the level of moderate to significant or lower but this appears to me to be incorrect. I have previously outlined that BS5228-1 provides for an allowance of up to 10dB for the installation of screens and following this approach it can be seen that for at least 1 stage of construction, noise levels at each of Nos. 1 – 17 Dartmouth Square⁶⁸ remain above the CNT by 5-15dB and the residual impact is thus at the level of significant to very significant. By contrast, the EIAR assessment applies reductions of between 10-20dB to these properties for the various stages, without explaining what level of bespoke mitigation has been applied that would allow each of the abovementioned impacts to be reduced below the significant level. Taking a precautionary approach, I consider the impacts should be considered to remain at significant to very significant.

11.16.348. I further note that the updated Appendix A13.7 identifies additional residual significant to very significant impacts, at 32-34 Dartmouth Road, during multiple stages of construction. There is no discussion of these impacts within the EIAR but on being questioned by the CDCG at the oral hearing, TII confirmed that on clarifying the above-ground height of upper floor windows at these houses, further assessment was undertaken and a series of additional impacts were identified.

11.16.349. For these houses at Dartmouth Square and Dartmouth Road, each is likely to be eligible for additional mitigation under the Noise Mitigation Policy and, again, following this I consider the impact would be reduced to the level of moderate.

11.16.350. In the case of 32-34 Dartmouth Road, multiple submissions were received from each property owner, Suzi and G.I. Taylor (32 Dartmouth Road) (S261, OH154, OH335 and 1FS39), Ciaran Black and Leon McCarthy (33 Dartmouth Road) and Michael A Doyle and Carmel Smith Doyle (34 Dartmouth Road).

11.16.351. The submissions from the owners of 33 and 34 Dartmouth Road were withdrawn on 23rd December 2024. In the case of 32 Dartmouth Road, TII's 'Response to Submissions Received – Secondary Consultation' document states

⁶⁸ The EIAR assessment assesses every second house on Dartmouth Square West, however clearly every house will experience a similar level of impact since they are parallel to the station box.

that “TII and the property owner have reached an agreement in principle which TII understands addresses all of the concerns which the property owner has with respect to the MetroLink Project. TII will continue to engage with the property owner to formalise this commercial agreement.” The Board will note, however, that no further submission was received from Ms Taylor and her submissions therefore stand.

11.16.352. For the sensitive receptors at Charlemont, having regard to the nature and scale of the construction works required to deliver the MetroLink project, there is clearly an unavoidable high level of airborne noise and vibration that will be generated. Further, in view of the close proximity of the station site to surrounding housing, at some locations this will be experienced for prolonged periods with traditional mitigation measures (screening and hoarding) having a limited noise-reducing effect. This is acknowledged by TII and has also been highlighted in the Tyréns report, which identifies that “clearly airborne noise is a problem at Charlemont”.

11.16.353. The Tyréns report points to the importance of further and more detailed modelling and assessment of both predicted noise levels and the effects of various mitigation proposals, both in terms of reducing noise and in seeking to gain greater acceptance of disruption during construction. I agree that this is very important at Charlemont and have previously recommended that, in the event the Board grant the Railway Order, a condition be attached requiring that additional noise modelling be undertaken and made available to the public and that the results of construction noise monitoring should be published daily. I consider this approach will allow affected residents and commercial occupiers to plan around noisy works and to better appreciate the extent and duration of these construction phases and may contribute to greater acceptance of disruption during construction.

11.16.354. A considerable number of submissions were received from observers, expressing concern regarding multiple aspects of the station construction and operation. Examples include the various CDCG submissions (S40-42, 1FS8-11, OH151-153, OH158 and OH307-309) that object to noise impacts during both construction and operation and, in particular, question the adequacy of the EIAR noise assessment and the adequacy of the Noise Mitigation Policy. I also refer to the submissions from: Caroline Regan and Family (S37) who question aspects of the

Noise Mitigation Policy; Conor and Lorraine Power (S51, 1FS13, OH162 and OH336-337) who in objecting to the development provided the results of updated noise monitoring (undertaken in 2024) that depict a quieter baseline environment and argue that the noise impact will be profound and who question whether a proposed noise barrier will be 4m or 7m tall; Union Investments Real Estate GmbH (S305) seek the implementation of procedures to mitigate exceedances of agreed noise thresholds; Niall Parsons (S203-204 and 1FS35) raises concerns that fixed elements will be a noise nuisance during operation. A similarly worded letter was also submitted by multiple observers, which states that the EIAR noise assessment is inadequate, although no further detail is provided to clarify the perceived inadequacy.

11.16.355. Firstly, regarding the submissions that claim the noise assessment is deficient, I have assessed TII's approach to the noise assessment at the start of my assessment and I am satisfied that TII's approach to the assessment of noise impacts is consistent with the guidance contained within BS5228-1.

11.16.356. The CDCG oral hearing submissions included detailed submissions and questions from Kenneth Goodwin, an Acoustic Consultant, regarding a number of aspects of the EIAR noise assessment. A particular concern for Mr Goodwin appeared to be unattended noise monitoring location UT51 (which was located near the Luas rail embankment) and its application as part of the BS5228-1 ABC Method, when categorising receptor locations. The thrust of his submission was that TII erred in its categorisation of impacts, based on the results at UT51, and that impacts of increased significance arise. He also pointed to a number of inconsistencies between TII's prediction of noise levels and predicted impact magnitudes, including inconsistencies between the various errata documents.

11.16.357. In responding to questioning on UT51, TII defended its selection stating that as it was in a screened location, set back from the public road and below the Luas line, a façade correction was applied to the observed noise levels and following this a category B designation was considered appropriate for sensitive receptors modelled from this location. I note that in the 'Response to Submissions Received – Secondary Consultation' document, TII further point out that the 70dB CNT is appropriate for properties along Dartmouth Road due to the contribution of road traffic along Dartmouth Road and from the adjacent Luas Line that these properties

are exposed to and which properties at Dartmouth Square West, for which baseline monitoring location UT52 was applied to, are not. TII also point out that available EPA Round 4 Noise Maps along Dartmouth Road support its baseline assessments. Having considered the information provided, I accept TII's clarification of its methodology.

11.16.358. I acknowledge Mr Goodwin's concerns regarding inconsistencies within various noise assessment documents. I have already discussed the voluminous and complex nature of the noise assessment, which has been challenging to analyse and to ascertain TII's conclusions regarding noise impacts.

11.16.359. Regarding the Noise Mitigation Policy, Mr Goodwin made the point that the applicable trigger values within the EIAR assessment do not align with the trigger value presented in the Noise Mitigation Policy (for example the EIAR presents a daytime noise threshold, whereas the Noise Mitigation Policy outlines a number of thresholds for different times of the day) and he questioned how residents can establish whether or not they are eligible for mitigation under the terms of the policy.

11.16.360. I did not consider TII's answer to be particularly clear but, by reference to the Noise Mitigation Policy document itself, I note that TII commits to updating the EIAR noise assessment, following appointment of a contractor and at least 6 months before the commencement of construction, and where predicted noise levels exceed the relevant trigger levels, affected owners/occupiers will be contacted and advised that they are eligible to enter into discussions with TII in respect to further mitigation measures to be put in place. I have already addressed the basis for and provisions of the Noise Mitigation Policy above and thus will not repeat them here, but I would summarise that the Noise Mitigation Policy and TII's approach to its application is consistent with BS5228-1.

11.16.361. Caroline Regan and family have also queried aspects of the noise mitigation policy, with reference to the duration of any required temporary rehousing and whether there is provision for retrofitting sound insulation to their home. I have previously recommended that the Noise Mitigation Policy should be amended, to omit reference to a 4-week limit and that the duration of rehousing shall be tied to the duration of the works which result in noise levels exceeding the relevant trigger values, plus an appropriate period on either side. Regarding noise insulation, the

Noise Mitigation Policy makes reference to certain types of insulation and also provides a commitment to further mitigation, dependent on the level of threshold exceedance and specific circumstances. I consider TII's approach is acceptable at this stage.

11.16.362. Conor and Lorraine Power made a number of submissions on the application and also appeared at the oral hearing and they have expressed detailed concerns regarding noise impacts at their home, which backs onto Charlemont Station. In their further submission (1FS13), Mr and Mrs Power provided a copy of a report prepared by AWN Consulting on behalf of TII, comprising further background noise monitoring undertaken at their property, 5 Dartmouth Square West, in July 2024. Compared against the closest EIAR monitoring location, UT52, the noise monitoring found that average daytime and night-time ambient noise levels were 7dB and 5dB lower than those measured at UT52 in 2018, with L_{den} values 6dB lower. Similarly, with regard to background noise levels, average daytime and night-time noise levels were 2dB lower in both instances than were measured at UN52 during 2018. The observers consider, with reference to their recent experience of the 2 Grand Parade development, that the noise levels from the construction of Charlemont Station will be unacceptable.

11.16.363. In interpreting the results of the further survey, AWN offer the opinion that the lowest Category A CNT, as was assigned in the EIAR, remains the appropriate significance criteria for these properties. With reference to operational phase noise from fixed installations, the report notes that, as committed to in the EIAR, updated baseline noise surveys will be undertaken in advance of the design of the operational plant to ensure the most up-to-date value is used.

11.16.364. The survey results indicate a quieter baseline environment than that which was surveyed in 2018 and from the results, I agree with AWN that noise Category A CNT is the appropriate significance criteria for this property (and others modelled off of UT52).

11.16.365. The EIAR noise assessment (including OH9 and OH12) predicts significant to very significant impacts during multiple stages of construction for 5 Dartmouth Square West, in the unmitigated scenario, and in the mitigated scenario these impacts are reduced to moderate to significant. The mitigation in question is a 7m

high noise barrier along the eastern boundary of the station site (item 119 of the SoE identifies that the noise barrier was incorrectly identified as proposed for the north site boundary and should have been identified for the east boundary).

11.16.366. I accept Mr and Mrs Power's point that a noise barrier of the proposed height will be unsightly for a prolonged period of time. However, I do not share their view (or similar views expressed by John Conway (1FS28) and Leo and Anne Crehan (1FS29)) that it will be ineffective. These installations serve an important noise attenuating function and their effectiveness is based on appropriate siting in relation to noise-generating activities. I note in this respect the following statement at Section 8.3.3 of BS5228-1:

"For maximum benefit, screens should be close either to the source of noise (as with stationary plant) or to the listener. Careful positioning of noise barriers, such as bunds or noise screens, can bring about significant reductions in noise levels, although account should be taken of the visual impact of such barriers."

11.16.367. Section 13.6.1.2.4 of the EIAR states that the appointed contractor will conduct an individual site assessment as part of the CNVMP to verify the height and position of screening to control noise impacts based on the most up to date construction methodologies and input data. I am satisfied that subject to appropriate specification and siting, the proposed noise barrier will be effective in mitigating noise impacts at the observers' home.

11.16.368. In response to the Union Investments Real Estate GmbH submission (S305) (I note that Grand Parade Property Trading DAC (S108) made an identical submission on the application) TII proposed to undertake further calculations to determine what the internal noise levels are likely to be inside 2 Grand Parade, which would allow for determination of whether additional measures would be required or whether vacation of the building would be required (the submission response states noise modelling undertaken to date does not identify the need for building occupants to be relocated).

11.16.369. TII's proposal in direct response to the building owner's submission is substantial and the EIAR also contains extensive proposals in relation to investigations that will be undertaken in order to determine what, if any, additional measures are required. Union Investments Real Estate GmbH appeared at the oral

hearing on 5th March 2024 and requested that the Board would attach a condition requiring implementation of TII's commitments in respect of the building.

11.16.370. I am satisfied that TII's approach will be effective in controlling noise for building occupants during construction. In view of the fact that TII's undertakings are outlined clearly in Section 13.7.1.1.4 of the EIAR and will be controlled as part of the Board's standard conditions, should it decide to grant the Railway Order. I see no reason for a specific condition of the nature requested.

11.16.371. Both Niall Parsons and CDCG raise concerns regarding noise nuisances from fixed station elements during operation. In particular concerns are expressed that noise associated with ventilation systems, internal communication systems, and escalators/security shutters have not been adequately assessed.

11.16.372. I note that TII's Response to Submissions document states that Section 13.5.3.2 of the EIAR discusses noise from fixed plant, such as extract fans and ventilation systems, all of which are contained in back-of-house plant rooms and which are not predicted to generate any measurable airborne noise emissions at ground level. The response further acknowledges that potential noise sources at ground level relate to breakout noise from ventilation shafts and grilles.

11.16.373. I have previously discussed the issue of breakout noise, which the EIAR states can have a significant noise impact during operation. The document 'Noise Control from Fixed Installations' (Ref. OH168) submitted to the oral hearing on 5th March 2024 contains a commitment that the appointed contractor will be required to design and construct fixed installations such that noise levels during normal operations do not exceed 5dB over the measured baseline level. In accordance with advice contained within BS 4142:2014+A1 2019, airborne noise arising from fixed installations is not significant if the predicted value does not exceed 5dB above the measured baseline.

11.16.374. I consider it is acceptable that exact performance details of fixed station elements are to be confirmed following the appointment of a contractor and, in view of the above, I am satisfied that operation of these elements will not give rise to significant noise impacts.

11.16.375. Regarding escalators, TII point out that the mechanical equipment running the escalator will be similarly housed underground within the Station and that the

escalators themselves will be housed within the entrance canopy structures at ground level. From the information presented, there is no reason to believe that the escalators will result in a significant noise impact during the operational phase.

11.16.376. Regarding communication systems, Section 13.5.3.2.4 of the EIAR states that best practice design principles will be employed as part of the design of these systems, in particular with regard to minimising any risk of noise breakout. The Tyréns report advises that on metro systems the use of P.A. systems is limited and usually confined to periods of traffic disruption or emergencies and the impact on the surrounding environment will be limited, particularly given that at most locations they are confined with the station. I see no reason to believe that these systems will result in a significant noise impact during the operational phase.

11.16.377. **Cumulative Impacts**

11.16.378. I concur with TII's assessment, that potential cumulative airborne noise and vibration may arise during the construction phase, should construction phases for MetroLink and other nearby projects overlap. With the implementation of Construction Noise and Vibration Management Plans for each site and the implementation of the other measures outlined in the EIAR and CEMP, the imposition of the recommended conditions, and the implementation of similar mitigation measures on other construction sites, I am satisfied that no significant cumulative residual airborne noise and vibration impacts are likely to arise.

11.16.379. For the operational phase, additional developments are identified as having the potential for cumulative operational noise associated with above ground fixed plant items associated with MetroLink stations. I am unclear what aspects of the MetroLink stations are considered by the applicant to have the potential to give rise to potential significant cumulative impacts, but by reference to the document 'Noise Control from Fixed Installations' (Ref. OH168) I note that the appointed contractor will be required to design and construct fixed installations such that noise levels during normal operations do not exceed 5dB over the measured baseline level. I see no reason to believe that MetroLink stations have the potential to give rise to significant cumulative impacts in respect of fixed plant above ground.

11.16.380. I note that Vincent Harrison & others (i.e. residents of Coke Oven Cottages) (S309, S310, OH240) claim that there was no cumulative assessment of the

implications of the operational phase, in relation to Coke Oven Cottages. The submission points out that the new station will generate and has the potential to increase train traffic and may lead to associated increased noise.

11.16.381. In response to this submission, TII state that MetroLink does not give rise to any additional train movements along the surface railway and with cumulative impacts identified between MetroLink and the IÉ programme being positive. The response further states that there will be no cumulative noise impact at Coke Oven Cottages, as the MetroLink Glasnevin Station is more than 300m from Coke Oven Cottages.

11.16.382. As TII state, the MetroLink proposals do not themselves promote or facilitate additional heavy train movements along the IÉ rail lines and all MetroLink train movements are below ground and with the station at some remove from Coke Oven Cottages. In this context, I am satisfied that there will be no significant cumulative noise impact at Coke Oven Cottages.

11.16.383. **Conclusion on Airborne Noise and Vibration**

11.16.384. I have considered all of the submissions made in relation to airborne noise and vibration impacts and the relevant contents of the file including the EIAR and relevant update reports provided to the oral hearing. Subject to specified exceptions below, I am satisfied that the potential for significant adverse airborne noise and vibration impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

11.16.385. Arising from my assessment, I consider there is a likelihood of residual significant airborne noise impacts (this includes moderate to significant impacts) in the following locations:

Area AZ1: At properties along the R132, between Estuary and the DANP, during linear works; at the Hertz Call Centre adjacent to Seatown Station during station construction; and at Feltrim Road related to redistribution of traffic along this road.

Area AZ2: At Our Lady Queen of Heaven Church, Dublin Airport.

Area AZ3: Alignment section between the M50 and Northwood Station, at residential property known as St. Anne's and Santry Lodge, during M50 viaduct and raised

embankment construction and during track laying works. At Blackwood Court apartments, during construction works at Northwood Station above the roof slab.

Area AZ4:

- Collins Avenue Station: At Our Lady of Victories Church and at housing at Albert College Court during multiple construction stages.
- Glasnevin Station: At The Court apartments, Dalcassian Downs during all stages of construction; at Cross Gun Quay Apartments during piling works and ground level and underground excavation; at properties within 200m of the Iarnród Éireann rail lines at Glasnevin Station, during track lowering works.
- Mater Station: At the Mater Hospital, St. Joseph's Church and for properties at 5-22 Berkeley Road during multiple construction stages.
- Tara Station: At the Irish Times Building, Tara Street, during multiple stages of construction.
- Charlemont: At 10 – 11 Cambridge Terrace and 2 Grand Parade during all construction stages; At 32 – 34 Dartmouth Road and 1 – 17 Dartmouth Square West during various stages of construction.

11.16.386. In each instance, I am satisfied that impacts have been correctly identified, assessed and understood. Further, I am satisfied that additional practical mitigation is not available, which would have the effect of reducing an identified impact below the 'significant' level.

11.16.387. In view of the very large scale of the MetroLink project, and the heavy engineering works that are required in order to construct it, there is a level of noise that is unavoidable at all construction sites, in particular cut and cover/retained cut works in area AZ1 and station sites in area AZ4. As has been discussed, noise levels at some locations are likely to remain very high for a prolonged period and standard mitigation will be limited in its effectiveness due to the nature of the works and their proximity to sensitive receptors. This is acknowledged by TII, who propose additional bespoke mitigation at the worst affected properties across the alignment, under the terms of the Noise Mitigation Policy. Such mitigation is likely to include noise insulation (such as secondary glazing) as well as temporary rehousing for

specified periods. However, the impacts need to be balanced against the very substantial benefits that will accrue to multiple communities across County Dublin and Dublin City, from the provision of a high-quality underground metro system.

11.16.388. To conclude my assessment, it is my opinion the long-term benefits of the development outweigh the identified significant airborne noise and vibration impacts and that none would give rise to an unacceptable impact on a sensitive receptor that would justify a refusal of the Railway Order.

11.17. Land, Soil, Water, Air and Climate – Groundborne Noise and Vibration

11.17.1. Introduction

11.17.2. Groundborne noise and vibration are addressed in Chapter 14 of the EIAR. The associated appendices A14.1 – A14.6 include supporting documentation, including relevant standards/guidance, train and track characteristics and assumptions, modelling results and the mitigation policy. Figures 14.1 – 14.6 identify vibration monitoring locations and illustrate the noise and vibration contours for various activities along the alignment.

11.17.3. Methodology

11.17.4. Given the **lack of statutory standards in Ireland relating to groundborne noise and vibration limit values for railway sources or construction works**, the EIAR assessment makes reference to other national guidelines/standards and international standards, including:

- EPA Guidance Note for Noise in Relation to Scheduled Activities, 2nd Edition, which includes guidance on vibration from blasting.
- ‘Measurement and Assessment of Groundborne Noise and Vibration’, 3rd edition, published by the UK Association of Noise Consultants, 2020.
- ISO 14837 ‘Mechanical vibration - Ground-borne noise and vibration arising from rail systems’: Various parts referenced.
- BS 6472-1:2008 ‘Guide to evaluation of human exposure to vibration in buildings’.
- German Standard DIN 4150-3:2016 ‘Vibrations in buildings – Part 3: Effects on structures’.
- BS 7385-2:1993 “Evaluation and Measurement for Vibration in Buildings”.

11.17.5. The EIAR notes that groundborne noise and vibration are essentially one physical phenomenon (the oscillatory movement of soil, rock or structures generated by construction or operational activity and propagated from the source to potential receptors through solid or liquid media) which has effects in two different ways. Sound is vibrations of the air detectable by the ear, with noise described as unwanted sound, or sound that causes disturbance. Vibration is mainly used when

there is a direct effect on a receptor, either a human being perceiving it through the sense of touch or motion or a sensitive item (e.g. laboratory instrument, fragile artefact or structure). The EIAR notes that vibration can cause structures to radiate airborne sound so it can be perceived through the sense of hearing as an audible noise.

- 11.17.6. The issue of air overpressure is also considered with regard to blasting impacts. This is a short duration rise in pressure above atmospheric pressure followed by a brief dip below which is heard as sound but may also cause secondary effects by rattling structures/windows etc.
- 11.17.7. The methodology for the assessment of groundborne noise and vibration impacts is set out in Section 14.2 of the EIAR. The main sources of groundborne noise and vibration from the construction phase with the potential for adverse effects are stated to be mechanical excavation, blasting and tunnel boring while, during operation, the main sources would be from rolling stock movement within the tunnels.
- 11.17.8. For groundborne noise, the EIAR utilises separate significance criteria for residential buildings (Table 14.2) and non-residential buildings (Table 14.3).
- 11.17.9. For residential buildings, groundborne noise is considered significant if levels exceed **40 dB L_{Amax,S}**. This excludes the passage of the TBM, due to its impacts at any individual receptor being short term and transitory. A higher significance threshold is therefore used for the TBM (**> 44 dB L_{Amax,S}**).
- 11.17.10. For non-residential buildings, individual thresholds for identifying significant impacts are set for different types of buildings that are particularly sensitive to noise or vibration, such as libraries, theatres, auditoria, hospitals, churches, schools etc. This ranges from **25 dB L_{Amax,S}** for theatres and large auditoria/concert halls to **45 dB L_{Amax,S}** for commercial buildings. These are described as levels that are noticeable to all and disturbing to some. As for residential buildings, a higher significance threshold is set for groundborne noise associated with the TBM advancement (**5 dB L_{Amax,S} higher**).
- 11.17.11. For groundborne vibration, the main construction phase sources are stated to be blasting, TBM advancement, mechanical excavation, secant piling and diaphragm walling (D-wall), while the main operational phase source is again rolling stock movement. The EIAR notes that the level of magnitude between human perceptions

of vibration and building damage from vibration are large and that, consequently, each has separate assessment criteria.

- 11.17.12. For vibration from blasting the EIAR, with reference to EPA guidance, notes that humans have a very low threshold of perception. Given that the human response can be reduced by communication and management of blasting programmes, the EIAR utilises the EPA's threshold for the effect of vibration on buildings of **8 mm/s peak particle velocity (PPV)** as the threshold of significance for blasting impacts on humans. This 8 mm/s PPV threshold is used for standard buildings, with a lower **3 mm/s** PPV threshold used for 'vulnerable' buildings/structures at high risk of damage, in accordance with German DIN guidance. The EIAR assumes that condition surveys of such buildings will be undertaken in advance of works and that any defects identified are repaired (such as loose panes in stained glass windows).
- 11.17.13. With regard to impacts on utilities, the EIAR states that DIN criteria are sufficiently high that none of the construction activities, with the exception of blasting, have the potential to exceed them.
- 11.17.14. For air overpressure, the threshold of significance is taken as **125dB (Lin) max peak** in accordance with EPA guidance.
- 11.17.15. For the impacts on occupants from vibration from sources other than blasting, the EIAR utilises different thresholds of significance for daytime and night-time for residential buildings (Table 14.6) and various classes of non-residential buildings (Table 14.7), based on BS 6472-1:2008 guidance and criteria adopted by projects such as High Speed 2 in the UK. These are equated to Vibration Dose Value (VDV).
- 11.17.16. For building structures, the thresholds for significant effects due to transient vibration (other than blasting) are set out in Table 14.8 of the EIAR. These range from 3mm/s PPV for potentially vulnerable structures to 50mm/s PPV for reinforced or framed structures such as industrial or heavy commercial buildings and are based on BS 7385-2:1993 guidance. For continuous vibration, the significance threshold values are reduced by 50%.
- 11.17.17. With regard to vibration from TBM advancement, the EIAR notes that this would be transient in nature as the face progresses and would be within range of any particular location for a limited duration. Consequently, with consultation and public

relations, it contends that a higher threshold of acceptability can be achieved than is the case for the permanent operating railway. The EIAR therefore proposes a threshold of significance of **1 m/s^{1.75} VDV_{day} and 0.5 m/s^{1.75} VDV_{night}** for dwellings for the passage of the TBM. Increases for the hospital and education category for the passage of the TBM (i.e. above those set out in Table 14.7) are also proposed, with significance thresholds of **0.4 m/s^{1.75} VDV_{day} and 0.2 m/s^{1.75} VDV_{night}**.

11.17.18. With regard to operational phase vibration, Table 14.9 of the EIAR, based on the guidance in BS 6472-1:2008, sets out the significance of vibration levels affecting building occupants in the absence of existing levels of vibration and where there is existing vibration. The potential for significant effects upon structures as a result of operational phase vibration is the same as the construction phase threshold levels (i.e. as per Table 14.8). The potential for operational phase vibration from rail maintenance is noted, particularly with regard to rail grinding. The EIAR states that this will not result in significant effects and will assist in reducing groundborne noise levels, but that it would generate measurable vibration if taking place directly beneath laboratories containing sensitive equipment. It is stated that mitigation includes making sure rail grinding is not planned on a night when a critical operation is in progress in a laboratory.

11.17.19. The EIAR notes that receptors with particular sensitivity to vibration include laboratories containing sensitive equipment such as electron microscopes, and buildings containing fragile artefacts. It outlines US guidance utilised for such effects and it is stated that vibration criteria are assigned to specific receptors on a case-by-case basis, based on existing building usage.

11.17.20. **Baseline**

11.17.21. Section 14.3 of the EIAR sets out the baseline environment, with a series of Tables identifying the sensitive receptors in each Assessment Zone and the applicable groundborne noise, vibration and air overpressure thresholds for each, depending on receptor type (i.e. the levels above which significant effects would arise). Baseline vibration surveys were undertaken at 3 No. locations within AZ4 only, given the absence of baseline vibration levels in zones AZ1 to AZ3. The locations were in the vicinity of mainline rail or Luas lines, at Glasnevin, O'Connell Street and Charlemont. Baseline vibration surveys were also carried out at a number

of locations with Trinity College Dublin (TCD), where sensitive equipment such as Scanning Tunnelling Microscopes and MRI machines are located. The locations are identified in Table 14.21 of the EIAR.

11.17.22. Baseline noise measurements were also taken within the Auditoriums of the National Concert Hall and Gate Theatre.

11.17.23. **Potential Impacts**

11.17.24. **Construction Phase**

11.17.25. Potential groundborne noise and vibration impacts during the construction phase are associated with the following activities:

- TBM progress.
- Drilling and Blasting (used for station excavation).
- Mechanical excavation (used for excavation of stations, retained cut, and cut and cover sections including D-walling).

11.17.26. With regard to the TBM, groundborne noise is stated to be the principal effect with regard to residential receptors, as vibration will be below the threshold of significance. Vibration is, however, stated to be a potential effect with regard to sensitive equipment in hospitals and research laboratories.

11.17.27. The potential for significant impacts in each AZ area are set out below. Refer also the tables contained in Section 14.4 of the EIAR and the related appendices.

11.17.28. ***Area AZ1 (Northern Section)***

11.17.29. The TBM will not be utilised in this area, and no blasting is proposed. Mechanical excavation will be utilised, including secant piling. **No significant groundborne noise and vibration impacts** are predicted in this section.

11.17.30. ***Area AZ2 (Airport Section)***

11.17.31. **Significant groundborne noise** is predicted at 4 No. receptors over a number of days during TBM passage. These are Our Lady Queen of Heaven Church, Head Office building, Terminal 1 and the Terminal 1 MSCP. **No significant vibration impacts during TBM passage** are predicted.

- 11.17.32. Similarly, **no significant groundborne noise or vibration impacts** due to mechanical excavation are predicted and **no significant vibration impact** is predicted on equipment at the airport.
- 11.17.33. During blasting, **significant vibration impacts** are predicted at Our Lady Queen of Heaven Church. No other receptors are predicted to experience significant vibration during blasting, and no receptors are predicted to experience significant impacts resulting from air overpressure.
- 11.17.34. **Area AZ3 (Dardistown to Northwood)**
- 11.17.35. The TBM will not be utilised, and no blasting is proposed. Mechanical excavation will be utilised, including secant piling. **No significant groundborne noise and vibration impacts** are predicted in this section.
- 11.17.36. **Area AZ4 (Northwood to Charlemont)**
- 11.17.37. During TBM passage through area AZ4, **significant groundborne noise** is identified for all buildings within 65m-75m of the tunnel centre, depending on the ground material type. The duration will be up to two weeks, with predicted levels of up to 50 dB L_{Amax,s}. **Significant groundborne vibration impacts** at some buildings are also identified during passage of the TBM, including parts of the Mater and Rotunda Hospitals at night-time and also a number of TCD buildings.
- 11.17.38. For mechanical excavation, **significant groundborne noise impacts** are identified for a small number of receptors in the vicinity of Glasnevin Station, Tara Station and Charlemont Station, including Dartmouth Square West and the 2 Grand Parade development. There are no predicted exceedances of vibration thresholds during mechanical excavation and calculated vibration levels are below the threshold for structural damage for any building type.
- 11.17.39. Blasting for underground station locations is identified as resulting in **significant blasting vibration impacts** at four locations⁶⁹ with low vibrations threshold. These are St Joseph's Church, 42 O'Connell Street, Dublin Fire Brigade HQ and the 2 Grand Parade development at Charlemont Station. At Our Lady of Victories Church on the Ballymun Road, the predicted level of 2.7 PPV is close to the

⁶⁹ Subsequently corrected at oral hearing. Refer to errata and assessment sections.

threshold of 3 PPV and while not significant, the EIAR identifies that mitigation is required.

11.17.40. The Townsend Sewer, a major sewer which is in close proximity to Tara Station, is identified as being at risk from blasting, and blasting will be monitored at it approaches the sewer. If necessary, less impactful means of excavation will be used to eliminate any potential impacts on the sewer. No other potential impacts on utilities are identified.

11.17.41. No receptors are predicted to experience significant impacts resulting from air overpressure during blasting.

11.17.42. Operational Phase

11.17.43. The potential for groundborne noise and vibration impacts during the operational phase is stated as being due to the rolling stock using the tracks and tunnels. In general, significance criteria for groundborne noise are predicted to be exceeded in very few cases, while there is potential for significant vibration effects in the case of laboratories housing sensitive scientific equipment, such as at TCD. The EIAR considers that the criteria for sensitive equipment at TCD can be satisfied but that care will be needed during the procurement to ensure that the track support systems are capable of achieving an equivalent result.

11.17.44. ***Area AZ1 (Northern Section)***

11.17.45. **Significant groundborne noise** impacts from railway operation are predicted at 8 No. residential buildings and 5 No. office/commercial/retail premises in area AZ1⁷⁰ (i.e. exceedances of the 40dB L_{Amax,s} threshold for residential/office or the 45dB threshold for commercial) in area AZ1. There are no exceedances of the lower threshold levels for other receptor types.

11.17.46. **No significant** groundborne vibration impacts from railway operation are predicted, with vibration levels below the threshold for structural damage for any building type.

11.17.47. ***Area AZ2 (Airport Section)***

⁷⁰ Subsequently corrected at oral hearing. Refer to errata and assessment sections.

- 11.17.48. **No significant** groundborne noise or vibration impacts from railway operation are predicted in area AZ2. The calculated vibration levels are below the threshold for structural damage for any building type.
- 11.17.49. Vibration from track maintenance in the airport tunnel will be substantially below criteria for vibration effects on equipment at the airport.
- 11.17.50. **Area AZ3 (Dardistown to Northwood)**
- 11.17.51. **No significant** groundborne noise or vibration impacts from railway operation are predicted in area AZ3. The calculated vibration levels are below the threshold for structural damage for any building type.
- 11.17.52. **Area AZ4 (Northwood to Charlemont)**
- 11.17.53. **No significant** groundborne noise impacts from railway operation on residential receptors are predicted in area AZ4⁷¹. However, **significant impacts** are predicted at the Gate and Abbey Theatres and the National Concert Hall due to exceedances of the lower groundborne noise threshold for theatres.
- 11.17.54. **No significant** groundborne vibration impacts from railway operation are predicted, with vibration levels below the threshold for structural damage for any building type.
- 11.17.55. **Mitigation Measures**
- 11.17.56. **Construction Phase**
- 11.17.57. ***Mitigation Policy***
- 11.17.58. The proposed mitigation for the construction phase is set out in the 'Airborne and Groundborne Noise Mitigation Policy' contained in Appendix A14.6 of the EIAR. The Policy sets out the applicant's proposals with regard to noise insulation of properties and temporary rehousing in certain circumstances. The proposed means of noise insulation is the provision of secondary glazing to affected habitable rooms, with additional ventilation provision if necessary.
- 11.17.59. ***Tunnel Boring***

⁷¹ Subsequently corrected at oral hearing. Refer to errata and assessment sections.

11.17.60. It is stated that there is no effective method of reducing groundborne noise or vibration from TBMs at source, but that the impact at any single location will occur for a very short period of days as the TBM passes beneath. The principal mitigation measures are therefore advance public consultation/stakeholder engagement to prepare occupants for the passage of the TBM and the implementation of additional measures on a case-by case basis in accordance with the abovementioned Policy. With regard to vibration effects on sensitive equipment, such as at TCD, it is proposed to consult with TCD to plan the passage of the TBM during weeks when critical use of the equipment can be avoided.

11.17.61. ***Blasting***

11.17.62. The proposed mitigation measures to reduce the impact of blasting are based on the blasting design, including: survey of the rock face profile prior to design; minimisation of the explosive charge per delay; choice of effective delay time between holes and rows which would avoid wave interaction and give good rock displacement; explosive initiation sequence set in a way that progresses away from the structures to be protected; use of adequate powder factor (weight of explosives per volume of excavated material); creation of shields or discontinuities between structures to be protected and the blasting; monitoring and re-optimising of blast design; use of blast mats; covering of voids and use of acoustic sheds, if required.

11.17.63. Notwithstanding these measures, pre-construction condition surveys will be undertaken at 6 No. receptors where potential significant impacts have been identified, and it is stated that any required pre-construction repair work will be undertaken. These receptors are Our Lady Queen of Heaven Church, St Joseph's Church, 42 O'Connell Street, Dublin Fire Brigade HQ and Charlemont Station new oversite development (i.e. the 2 Grand Parade development)⁷².

11.17.64. If the mitigation measures do not reduce noise and vibration levels below the criteria set, then it is stated that alternative non-explosive excavation methods will be used such as expanding grout, rock sawing or use of mechanical excavation, which may result in protracted effects or a protracted programme.

11.17.65. ***Mechanical Excavation***

⁷² Subsequently corrected at oral hearing. Refer to errata and assessment sections.

11.17.66. Where rock excavation is carried out using a road header, no mitigation measures other than controls on times of working are stated to be available. Where the contractor has no other option, it is stated that equipment such as hydraulic breakers or percussive piling rigs can be used as a last resort with the prior agreement with the local authority and subject to compliance with all limits and restrictions required by the local authority.

11.17.67. Operational Phase

11.17.68. At certain sensitive receptors where significant potential impacts are predicted during the operational phase it is proposed to mitigate the impact by utilising floating slab track in certain areas in the vicinity of the receptors to meet a certain groundborne noise threshold level. The receptors and sections of the tunnel where floating slab track will be used and the threshold to be met are listed in Table 14.47 and include the Abbey and Gate theatres, certain TCD buildings, National Museum, National Gallery, National Concert Hall and a Veterinary Clinic and Seaview Mews in area AZ1.

11.17.69. With regard to sensitive laboratory equipment at TCD, it is stated that detailed building-specific modelling will be required and that mitigation at the receptor for specific rooms may also be required (e.g. installation of base-isolated foundation slabs to support the equipment). The EIAR states that, since the specific sensitive equipment is expected to change between the time of the assessment and the opening of the project, close consultation should be undertaken between TII and TCD in relation to these specifically sensitive rooms.

11.17.70. **Residual Impacts**

11.17.71. Construction Phase

11.17.72. ***Tunnel Boring***

11.17.73. **Significant residual impacts** are anticipated during the construction phase at a number of receptors in areas AZ2 and AZ4, due to tunnel boring. Representative receptors are listed in Tables 14.48 – 14.49 of the EIAR, respectively, and include churches, airport buildings, residential dwellings, hospitals, theatres, commercial developments, cultural buildings, and certain buildings within the TCD campus.

- 11.17.74. The short-term nature of the residual impacts is noted in the EIAR. It also states that while early stakeholder engagement will prepare occupants for the passage of the TBM, some residents may find the effect intolerable and that TII will therefore accept and consider applications for additional measures on a case-by-case basis, in accordance with the submitted Airborne and Groundborne Noise Mitigation Policy.
- 11.17.75. ***Mechanical Excavation***
- 11.17.76. **Significant residual groundborne noise impacts** are predicted at one receptor in area AZ4, the 2 Grand Parade development at Charlemont Station⁷³.
- 11.17.77. ***Blasting***
- 11.17.78. **No significant** residual impacts. It is stated that in any case where proximity of receptors or sensitivity of receptors is such that significant effects cannot be avoided due to blasting, then alternatives to blasting will be employed.
- 11.17.79. Operational Phase
- 11.17.80. **No significant residual groundborne noise or vibration impacts** are anticipated during the operational phase. This is on the basis of the assumed track support system, installation of floating slab track in the vicinity of certain highly sensitive receptors and receptor-focused mitigation for items of highly sensitive equipment (e.g. in laboratories).
- 11.17.81. **Cumulative Impacts**
- 11.17.82. Potential cumulative impacts associated with groundborne noise and vibration are addressed in Section 30.4.6 of the EIAR. It states that the list of 176 'other developments' has been reviewed and that all other developments were screened out for cumulative groundborne noise and vibration impacts during both the construction and operational phases, due to their distance, scale and nature.
- 11.17.83. **Oral Hearing**
- 11.17.84. Errata
- 11.17.85. A substantial number of errata in relation to this chapter were submitted at the oral hearing. I refer the Board to the final Schedule of Errata (SoE) submitted on 27th

⁷³ Refer to errata and assessment sections.

March 2024 (Ref. OH374). This included assessments of the mechanical excavation of Seatown Station and pumping station, which had not been included, and corrections of various errors, which included the omission of receptors who would experience significant residual impacts.

11.17.86. The following documents, submitted on the first day of the oral hearing, are also noted:

- Statement of Evidence by Ronan Hallissey (Ref. OH8).
- Schedule of Errata (Ref. OH9).
- Groundborne Noise and Vibration Amendments (Ref. OH11).
- Updated Appendix A14.5 (Ref. OH13).
- Updated and Additional GBNV Figures (Ref. OH14).

11.17.87. In Mr Hallissey's Statement of Evidence, it is stated that:

"[...] in error, a number of locations where residual impacts were identified in the analysis and presented in the Appendices and Figures were not transcribed into the relevant Tables in Section 14.6 of the Chapter. As a result, and for clarity updated residual impact tables are available to the inspector for the purpose of the Environmental Impact Assessment.

- Significant effects associated with Mechanical Excavation at additional residential properties close to Glasnevin Station, Tara Station, and at the non-residential receptor St Joseph's Catholic Church close to Mater Station were not reported in the summary tables in the main Chapter. Predicted values had been correctly tabulated in App 14.5.
- Predicted groundborne noise and vibration magnitudes associated with the construction of the intervention tunnels at Charlemont had not been presented in App 14.5. No residual significant effects identified.
- Predicted TBM groundborne noise levels south of Eden Quay updated. Generally the effects have reduced, but a new Significant Effect arises at one property along Eden Quay.

- Significant residual construction groundborne vibration effect from the passage of the TBM at National Concert Hall incorrectly identified in chapter. Now removed.
- Additional assessment of groundborne noise and vibration during Mechanical Excavation at Seatown Station, and during the construction of Seatown Pumping Station undertaken. No significant effects identified.
- Significant Effects associated with blasting at Dartmouth Road not reported in main chapter. The requirement to control blasting at the Oversite Development at Charlemont, means that there no significant effects.
- Additional lengths of Floating Slab Track included to remove significant effects at 2 no. non-residential properties in AZ1, and 20 residential properties in AZ4.
- Previously incorrectly reported operational vibration significant effects at the National Museum and National Gallery removed from the summary tables.
- Drawings added to show the extents of the Floating Slab Track, including additional lengths referred to above.”

11.17.88. Updates

11.17.89. A number of documents relating to groundborne noise and vibration related matters were submitted over the course of the oral hearing, including additional commitments and changes to the extent of floating slab track. These documents will be addressed as relevant below.

11.17.90. Cumulative Impact Assessment

11.17.91. An updated cumulative impacts addendum was submitted to the oral hearing on 28th February 2024 (Ref. OH98). The Addendum comprises a more up-to-date review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application.

11.17.92. Where potential cumulative impacts are identified, they are generally associated with the construction phase and relate to cumulative impacts if works

such as piling are undertaken at the same time at the same time as MetroLink works. It is contended that the proposed CNVMPs will mitigate potential cumulative impacts.

11.17.93. No additional significant residual cumulative groundborne noise and vibration impacts are identified.

11.17.94. **Post-Oral Hearing**

11.17.95. A further cumulative impact assessment update was submitted on 31st January 2025 as part of the applicant's response to the Wild Ireland Defence CLG oral hearing submission. Groundborne noise and vibration were screened out for cumulative impacts on the basis that a review of the shortlist projects found no potential for cumulative impacts.

11.17.96. An EIAR Addendum was also submitted by the applicant as part of their abovementioned response, addressing impacts associated with the proposed PFAS management strategy at Dublin Airport. This found no potential for additional impacts associated with groundborne noise and vibration

11.17.97. **Assessment**

11.17.98. This section should be read in conjunction with the consultant's report prepared by Tyréns Group AB, contained in Appendix 1. The issue of airborne noise and vibration is considered separately in Section 11.16.

11.17.99. Concerns regarding groundborne noise and vibration were raised in many submissions across the entire alignment. These were primarily related to the construction phase and included general concerns as well as more specific concerns regarding the TBM operation, blasting and general excavation and the potential for damage to properties. A number of observers also raised issues regarding the potential for operational phase groundborne noise and vibration to result in disturbance or nuisance. The Board should note that a number of observers retained consultants with acoustic expertise, and these submissions are addressed below.

11.17.100. As with a number of other EIA topics, a considerable number of errors or omissions in the applicant's groundborne noise and vibration assessment were corrected in the errata and other documents submitted at the oral hearing. These were presented in a piecemeal manner which makes it challenging and time-consuming to correctly ascertain the conclusions of the assessment.

11.17.101. Construction Phase

11.17.102. I agree with the applicant's identification of the activities with the potential to cause significant groundborne noise and vibration impacts during the construction phase, i.e. TBM passage, blasting, and mechanical excavation (including piling and diaphragm walling).

11.17.103. ***TBM Passage***

11.17.104. The only potential for groundborne noise and vibration impacts associated with the progress of the TBM occurs in areas AZ2 and AZ4, since TBMs will not be utilised in areas AZ1 and AZ3.

11.17.105. Due to the inherent nature of the tunnelling process, with the TBM cutting face grinding through rock and clay, I accept that groundborne noise associated with TBM tunnelling is unavoidable and that it cannot be effectively mitigated. However, as the TBM will operate on a 24/7 basis, the groundborne noise impact experienced by any one receptor is transient and innately limited in duration.

11.17.106. The significance threshold utilised in the EIAR is 5dB higher for TBM passage than for other groundborne noise sources, which I consider to be reasonable, based on the very short duration of the impact. As noted above, the thresholds vary depending on the receptor sensitivity, with theatres and concert halls having the lowest thresholds and commercial receptors (shops, restaurants, manufacturing facilities) having the highest thresholds.

11.17.107. The EIAR outlines that, essentially, TBM tunnelling is likely to cause a significant impact for up to 2 weeks for all receptors within 65m – 75m of the centreline of the tunnel, with a peak of 2-3 days when the TBM is closest. The impact is described in the EIAR as “noticeable to all and disturbing to some over a number of days”. I note in this regard that Tyréns advise that TBM progression rates would typically be c. 10m per day.

11.17.108. Typically, for residential receptors within this band in area AZ4, predicted groundborne noise levels are c. 5dB above the threshold level. Similar exceedances are reported for non-residential receptors, although I note that those with lower thresholds, such as the Gate Theatre, Abbey Theatre and National Concert Hall are predicted to have exceedances of 15 – 19dB.

- 11.17.109. I note the errata submitted by the applicant, which states that the groundborne noise contours and receptors were incorrect for a short section of the route between Harbour Court and Tara Station (Ref. OH11). Updated groundborne noise contour figures and corrected Appendix A14.5 were submitted. It is stated that effects have generally reduced, but 1 No. additional significant effect arises at 21 Eden Quay during TBM passage.
- 11.17.110. While the TBM groundborne noise cannot be mitigated at source, or along the pathway, I note the provisions of Section 4 of the Airborne and Groundborne Noise and Vibration Mitigation Policy (i.e. Appendix A14.6). It states that, while most individuals will be able to tolerate the groundborne noise without issue, TII recognise that some sensitive individuals, such as those with a medical condition or night workers, may find its effect intolerable. It states that TII will consider temporary rehousing for a maximum of 2 days on a case-by-case basis and will meet all reasonable costs associated with the move.
- 11.17.111. I consider this to be a reasonable and pragmatic measure. While the TBM noise will just be a transitory disturbance for most people, it is appropriate that those with particular medical or other personal circumstances would be relocated during the peak TBM groundborne noise period.
- 11.17.112. The impacts due to TBM related groundborne noise could potentially be reduced by limiting the working hours for the TBM, for example only allowing tunnelling during daytime hours. However, as detailed in Section 9.13, the continuous operation of a closed-face TBM is a means of controlling groundwater inflow and minimising settlement and property damage. Reduced TBM working hours were identified as being one of the causes of property damage which occurred in the Dublin Port Tunnel construction. I therefore do not recommend that the Board impose a restriction on TBM tunnelling hours of construction.
- 11.17.113. Other than the abovementioned short period of temporary rehousing, the only main mitigation proposed is advance public consultation and stakeholder engagement to ensure building occupants are prepared for the TBM related groundborne noise and vibration. Given the potentially disconcerting experience of structure-borne noise and vibrations, it is important that appropriate engagement and notification take place in advance of TBM arrival. As addressed elsewhere in this

report, a communications strategy is proposed, including web portals for information, community liaisons and other forms of communication. This should include for the communication of information to include monitoring results, project updates and information such as the current TBM location, with more targeted advance information for those who will be directly affected by TBM noise and vibration. While communications will not reduce the actual impact, it is likely to increase the public acceptance of the impacts and lessen concerns.

- 11.17.114. Further commitments are also made in relation to the preparation of Trigger Action Plans (TAPs) for a number of the more sensitive non-residential receptors, which will include groundborne noise and vibration among other environmental factors. These receptors include Our Lady of Victories Schools, O'Scanail's Veterinary Hospital, Mater and Rotunda Hospitals, Gate, Abbey and Ambassador Theatres, TCD, Leinster House, National Library, National Museum of Archaeology, Natural History Museum, Govt. Buildings Complex, Dept. of Agriculture, Food and the Marine, National Concert Hall and the Arthur Cox building (i.e. Earldav PUC and Jerdip PUC) on Earlsfort Terrace among others.
- 11.17.115. Tyréns have also advised that TAPs and monitoring should be put in place for certain other sensitive receptors, such as the Cadenza Building on Earlsfort Terrace and other such sensitive buildings to be agreed with the Expert Panel.
- 11.17.116. I note that one of the assumptions underpinning the assessment is that the TBM will not be serviced by a temporary construction railway, but instead conveyors will be used for the transfer of materials out of the tunnel and that rubber tyred vehicles will be used for the transportation of material and people. However, elsewhere in the appendices to the EIAR there is reference to a temporary railway potentially being used. Tyréns have advised that such temporary railways can be a significant source of groundborne noise during the construction phase, as they are typically not constructed to the same tolerances as the permanent railway. The applicant's groundborne noise specialist was questioned in relation to this matter at the oral hearing and confirmed that a temporary railway would not be used in the tunnel during construction.
- 11.17.117. I am satisfied that the groundborne noise associated with the TBM operation are likely to be significant for all properties within 65m – 75m of the centreline of the

tunnel alignment in areas AZ2 and AZ4 and that these groundborne noise impacts cannot be mitigated. While the EIAR refers to these groundborne noise impacts as short-term, I consider them to be temporary adverse significant residual impacts, with reference to the EPA's EIAR Guidelines.

11.17.118. With regard to groundborne vibration impacts from the TBM passage I note that, as with groundborne noise, a higher significance threshold is utilised, given the transient nature of the impact. Again, I consider this to be reasonable given the short duration of the impact.

11.17.119. I note from the assessment that the predicted TBM related groundborne vibration levels are far below the thresholds for all receptors in areas AZ2 and AZ4, and are thus not significant, with the exception of the Mater and Rotunda Hospitals at night-time and certain buildings in TCD where disturbance to sensitive equipment (e.g. Scanning Electron Microscopes, MRI machines etc.) is identified over a number of days. With regard to this vibration-sensitive equipment, it is proposed that consultation will be undertaken to ensure that TBM passage does not coincide with sensitive research operations.

11.17.120. Many of the particularly sensitive receptors who had made initial written submissions, such as the Mater and Rotunda Hospitals, TCD, Gate Theatre, Ambassador Theatre, Abbey Theatre and the various OPW properties, including the National Concert Hall, Leinster House and Government Buildings, subsequently reached agreement with TII over the course of the oral hearing in relation to matters of concern of them. They have generally expressed their support for the project (with the exception of St Stephen's Green park in the case of the OPW).

11.17.121. Given their statements, I am satisfied that any particular measures required to address groundborne vibration impacts on their sensitive equipment (which may, in the case of certain scientific equipment, require mitigation at the receptor) are matters that can be agreed between the parties during the detailed design phase and that no significant environmental impacts can be considered to arise. With implementation of TAPs and advance communication regarding timing and duration of impacts, it should be feasible to ensure that the period when tunnelling is required under any particular building does not unduly interfere with scientific, medical or other particularly sensitive equipment or work.

11.17.122. I note the Arup report, entitled 'Assessment of groundborne noise and vibration impacts from Transport Ireland's proposed MetroLink', which was prepared on behalf of Wynn's Hotel on Lower Abbey Street and submitted at the oral hearing on 28th February 2024 (Ref. OH102). The report does not take issue with the methodology or findings of TII's groundborne noise and vibration assessment, but notes (similarly to TII's assessment) that there will be an exceedance of the groundborne noise threshold for a c. 2 week period while TBM tunnelling is directly under the hotel. It notes the likelihood of disturbance to guests, including sleep disruption and states that closure of the hotel for this period is the only practical way to mitigate the risk. It considers that vibration should not be disturbing to guests or staff, provided they are warned in advance. The accompanying oral hearing submission by John Spain Associates on behalf of the hotel contends that there will be a significant adverse commercial impact on the hotel due to what they consider will be necessary closure during TBM passage.

11.17.123. TII, in response, welcomed the Arup report as being consistent with their assessment. They acknowledged the significant impact but stated that the 2 week period identified in the EIAR was for some level of audibility at the receptor location, with the peak occurring over a number of days. TII's Project Director stated that the issues raised by Wynn's Hotel warranted specific engagement and that TII wished to come to an agreement with them. No agreement was submitted at the oral hearing and no further submissions were made by Wynn's Hotel. I acknowledge that there will be a significant impact on the hotel for a short period of time as the TBM traverses the site, as with other properties close to the tunnel alignment. However, these significant impacts are unavoidable and necessary for the construction of the metro. I consider that the long-term benefits of the MetroLink to the city, including the benefits it will bring to hotels located near metro stations, outweigh the temporary significant groundborne noise impact on the hotel and other receptors along the alignment. I consider that this is an example of a location where good communications and stakeholder engagement can lessen the impact on the continued operation of the business during tunnelling.

11.17.124. I also note the two submissions made at the oral hearing by Allegro Acoustics on behalf of Irish Life Assurance PLC in relation to the Cadenza Building on Earlsfort Terrace on 4th March 2024 (Ref. OH140) and 21st March 2024 (Ref. OH286),

respectively. The second submission followed the TII proposal to lower the tunnel in this area to avoid conflicts with the Cadenza Building, the Arthur Cox Building and AerCap House.

11.17.125. Allegro Acoustics consider that the groundborne noise during TBM progression under the Cadenza Building would be unacceptable due to disruption to the office use and that a lower limit more typical to office environments (e.g. 35dB L_{Aeq}) should be applied as well as restricted hours of tunnelling to avoid interference with the use of the building.

11.17.126. As detailed above, I am satisfied that groundborne noise due to TBM tunnelling cannot be mitigated, due to its nature and transmission to structures. Also as detailed above, I do not recommend that TBM hours of operation should be restricted, as this would increase the risk of settlement and property damage above the alignment. As settlement is a particular concern in relation to the Cadenza Building, restrictions on tunnelling hours would be inadvisable.

11.17.127. As with other receptors along the tunnel alignment, I consider that the Cadenza Building will experience a significant adverse temporary impact due to groundborne noise for a period of c. 2 weeks. Again, advance communications will assist in preparing the occupants of the building for the temporary impact. As noted above, Tyréns have advised that a Trigger Action Plan should be developed for the Cadenza Building and that groundborne noise and vibration monitoring should be undertaken at this location during TBM passage. I agree with that recommendation and consider that it should also apply to AerCap House, which is similarly sensitive, and where similar concerns were raised.

11.17.128. ***Mechanical Excavation***

11.17.129. With regard to mechanical excavation, secant piling and diaphragm wall construction, I firstly note Tyréns advice that groundborne noise and vibration from these other construction works are limited and that they do not consider that they will be problematic.

11.17.130. In the case of areas AZ1 and AZ3, where extensive secant piling will be utilised for the retained cut, cut-and-cover portions of the alignment and shallow stations, the applicant assessed Woodies DIY at Seatown, which is one of the closest receptors to secant piling works (c. 2.7m distance). The predicted

groundborne vibration at that location are well below the significance threshold for human disturbance in residential buildings and well below the threshold for building damage. I accept that, as the more sensitive residential receptors are all at a greater distance, they are thus not likely to experience significant impacts.

11.17.131. I note that the errata submitted at the oral hearing stated that the assessment of mechanical excavation at Seatown Station and at Seatown Pumping Station in area AZ1 had not been included. Assessments for both structures were submitted (see Refs. OH9 and OH11) with no significant groundborne noise or vibration impacts identified. Having reviewed the assessment, I would agree with this conclusion.

11.17.132. In area AZ2, mechanical excavation and D-walling at the Dublin Airport Station is not predicted to result in any exceedances of the groundborne noise or vibration significance thresholds, although I note that the predicted level of groundborne noise at Our Lady Queen of Heaven Church is just 1dB below the threshold. Vibration levels are also below the VC-A curve, indicating no significant vibration effect on equipment at the airport. I note in this regard that DAA have reached an agreement with TII in relation to matters of concern to them and have confirmed their support for the project (Ref. OH77).

11.17.133. In area AZ4, groundborne noise threshold exceedances due to mechanical excavation are predicted at a number of residential and non-residential receptors in the vicinity of a number of stations, including Glasnevin Station, Tara Station and Charlemont Station. However, no significant groundborne vibration impacts are predicted in area AZ4, with calculated levels also below the structural damage threshold.

11.17.134. I note that the proposed construction methods of secant piling and D-walling for stations and cut sections generate less vibration than alternative methods such as driven piles. They will, however, generate some groundborne noise and vibration for which there may not be an effective mitigation method. With regard to rock excavation, the main alternative to blasting are road headers which, like the TBM, cannot be mitigated at source, other than via restrictions on the hours of construction. Rock can, however, be initially broken by other non-percussive means

such as expanding grout or rock sawing which will limit groundborne noise and vibration compared to hydraulic breakers etc.

11.17.135. I note that Section 14.5 of the EIAR references the noise insulation (e.g. secondary glazing) proposals contained within the Airborne Noise and Groundborne Noise Mitigation Policy. However, given the nature of groundborne noise and vibration which is transmitted through the ground into the structure, I do not consider that secondary glazing or other forms of noise insulation will meaningfully mitigate any such impacts and it is not clear why the applicant is referring to it in the context of groundborne noise and vibration.

11.17.136. As with TBM operation, effective communications will be key to increasing the public's acceptance of groundborne noise and vibration associated with excavation, piling and D-walling works.

11.17.137. The updated Table 14.50 included in the errata (Ref. OH11) identifies additional receptors in the vicinity of Glasnevin, Mater, Tara and Charlemont Stations where significant temporary adverse impacts are predicted due to mechanical excavation. While the EIAR table had identified a significant residual impact for the Charlemont oversite development, the updated Table 14.50 states that the residual impacts are not significant for all receptors. The mitigation relied on in the table for this assessment is "as identified in Section 14.5.1.3 of Chapter 14 and restricted working zones". It is not clear what the applicant means by 'restricted working zones', given that the extents of the required excavation are clearly linked to the station footprint. The measures set out in Section 14.5.1.3 do not appear to explain how the impact would be mitigated to be not significant. I therefore consider that a temporary significant adverse residual impact due to mechanical excavation would arise at all receptors identified in the updated Table 14.50.

11.17.138. With regard to the proposed Charlemont Intervention Tunnel, which it is proposed to excavate by means of mechanical excavation and SCL works, again this was omitted from the EIAR assessment. Tables submitted with the errata indicate no predicted exceedances of the significance thresholds for groundborne noise or vibration during the excavation of the intervention tunnels. Notwithstanding this, as addressed elsewhere in this report, it is recommended that excavation of the SCL works, including the Charlemont Intervention Tunnel should be undertaken on a 24

hour, 5.5 day basis, rather than the 24 hour, 7 day basis sought by the applicant, in order to give a degree of weekend respite to residential receptors in the vicinity.

11.17.139. I note the submission made at the oral hearing on 4th March 2024 by Kenneth Goodwin, an Acoustic Consultant, on behalf of Charlemont and Dartmouth Community Group (Ref. OH153). The submission primarily related to airborne noise and is addressed in the relevant section of this report. In relation to groundborne noise, Mr Goodwin contends that there are contradictions in the applicant's information, as updated by the errata submissions, with regard to groundborne noise associated with mechanical excavation. He contends that it is variously stated that there will be exceedances for certain receptors at Charlemont and that there will not be any exceedances.

11.17.140. It seems that Mr Goodwin is confusing the mechanical excavation for the station box with the mechanical excavation for the intervention tunnel. Given the piecemeal manner in which the errata were presented by the applicant, Mr Goodwin's confusion is understandable. However, the predicted groundborne noise for the Charlemont intervention tunnel is set out in the newly added section 14.4.10 of the updated Appendix A14.5 (Ref. OH13), and as noted above, it shows no exceedances of the 40 dB $L_{Amax,S}$ significance threshold for any receptor. There will, however, be exceedances of the significance threshold during mechanical excavation of the Charlemont Station box at certain receptors on Dartmouth Square West and Dartmouth Road. Those receptors are the ones identified in the updated Table 14.50 which I have addressed above and where I consider that there will be a significant residual temporary impact due to mechanical excavation of the station box.

11.17.141. ***Blasting***

11.17.142. With regard to blasting related groundborne noise and vibration, as I have detailed in Section 9.9 of this report, Tyréns has recommended that restrictions should be placed on the use of blasting at city centre stations (i.e. Mater, O'Connell Street, Tara Station, St Stephen's Green and Charlemont Stations) and at SCL works sites. They consider, with reference to the rock strength data, that there is no compelling technical reason why blasting is required at these locations and that it introduces unnecessary risk in what are constrained urban areas, with nearby

sensitive receptors. They note that similar metro/underground rail projects in Copenhagen and Malmö were successfully constructed in similar ground conditions without any recourse to blasting. I agree with Tyréns advice and note in this regard Section 14.6.1.3 of the EIAR, which states that where significant effects cannot be avoided due to blasting, then alternatives to blasting will be employed. The applicant's acceptance that there are alternatives to blasting supports Tyréns position that blasting is not a technical requirement for the project (e.g. if the bedrock was particularly hard). I recommend blasting related conditions in Section 9.9, accordingly.

11.17.143. Tyréns also note that the boundaries of the proposed POPS Scheme currently has no relationship to the potential impact zone from blasting. Therefore, in the areas where blasting is allowable, they recommend a condition to ensure that blasting effects do not extend beyond the POPS zone.

11.17.144. In addition to these proposed restrictions on blasting at certain locations, I note the additional blasting related commitments proposed by the applicant at the oral hearing, which are contained in the final Schedule of Additional Environmental Commitments (Ref. OH376):

- "Blasting will not be used in the Charlemont Intervention tunnel."
- "Controlled blasting will only be used to excavate rock where it can be demonstrated through extensive trials that the groundborne vibration and air overpressure limits set to control disturbance and avoid any building damage, will be comfortably met."
- "Blasting is to be used for station box excavation with limits on areas closest to sensitive receptors. Exclusion zones for blasting will be identified where blasting would exceed limits for structural damage to a property."

11.17.145. Impacts associated with blasting were raised by a number of observers in various location along the alignment, both in terms of groundborne noise and vibration generally and due to potential property damage arising from this.

11.17.146. The applicant's assessment identified potential significant vibration impacts due to blasting in areas AZ2 and AZ4, including Our Lady Queen of Heaven Church (near Dublin Airport Station), St Joseph's Church (near Mater Station), 42 O'Connell

Street near O'Connell Street Station), Dublin Fire Brigade HQ (near Tara Station), 2 Grand Parade development (near Charlemont Station). Our Lady of Victories Church, is close to the threshold while the major Townsend Sewer close to Tara Station is at risk of the threshold being exceeded.

- 11.17.147. I note that the applicant submitted errata at the start of the oral hearing, identifying that a number of receptors who were predicted to experience significant vibration impacts from blasting at Charlemont Station, while identified in Appendix A14.5, were not brought forward into the relevant EIAR tables. This included 10 No. dwellings on Dartmouth Road and Dartmouth Square West. Post-mitigation, the residual impacts at these receptors are predicted to be not significant. These additional receptors are also identified as further receptors where pre-construction surveys and any required repair work will be undertaken.
- 11.17.148. No exceedances of air overpressure significance thresholds were identified at any receptors along the alignment.
- 11.17.149. As noted above, the applicant has utilised a significance threshold for blasting vibration of 8mm/s for standard buildings and 3mm/s for "listed or potentially vulnerable buildings").
- 11.17.150. Having reviewed the submitted information, it appears that the applicant has incorrectly applied the higher threshold to a considerable number of protected structures (i.e. "listed buildings", see Table 14.34). This includes the Mater Hospital, Rotunda Hospital, Shelbourne Hotel, Dartmouth Square West houses and the Carroll's Building which is part of the 'Charlemont Station new oversite development'. While blasting vibration at many of these would not exceed the lower significance threshold, in the case of the Mater Hospital and Dartmouth Square West, the predicted vibration levels are in excess of the lower threshold and are thus significant.
- 11.17.151. This is a potentially serious omission which was not identified by the applicant in their errata documentation. However, as I am recommending that blasting should not be permitted at the city centre stations or in the SCL works areas, I am satisfied that no significant blasting vibration impacts will occur at receptors in the vicinity of these more constrained station sites should the Board impose my recommended

condition. I note with regard to Glasnevin Station, which is another particularly constrained site, that no blasting is proposed.

11.17.152. In his oral hearing submission on behalf of Charlemont and Dartmouth Community Group (Ref. OH153), Mr Goodwin queried the blasting errata submitted by the applicant at the oral hearing and contended that contradictions arose. Again, it appears that Mr Goodwin is confusing the Intervention Tunnel and the station box construction. The applicant has confirmed that they are not proposing blasting for the Intervention Tunnel, but they do wish to use blasting for the station box excavation. As I am proposing a condition to prohibit blasting at Charlemont Station in any event, I consider that no further blasting related issues arise at this location.

11.17.153. Operational Phase

11.17.154. The errata submitted at the start of the oral hearing (Ref. OH11) identified additional significant groundborne noise impacts at 2 No. non-residential receptors in area AZ1 (Unit 100 Airside Business Park and Grove Commercials) and at 20 No. residential receptors in area AZ4 (at Botanic Avenue and Daneswell Road, Glasnevin). While the groundborne noise predictions were included in Appendix A14.5, they were not brought forward into the EIAR tables. Additional floating slab track is proposed to mitigate these impacts, as addressed below.

11.17.155. Tyréns, in Section 13 of their report, advise that vibrations propagating from the tunnel into adjacent buildings and resulting in rumbling low frequency noise is a known problem during metro operation. They advise that the preferred means of avoiding this issue is to ensure a minimum distance between rail and building but that, where this is not possible, measures should be taken in the design of the railbed.

11.17.156. Tyréns note the need to address potential operational phase impacts in the design phase, since it will be generally impractical to mitigate at a later stage should issues arise. They note by way of example that changing the track form to a different type (e.g. floating slab track) after construction is complete would not be practical as it would involve stripping out and replacing all the tunnel internal works and closure of the metro for an extended period. Tyréns also advise, based on their experience of metro projects, that the public tolerance of groundborne noise and vibrations has reduced in recent years and that it is an increasing problem in the public perception.

- 11.17.157. For these reasons, Tyréns therefore advise that a new metro should be constructed to give the lowest practical operational groundborne noise and vibrations.
- 11.17.158. I note that the EIAR uses the same Significance thresholds for groundborne noise impacts in the operational phase as in the construction phase (i.e. as per Tables 14.2 and 14.3 of the EIAR).
- 11.17.159. In the case of residential receptors, the significance threshold used in the EIAR assessment is ≥ 40 dB $L_{Amax,S}$. However, TII submitted a document entitled 'Additional Groundborne Noise Commitment' (Ref. OH174) at the oral hearing on 5th March 2024, which states that:
- “TII will ensure that during the operation of the Metrolink passenger service, the operational groundborne noise levels in any lawfully occupied residential dwellings, measured near the centre of any noise-sensitive room, will be below 35 dB $L_{Amax,S}$.”
- 11.17.160. This additional commitment is contained in the final SAEC (Ref. OH376) and it is effectively an upper limit that the applicant is committing not to exceed, rather than a change to the significance threshold.
- 11.17.161. This commitment was made following questioning of the applicant by Tyréns, with the motivation mainly being to ensure that the disturbance caused by groundborne noise from operation during sleeping hours is comparable to typical in-house background levels. Tyréns advise that this commitment is a significant improvement for nearby residential dwellings and a very positive development for the MetroLink, bringing it more in line with levels utilised, for example, in the Nordic countries.
- 11.17.162. Separate to the blanket additional commitment regarding groundborne noise levels, the applicant proposes to address potential significant groundborne noise impacts in specific locations in areas AZ1 and AZ4 through the use of floating slab track (FST) for portions of the rail bed. The proposed locations for FST are shown in a series of maps contained in Figure 14.8 of the EIAR. This was subsequently updated at the oral hearing on a number of occasions. On the first day of the oral hearing, in the errata submissions, updated maps were submitted (Ref. OH14) to add additional extents of FST where additional groundborne impacts had been

identified in the errata (as addressed above) and in the vicinity of the Rotunda Hospital. Subsequently, on the 22nd February 2024, an updated version of Figure 14.8 was submitted (Ref. OH69), which removed an area of FST in area AZ1 where the receptor to benefit from the mitigation was in fact to be acquired and demolished. Additional FST, identified in the EIAR but omitted from the maps, for O'Scanail's Veterinary Hospital was also included. A further update of Figure 14.8 was submitted at the oral hearing on 28th February 2024 (Ref. OH104). This included an omission of a further area of FST in area AZ1 where the relevant receptor is to be demolished as well as additional areas of FST in the city centre area, effectively to provide a continuous extent of FST between Pearse Street and Hatch Street, on foot of the applicant's agreement with the OPW (Ref. OH73). A document entitled 'Location summary where track support measures are proposed for the mitigation of groundborne noise or vibration' (Ref. OH103) was also submitted on 28th February 2024, which identifies the chainages for the additional extents of FST, beyond those set out in Table 14.47 of the EIAR.

11.17.163. It is clear from the above that the situation with regard to the locations and extent of FST is complicated and has been subject to various iterations. I note that the following additional commitment is contained in the final Schedule of Additional Environmental Commitments (OH376):

"TII has commits [sic] to floating slab track or equivalent at locations referenced in the "Location summary where track support measures are proposed for the mitigation of groundborne" note submitted to the Oral Hearing on 28 February 2024."

11.17.164. Tyréns note that the additional areas of FST may be perceived as a good outcome for the observers who sought this, however they advise that FST requires additional maintenance and that it is usually avoided unless absolutely necessary. I consider that any onerous maintenance regime that the applicant may be committing itself to with its proposed increases to the extent of FST is an operational matter for them, rather than a matter for the Board. I consider that the proposed use of FST to mitigate significant groundborne noise impacts is appropriate, given the long-term or permanent nature of any such impacts in the absence of mitigation.

- 11.17.165. Tyréns note that a noise reduction of 15dB from the FST is assumed in the analysis undertaken, according to the applicant's experts during the oral hearing. They consider that this will not be straightforward to achieve and that further analysis will be required at the detailed design stage in relation to FST specification.
- 11.17.166. With regard to receptors that are particularly sensitive to operational groundborne noise and vibration, such as Mater and Rotunda Hospitals, Gate, Abbey and Ambassador Theatres, Trinity College Dublin (laboratories and scientific equipment), and various OPW properties, as I have noted in the construction phase assessment, these observers submitted correspondence at the oral hearing effectively confirming that their concerns had been addressed and that they support the project. I note that most of these receptors will benefit from the increased extent of FST.
- 11.17.167. In terms of how the blanket 35dB $L_{Amax,S}$ commitment for groundborne noise will be achieved, this may involve additional extents of FST or other innovative trackbed solutions, and subject to the imposition of this commitment by way of a RO condition, I consider that the means of achieving the limit can be addressed in detailed design. I note from the updated Appendix A14.5 'Groundborne Noise and Vibration Blasting Modelling Results' submitted at the oral hearing (Ref. OH13) that the number of predicted exceedances of this 35dB upper limit is relatively limited in any event.
- 11.17.168. Tyréns also recommend that the applicant's proposed 35dB $L_{Amax,S}$ limit for residential properties should also be applied to commercial office buildings and heritage buildings, which are also very sensitive receptors. They consider that such a condition extending the application of the limit would not be overly onerous, since the applicant has already committed to having FST for much of the alignment in area AZ4 where the majority of these buildings are located.
- 11.17.169. The abovementioned Allegro Acoustics submissions on behalf of Irish Life Assurance PLC regarding the Cadenza Building sought that a 35dB operational groundborne noise limit should be imposed, with reference to the high level of acoustic comfort that the building was designed for. The proposed condition recommended by Tyréns would fulfil this, and I consider 35dB $L_{Amax,S}$ to be a suitable operational limit for commercial office buildings, which are being increasingly

designed to very high acoustic performance specifications. The nearby AerCap House, where similar concerns arose, would also benefit from such a condition.

11.17.170. I also note that Allegro Acoustics consider that the predicted operational phase vibration levels are not expected to cause adverse comment inside the Cadenza Building.

11.17.171. I further note that the abovementioned Arup report, prepared and submitted on behalf of Wynn's Hotel at the oral hearing states, with regard to operational phase groundborne noise and vibration, that groundborne noise within the hotel is unlikely to be audible and that perceptible vibration is well below the assessment criteria and unlikely to give cause for comment. It concludes that MetroLink is unlikely to cause any disturbance to hotel guests or staff.

11.17.172. A number of residents associations and groups including GADRA (1FS25) and BRARA (1FS6) sought that FST be installed within their residential areas. I note that these residential areas will be protected by the applicant's commitment regarding the operational noise limit as described above. I do not consider it necessary to specify a requirement for FST in these areas.

11.17.173. ***Switches and Rail/Wheel Roughness***

11.17.174. Tyréns note the importance of wheel/rail roughness for limiting the generation of vibrations and groundborne noise and the need for regular maintenance during operation, including rail grinding. The importance of this issue is identified in the EIAR.

11.17.175. In addition to the commitments made regarding operational groundborne noise limits and the increased extent of FST, a number of additional commitments were proposed by the applicant at the oral hearing, following questions by Tyréns, and are contained in the final SAEC (Ref. OH376).

11.17.176. In relation to rail switches and crossings, which can result in substantial operational phase groundborne noise issues due to discontinuities in the rails, the applicant made the following additional commitment (refer also to 'Additional Groundborne Noise and Vibration Commitments: Oral Hearing – 29th February 2024' (Ref. OH119, OH119A):

“Charlemont turnback facility, St Stephens Green Station, O’Connell Street Station, Glasnevin Station, Ballymun Station: TII will ensure that special track work, which includes switches and crossings, required for the Metrolink railway will comply with the following minimum requirements to prevent significant operational ground-borne noise and vibration effects:

- Only ‘swing-nose’ switches, which remove significant discontinuities in the tangential running lines of the railway, will be installed at the following locations:
 - Charlemont turnback facility
 - St Stephens Green Station
 - O’Connell Street Station
 - Glasnevin Station
 - Ballymun Station

The performance specification for the final design of each section of special trackwork, will require that groundborne noise and vibration levels in overlying properties during the use of the special trackwork at the maximum operational speeds (both for the normal revenue service, and for the re-arrangement of trainsets outside of revenue service) will be no worse than those levels presented in the EIAR at each respective location.”

11.17.177. A further commitment was made in relation to rail condition during the operational life of the metro, which is an important issue for controlling operational phase groundborne noise. This states:

“Prior to the opening of the railway, TII will ensure that the rails of the underground sections of Metrolink are conditioned by grinding, or other suitable means. TII will ensure that both the rails and wheels are appropriately maintained thereafter to achieve the above roughness specification.”

11.17.178. Related to this is a commitment made in relation to rail/wheel roughness:

“Combined rail / wheel roughness limit: TII will put in place measures that will ensure that at no point during the operational life of the Metrolink passenger service will the combined power spectral density of the wheel and rail

roughness amplitudes be worse than 30 dB re 1 micron in the 1/3 octave centred on a wavelength of 2m, decreasing by 15 dB per tenfold reduction in wavelength.”

11.17.179. Noting these additional switch type and rail grinding commitments, and subject to appropriate conditions, Tyréns advise that the applicant’s proposals are in line with best practice and are an acceptable response to concerns raised regarding groundborne noise and vibration.

11.17.180. ***Groundborne Vibration***

11.17.181. As noted above, groundborne noise and groundborne vibration are essentially one physical phenomenon, which has effects in two different ways.

11.17.182. Tyréns note the applicant’s use of proprietary ‘FINDWAVE’ numerical modelling and rules of thumb to estimate the groundborne vibrations and noise and its transmission to ground and buildings, as detailed in Appendix A14.4 of the EIAR. They also note that Section 14.2.5.4.3 of the EIAR identifies the uncertainty in the model used.

11.17.183. While Tyréns consider that a thorough analysis has been performed by the applicant, they note the difficulties in undertaking such analysis. In particular, they note that the coupling between ground and building is very difficult to correctly model due to the lack of detailed knowledge of the ground structure adjacent to the building. They note that, in the EIAR, widely used tunnelling industry assumptions were applied to transform the groundborne vibrations to in-house noise, as detailed in the document ‘Prediction of Groundborne Noise From Groundborne Vibration’ submitted at the oral hearing on 28th February 2024 (Ref. OH112).

11.17.184. Tyréns advise that, on similar projects such as the Copenhagen Metro, the actual propagation of groundborne vibrations and the coupling between the tunnel and ground and ground/buildings were measured. This was achieved by placing a seismic vibrator in the completed tunnel prior to trackbed construction, with the tunnel then excited at a range of relevant frequencies and the response at ground surface and in selected buildings measured. They advise that this approach allows the models to be calibrated and removes the need for assumptions to be made regarding the propagation and coupling. It also allows confirmation that the selected

trackbed solution will provide the required result in terms of groundborne vibrations during the operational phase.

11.17.185. Tyréns recommend that a similar approach to the measurement of actual groundborne vibration propagation should be utilised in the MetroLink project, as described by Talic et al in 'Prediction of ground-borne vibrations from Copenhagen Metro' published in the proceedings of BNAM⁷⁴ 2021, and they recommend a condition accordingly.

11.17.186. Given the inherent assumptions and simplifications contained in any modelling analysis, the heterogeneity of ground conditions and building types above the tunnel alignment and the extreme difficulty in addressing any excessive or unforeseen groundborne noise and vibration issues in the operational phase, I consider that the 'ground truthing' condition recommended by Tyréns is reasonable and appropriate in the interests of ensuring the effectiveness of the mitigation measures and to ensure that no significant residual impacts arise. If the Board is minded to grant the RO, I therefore recommend that a suitable condition be included.

11.17.187. In conclusion, I consider that the additional commitments made by the applicant over the course of the oral hearing are substantial and, together with appropriate conditions, will be effective in addressing operational phase groundborne noise and vibration, such that no significant residual effects arise.

11.17.188. **Cumulative Impacts**

11.17.189. In relation to cumulative impacts, I concur with the applicant's assessment that potential cumulative groundborne noise and vibration impacts are generally limited to the construction phase, should MetroLink and other nearby projects involving works such as piling or deep excavation be under construction at the same time. The number of such projects is limited, and with the implementation of Construction Noise and Vibration Management Plans for each site and the implementation of the other measures outlined in the EIAR and CEMP, the imposition of the recommended conditions, and the implementation of similar mitigation measures on other construction sites, I am satisfied that no significant cumulative residual groundborne noise and vibration impacts are likely to arise.

⁷⁴ Baltic-Nordic Acoustics Meeting.

11.17.190. **Conclusion on Groundborne Noise and Vibration**

11.17.191. I have considered all of the submissions made in relation to groundborne noise and vibration impacts and the relevant contents of the file including the EIAR and relevant update reports provided to the oral hearing. Subject to the specified exceptions below, I am satisfied that the potential for significant adverse groundborne noise and vibration impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

11.17.192. During the construction phase, I consider that there are likely to be temporary adverse significant residual groundborne noise impacts on all receptors within 65-75m of the tunnel centreline in areas where TBM tunnelling will take place (i.e. areas AZ2 and AZ4). I also consider it likely that there will be temporary adverse significant residual groundborne noise impacts for some receptors during mechanical excavation of station boxes at Glasnevin, Mater, Tara and Charlemont Stations. I am satisfied that these impacts cannot be avoided or mitigated due to the nature of groundborne noise, the extent and depth of the required excavations and the proximity to receptors, all of which are necessary to deliver a metro system within an urban environment. While these groundborne noise impacts cannot be avoided I do, however, consider that advance communication and engagement regarding the timing and duration of the impacts will assist in reducing the human response to the impacts.

11.17.193. To conclude, I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative groundborne noise and vibration impacts, that would warrant refusal of the Railway Order.

11.18. Land, Soil, Water, Air and Climate – Electromagnetism and Stray Current

11.18.1. Introduction

11.18.2. Electromagnetic compatibility and stray current are addressed in Chapter 12 of the EIAR. Appendices A12.1 – A12.6 comprise a series of technical reports, including baseline surveys and reports relating to Trinity College Dublin (TCD) and Dublin Airport.

11.18.3. Methodology

11.18.4. The proposed development will generate electric and magnetic fields in the following ranges:

- DC fields generated by the traction system which powers the trains.
- AC fields generated by the electricity drawn by the system and used to power equipment at the stations.
- Radiofrequency fields generated by the communications radio systems and as a by-product of every electrical and electronic system such as the train drive system.

11.18.5. Potential issues associated with electromagnetic fields (EMF) include electromagnetic interference (EMI) with other devices or equipment, potentially leading to the equipment not functioning properly and adverse health effects at high levels of electromagnetic radiation (EMR). Another potential issue is 'stray current', which occurs when current leaks from the rails and passes through other nearby metallic structures, which can result in corrosion. The EIAR states that the structures potentially at risk are usually large electrically conductive systems such as utility pipes or cables running close to and parallel with the track.

11.18.6. Relevant guidelines, policy and legislation relating to these matters are set out in Section 12.4.1 of the EIAR, which notes that the project will be required to comply with the requirements of the European Directive on Electromagnetic Compatibility (2014/30/EU) and European Standards EN 50121 (Parts 1-5) addressing railway electromagnetic compatibility (EMC), while all electrical and electronic products in the EU must comply with the EMC Directive, the Low Voltage Directive (2014/35/EU) and the Radio Equipment Directive (2014/53/EU), which have been transposed into

Irish law. Relevant guidelines include those on limiting exposures to EMF as published by the International Commission on Non-Ionising Radiation Protection and the European Council Recommendation (1999/519/EC). Potential impacts from stray currents are addressed with regard to European Standard EN 50122-2.

11.18.7. The study area utilised for the assessment utilised a 10m 'narrow corridor' either side of the alignment for low sensitivity receptor types and a broader 100m 'wide corridor' for certain particularly sensitive receptor types, such as hospitals, research facilities, dental facilities, theatres, veterinary clinics, relevant industry etc. where there is the potential for extremely sensitive equipment. The exception to this is with regard to AC fields, where a 10m corridor was used for all receptor types on the basis that beyond this distance the levels anticipated would be reduced to background levels.

11.18.8. The methodology for evaluating impacts and the significance of effects is set out in Section 12.6.3 of the EIAR and tabulated in Table 12.6. The limits for the various types of EMR for different groups of receptors are based on applicable Standards, Directives and Luas testing results. The methodology for evaluating and quantifying effects on the general public are set out in Section 12.6.4 and are based on the limits contained in the abovementioned ICNIRP Guidelines, EU Directive 2013/35/EU and Council Recommendation 1999/519/EC.

11.18.9. **Baseline**

11.18.10. Desktop studies, consultation meetings and questionnaires were utilised to identify relevant stakeholders and their potentially sensitive electrical equipment. Certain 'Major Stakeholders' were chosen for the EMR baseline surveys and surveys were also undertaken at the proposed substation locations from the perspective of limiting public exposure to EMF.

11.18.11. In area AZ1, Siemens was identified as a site with potentially sensitive research equipment on their premises and was assigned a baseline rating as Very High with respect to EM fields. No other particularly sensitive receptors were assigned a Very High rating. A number of medical, dental and veterinary facilities were classed as High from an EM Field perspective.

11.18.12. In area AZ2, Dublin Airport was noted as a site with potentially sensitive equipment on their premises, designated as a Major Stakeholder, and assigned a

Very High rating for EM fields and stray current. Consultation and baseline surveys were undertaken. No other particularly sensitive receptors were identified.

11.18.13. In area AZ3, no potentially sensitive receptors were identified.

11.18.14. In area AZ4, DCU and the crossing of the Irish Rail line at Prospect Road were identified for baseline surveys. The Mater Hospital, Rotunda and Rotunda IVF were identified as Major Stakeholders and assigned a Very High rating for EM fields. Consultations and baseline surveys were undertaken. The Ambassador and Gate Theatres were assigned a High rating. South of the River Liffey, Tara Street station, TCD, the National Concert Hall and the Royal Victoria Eye and Ear Hospital were all identified as Very High ratings from an EM Field perspective and were the subject of baseline surveys. DC surveys were also carried out at TCD. Other receptors with a Medium to High rating from an EM Field perspective included dental and medical facilities, Dublin Fire Brigade, Luas Red Line, Luas Green Line, Abbey Theatre and Government Buildings.

11.18.15. Section 12.8 of the EIAR details the equipment present, or likely to be present, at the identified sensitive baseline receptors. Section 12.9 outlines the results of the abovementioned baseline surveys. No unusually elevated electromagnetic field levels were detected in the range between 1Hz to 10kHz at any survey location. Neither was there evidence of any transient or intermittent events in the frequency range 10kHz to 18GHz at any location. The RF emissions profile in this frequency range was stated to be well below the typical risk levels of 3V/m.

11.18.16. **Potential Impacts**

11.18.17. **Construction Phase**

11.18.18. **No likely significant effects** are identified for the construction phase (only **Imperceptible to Slight** impacts identified).

11.18.19. The largest sources of elevated AC fields are stated to be from the on-site generators and the power cables feeding the TBM, however levels will not exceed public exposure guideline limits. The EIAR notes that the TBM is so large that it will affect the earth's DC magnetic field, creating a localised distortion to the lines of flux. However, it is stated that the slow rate of movement of the machine would render any impact on potentially sensitive equipment difficult to detect. It notes that certain

potentially sensitive equipment (particularly in TCD) will not be in operation as the TBM passes as part of the noise and vibration mitigation measures, reducing the likelihood of DC magnetic field interference to nil for that equipment.

11.18.20. Temporary on-site communications and IT infrastructure will result in emissions in the RF range of frequencies. However, any emissions from such equipment are governed by the EMC and Radio Directives such that impacts on identified receptors in the study area are unlikely. DC field perturbations and AC fields from the on-site electrical equipment are stated not to pose any impact to any of the identified receptors.

11.18.21. Operational Phase

11.18.22. The potential operational phase impacts include radiated interference from the DC magnetic fields, AC magnetic fields and radiofrequency (RF) electric fields. Conducted interference may also be caused by stray currents from the traction system.

11.18.23. Elements of the project that can potentially act as sources and propagators of EMI include: power supply and distribution system; traction power supply system (including substations, feeders, OCS, running rails and feeding/return current cables between the OCS and running rails to the substation); rolling stock traction equipment (including inverters, traction motors and auxiliaries); signalling systems; and communication systems. With regard to stray current generated from the traction system, it is stated that small amounts of the return current may find alternative paths back to the substation via buried utilities running for long distances in parallel with the alignment.

11.18.24. With regard to DC and near-DC magnetic fields, the EIAR states that sensitivity of standard electrical equipment is not typically an issue and that there are no immunity standards for such equipment that covers this frequency range and no emissions standard limits for DC and near DC magnetic fields which the development must meet. The EMF Directive does specify limits for human exposure (4,000µT at DC to 800µT at 5Hz) which it is stated will not be exceeded by the project at any location to which the public has access. The significance of the effects arising from DC and near DC magnetic fields for members of the public is classed as **Imperceptible**.

- 11.18.25. With regard to impacts on Dublin Airport, consultation was held with the IAA and DAA regarding their equipment and no significant effects were identified. Discussions were also undertaken with some of the main airlines that utilise Dublin Airport. While no likely significant effects arising from AC and RF fields were identified, an assessment of compass deflections arising from the worst-case modelled DC magnetic field levels were determined only to be of significance for users of aircraft manufactured by ATR that utilised Flux Valve Compasses. The magnitude of deflections is stated to be comparable to other localised sources within the airport, such as passing fuel trucks, buildings and buried utilities and structures. The significance of the effects at Dublin Airport was determined to be **Moderate** and is predicted to be within a corridor of 20m either side of the proposed alignment.
- 11.18.26. At TCD, effects arising from DC and near DC magnetic fields were noted at the Scanning Electron Microscopes (SEMs) in the Centre for Microscopy Analysis (PANOZ building), MRI machines in the Lloyd building; and Nuclear Magnetic Resonance machines (NMRs) in Chemistry. No impacts were noted at the Scanning Tunnelling Microscopes (STMs) in the CRANN building or the Superconducting Quantum Interference Device (SQUID) in the Sami Nasr Institute of Advanced Materials (SNIAM). The EIAR states that the operator of the SQUID outlined that their concerns were more around AC field sensitivities rather than DC and that since the AC fields predicted at the distance of the SQUID from the proposed alignment are likely to be no more than at background radiation levels, no impact is envisaged on the SQUID.
- 11.18.27. The SEMs experienced the most interference at the highest magnification levels of the equipment although the effects are not anticipated to be continual. As a result of the proximity of the MRIs and NMRs to the proposed alignment, they are identified as being of the biggest concern to interference, with the effects again being momentary but possibly occurring several times an hour throughout the day. Overall, the effects of DC magnetic fields on the TCD campus are identified as **Significant**.
- 11.18.28. With regard to hospitals, the Radiology Department of the Mater Hospital is located more than 100m from the proposed alignment with no significant effects likely to be experienced in the operation of the on-site MRI, CT and PET-CT scanning equipment. The significance of effects on the Mater Hospital from DC magnetic fields is stated to be Slight. The SEM at the Rotunda Hospital is noted to

be located equidistant from the Luas Green Line and the proposed alignment. Based on testing undertaken in connection with the Luas Green Line, this SEM is likely to experience effects in worst-case conditions. The EIAR states that any such effects would be momentary in nature, would occur rarely and that it is unlikely that the DC field levels would exceed those currently experienced from the Luas Green Line, which is not causing operational issues. The EIAR considers the significance of effects of DC magnetic fields on the Rotunda as **Slight**.

11.18.29. With regard to Swords Veterinary Hospital, it is stated that the equipment does not have a sensitivity to DC magnetic fields at the modelled levels. A significance rating of **Slight** with respect to DC magnetic fields is identified for this receptor.

11.18.30. AC EMF will occur primarily at the power frequency of 50Hz, with the main sources being the high voltage MetroLink Grid Connection cables, the 110kV substations at Naul Road and Dardistown, and the 20kV cables and substations at each station. Elevated levels of E-Fields are expected at the substations, however these are required to be within exposure guideline limits, with intensity decreasing with distance due to inverse square law. The E-Fields from the underground cables will be naturally shielded by the earth. The AC magnetic fields can be cancelled or reduced by running the cables close together with three phase feeds, where each feed is out of phase with the others to reduce emissions for the overall line. AC fields at the power frequency will be of continuous duration, varying briefly in magnitude based on the actual loading of the circuits at a given time, but it is stated that they will not exceed the ICNIRP EMF guidelines.

11.18.31. With regard to impacts on humans, the EIAR notes that Active Implantable Medical Devices, such as pacemakers, are tested to higher EMF Immunity levels than standard electrical equipment which will not be exceeded by the project. The significance of effects for public exposure to AC fields is therefore stated to be **Imperceptible**.

11.18.32. AC fields at harmonic frequencies will also occur at multiples of the fundamental power frequency of 50Hz (i.e. 100Hz, 150Hz, 200Hz etc.) due to rectification of the power source to derive the DC voltage to drive the traction system however their magnitude is always below that of the 50Hz fundamental. Typical

electrical equipment, with the exception of audio-visual equipment, is stated not to have any susceptibility to these harmonic frequencies, with audio-visual equipment interference unlikely more than 5m from the proposed alignment. No third-party audio-visual equipment was identified closer than 5m from the proposed tunnel. With regard to induction loops present in the Gate Theatre and the Dáil committee rooms, it is stated that these would be required to be immune to magnetic fields at levels in the audible range above what would be generated by the traction system at the distances involved. The underground Dáil committee rooms are c. 5m from the crown of the tunnel with the Gate Theatre induction loop even further away. It is stated that both the Gate Theatre's and the Dáil committee rooms systems should have the required immunity level.

11.18.33. The EIAR assigns a significance of effect of **Slight** for the Ambassador Theatre, Gate Theatre, National Concert Hall and the Dáil. In relation to TCD and its sensitive equipment, the SQUID is the only item which has specifications for tolerances in this frequency range. The EIAR gives TCD a **Slight** significance of AC fields effects. Dublin Airport and all other receptors were given a significance of effects of **Imperceptible** with respect to AC fields.

11.18.34. With regard to RF and microwave field impacts, the electrical systems, communications and other applicable equipment will be required to comply with the abovementioned Directives which have been implemented in Ireland under Statutory Instruments and consequently emissions will be controlled to levels that will ensure the absence of interference with radio, TV and telecommunications apparatus. The EIAR considers that the significance of effects on all receptors in the study area from RF and microwave fields will be **Imperceptible to Slight**.

11.18.35. With regard to stray current and potential corrosion impacts on buried pipes and cables, the EIAR notes that corrosion is a naturally occurring feature of buried pipework due to existing stray currents and other causes.

11.18.36. Design mitigation measures will be required in accordance with EN 50122-2:2010 (Railway applications - Fixed installations - Electrical safety, earthing and the return circuit - Part 2: Provisions against the effects of stray currents caused by d.c. traction systems), This will include the use of a stray current collector system, adjustment of the power supply system, improvement of the return circuit and

isolation of the return circuit from ground. Monitoring of the earthing system and stray currents will be performed during the operational phase to ensure effectiveness. The significance of effects for stray currents is stated to be **Slight** for all identified receptors, with the project also acting as a sink for the stray currents already present in the subterranean environment while having its own stray current emissions mitigated through its design.

11.18.37. **Mitigation Measures**

11.18.38. With regard to DC magnetic field impacts on sensitive medical and scanning equipment (e.g. at TCD, the Rotunda and the Mater Hospital) the EIAR states that the following mitigation measures are available:

- Relocation of effected equipment.
- Installation of an active cancellation system (i.e. a system that generates a counter field to cancel out fluctuations as they occur).
- Shielding of the labs/rooms using specialised material designed to attenuate magnetic fields.

11.18.39. For the active cancellation system approach, the EIAR states that the response time of such a system was cited as a cause of concern by TCD technical experts in meetings with TII. If such a system were to be adopted, therefore, the speed of cancellation versus the equipment acquisition rate would need to be scrutinised and field-tested for effectiveness.

11.18.40. With regard to shielding, the EIAR notes that TCD's Scanning Transmission Microscope at the Advanced Microscopy Lab, which is not currently located on the main TCD campus, has already been installed in a double shielded room constructed from Mu-metal.

11.18.41. With regard to unexpected AC field impacts, it is stated that these can be addressed in a number of ways, if necessary, including shielding and filtering.

11.18.42. For DC magnetic fields at Dublin Airport, while impacts on airlines' magnetic compass systems are stated to be unlikely, the EIAR states that it was agreed with DAA that they would either update their Aerodrome Notification Package or utilise another form of standard notification to the airlines, identifying the corridor within

which magnetic compass systems may experience momentary fluctuations as they pass through.

11.18.43. **Residual Impacts**

11.18.44. **Construction Phase**

11.18.45. No significant residual impacts are predicted.

11.18.46. **Operational Phase**

11.18.47. Locations within the TCD, Rotunda and Mater Campuses where DC and quasi-DC magnetic field perturbations are at elevated levels may not be suitable for the installation or relocation of equipment with sensitivities to these types of fields. Potential installation of MRI technologies at Dublin Airport will need to be cognisant of the new baseline environment.

11.18.48. Future developments such as extensions and new building at locations such as theatres, musical venues, stadiums, etc. that bring unapproved audio equipment within 20m of the lines could potentially experience interference in the audio frequency range.

11.18.49. A future MRI installation at Swords Veterinary Hospital may have issues with DC magnetic field interference.

11.18.50. Continued monitoring of the performance of the traction circuit with respect to current returns to the substation will be required to address stray current.

11.18.51. **Cumulative Impacts**

11.18.52. Potential cumulative impacts associated with electromagnetic interference are addressed in Section 30.4.4 of the EIAR. It states that the list of 176 ‘other developments’ has been reviewed and that the proposed project will have an imperceptible impact in relation to electromagnetic interference during the construction phase, with no likely significant cumulative impacts with other developments, and that there are no cumulative impacts predicted during the operational phase.

11.18.53. **Oral Hearing**

11.18.54. **Errata and Updates**

- 11.18.55. The applicant did not make any submissions relating to this environmental topic at the oral hearing, other than the agreement with DAA referenced below and an updated cumulative impact assessment. No errata relating to this topic were submitted.
- 11.18.56. Cumulative Impact Assessment
- 11.18.57. An updated cumulative impacts addendum was submitted to the oral hearing on 28th February 2024 (Ref. OH98). The Addendum comprises a more up-to-date review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application. No additional significant residual cumulative impacts are identified with regard to electromagnetic interference.
- 11.18.58. Post-Oral Hearing
- 11.18.59. A further cumulative impact assessment update was submitted on 31st January 2025 as part of the applicant's response to the Wild Ireland Defence CLG oral hearing submission. Electromagnetic compatibility and stray current was screened out for cumulative impacts on the basis that a review of the shortlist projects found no potential for cumulative impacts.
- 11.18.60. An EIAR Addendum was also submitted by the applicant as part of their abovementioned response, addressing impacts associated with the proposed PFAS management strategy at Dublin Airport. This found no potential for additional impacts associated with electromagnetic compatibility and stray current.
- 11.18.61. Assessment
- 11.18.62. A number of written submissions raised concerns regarding the effects of electromagnetic interference and/or stray current on sensitive equipment, including those from Trinity College Dublin (S303) and the Abbey Theatre (S291).
- 11.18.63. While the written submission from TCD raised extensive concerns about the impacts of EMI and stray current on sensitive laboratory equipment and the adequacy of the proposed mitigation measures, the subsequent submission (Ref. OH184) made at the oral hearing on 6th March 2024 on behalf of TCD by Jarlath Fitzsimons SC stated that agreement had been reached with TII in relation to the issues of concern to them and that they support the MetroLink project.

- 11.18.64. Similarly, with regard to the Abbey Theatre, while their written submission raised concerns regarding possible electromagnetic interference with instruments, sound loops and broadcast units, an email sent on their behalf to the Board during the oral hearing on 19th March 2024 stated that all representations and submissions made by or on behalf of The Abbey Theatre have been satisfactorily dealt with, and they are satisfied with all mitigation measures set out in the EIAR and support the MetroLink project.
- 11.18.65. With regard to the hospitals in the vicinity of the proposed development, the submissions on behalf of the Mater Misericordiae and the Children's University Hospital and the Mater Misericordiae University Hospital (S186 and S187) and the Rotunda Hospital (S296) did not explicitly raise electromagnetism or stray current as an issue. A subsequent submission at the oral hearing on 29th February 2024 (Ref. OH115) by Jarlath Fitzsimons SC on behalf of the Mater Hospital legal entities stated that agreement had been reached with TII in relation to the issues of concern to them and confirmed their support for the MetroLink project. A similar oral hearing submission was made on behalf of the Board of Governors of the Rotunda Hospital on 28th February (Ref. OH95).
- 11.18.66. The details of any agreements reached between TII and the abovementioned bodies are not before the Board, however it is reasonable to conclude on the basis of the information above that the identified potential impacts on these receptors and their sensitive equipment are capable of being mitigated to the satisfaction of the bodies concerned. There is therefore no information before the Board to conclude that unacceptable residual impacts would arise in respect of any of these receptors.
- 11.18.67. With regard to other potentially sensitive receptors, I note that the written submission (S68) from DAA states that the proposal is not considered to impact safety or operations of aircraft at Dublin Airport with regard to electromagnetic fields and that impacts can be overcome with appropriate procedures in the flight crew operations manual. DAA requested continued consultation to ensure that sensitive equipment such as baggage screening is not impacted. Condition 3.2 of the subsequent agreement between TII and DAA submitted at the oral hearing on 26th February (Ref. OH77) relates to electromagnetism and aeronautical safeguarding and states that, prior to the commencement of development, TII shall agree the EMI mitigation measures with DAA & IAA as the responsible organisations for Aerodrome

Security & Safety provisions at Dublin Airport. I consider this to be a reasonable and appropriate measure to ensure that EMI associated with the proposed development does not impact on the safe operation of the airport or aircraft.

11.18.68. The Office of Public Works made a considerable number of written submissions (S213-S240), the common cover letter to which noted that the Oireachtas Chambers have extremely low tolerance for any external noise, vibration or electromagnetic interference during and post construction. The subsequent agreement between TII and OPW (which relates to all their properties with the exception of St Stephen's Green), which was submitted at the oral hearing on 26th February 2024 (Ref. OH73), includes various conditions. While none of these relate directly to electromagnetic interference or stray current, I note Part 3, conditions 2 and 4, which relates to the avoidance of disruption to Government business and broadcasting functions from the Leinster House Complex.

11.18.69. The written submission by Nigel Mallen (S209), a resident of Daneswell Road, Glasnevin, objects due to electromagnetic and stray current effects of the operation of the metro under his home. The applicant's response was that levels of EMI generated will not impact on residential properties due to compliance with relevant European Directives and Standards such that EMI levels generated by MetroLink will not occur at levels that affect home appliances. With regard to stray current, the applicant noted the design mitigation measures outlined in the EIAR. Mr Mallen did not provide any scientific evidence to substantiate his concerns and he did not make a submission at the oral hearing. Having regard to the information submitted and the applicant's commitments to comply with relevant European Directives and standards, there is no reason to conclude that significant residual impacts on Mr Mallon or any other residential receptors will arise as a result of stray current or electromagnetic interference.

11.18.70. I consider that potential impacts associated with electromagnetic interference and stray current arising from the construction and operation of the metro system on sensitive receptors are well understood, are governed by European regulations and are capable of effective mitigation. I further consider that the exact nature and detail of such mitigation is ideally a matter for agreement between TII and the affected parties, given the highly sensitive and highly complex nature of the equipment potentially affected (scanning electron microscopes for example). I note in this

regard that agreement has been reached with the relevant parties with regard to their particular concerns and that they have indicated their support for the project.

11.18.71. Cumulative Impacts

11.18.72. In relation to cumulative impacts, I concur with the applicant's assessment that any such impacts are limited to the operational phase, and that no significant residual cumulative impacts are likely to arise.

11.18.73. **Conclusion on Electromagnetism and Stray Current**

11.18.74. I have considered all of the written and oral submissions made in relation to electromagnetism and stray current and the relevant contents of the file including the EIAR and relevant updates provided to the oral hearing. I am satisfied that the potential for significant adverse impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on sensitive receptors.

11.19. **Material Assets, Cultural Heritage and the Landscape – Material Assets**

11.19.1. **Introduction**

11.19.2. Chapter 22 of the EIAR addresses Infrastructure and Utilities and Chapter 24 addresses Materials & Waste Management. The assessment of Infrastructure and Utilities is stated to encompass:

- Gas transmission/distribution pipework;
- Gas pressure reduction equipment;
- Electricity transmission/distribution systems (including underground and overhead cables and sub-stations);
- Potable (drinking) water pipes, foul or combined sewers, surface water sewers;
- Telecommunications (including telephone, cable television networks, internet services, signalling and traffic cables);
- Railway lines (and associated bridges) where there is interchange between the proposed Project and existing track or stations; and
- Navigable waterways (canals).

11.19.3. Chapter 22 is supported by a single appendix, A22.1 'Summary of Utilities Settlement Analysis Study', and a series of figures, which identify the locations of gas, electricity and water utilities in proximity to the proposed route.

11.19.4. Chapter 24 is supported by a single appendix, A24.1 'Excavated Materials Management Study', and a series of figures, which identify the locations of licensed landfills and recovery facilities surrounding the proposed development.

11.19.5. Section 22.1 of the EIAR states that road infrastructure and associated footbridges, footpaths and cycleways are not assessed within the Chapter and are assessed within the Traffic & Transport assessment contained at Chapter 9 of the EIAR.

11.19.6. I also consider it appropriate to briefly address the issue of settlement and property damage under the heading of 'material assets'.

11.19.7. **Methodology**

- 11.19.8. Chapter 22 splits the assessment zone into areas AZ1 – AZ4, whilst Chapter 24 identifies 2 No. geographically distinct study areas. The first of these includes the application site and any areas required for temporary access, site compounds, working platforms and other enabling activities. The second area extends to the availability of construction materials and capacity of waste management licensed infrastructure and remaining landfill void likely to be suitable to accept arisings and/or waste generated by the development.
- 11.19.9. Both chapters are stated to have been prepared in accordance with relevant policies and guidance. Chapter 24, in particular, references the Waste Framework Directive 2008/98/EC, which, amongst other things, includes the following 2 No. recycling and recovery targets to be achieved by 2020:
- 50% of certain waste materials from households and other origins similar to households must be prepared for re-use and recycling.
 - 70% of construction and demolition waste must be prepared for re-use, recycling and other recovery.
- 11.19.10. A summary schedule of consultations undertaken is presented in Tables 22.3 and 24.2 of the EIAR.
- 11.19.11. Chapter 22 is stated to have involved consultations with utility providers and utilities surveys, which included topographical surveys, ground penetrating radar and electromagnetic location, as well as manhole inspection. Infrastructure items are provided with a baseline rating of 'Very High', 'High', 'Medium', 'Low' or 'Very Low', which is based on their importance and sensitivity of service/supply, and the magnitude of impacts is assessed based on the level of disruption.
- 11.19.12. Chapter 24 (subsection 24.3.4.4) states that a notification under Article 27 of the European Communities (Waste Directive) Regulations 2011, as amended, has been made to the EPA, to classify much of the inert material to be generated by the development as a by-product and not a waste, as this would allow the material to be reused. The impact assessment utilises two scenarios: one where a significant volume of material has been determined to be a by-product; and another where the material has been determined not to be a by-product. The chapter further states that types and quantities of construction materials required as well as waste to be

generated through construction have been estimated, along with estimates of the quantities to be reused and waste recycled/recovered off site.

11.19.13. Materials and waste are each attributed a sensitivity rating of Very High', 'High', 'Medium', 'Low' or 'Negligible', which are related to the availability of the given material or landfill void capacity and the magnitude of impacts in each instance is assessed based on a percentage-based approach, i.e. the percentage of a given material used or the percentage of available landfill space utilised.

11.19.14. **Receiving Environment**

11.19.15. Chapter 22 identifies that there are a large number of utilities and services located in the public roads, adjacent to carriageways and in footpaths along the proposed route, in particular along the R132 Swords by-pass and in Dublin City Centre, with such infrastructure including sewers, watermains, overhead and underground electricity cables, gas mains and telecommunications and cable services. Table 22.7 presents a summary of the infrastructure and utilities present in each zone, identifying a mix of Very High and High importance items.

11.19.16. Chapter 24 references an Irish Concrete Federation document 'Essential Aggregates: Providing for Ireland's Needs to 2040' (2018), which states that Ireland has c. 500 active quarries and that there are abundant supplies of high quality aggregates in Ireland. Reference is also made to rising quantities of Construction & Demolition ('C&D') waste in the State, with soil and stone accounting for the vast majority of such waste and with 96% of such waste undergoing final treatment in Ireland.

11.19.17. There are stated to be 15 soil recovery facilities operating in the Eastern and Midlands Region (as of 2018), with additional facilities anticipated. Table 24.10 summarises existing facilities by available annual and remaining capacity and the expected year of closure. It further identifies that there are two approved recycled aggregate facilities (Integrated Materials Solutions Ltd Partnership and Panda Greenstar), details of which are summarised in Table 24.11. Existing waste transfer stations are summarised in Table 24.12 and inert landfills in the Eastern and Midlands Region are summarised in Table 24.13. Non-hazardous and hazardous landfill facilities are summarised in Tables 24.14 and 24.15.

11.19.18. **Potential Impacts**

11.19.19. Utilities and Infrastructure

11.19.20. Chapter 22 considers existing and proposed utilities and infrastructure. The assessment considers 'clashes' (i.e. where construction intersects with a given utility) and impacts arising from settlement. At a high level, the assessment states that if the development proceeds as planned, there is a risk of damage to existing infrastructure and utilities with consequent damage, disruption and economic cost.

11.19.21. A clash analysis was undertaken, to identify locations where existing utilities and infrastructure intercept with the proposed route. This assessment is summarised in Table 22.12. In brief, the route clashes with existing utilities in a large number of areas, with such clashes distributed across all assessment zones. In particular, the assessment identifies a requirement to modify the railway track layout and alignment at Glasnevin and disruption of the Royal Canal. Works to the rail line are stated to involve lowering the track by c. 2m and associated modifications, which requires closure of the Western Commuter Line for 21 months and closure of the South Western Commuter Line for 5 months. Works affecting the Royal Canal are stated to require closure and temporary draining of the affected section, with the maximum duration of closure stated to be 24 months. The Royal Canal Tow Path is stated to be required to remain closed for a 4 year period.

11.19.22. A settlement analysis was also carried out (summarised in Appendix A22.1), in view of the fact that tunnelling and other below ground works can potentially lead to movements at the surface and below ground, with associated settlement impacts on utilities. The assessment states that some c. 50,000 utilities were identified within the project boundaries that could potentially be impacted by tunnelling and other below ground works. A criteria-based assessment of potentially affected utilities determined 397 No. cases where criteria limits were exceeded, whereby impacts ranging from very slight to extremely severe were predicted to arise. The assessment states that in 16 of these instances, a utilities clash is identified and a utility diversion is proposed, and in a further 120 instances the assessment result is suggestive of a problem with input data, which requires further analysis and there is an expectation that impacts will be downgraded to negligible on further assessment (the settlement analysis states that from experience it is very unusual for a pipe to fail at the predicted level unless there is some pre-existing condition). The remaining 261 instances are stated to represent a 0.5% criteria exceedance rate.

- 11.19.23. Regarding infrastructure, the assessment states that a preliminary assessment has been carried out for existing bridges and other assets within the potential impact zone, a number of which are indicated as potentially impacted in a worst-case scenario. The Building Damage Report contained at Appendix A5.17 states that at the detailed design stage, detailed structural condition surveys of the bridges will inform the detailed damage assessment and that the allowable displacement limits will be agreed with the asset owners, informing agreement on any necessary intervention measures.
- 11.19.24. Power for the project is identified as provided via cable routes and 2 No. 110kV substations at the Dublin Airport North Portal (DANP) and at Dardistown, with an application for these elements to be made by ESB Networks. A further 7 No. traction substations are required to provide power to trains, at Dardistown depot and at Estuary, Fosterstown, Dardistown, Collins Avenue, Glasnevin, Tara and Charlemont. Dielectric gas, an identified potent greenhouse gas, is stated to be required as part of substation construction.
- 11.19.25. No public toilets are proposed for stations⁷⁵ or on trains but potable and foul water connections are required at all stations and at Dardistown depot and pre-application enquiries are stated to have been submitted to Uisce Éireann in each instance. Water supplies are required at all compound locations, with water usage varying from site to site and peaking in locations where on-site concrete batching is proposed.
- 11.19.26. Foul water drainage infrastructure is required at all construction sites and will discharge to the public network where possible or will be stored for removal by tanker. Construction wastewater will be recycled or reused where possible. Water requiring disposal will be discharged to the public sewer under licence or will be tankered off-site to a licensed facility.
- 11.19.27. Surface water drainage infrastructure will be installed along the length of the alignment, with surface water proposed to drain to nearby watercourses or to sewers following treatment and/or attenuation. Any discharge to a watercourse will be done under licence. Proposed culverts will be designed in accordance with legal

⁷⁵ This is incorrect. Public toilet facilities are proposed at interchange stations, as detailed in Section 9.26 of this report.

requirements, under direction from the OPW and Inland Fisheries Ireland. It is stated that surface water run-off from the construction compounds will be discharged to ground where soil conditions allow, or to a watercourse or to surface water sewer if of sufficiently good quality⁷⁶.

11.19.28. Whilst not identifying specific instances of significant adverse impacts, the assessment states that if the proposed design did not take account of identified infrastructure and utilities, a short-term **significant adverse** impact is predicted.

11.19.29. Materials and Waste Management

11.19.30. For the construction phase, demolition of various elements is required, 98% of which is predicted to constitute inert or non-hazardous waste, with hazardous wastes comprising asbestos, bituminous oils, chemicals and waste electronics and electrical equipment. Table 24.18 summarises predicted demolition wastes and the rate of recovery or disposal.

11.19.31. Tunnelling and excavation works are predicted to generate large quantities of excavated material, primarily soil, stone and made ground. Table 24.19 summarises the estimated quantities of material to be excavated, by location, estimating that a total of 3,025,588m³ will be excavated, with 99,931m³ of backfill required for the Dardistown depot and for landscaping measures. The assessment predicts that 89.6% of all tunnelled/excavated material will be classified under Article 27, thus not becoming a waste nor requiring disposal to landfill, and with the remaining 10.4% classified as waste. Notwithstanding this, the EIAR assessment presents a worst-case scenario and outlines that were all excavated material to be classified as waste and disposed to landfill, it would have a **significant adverse** impact on national landfill capacity void, reducing overall capacity by 24%.

11.19.32. Section 24.5.4.2.1 of the EIAR outlines that based on industry benchmarking data, it has been assumed that 2% of C&D waste will be classified as hazardous. The assessment further outlines that 83% of contaminated soils generated by the development will be treated, with the remaining 17% needing to be exported as there are no hazardous landfills in Ireland. Germany is identified as a likely destination for

⁷⁶ This contradicts the Hydrology section of the EIAR. Refer to Section 11.12 of this report.

such waste and in the event of export, German hazardous landfill void capacity is predicted to be reduced by 0.17%, giving rise to a **significant adverse** impact.

11.19.33. **Mitigation Measures**

11.19.34. Proposed mitigation measures are outlined at Sections 22.6 and 24.6 and can be summarised as follows:

11.19.35. **Infrastructure and Utilities**

- **Utility diversions:** A large number of utility diversions are required and are summarised in Table 22.12.
- **Settlement:** Measures will be incorporated to minimise the risk of utilities settlement, including good tunnelling practice and utilities monitoring and potential intrusive measures in conjunction with utility owners.
- **Existing infrastructure:** Appropriate instrumentation and monitoring will be designed as required for existing bridges/other assets within the potential impact zone. Identified mitigation for existing bridges is outlined in Table 22.11.
 - Further assessment will be undertaken of Cross Guns Quay canal lock, to determine whether protective measures are required to ensure the lock gates remain operational.
 - Monitoring of assets at Dublin Airport will be agreed with Airport Authorities.
 - Any requirement to redress road surface cracking will be addressed during completion works.

11.19.36. **Materials and Waste Management**

- Throughout construction, solutions will be implemented to minimise the consumption of materials and the generation of waste throughout the lifecycle of the proposed Project.
- All waste will be managed in accordance with the waste hierarchy, where possible.

- A Demolition Plan will be prepared for each building/structure to be demolished.
- The appointed contractor will prepare and finalise the CEMP, which will include all mitigation measures as outlined in the EIAR, and specific method statements.
- Hazardous waste will be managed as per the Waste Management (Hazardous Waste) Regulations and will be disposed of through a suitable waste contractor. Export of hazardous waste from the site outside of Ireland will comply with the procedures set out in this legislation.
 - Northwood compound site will be used for temporary storage, if required.
- Fuels, oils and other hazardous substances will be stored in secure and/or bunded areas.
- An Excavated Materials Management Strategy has been prepared and submitted with the application, which will be utilised by the appointed contractor.
- Attempts are being made with the EPA to have 2.9 million m³ of excavated material classified under Article 27, which would allow for reuse rather than classification as waste for disposal.
 - Huntstown quarry in Co. Dublin is the preferred location for material classified under Article 27 as it can accept all by-product predicted to be generated. If for some reason this quarry cannot accommodate the development, there are other facilities that can accommodate on a cumulative basis.
- Excavated waste materials will be stored and managed properly on site.
- A portion of the non-hazardous excavated waste will be used for backfilling and for bunding or landscaping works, with the remaining portion either sent to landfill or exported.
- Hazardous waste will be primarily treated, with a small proportion of this waste needing to be exported.

- Waste bentonite will be reused in the system, with spoil filtered and separated from the slurry and the remaining slurry material then recirculated for repeated reuse. Liquid sludge from this process is placed under a soil separator and dewatered with a centrifuge or filter press. Once the material is no longer required, the spoil and residual slurry from the tunnel boring will be disposed of off-site to a suitable authorised waste facility through an appropriate waste contractor.
- Slurry storage tanks will be bunded, to prevent leakage. Should leakages or breakouts occur, they will be responded to immediately with repairs and clean-up of any slurry that has spilled.
- All wastes generated during the operational phase will be managed in accordance with the waste hierarchy.
- Operational waste plans will be prepared by the operator in order to ensure that the aims of the project sustainability plan are met.
- The operator will be required to be accredited to ISO 14001 Environmental Management Systems (or similar) for the operation and maintenance of the project.

11.19.37. **Residual Impacts**

11.19.38. Residual impacts are set out at Sections 22.7 and 24.7 of the EIAR.

11.19.39. Regarding utilities and infrastructure, the assessment predicts that subject to implementation of mitigation measures, the residual impacts will be largely neutral, with localised positive impacts in specified cases such as at Glasnevin station where MetroLink interfaces with the western and south-western commuter rail lines.

11.19.40. Regarding materials and waste management, the assessment predicts that subject to the implementation of mitigation measures, potential impacts in relation to inert and non-hazardous and hazardous waste for the proposed Project will be avoided, reduced or offset. Table 24.28 summarises predicted residual impacts and I note that it predicts that the generation of inert and non-hazardous waste during construction, following the implementation of proposed mitigation, will have a **significant adverse** impact on national inert and non-hazardous landfill capacity, by reducing overall capacity by 1-5%.

11.19.41. **Cumulative Impacts**

11.19.42. Potential cumulative Infrastructure and Utilities impacts are addressed in Section 30.4.14 of the EIAR and potential cumulative Materials and Waste Management impacts are addressed in Section 30.4.16 of the EIAR.

11.19.43. In relation to Infrastructure and Utilities, the assessment states that of the 176 other developments reviewed, the majority were 'screened out' due to distance, scale or nature. All developments 'screened in' relate to the construction phase and are identified as giving rise to cumulative disruption to services in a situation where construction phases overlap. Subject to implementation of mitigation, the predicted impact is not significant.

11.19.44. In relation to Materials and Waste Management, the majority of developments considered were 'screened in' for potential cumulative impacts, due to increased material demands and the requirement to dispose of additional excavated material. A potential **significant cumulative adverse impact** on landfill capacity is identified, in a situation where construction phases of the different projects overlap.

11.19.45. **Oral Hearing**

11.19.46. **Errata**

11.19.47. The Schedule of Errata submitted at the oral hearing (Ref. OH9) on 19th February 2024 identified a number of typographical errors in the EIAR cumulative assessment regarding Utilities and Infrastructure. The document contains a number of appendices, including Appendix 8, a technical note on the Pumping Station Seatown Swords, and Appendix 13, an Addendum to Chapter 24 Materials and Waste Management.

11.19.48. An updated Schedule of Errata was submitted on 27th March 2024 (Ref. OH374), which includes additional errata identified following the opening of the hearing, but which does not include reference to the aforementioned Appendices 8 and 13. The updated Schedule does not expressly supersede the original submission, and in view of the fact that the documents do not contain identical information, they have been considered in tandem as part of my assessment.

11.19.49. **Updates**

11.19.50. The applicant provided multiple updates over the course of the oral hearing.

- 11.19.51. Copies of agreements with Fingal County Council (Ref. OH147) and Dublin City Council (Ref. OH76), setting out agreed 'conditions', and correspondence with Waterways Ireland (Ref. OH166) regarding the proposed Charlemont drop-off, were submitted.
- 11.19.52. A number of updates were provided in relation to waste disposal proposals, including: a letter from Roadstone (Ref. OH70) that confirms Article 27-compliant material will be accepted at the Huntstown Quarry facility; a 'Technical Note on Excavated Material' (Ref. OH94); and a letter from the EPA (Ref. OH297) regarding the Article 27 by-product notification made in relation to excavated material.
- 11.19.53. Updates were also provided in relation to drainage infrastructure, including a letter of support from Uisce Éireann (Ref. OH89); and a technical note entitled 'Utilities and Infrastructure Amendments Swords Pumping Station' (Ref. OH344).
- 11.19.54. A technical note and drawings relating to private foul drainage infrastructure, entitled 'Metrolink / Mouna Private Rising Main Interface' (Ref. OH182 and OH323), were also submitted, although it should be noted that these documents are related to a submission by Mouna Unlimited Company that was subsequently withdrawn prior to closure of the oral hearing. As the submission has been withdrawn (with the former observer listed in the applicant's Schedule of Third Party Agreements), I do not consider that this issue requires any detailed consideration by the Board and I consider that the amendments proposed by the applicant are acceptable and do not give rise to any potential significant additional effects on the water environment beyond those assessed in the EIAR.
- 11.19.55. The Schedule of Additional Environmental Commitments, which was updated at numerous stages over the course of the oral hearing, also sets out commitments in relation to Material Assets.
- 11.19.56. An updated Cumulative Impacts Addendum Report (Ref. OH98) was submitted to the oral hearing on 28th February 2024. The Addendum comprises an updated review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application. In relation to Infrastructure and Utilities it identifies a number of developments that have the potential to give rise to cumulative impacts, during the construction and operational phases, however following the implementation of proposed mitigation the

assessment does not identify residual significant adverse impacts. Regarding Materials and Waste Management, the assessment states that there will be a residual **significant cumulative adverse** impact with all of the developments considered, in view of the reduced landfill capacity that will arise should developments overlap.

11.19.57. **Post-Oral Hearing**

11.19.58. Following closure of the oral hearing, the applicant submitted a PFAS Management Strategy for Dublin Airport on 31st January 2025, addressing the potential for encountering PFAS contamination during tunnelling and excavation works at Dublin Airport. This submission followed the raising of the issue at the oral hearing and a request by the Board to respond to identified concerns.

11.19.59. A further Cumulative Impact Assessment update was also submitted as part of that response. In relation to Infrastructure and Utilities, it identifies a number of developments that have the potential to give rise to cumulative impacts during construction. However, the assessment states that utility diversions will be agreed with utility providers and that there will be no residual cumulative impact. In relation to Materials and Waste Management it identifies a large number of developments that have the potential to give rise to cumulative impacts on landfill capacity during construction. TII proposes that all waste generated will be managed in accordance with circular economy principles and with recovery methods favoured over disposal, however a potential residual cumulative **significant adverse** impact is identified in circumstances where construction phases overlap.

11.19.60. **Assessment**

11.19.61. I consider the potential significant impacts in terms of Material Assets relate to:

- Impacts on utilities and infrastructure.
- Impact on landfill capacity arising from disposal of excavated material.

11.19.62. As stated above, I also consider it appropriate to briefly address the issue of settlement and property damage under the heading of 'Material Assets'.

11.19.63. **Impacts on Utilities and Infrastructure**

- 11.19.64. As the EIAR assessment points out, in view of the nature of the project and the heavily urbanised landscape through which the route alignment runs, there is a risk of damage to existing infrastructure and utilities during construction. The issue may arise through a direct strike or 'clash' with a given utility or infrastructure asset or may arise from ground settlement.
- 11.19.65. Figures 22.1 to 22.4 of the EIAR identify the location of utilities and infrastructure across the route alignment and Sections 22.5.2.1.1 – 22.5.2.1.4 of the EIAR summarise the distribution of utilities and infrastructure across Areas AZ1 – AZ4. I note from Section 22.3.3 of the EIAR that the identification process included engagement with relevant service providers and a variety of surveys.
- 11.19.66. Regarding the risk of a direct strike, I note from the assessment that a clash analysis has been undertaken, the results of which are contained in Table 22.12 of the EIAR. A substantial number of diversions are required in each section, including the diversion of both public and privately owned assets, and the diversions are described by Section 22.6.1.1 of the EIAR as significant. The proposed mitigation strategy outlines that consultations have taken place with all known service providers and that designs for utility diversions and/or protection measures have been agreed in principle with the relevant utility providers. The duration of service interruptions will be agreed with the relevant utility provider, in accordance with their service level/business interruption requirements, and in most cases, the duration of disruption is predicted to be no more than a number of hours.
- 11.19.67. As noted above, agreements with both DCC (OH76) and FCC (OH147) were submitted at the oral hearing, containing detailed commitments relating to interactions with public utilities during construction. Uisce Éireann (UÉ), having initially raised various issues in their initial written submission, subsequently provided a letter of support for the application to the oral hearing (Ref. OH89).
- 11.19.68. In view of the above, I concur with the EIAR, that disruptions of the nature outlined will not give rise to any significant adverse impact.
- 11.19.69. Regarding the risk of settlement-related impacts on utilities, I again note that a settlement analysis has been undertaken and it involved analysis of 50,000 utilities. Of these, 261 No. or 0.5% of the total were predicted by the analysis to exceed

applied settlement threshold criteria, giving rise to a potential significant impact on the performance and structural integrity of the pipe.

- 11.19.70. The risk of settlement-related impacts to infrastructure assets including bridges is addressed in Appendix A5.17 of the EIAR, Building Damage Report, and I note that bridges ST-4, ST-5 and ST-5a at Glasnevin are predicted to exceed settlement threshold criteria and are likely to require mitigation. The Cross Guns Royal Canal quay lock, ST-5b, may experience jamming of the gates and will require monitoring in order to inform potentially necessary gate adjustments.
- 11.19.71. The oral hearing submission by Sabrina Joyce-Kemper and Wild Ireland Defence CLG (Ref. OH369) questions the exclusion of the Ringsend WWTP, regional biosolids facility and other elements of the sewer network from the EIAR assessment. It suggests that there is potential interaction with subsurface pipes such as the North Fringe Sewer.
- 11.19.72. In the Response to Submissions document, TII point out that any interactions between MetroLink and elements of the Greater Dublin Drainage (GDD) scheme (of which the Ringsend WWTP upgrade forms part) were considered in the EIAR Chapter 22 and 28 assessments. The response acknowledges that the MetroLink alignment crosses the orbital sewer route at Dardistown and points out that TII have engaged with UÉ in relation to it and have reached agreement on how the interactions shall be dealt with between the parties. The response also states that MetroLink does not interact with the North Fringe Sewer diversion or interface with the GDD proposed WWTP.
- 11.19.73. I note the abovementioned interaction with the proposed orbital sewer at Dardistown is shown on utilities drawing No. ML-UC 303 G- H and I further note TII's comment that it has agreed with UÉ the nature of interactions between projects. The sewer is further identified and assessed in Table 22.12 of the EIAR as being installed with sufficient cover and protection, in view of which the predicted impact is not significant. UÉ provided a letter to the oral hearing on 27th February 2024 (Ref. OH89), stating that it is confident that agreement can be reached on all issues that it is necessary to reach agreement on relative to delivery of the MetroLink project and in the context of UÉ's statutory functions.

- 11.19.74. I am satisfied that adequate consideration has been given to this element of the GDD in the EIAR assessment and that TII has proposed mitigation that will be effective in ensuring there is no significant impact arising from the proposed development.
- 11.19.75. A submission was received from John McGreevy (S152) which requested that land should not be acquired as part of the development, for the purposes of accommodating a relocated telecommunications mast. Mr McGreevy was also represented at the oral hearing on 11th and 13th March 2024 and provided a copy of a legal agreement with the mast operator (Ref. OH203) stating that the mast will be removed from the site by the end of September 2024. I note that the mast has now been removed from the site and as such there is no longer any interaction with the project. This issue is also discussed in the CPO section of this report.
- 11.19.76. In terms of infrastructure impacts, the development requires works to both the Royal Canal and Iarnród Éireann (IÉ) rail lines at Glasnevin. Construction of the Glasnevin Station requires modifications to the IÉ track layout that will result in closure of the Western Commuter Line for 21 months and subsequent closure of the South Western Commuter Line for 5 months. The Royal Canal will also be dewatered between locks 5 and 6 for 2 x 3-month periods and will be closed for a temporary period of up to 24 months.
- 11.19.77. In the case of the IÉ rail lines closures, the assessment identifies the impact as profound, prior to the implementation of proposed mitigation, and not significant following implementation. This mitigation, according to Table 22.12, relates to linking required works with planned IÉ infrastructure works, to ensure interfacing and the timing of works is optimised.
- 11.19.78. The closure of both lines has the potential to disrupt rail passengers and I note in this respect that the IÉ submission on the application (S121) submits that the closures will have a significant disruptive impact on passenger, freight and maintenance services. However, and whilst it is not outlined within the EIAR, I note that in its response to the IÉ submission, the applicant outlines that onward access to Connolly Station will be available throughout the period of closure of the western rail line. In this context and having regard to the fact that there are no required

station closures for these required works, I concur with the EIAR assessment that the impact of the western line rail closure would not be significant.

11.19.79. In the case of the south western rail line closure, there is no such commitment to maintaining onward access to Connolly Station and, in this context, I agree with the IÉ submission that the line closure will have a significant disruptive impact on rail users. However, this disruption will be for a specified period of 5 months and I consider the temporary impact is outweighed by the benefits that will accrue from delivery of the development, in particular as the Glasnevin Station will provide for a high level of interchange between rail and metro services and this interchange cannot be delivered without some level of interaction between rail lines during construction.

11.19.80. Dewatering and closure of the Royal Canal will have a similarly disruptive impact on canal users but, for the above-outlined reasons, I again consider the temporary impact is outweighed by the benefits that will accrue from delivery of the development.

11.19.81. I further note that the EIAR identifies that settlement may have an effect on operation of the Cross Guns Quay Canal Lock Gates and the applicant commits to implementing necessary protection measures to ensure that the Lock Gates remain operational. I am satisfied that there will be no significant adverse impact on the operation of the Royal Canal.

11.19.82. A new pumping station is required at Seatown West, as part of sewer diversions that are required to facilitate the route alignment along the R132. The applicant provided a document entitled Utilities and Infrastructure Amendments Swords Pumping Station (Ref. OH344) to the oral hearing on 26th March 2024, which contains an assessment of potential environmental impacts. According to Section 3 of this report, the pumping station principally comprises a below ground sump chamber and an above ground control building. The pumping station is identified as having the potential to impact on utilities, due to the change in pumping station drainage arrangements. However, I note that the proposed layout has been agreed with UÉ. In view of the fact that agreement regarding the layout and design of the pumping station has been agreed with UÉ, I am satisfied that the proposed

development is not likely to have a significant impact on the local foul drainage network.

11.19.83. Whilst the issue of damage to existing roads is not addressed in the Chapter 22 assessment, I note that the mitigation measures contained in Section 22.6 of the EIAR make reference to potential minor damage to roads, surface cracking, whether crossed by the route alignment or used as a haul route. I agree that the development has the potential to degrade road conditions in the manner described.

11.19.84. The applicant was asked during Inspector questions at the oral hearing, on 19th March 2024, whether roads conditions surveys are proposed to be undertaken prior to the commencement of development and I note that, following this, the document Final Schedule of Additional Environmental Commitments (Ref. OH376) contains a commitment to complete such surveys in the vicinity of construction sites and on haul routes, prior to the commencement of development. I am satisfied that that this will provide a mechanism for identifying any degradation that has been caused during construction and that any necessary rectification can be undertaken in consultation with the relevant local authority.

11.19.85. Impact on Landfill Capacity Arising from Disposal of Excavated Material

11.19.86. According to Section 5.5.14 of the EIAR, nearly 3,000,000m³ of excavated material is forecast to be generated during the construction phase, arising from tunnelling works, excavation of station boxes and open cut and cut and cover sections of the route alignment. The EIAR assessment envisages three waste disposal scenarios: unmitigated (i.e. 100% disposal to landfill); disposal via Article 27 Notification process; and disposal via Soil Recovery Facilities (SRF).

11.19.87. I agree with the EIAR assessment, that in a worst-case scenario where all waste generated during construction is disposed of to landfill, it would have a significant adverse impact on national landfill capacity, by reducing overall capacity by 24%.

11.19.88. Notwithstanding this unmitigated scenario, the EIAR assessment predicts that much of the inert material excavated as part of construction could be classified as a by-product, which would allow for reuse of 89.4% of all excavated material and with 10.6% requiring disposal to landfill, thus reducing the impact on national landfill capacity to moderate. In this context the applicant advises that a By-Product

Notification under Article 27 of the European Communities (Waste Directive) Regulations was submitted to the EPA in November 2021 and remains undetermined.

11.19.89. Importantly, the applicant provided a letter to the oral hearing on 21st March 2024 (Ref. OH297), which it received from the EPA regarding the Article 27 Notification and which states that the EPA is not satisfied with the level of information provided with the Notification and that that the Notification should be withdrawn. In view of this letter, the applicant confirmed to the oral hearing on 21st March 2024 that the Article 27 Notification would be withdrawn and that a series of smaller notifications, relating to smaller quantities of excavated material, will be submitted in the future.

11.19.90. Following Inspectors questions on the matter, TII also provided a document, 'Technical Note on Excavated Material' (Ref. OH94), to the oral hearing on 27th February 2024, which assesses the disposal of excavated material to SRF in the event that the Article 27 Notification is unsuccessful. It outlines that 80% of excavated material could be classed as suitable for SRF and, on this basis, predicts that the development will also have a moderate adverse impact on national landfill capacity.

11.19.91. The Technical Note identifies important differences between Article 27 classification and the use of a SRF, whereby the Article 27 process is subject to application and determination by the EPA and a Licensed SRF has the ability to accept material based on compliance with EPA guidance on acceptance criteria on an individual basis.

11.19.92. There is clearly ongoing uncertainty regarding the exact quantum of material that could be disposed of through either process, but I consider this is acceptable in the circumstances. Establishing the exact quantum requires further ground investigations to be undertaken, but I consider it is likely that substantial quantities of the excavated material could either be classified under Article 27 or accepted at a SRF. The route alignment passes through a variety of environments, including greenfield sites at Estuary and Dardistown, and tunnelling will take place at considerable depth below the surface where the potential for encountering contamination is reduced. I would also point out that the abovementioned EPA letter

offers stated support for the applicant's efforts to maximise beneficial reuse of excess materials as by-product and does not raise concerns regarding the sample results provided, instead expressing concern that there is insufficient sampling data to provide the necessary certainty that the data is representative of the entire volume.

11.19.93. Either of the proposed disposal methods would reduce the quantum of material requiring disposal to landfill and I note from the information contained within the EIAR and Technical Note that substantial reductions in the quantum of material requiring disposal to landfill are predicted. As noted above, the applicant also provided a letter to the oral hearing from Roadstone (OH70), which outlines that all Article 27-compliant material will be accepted at their Huntstown South quarry facility and that a Memorandum of Understanding has been agreed between the parties. The EIAR points out elsewhere that Huntstown Quarry also has a licence to operate as an SRF.

11.19.94. I consider that the applicant's approach to mitigating the potential significant impact of the development on national landfill capacity is reasonable and is likely to be effective in ensuring that significant impacts on national landfill capacity do not arise.

11.19.95. Hazardous waste encountered during construction will, according to Table 24.28 of the EIAR, be exported as there are no commercial hazardous waste landfills in Ireland. Germany is identified by the assessment as the recipient of a large percentage of Ireland's hazardous waste and is therefore assumed as the destination for hazardous waste arising from the proposed development. The assessment states that hazardous landfill waste capacity in Germany will be reduced by <1% as a result of the development and I concur that such a reduction will not have a significant adverse impact on German national hazardous waste landfill capacity.

11.19.96. As I outlined above, the issue of PFAS ground contamination was raised at the oral hearing. The issue appears to have come to light following submission of the application and is therefore not addressed in detail in the EIAR.

11.19.97. A PFAS Management Strategy is contained within the document Response to Wild Ireland Defence CLG & Sabrina Joyce Kemper submission and, whilst it states

that construction activity will not interact with the primary known source areas identified at Dublin Airport, it may nevertheless give rise to mobilisation of PFAS that is contained within the soil, bedrock and/or groundwater. The full extent of PFAS contamination is stated to be unknown and, in view of same, a worst case assumption has been applied whereby 100% of excavated material (both soils and water) at the Airport construction sites will be contaminated and will require management. Contaminated material will be stored at Dardistown, at a purpose-built storage facility, pending transport to Dublin Port, where it will be exported for treatment or disposal to landfill.

11.19.98. In the event that all excavated material is contaminated, it will reduce the overall quantity of material predicted to be reusable but this will not affect landfill capacity in Ireland, since there are no hazardous landfills in Ireland. I have outlined above that the predicted usage of hazardous landfill capacity in Germany would affect its overall capacity by <1% and, in the context of the potential additional 300,000m³ that may require disposal to landfill, I am satisfied that this will not have a significant adverse impact on available hazardous landfill capacity.

11.19.99. Settlement and Property Damage

11.19.100. The issues of settlement and property damage are primarily addressed in the 'Building Damage Report' (BDR) included as Appendix A5.17 to Chapter 5 of the EIAR. Chapter 5 is a descriptive chapter of the EIAR relating to the construction phase. This would appear to be an unusual place to address the issue of settlement and property damage, rather than Chapter 20 (Soils and Geology), Chapter 21 (Land Take) or elsewhere, within the context of the EIA topic of 'Material Assets'. I note that Section 20.2.4.6 of Chapter 20 states that the chapter only considers effects of settlement on receptors relevant to soils and geology. It states that settlement effects on buildings are addressed in Chapter 21 (Land Take) and on the built environment are addressed in Chapter 26 (Architectural Heritage). However, Chapter 21, at Section 21.6.1.4, just refers to the assessment contained in Appendix A5.17.

11.19.101. This was queried at the oral hearing by the legal representative for Irish Life Assurance plc and representatives of CDCG. The applicant's response was that settlement was considered in a number of EIAR chapters but that the impacts are not significant.

11.19.102. I have addressed the issues of settlement and property in detail in Section 9.10 of this report. Having reviewed the information submitted by the applicant and by observers and the report by Tyréns, the Board's specialist consultant in relation to these matters, I consider that while there is a risk of damage to individual buildings as a result of settlement, primarily due to tunnelling, this can be addressed through good tunnelling practice, risk management, monitoring and oversight of the building damage assessments and any related measures by the applicant's Expert Panel. I do not consider that there are likely to be significant adverse impacts on the environment as a result of settlement or property damage caused by the proposed development.

11.19.103. **Cumulative Impacts**

11.19.104. As the EIAR and Cumulative Impacts Addendum Report (Ref. OH98) point out, there are locations where other largescale development proposals may act in tandem with the proposal, giving rise to significant cumulative impacts. In preparing this cumulative assessment section, I have given consideration to the EIAR and Cumulative Impacts Addendum Report and I have also analysed available online planning records provided by Fingal County Council and Dublin City Council.

11.19.105. In relation to Infrastructure and Utilities, in view of the nature and scale of the proposed development, and the urban environment through which both the proposed development and the other cumulative developments are located, there is a risk of clashes with utilities such as mains pipes, communications infrastructure, etc.

11.19.106. The applicant has, in my view, undertaken a detailed survey programme to identify the location of known utilities and infrastructure items along the alignment and, critically, states that designs for utility diversions have been agreed in principle with relevant utility providers. Diversions will undoubtedly lead to some disruption but I consider the applicant's approach is likely to ensure that such disruptions are minimised and will not be significant and will not contribute to any significant cumulative impacts with other developments in proximity to the alignment.

11.19.107. In relation to Materials and Waste Management, I have previously outlined that the proposed development has the potential to have a significant adverse impact on national landfill capacity, in a worst-case scenario where all excavated material is required to be disposed to landfill, and I agree that additional large scale

developments have the potential to contribute to and compound such impact. I note in this respect that the further submission by the OPW (2FS11) requests that the applicant should provide greater clarification and additional detail (examples provided relate to staggered work schedules and contingency plans) on how the issue will be addressed.

11.19.108. I have outlined previously that the applicant's approach to mitigating the potential impact on landfill capacity effectively seeks to minimise the amount of material that requires landfill disposal, by either having the majority of excavated material classified by the EPA as a by-product that can be reused or by disposing of the majority of excavated material to a soil recovery facility. This approach is consistent with the circular economy model, as was confirmed in its submission to the oral hearing by the EPA (Ref. OH297), and I consider it likely that substantial quantities of the excavated material could either be classified under Article 27 or accepted at an SRF. Either disposal method will substantially reduce the quantum requiring disposal to landfill but notwithstanding this, the residual volume requiring disposal to landfill, where it is predicted overall national landfill capacity by 1-5%, will have a significant impact on national capacity.

11.19.109. Regarding the OPW's request for clarification on how the issue will be addressed, I do not consider such a request would assist with the Board's assessment of the application. The use of landfill for disposal is clearly itself a contingency, in the event that excavated material cannot be reused as a by-product or disposed of to an SRF. Regarding the questioning of whether work schedules can be staggered, I do not see how this could be a workable solution since it would likely require prolonged breaks in construction whilst additional landfill capacity is provided. It would also do nothing to reduce the amount of excavated material to landfilled. In any case, I would highlight to the Board that TBM operation is required to be 24/7, in order to maintain pressure and to minimise the potential for ground settlement. This aspect of the project will generate substantial amounts of excavated material (Table 24.19 of the EIAR outlines that tunnelling will generate approx. 27% of all excavated material) and there is a requirement to process and remove this material, in order that tunnelling can continue.

11.19.110. To conclude, I agree that the development has the potential to have a significant adverse impact on national landfill capacity, in a worst-case scenario, and

that additional large scale developments have the potential to contribute to and compound such impact. However, I consider the likelihood of this scenario arising is low.

11.19.111. **Conclusion**

11.19.112. I have considered all of the submissions made in relation to Infrastructure and Utilities and Materials and Waste Management impacts and the relevant contents of the file, including the EIAR and relevant update reports provided to the oral hearing. Subject to specified exceptions below, I am satisfied that the potential for significant adverse impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

11.19.113. In the case of disposal of inert waste, notwithstanding the implementation of mitigation measures that will reduce the amount of excavated material requiring disposal to landfill, the project is nevertheless predicted to reduce overall national landfill capacity by 1-5% and will thus have a significant adverse impact on national landfill capacity. I am satisfied that additional practical mitigation is not available, which would have the effect of reducing the identified impact below the 'significant' level.

11.19.114. In view of the primarily subterranean nature of the project, that requires very substantial excavation as part of tunnelling and station construction, the generation of large amounts of spoil that requires disposal is unavoidable. It is my opinion that the long-term benefits of MetroLink outweigh the identified impact and that it does not justify a refusal of the Railway Order.

11.20. Material Assets, Cultural Heritage and the Landscape – Traffic and Transportation

- 11.20.1. Traffic and transport are addressed in Chapter 9 of the EIAR. Appendices A9.1 – A9.6 include: a note on the Area of Influence; the Overall Scheme Traffic & Transport Assessment; Traffic and Transport Modelling Plan and Report; Scheme Traffic Management Plan; and a report on data collection. This is supported by Figures 9.1 – 9.49. The Board will note that Appendix A9.2-M ‘Traffic and Transportation Assessment – St Stephen’s Green Station’ was inadvertently omitted from the application documentation and was subsequently submitted.
- 11.20.2. **Methodology**
- 11.20.3. To determine the main area of influence for the project, two baseline model runs were compared, with and without the project in place. This indicated an increase in road traffic volumes to the north of the alignment (i.e. north of the P&R Facility) and a subsequent reduction in road traffic between Swords and Dublin City Centre. Changes in car trips also occurred on arterial routes around the city centre.
- 11.20.4. This area of influence is illustrated in Figure 9.1 of the EIAR, with the effect of the P&R Facility resulting in the area of influence extending northwards to Dundalk and Monaghan Town along the M1 and N2, respectively. To the west, the area of influence extends to Kinnegad, while to the south it extends as far as Wicklow Town, again along the major radial road corridors and the M50 Motorway, which is stated to be due to opportunities to combine Luas Green Line trips with the project and to access the Kildare and Maynooth railway stations.
- 11.20.5. The NTA’s East Regional Model (ERM) was utilised to provide the majority of the input transport data for the assessment. It was used to provide forecast transport movements, such as passenger numbers, origin/destination and changes in travel behaviour due to the project. TII also obtained NTA Planning Datasheets that includes forecasts for key trip generation and destination variables.
- 11.20.6. In relation to Dublin Airport, its growth differs from land use related growth, and passenger growth forecasts are therefore based on CSO statistics extrapolated to 2065 using growth figures from a DTTAS report ‘Review of Capacity Needs at Ireland’s State Airports - August 2018’.

- 11.20.7. The EIAR also utilised various other sources of qualitative data (e.g. Ordnance Surveys, Google Street View, Street Level Layout Drawings) and quantitative data (traffic surveys, topographical surveys, TII Traffic Counters, Street Level Layout Drawings and forecast vehicle flows and pedestrian movements from DAA).
- 11.20.8. Traffic and pedestrian count surveys were undertaken to inform local junction models and micro-simulation models and to complement existing traffic data. This included surveying a total of 108 locations over a 24-hour period on mid-week days. Consultation also took place with the public and various stakeholders (see Section 9.4.5 of EIAR).
- 11.20.9. The assessment of potential traffic and transport impacts during both the construction and operational phases was undertaken in line with TII's 'Traffic and Transport Assessment Guidelines' (2014) and considered impacts on:
- Public Transport (PT) users.
 - Road Users (i.e. general traffic).
 - Pedestrians.
 - Cyclists.
 - Parking and Loading.
- 11.20.10. Construction Phase
- 11.20.11. The construction phase impact assessment methodology included:
- Review of proposed **Temporary Traffic Management (TTM)** measures to identify lane closures, impacts to cycle/walking networks, parking reduction etc.
 - **Strategic modelling** to assess the impact on the regional transport network (utilising NTA's ERM) and allowing the reassignment of traffic onto other road links depending on travel times and delays that drivers may experience.
 - **Local modelling** to assess impacts on individual junctions or groups of junctions, utilising tools such as LinSig and Junctions 9. This uses static demand, where the demand doesn't reassign.

- Development of a Strategic/Local impact assessment and rating methodology as part of the **Scheme Traffic Management Plan (STMP)**.

11.20.12. 2028 is utilised as a worst-case peak construction scenario, with TTM measures in place at most stations and the busiest period for movement of construction vehicles.

11.20.13. In the Do-Minimum scenario, a 2028 base network is utilised with the addition of the permitted R132 Connectivity and BusConnects projects (including 4 No. roundabouts on the R132 replaced by signalised junctions, Bus Gate on St Mobhi Road and operation changes around Blackhall Place).

11.20.14. In considering the Enabling Works, a 2024 Do-Minimum model was used, which included the R132 Connectivity Project only, to reflect a 'pre-BusConnects' scenario.

11.20.15. I note that the construction phase assessment makes a number of assumptions, including 90% of spoil going to Huntstown Quarry, 10% going to Portlaoise as contaminated material, precast going to/from Co. Offaly and concrete going to/from the nearest batching site to the construction site.

11.20.16. Operational Phase

11.20.17. The assessment for the operational phase used the following scenarios, where 2035 is the opening year, 2050 is the design year and 2065 is the forecast year:

- **Scenario A – Do Committed Minimum:**
 - 'Do Minimum' (2035, 2050, 2065).
 - 'Do Something' (2035, 2050, 2065).
- **Scenario B – Likely Future:**
 - 'Do National Development Plan' (Do Minimum and Do Something 2035).
 - 'Do GDA Transport Strategy' (Do Minimum and Do Something 2050, 2065).

11.20.18. The rationale for the two modelled sub-scenarios under Scenario B is to model scenarios with schemes planned for delivery under the NDP by 2035 for the 2035 Opening Year and the additional schemes planned under the Transport

Strategy for the GDA for the 2050 Design Year and the 2065 Forecast Year, with and without the MetroLink project.

- 11.20.19. Local area models were also used in certain locations and at station locations to assess local cycle and pedestrian impacts. This included use of VisWalk microsimulation models, LinSig junction models and Transport for London's Pedestrian Comfort Calculator.
- 11.20.20. The EIAR notes that the assessment approach taken in the EIAR differs from that used in the STMP, with the EIAR assessment considering the significance and sensitivity of the receptor, as well as the magnitude of the impacts. Hence, the STMP impact ratings differ from the STMP ratings.
- 11.20.21. In categorising the sensitivities of roads, the EIAR makes use of DMURS guidance and professional judgment, with local roads being of low significance in terms of strategic importance but high sensitivity to change in traffic flow, for example, while Motorways would be of very high significance but low sensitivity to change in traffic flow. Similarly, higher quality public transport modes are high or very high significance and medium to very high sensitivity to change in volume or quality of service. In terms of pedestrians and cyclists, different types of areas are assigned significance and sensitivity ratings. These range from very high significance and high sensitivity in the case of the city centre with high volumes of pedestrians and cyclists, to low significance and low sensitivity in the case of industrial estates, where pedestrian and cyclist volumes will be minimal.
- 11.20.22. The criteria used for assessing the magnitudes of impacts are set out in Section 9.4.8.2 of the EIAR.
- 11.20.23. In the operational phase, the magnitude of impacts on pedestrians is based on the 'Pedestrian Space Calculator' from the DCC publication 'The Heart of Dublin – City Centre Public Realm Masterplan', which identifies 'circulation zone' widths based on footfall. Streets which fell below the recommended width were re-assessed using Transport for London's Pedestrian Comfort Guidance for London. Similarly, for cyclists, the NTA's National Cycle Manual Quality of Service Evaluation was used, which assesses the quality of service based on various factors.

- 11.20.24. Public transport impact magnitudes are based on increases in passenger flows, changes in the number of trips, changes in capacity, journey time delays and overall public transport network statistics.
- 11.20.25. For general traffic impacts, the magnitude of impact is based on changes in traffic flows on a given link, changes in road travel time on the link, and the quantum of parking or loading bays removed.
- 11.20.26. The magnitude of impact on 'Other Users' is also assessed, based on the distance of relocation to access/entry points for schools, commercial premises, residential, public services etc.
- 11.20.27. In the construction phase, the magnitude of the impacts is taken from the STMP and combined with the significance and sensitivity of the receptor identified in the EIAR to establish the overall Significance of the impact. In terms of magnitude, the STMP uses three rating levels of 'slight', 'moderate' or 'severe'. Table 9.22 of the EIAR sets out the performance indicators used in the STMP for the various assessment criteria.
- 11.20.28. The STMP uses a two-stage assessment screening methodology for impacts at a local level, with the magnitude and duration of traffic management interventions used to screen those to be progressed to further Stage 2 assessment (see Table 9.23 of EIAR).
- 11.20.29. The significance of the impacts is then determined using the standard EPA guidance.
- 11.20.30. **Baseline**
- 11.20.31. The current baseline environment is set out in considerable detail in Section 9.5 of the EIAR, both at the strategic network level and at the local level, with consideration of the public transport network, road network, pedestrian and cycle networks and parking provision. It also details the future receiving environment if other infrastructure proposals are implemented before MetroLink is operational, such as BusConnects and various roads proposals.
- 11.20.32. I do not repeat or summarise the baseline conditions here in the interests of brevity, but I refer the Board to the abovementioned section of the EIAR where they will find extensive tables and information setting out the baseline conditions.

11.20.33. **Potential Impacts**

11.20.34. The potential impacts are set out in Section 9.6 of the EIAR. As noted above, the impacts are considered at both the strategic and local levels due to the scale of the project. For the construction phase, this section of the EIAR needs to be read in conjunction with the STMP in Appendix A9.5, which provides greater detail on the TTMs and works along the alignment. For the operational phase, it should be read in conjunction with the TTA in Appendix A9.2.

11.20.35. **Construction Phase**

11.20.36. ***Strategic Overview***

11.20.37. Construction phase impacts are primarily due to the traffic management arrangements associated with the construction of the proposed stations, which will generally require removal of areas of road space and reduced road capacity, and the associated construction vehicle movements associated with spoil removal, delivery of materials and general construction traffic.

11.20.38. The EIAR notes that there is likely to be concurrent construction with other planned projects, including the R132 Connectivity Project, BusConnects, the Hines 'Two Grand Parade' Development at Charlemont (now completed), DART+ Programme, and the Dublin Central development at O'Connell Street. It is stated that consultation has been undertaken with each project team to coordinate predicted construction phasing to minimise potential impacts associated with concurrent construction activity.

11.20.39. To assess the construction impacts on the strategic road network, the applicant used a fixed demand SATURN model, based on the NTA's ERM, for Northern Peak (i.e. busiest period north of the M50) and Southern Peak (i.e. busiest period south of the M50), with construction vehicles and road closures/diversions modelled (see Tables 9.62 – 9.65 of EIAR for details of closures/diversion for the main works and enabling works scenarios).

- **Public Transport Impacts:** **Short-term Significant negative** impact on the Western Commuter Rail Line (Maynooth to Docklands) which will be closed for 21 months and on the South Western Commuter Rail Line (Maynooth and Phoenix Park to Connolly) which will be closed for 5 months. During these

period, the Western Commuter Line will terminate at Broombridge and the Southwestern Commuter Line will terminate at Heuston Station.

No significant impact to the operation of the Luas network.

No significant impact on bus services, since bus lanes are provided throughout most of the work areas. There will be some delays to bus journey times and scheduling at locations where the bus lanes are removed or where buses need to share with general traffic. Journey times will also be impacted by the removal of designated bus lanes at some locations, such as on approach/exit to junctions along the R132 Swords Bypass during the Main Works, however these will be short in duration.

- Strategic Road Network:

The main proposed haul routes to and from the sites are shown in Figure 9.9 of the EIAR, with the M1 and M50 Motorways being utilised as haul routes to access the spoil site.

- ***Traffic Flow Impacts***

The two Main Works Construction Period scenarios (closures in the central and southern sections, and closures in the northern sections) results were analysed to identify instances of either:

- An increase in flow greater than both 20 PCUs and 5% of the equivalent Do Minimum flow.
- An increase in delay greater than 3 minutes.

Diagram 9.26 and Diagram 9.27 are based on the outputs from the Main Works 2028 AM modelling scenario. This shows the links that meet one of the criteria above, categorised by the percentage increase in flows.

For the Main Works 2028 AM modelling scenario, increases in traffic flows are shown in Diagrams 9.25 and 9.26 of the EIAR, indicating sizable increases (over 30% in many cases) in the northern section of area AZ4 (Northwood to Charlemont) between the R108 and M50 Motorway Junction 6, reflecting traffic routing away from R108 Northwood routes due to the construction closure, lane loss and construction vehicle impacts, to alternative routes such as R104 St Margaret's Road, Coultry Road,

Shanliss Road, Shanard Avenue and Ballygall Road East. Sizeable increases occur on the R108 between the Ballymun and Northwood sites due to the addition of construction vehicles here outweighing other traffic routing away.

In the city centre, there are also sizable increases in traffic flows of over 30% in the vicinity of the Tara Station, where the closure of Luke Street and Poolbeg Street causes more traffic to route via surrounding roads. Re-routing also occurs to certain side streets at Charlemont, Mater and St Stephen's Green sites to avoid closures and lane losses, causing high percentage growth on those streets (e.g. Goldsmith Street near Mater, Hume Street near St Stephen's Green and Northbrook Road near Charlemont).

For the Main Works 2028 PM modelling scenario, a similar result is illustrated in Diagrams 9.28 and 9.29 of the EIAR, with traffic rerouting onto roads with low existing traffic flows leading to large percentage increases of over 30%. Impacts in the city centre are highly localised to various short stretches of local roads.

In the Swords area, the results outlined in the STMP demonstrate that the Swords closures cause increase on flows on parallel side-roads to the closed roads, due to traffic re-routing, particularly for the Airside, Pinnock Hill and Estuary closures and particularly in the AM peak period.

- **HGV Increases**

The impact of the construction phase on the volume of HGVs on the road network was categorised via the "change in percentage HGV" on the link.

- Slight Impact: 0-2 percentage point increase.
- Moderate Impact: 2-5 percentage point increase.
- Severe Impact: Over 5 percentage point increase.

For the Main Works 2028 Construction Scenario, most of the increases are below 5%. In the north of Dublin there are increases of over 5% in both the AM and the PM peak period, principally on the M50 Motorway and N2 between the Northwood site and the Huntstown Quarry, due to the high

number of construction vehicles routing to the spoil site at Huntstown Quarry.

In the Swords area, the analysis indicates moderate increases in HGV proportions across all five Swords scenarios due primarily to the additional construction vehicles, but also some re-routing of other HGVs away from the R132. Only the Pinnock Hill closure, AM Seatown 'left-in left-out' closure and PM Malahide lane-loss scenarios have "severe" impacts of over a 5-percentage point increase in HGVs.

- ***Traffic Delay Impacts***

Traffic delays of up to three minutes in the AM are identified in a number of areas, with the main impact in northern Dublin at the R108 Collins Avenue – R103 Junction in the vicinity of Collins Avenue Station, reflecting the loss of lanes on both the southern approach and exit to this junction. In Central Dublin, localised impacts are only seen in the immediate vicinity of the Tara and St Stephen's Green sites, again reflecting closures and lane loss at these locations.

For the PM peak period, there is a 3–5 minute delay predicted on the southern approach to the R108 Collins Avenue-R103 Junction, reflecting the loss of a lane on this approach as well as the closure of Albert College Drive to through traffic. There are no delay increases of over one minute in Central Dublin in the PM peak period.

For the Swords area closures, delay of 3 to over 5 minutes are identified for a number of the closures and diversions.

- ***Route Journey Times Results***

A number of key journey route times were analysed to assess the impact on longer distance journeys. The chosen routes are illustrated in Diagram 9.32 of the EIAR and are primarily city centre to M50 routes, as well as M50 journeys.

In the AM peak period, the impacts of construction on journey times are minor, with the largest increase in journey time being c. 2 minutes on the R108-R103 route southbound from Whitehill to Drumcondra. In the PM

peak period, greater impacts arise, primarily due to delays caused by the lane loss at the R108-R103 junction, leading to delays of c. 4 minutes northbound for the routes passing through the R108-R103 junction.

Analysis of journey times on the R132 through Swords, between Junctions 2 and 4 of the M1 was also undertaken. This found the largest journey time impacts comes from the Estuary closure in the PM peak, with increases of c.2 minutes 30 seconds, the Pinnock Hill closure with increases of 1 minute and the Airside Closure with delays of 2 minutes 40 seconds northbound.

- Strategic Cycle Network: **Short-term Significant negative** impacts on cyclists on the R108 Ballymun Road during the Enabling Works when cycle facilities are removed but not replaced, and at Royal Canal Way where there is a full section closure and diversion.

The GDA Cycle Network will be impacted at most stations in area AZ4 with the impact being Slight in most instances. In the northern sections, where there is minimal cycling infrastructure present, the severity of impact will be limited.

- Strategic Pedestrian Network: **Moderate negative impacts** on pedestrians in all AZ sections, with the exception of AZ1 (Northern Section), due to the increased significance and sensitivity of the pedestrian network towards Dublin City Centre.

Pedestrian network will be impacted in each of the sections, with a Slight impact in most instances due to the provision of diversions or additional crossings.

11.20.40. **Local Level Impacts**

- 11.20.41. Section 9.6.1.2 of the EIAR sets out the local level impacts at each of the works sites in each AZ assessment zone under the headings of: PT users; general traffic; pedestrians; cyclists; and parking and loading. It should be read in conjunction with the STMP and the details on the construction phase set out in Chapter 5 of the EIAR.

- 11.20.42. Given the voluminous nature of the local level assessment, I do not repeat or summarise it here and instead refer the Board to the abovementioned section of the EIAR. Each AZ section includes a summary table for each of the assessment parameters, identifying the significance of the impacts.
- 11.20.43. Table 9.94 of the EIAR sets out a summary of all identified Significant impacts in both the Enabling Works and Main Works phases. All of the Significant impacts identified are **short-term negative Significant** impacts and are subsequent to the implementation of the proposed TTM measures described in the STMP, which act as mitigation. Section 9.6.1.3 of the EIAR states that all of the identified **short-term negative Significant** impacts will be removed once the construction phase is complete and that therefore further mitigation measures are not required. Hence, the identified impacts are residual impacts. I have identified the impacts in the table contained in the residual impacts section below.
- 11.20.44. Many of the Significant negative impacts occur within area AZ1 (Northern section), particularly during the Main Works Phase, due to the linear non-tunnelled works and the sensitivity and significance of the Regional Road network in this area. Arm and lane closures lead to an increase in traffic volumes on the R132 southbound by 74%.
- 11.20.45. No Significant negative impacts are identified within area AZ2 (Airport Section) in either the Enabling Works or Main Works, while in area AZ3 (Dardistown Depot to Northwood Section) a Significant increase in the volume of HGVs utilising the R108 is identified, since it is the primary route to and from Huntstown Quarry for spoil movements.
- 11.20.46. In area AZ4 (Northwood to Charlemont Section), there will be Significant negative impacts on the public transport network due to the temporary closure of the Western Commuter Rail Line and South Western Commuter Rail Line. There will be increases in traffic flow of 17% on Berkeley Road as a result of the restricted access to Eccles Street during the construction of Mater Station, as well as closures of key pedestrian and cycle route around Glasnevin and Tara stations.
- 11.20.47. Operational Phase
- 11.20.48. ***Strategic Overview***

11.20.49. The proposed development will have positive impacts for the vast majority of transport users as it will increase the public transport mode share, reduce use of private vehicles, and present opportunities for interchange with other public transport modes providing for journey time savings, increased travel opportunities and better accessibility across the GDA. Private vehicle reductions will reduce congestion on some road links resulting in road journey time savings also.

11.20.50. Comparing Scenarios A and B, Scenario B generally sees a lower volume of load passengers. In the AM peak hour southbound the largest volume of load passengers is in Scenario A 2065 at Glasnevin Station with c. 15,500 passengers. In Scenario B 2065, Ballymun sees the largest volume of load passengers, reaching c. 14,000 passengers. In the PM peak period northbound, Mater Station sees the largest volume of onward load passengers in Scenario A 2065, with c. 13,500 passengers, whereas Glasnevin sees the largest volume of load passengers in Scenario B reaching c. 10,000.

- Mode Share within Area of Influence: **Long-term Slight positive impact** on public transport mode share in both Scenarios compared to Do Minimum.
 - **Scenario A:** In 2035 the mode share of PT increases from 16.33% to 17.10% in the Do Something scenario, while in 2050 PT increases its mode share from 17.09% to 18.01%. In 2065, PT increases its mode share from 17.80% in the Do Minimum scenario, to 18.94% in the Do Something scenario, with car mode share falling to 53.31%.
 - **Scenario B:** A slightly greater modal shift occurs. In 2035, PT mode share increases from 17.12% to 17.80%, while in 2050, it increases from 18.69% to 19.54%. In 2065, PT mode share increases from 19.51% to 20.26%, whilst Car mode share decreases from 53.46% to 53.16%.
- Public Transport Impacts
 - **PT Network Statistics:**
Scenario A: long-term Significant positive impact.
2035: Increase of c. 145,000 passenger km on Public Transport between the Do Minimum and Do Something scenarios in the AM period (i.e. an increase of 6%).

2050: Increase of c. 225,000 in total passenger km on Public Transport (i.e. 7% increase).

2065: Increases of c. 344,000 in total passenger km on Public Transport (i.e. 10% increase).

In all scenarios, the Bus network sees a large reduction in passenger km (up to 21% in Scenario A 2065 AM peak period), which is a Very High Negative impact on the bus network but which is identified as a positive impact due to many bus corridors being at or near capacity. Marginal reductions in rail and Luas passenger km in the Opening Year are reversed in 2050 and 2065 as a result of the interchange opportunities with MetroLink.

In the PM peak period, total passenger numbers are higher than in the AM peak, but a similar increase in total passenger km on Public Transport between the Do Minimum and Do Something scenarios occurs in all three future years, again stated to be a **long-term Significant positive** impact.

Scenario B: Significance not stated, but considered to be **long-term Significant positive** impact.

2035: Increase of c. 137,200 passenger km on Public Transport between the Do Minimum and Do Something scenarios in the AM period (increase of 5%).

2050: Increase of c. 202,000 in total passenger km on Public Transport (6% increase).

2065: Increase of c. 236,400 in total passenger km on Public Transport (6% increase).

In the PM peak period, total passenger numbers are again higher than in the AM peak, although a similar percentage increase in total passenger km on Public Transport occurs in all three future years, as in the AM peak period.

- ***PT Journey Times:***

Scenario A: Overall, the proposed development has a **long-term Significant positive** impact on end-to-end public transport journey times

in 2035, 2050 and 2065 from a range of locations in north Dublin, Dublin City Centre, and south Dublin.

Saving of c. 20-21 minutes in public transport journey time from O'Connell Street to Dublin Airport across the forecast years.

The largest saving occurs for journeys to and from Swords Pavilion and Glasnevin, of c. 48 minutes in all of the forecast years (61% reduction from the Do Minimum scenario).

Saving of c. 29 minutes from Dublin Airport to Sandyford in 2050, due to interchange with Luas at Charlemont Station, increasing to a saving of 32 minutes in 2065, in the AM period (37% reduction from the Do Minimum scenario). Similar end-to-end public transport journey time savings were found on a number of other journey routes.

Similar results were found in the PM period, with the largest reduction in end-to-end public transport journey time again between Swords Pavilion and Glasnevin with a saving of c. 42-43 minutes. Journey times from key locations such as O'Connell Street and St Stephen's Green to Swords Pavilions have savings of c. 30 mins in 2065.

Scenario B: long-term Profound positive impact on end-to-end public transport journey times in 2035, 2050 and 2065, from a range of locations.

In the AM period, the largest journey time saving occurs from Swords Pavilion to Glasnevin, with a saving of c. 25-35 minutes in all of the forecast years (45% reduction from the Do Minimum scenario in 2035, and up to 60% reduction in 2065).

Other examples include savings of c. 27 minutes from Dublin Airport to Rathgar Road, increasing to 30 minutes in 2065, with similar PT journey time savings from Swords Pavilion to Blanchardstown. Also time savings of c. 16 minutes between DCU and Ballymun.

In the PM period, the largest saving in 2035 is from Glasnevin to Swords Pavilions, with a saving of c. 38 minutes, while the Fingal corridor sees journey time savings to and from key locations such as O'Connell Street and St Stephen's Green of c. 30 minutes in 2065.

- ***Interchange with Other Modes:***

Scenario A: In all years, Dublin City Centre locations see large numbers of passengers interchanging between the bus network and the MetroLink for their onward journey, as these locations are hubs for employment so passengers may have origins or final destinations in residential areas outside of Dublin City Centre. Glasnevin and Tara Stations see a significant volume of passengers interchanging between the DART network and the MetroLink (c. 5,400 at Glasnevin and c. 6,400 at Tara Station in 2035, increasing to over 10,700 at both stations in 2065). Large volumes of passengers also interchange with Luas at Charlemont Station.

Scenario B: **Similar results to Scenario A.** Scenario B sees large volumes of passengers interchanging with the bus network at Ballymun and Collins Avenue Stations, with over 2,000 more passengers at both stations in Scenario B 2035. Glasnevin and Tara Street again see a significant volume of passengers interchanging between the DART network and MetroLink (c. 13,500 at Glasnevin, and c. 5,600 passengers at Tara Street in 2035). Charlemont Station also facilitates large volumes of interchange with the Luas (over 19,100 in 2065).

- ***Link Flows:***

Scenario A:

Long-term, Moderate, positive impact on the DART Coastal Northern Line: In the AM peak hour, the 2035 scenario sees flows on the DART Coastal Northern Line decrease by 5%, decreasing to 0% in 2065. The DART service is approaching the 0.8 threshold of 'near capacity' in the baseline conditions and a reduction in usage will improve levels of service on the line.

Long-term, Significant, negative impact on the Maynooth Line: Flows increase by 9% on the Maynooth Line in 2035, due to the interchange opportunity with MetroLink at Glasnevin Station, increasing to 15% in 2065. As the service is operating under capacity in the Do Minimum scenario, an increase in passenger numbers will not reduce the level of comfort for passengers.

Long-term, Significant, negative impacts on the Maynooth and Kildare lines and long-term, Significant, positive impacts on the Luas

Green Line: In the PM peak hour, the Kildare Line and Luas Red Line see the largest increase in usage at 13% when the proposed Project is in place, while the Maynooth Line sees a 10% increase. Each line is operating under capacity in the Do Minimum scenario and increases in flows will not reduce the passenger comfort levels.

Scenario B:

Long-term, Significant, positive impact on the DART North Coastal

Line: In the AM peak hour, the 2035 scenario sees flow reduction of 14%, increasing to an 8% reduction in 2065. In the PM peak hour, there is a 5% reduction in 2035, increasing to 6% in 2065. DART Coastal Northern Line is operating under capacity in the Do Minimum scenario in Scenario B.

Long-term, Moderate, positive impact on Luas services: Luas Green Line sees largest increase in the AM peak hour, with flows increasing by 6% in the 2035 and 2050 scenarios and 5% in 2065, whereas Luas Red Line sees the largest increase in the 2065 PM, with an increase of 8%. Both services operate under capacity in the Do Minimum scenario.

Long-term, Moderate, positive impact on the Kildare Line: 3% increase in flows in both peak hours, decreasing to a 0% change in 2050, and an increase of 2% in 2065. The Kildare line operates under capacity in the Do Minimum scenario.

- **Road Network Impacts**

- ***Overall Network Statistics (Road Travel Time)***

In both Scenarios A and B, there is a reduction in the road distance travelled in the AM and PM periods when comparing the Do Minimum and Do Something scenarios. The largest reductions in Road travel time is in the 2065 Scenario A, with a reduction of 5% in the AM peak period and 4% in the PM peak period. Notably, Scenario B sees no change to Road travel time in 2065 in either the AM or PM peak periods.

In the PM peak period, Scenario A sees greater reductions in total road distance travelled in both 2050 and 2065 than Scenario B with the project in place.

- ***Link Flows (i.e. Changes in AADT Traffic Flows):***

Scenario A: Long-term, Significant, positive impact on the road network.

2035: Reductions over 5,000 AADT on the M1, which can be seen along the M1 to Dublin Airport, with reductions of up to 2,500 AADT along the M50 Motorway. Reductions of 2,500 – 5,000 AADT along the R132, with increases of up to 2,000 AADT on the On and Off-slips at the M1 Lissenhall Junction, which is close to the P&R Facility. Reductions in AADT traffic flow also along key national routes such as the M3, M4, M7/M9 and M11 due to transfer of road passengers onto the rail network.

2050 and 2065: Reductions of over 5,000 AADT on the R132, between 2,500 – 5,000 AADT at the Port Tunnel, over 5,000 AADT along the M1 to Dublin Airport and onto the M50 Motorway. Reductions of between 100 and 500 AADT on the network within Dublin City Centre.

Scenario B: Long-term, Significant, positive impact on the road network.

2035: Reductions of up to 2,500 AADT on the M1 in the Swords area and over 5,000 AADT at the Dublin Airport/M1 Junction. Negligible changes in much of Dublin City Centre. Reductions of 1,000 – 5,000 AADT on National Roads such as the M3, M4, M7/9 and M11.

2050: Reductions of up to 250 AADT on links in Dublin City Centre. Slight increases of 250 – 500 AADT along the M50 Motorway due to the improvement of public transport infrastructure in Scenario B resulting in freeing up of road capacity. Similar increases in AADT at the Port Tunnel.

2065: More widespread reductions of up 500 AADT within Dublin City Centre, along the M50 Motorway and in the Swords area.

- ***Changes in Road Travel Time (i.e. delays):***

Scenario A: A range of **long-term positive Moderate to Significant**

impacts on road travel times in the AM and PM peaks in 2035, 2050 and 2065, compared to the Do Minimum scenario.

2035 AM peak hour: Road travel time savings of up to 500s (~8 mins) on the on-slip at the M1 Lissenhall Junction, up to 250s (~4 mins) at Dublin Airport and along the R132 Swords Bypass, and up to 25s along individual sections of the M50 Motorway and locations within Dublin City Centre.

2050: Similar results at the M1 Lissenhall Junction On-Slip and Dublin Airport. Where the M50 Motorway joins the M1, an increase in road travel time can be seen of up to 50s, however much of the M50 Motorway sees road travel time savings of between 25 and 100s.

2065: Slight increases of up to 25s on the M1 Lissenhall Junction Off-Slip, continued time savings on the R132 Swords Bypass and Links leading to and from Dublin Airport. Road travel time savings of up to 25s at the Port Tunnel as well as the section of the M50 Motorway in the vicinity of Northwood Station.

Scenario B: **Long-term, Significant, positive** impact on the road network.

2035: Negligible changes in travel time on the road network, with fluctuations (both increases and reductions) of up to 10s on individual sections of the M1, M50 Motorway and R132 Swords Bypass. Increase of up to 25s on the R132 on the northbound approach to the P&R Facility.

2050: Increases of up to 25s on the M1 north of the P&R Facility, however savings of up to 100s on individual sections of the R132 Swords Bypass and up to 250s (~4 mins) at Dublin Airport on the Corballis Road North and T2 Departures Road. Negligible variations on individual sections of the M50 Motorway and locations within Dublin City Centre.

2065: Savings of up to 25s on the M1 south of the Lissenhall Junction, with negligible changes north of the P&R Facility. Savings of up to 100s on the M1 on approach on Dublin Airport. Internal road network at Dublin Airport sees savings of up to 1,000s (~16 mins) on the Arrivals Road to the south

of T1, and up to 250s (~4 mins) on the T2 Departures Road. The R132 Swords Bypass also sees negligible changes.

11.20.51. ***Local Level Impacts***

11.20.52. Section 9.6.2.2 of the EIAR sets out a detailed assessment of the operational phase impacts in each of the assessment zones AZ1 – AZ4 and should be read together with the Overall TTA and station-specific TTAs contained in Appendix A9.2. It again considers impacts with regard to: mode share; public transport; road network; pedestrians; cyclists; and parking and loading.

11.20.53. Given the extensive nature of the local level assessment, I do not summarise it here but note that a wide range of **long-term moderate to profound positive impacts** are identified during the operational phase under the various traffic and transportation headings set out above.

11.20.54. Where **long-term moderate or significant negative impacts** are identified, these are only with regard to pedestrian comfort levels on certain roads and streets in future year scenarios, including R132 Swords Bypass, L2300 Boroimhe Road, R103 Glasnevin Avenue (2050 and 2065), R108 Ballymun Road (south of Collins Avenue Station), R101 North Circular Road (2065), Parnell Street West (2050 and 2065), R138 George's Quay West (2065), Townsend Street East, Charlemont Steet (2065) and the R111 Grand Parade West (2065).

11.20.55. **Mitigation Measures**

11.20.56. Mitigation measures are addressed in Section 9.7 of the EIAR.

11.20.57. **Construction Phase**

11.20.58. The main mitigation measures for the construction phase are the Construction Environmental Management Plan (CEMP), the Construction Sustainability Mobility Plan (CSMP), the Scheme Traffic Management Plan (STMP) and the associated Temporary Traffic Managements Measures (TTMs).

- **CEMP:** Contains details of HGV management and control measures and will form part of the construction contract. Prior to commencement, each appointed contractor(s) will prepare their own detailed CEMP.

- **Construction Sustainable Mobility Plan:** A management tool to support and promote sustainable travel for construction staff travelling to and from site. It will be an active document, updated as construction progresses (i.e. a Mobility Management Plan in other words).
- **STMP:** Details mitigation techniques and measures to be employed to minimise traffic impacts during the construction phase. In some cases, mitigation may not be possible. The STMP includes both reduction (before construction) and remedial (ongoing during construction) measures.

The proposed reduction measures include:

- Co-ordinated City Centre Traffic Management Plan, for all stations.
- Establishment of a **Project Construction Traffic Forum** with representatives from key stakeholders.
- Control of construction vehicles in terms of the hours of operation and vehicle size and weight.
- Carrying out of construction work requiring short term disruption and road closures when traffic volumes are lower (e.g. night, weekends, school holidays), where practicable

The proposed remedial measures include:

- Wheel wash facilities where required.
- Management of employee vehicle numbers through car sharing and transporting workers via mini buses from designated collection points.

11.20.59. Table 9.147 of the EIAR presents a summary of the Moderate, or above, negative impacts in the Construction Phase and the associated mitigation measures proposed to reduce these impacts. It notes that the impacts will be removed following completion of the Construction Phase and therefore will not present residual impacts.

11.20.60. Construction phase monitoring will include:

- **HGV movements:** Haul routes (particularly those affected by the HGV Restricted Zone within Dublin City Centre), hours of operation and vehicle size and weight.

11.20.61. Operational Phase

11.20.62. Table 9.148 of the EIAR summarises the Moderate, or above, negative impacts in the operational phase and the associated mitigation measures. As the impacts requiring mitigation are all related to pedestrian comfort levels, the mitigation is generally to consider placement of street furniture to maximise available width and monitoring to determine if footway width needs to be increased in Future Years. In the case of Boromhe Road L2300 at Fosterstown Station, this may involve an increase in the footpath width utilising a grass verge to provide a 4m footpath width.

11.20.63. Operational phase monitoring will include:

- **Estuary P&R Facility:** To determine its impacts on local and strategic level trips and whether further demand management measures are required in order to increase the number of spaces available to the wider catchment.
- **Cycle parking:** To ensure the level of provision is meeting the demand and whether the type of cycle parking provision needs to change due to the ongoing shift to shared and micro mobility solutions.
- **Pedestrian comfort levels:** To ensure that surrounding footpaths have the capacity to maintain acceptable comfort levels with increasing demand. Those identified as 'Uncomfortable' and 'Acceptable' in the assessment will be monitored to ensure that maximum available width is provided through the monitoring of street furniture placement and total footpath width, where applicable.

11.20.64. Residual Impacts

11.20.65. Construction Phase

11.20.66. Some **significant** negative residual impacts will remain during the construction phase but will be removed following completion of the construction phase.

- **General Traffic Impact:** Some sections will experience **temporary Significant negative impacts** despite the TTM measures being implemented. These significant impacts are at a local level, particularly in the AZ1 Northern Section, whereas the overall impact on the strategic network is **short-term Slight negative**.

- **Pedestrian Impact:** Residual **short-term significant negative** impacts to pedestrians at Glasnevin and Tara Street.
- **Cycling Impact:** Residual impacts remain at Glasnevin and along the R108 Ballymun Road.
- **Public Transport Impact:** Residual impacts remain on bus journey times due to local diversions at some locations. Residual **short-term significant negative** impacts to the public transport network at Glasnevin with the temporary closure of the Western Commuter Line and South Western Commuter Line.
- **Parking and Loading Impact:** Site specific measures will be developed through consultation with stakeholders, including local authorities, residents and business owners. Impacts monitored throughout construction phase to assess if any disrupted bays can be reinstated.

11.20.67. Table 9.149 of the EIAR, replicated below, sets out a summary of the residual significant negative impacts during the construction phase.

Section	Link	User Group	Impact	Description	Mitigation Measure	Residual Impact
Enabling Works						
AZ1 Northern Section	Seatown Junction	Parking and Loading	Short-term Significant Negative	Diversion of access of c. 2.5km to 3.5km and loss of 30% of spaces at Woodies	Not required as will be removed once construction phase is complete	N/A – All Impacts will be removed once construction phase is complete
AZ3 Dardistown Depot to Northwood	R108 Ballymun Road (Northwood)	General Traffic	Short-term Significant Negative	HGV routeing profile takes several stations worth of site vehicles through this area		
	R108 Ballymun Road Realignment	Cyclists	Short-term Significant Negative	Removal of southbound cycle facility during phase 3. Cycle lane/ways		

				provided in other phases. cycle facility not replaced in Phase 3, requirement to use traffic lane		
AZ4 Northwood to Charlemont	Poolbeg Street	Pedestrians	Short-term Significant Negative	2-month Closure of footway causing diversion for pedestrians		
	Hume Street – Local Access	General Traffic	Short-term Significant Negative	Closure of Hume Street and 900m diversion via Pembroke Street and Leeson Street		
Main Works						
AZ1 Northern Section	Estuary Junction	General Traffic	Short-term Significant Negative	Loss of turning movements to and from the R125 (west) junction arm	Not required as will be removed once construction phase is complete	N/A – All Impacts will be removed once construction phase is complete
	Ennis Lane	General Traffic	Short-term Significant Negative	Closure of Ennis Lane, which links the R132 to Balheary Road		
	Seatown Junction and Station	General Traffic	Short-term Significant Negative	Reduced capacity on all arms of Seatown Junction including the loss of turning movements to and from Seatown Road (East) junction arm		
	R125 Airside Retail Park	General Traffic	Short-term Significant Negative	Full closures of the R125 south arm during Main Work. Reduced general traffic lane on R132		

				southbound on approach to junction and R132 northbound on approach to junction. Results in 74% increase in traffic volume on R132 southbound between Pinnock Hill Junction and Nevinstown Junction		
	Nevinstown Junction	General Traffic	Short-term Significant Negative	Closure of southern arm at Pinnockhill Junction results in 1.5km diversion		
	Nevinstown Junction	General Traffic	Short-term Significant Negative	Closure of L2305 arm. Existing 4 arm junction reduced to 3 arms, with a left-out slip onto R132 southbound, south of the junction		
	L2305 Nevinstown Lane	General Traffic	Short-term Significant Negative	Closure of L2305 causing c. 1.4km diversion to Pinnock Hill Junction/ Airside Junction		
	Seatown Junction	Parking and Loading	Short-term Significant Negative	Diversion of access of c. 2.5km to 3.5km and loss of 30% of spaces at Woodies		
AZ3 Dardistown	R108 Ballymun	General Traffic	Short-term Significant Negative	HGV routing profile takes several stations		

Depot to Northwood	Road			worth of site vehicles through this area		
AZ4 Northwood to Charlemont	Western Commuter Line Maynooth to Docklands	Public Transport	Short-term Significant Negative	Closure for 21 months		
	South Western Commuter Line Maynooth and Phoenix Park to Connolly	Public Transport	Short-term Significant Negative	Closure for 5 months		
	R108 Ballymun Road /R103 Collins Avenue Junction	General Traffic	Short-term Significant Negative	Increase in traffic flow due to diverted local traffic and increase in HGVs, junction will operate over capacity		
	Mater Phase 2 and 3 (Berkeley Road)	General Traffic	Short-term Significant Negative	Restricted access to Eccles Street from Berkeley Road, increase of 17% traffic flow on Berkeley Road		
	Royal Canal Way	Pedestrians	Short-term Significant Negative	Partial closure of Royal Canal Way, however diversion provided and new bridge (Diversion of over 500m)		
	Luke Street	Pedestrians	Short-term Significant Negative	Full closure of footway for the duration of works		

	Albert College	Parking and Loading	Short-term Significant Negative	Loss of 42 spaces (42% of public parking within 200m)		

11.20.68. Operational Phase

11.20.69. Section 9.8 of the EIAR states that, with the implementation of the specified mitigation measures, all Significant negative impacts in the operational phase will be reduced to Moderate or Slight negative. This is contradicted by Section 9.8.2.1, which states that a number of the identified potential Moderate and Significant impacts will remain post-mitigation, however Table 9.150 identifies only Slight and Moderate residual negative impacts. Many of the residual negative impacts are stated to be in relation to the pedestrian comfort level of the associated footways with the anticipated passenger demand.

- **General Traffic Impact:** In the operational phase, there is an increase in traffic flows in both directions to the north of Swords in all Future Years due to traffic travelling to the Estuary P&R Facility, causing residual impacts in this area. However, as a result of the P&R Facility, there is a general decrease in traffic between Swords and Dublin City Centre.
- **Pedestrian Impact:** Overall **positive impacts** on pedestrians by improving the public transport network, encouraging more active modes trips to and from the stations (significance not stated). **Long-term, Moderate, negative** impacts remain on pedestrian comfort level in the vicinity of Fosterstown Station on the L2300 Boroimhe Road and R132 and on the R103 Glasnevin Avenue at Collins Avenue. Future coordination with FCC and DCC is proposed to determine further mitigation, such as reallocation of grass verges or reconfiguration of street furniture to reduce these to **Long-term, Slight, negative impacts**.
- **Cycling Impact:** **Positive** residual impacts to cyclists due to improved infrastructure (significance not stated).
- **Public Transport Impact:** **Significant positive** impacts on public transport journey times across the GDA. Journey time savings will increase throughout

the design years, resulting in greater positive impacts to public transport. Public transport mode share will also increase as a result of the proposed development. In the absence of improvements on other public transport corridors, the increase in passenger flows on some of the other public transport corridors will result in some overcrowding (i.e. in Scenario A, but not in Scenario B).

- **Parking and Loading Impact:** No negative residual impacts.

11.20.70. Overall, it is stated that the proposed development will have a range of long-term positive impacts. This includes **Significant and Profound positive impacts** on the public transport network, due to improvements to public transport journey times, increases in PT mode share, and improvements to interchange opportunities. While the P&R Facility will result in some additional car trips on the M1 and surrounding links, there will be an overall net decrease in car trips and traffic flows on the road network.

11.20.71. No Long-term Significant Negative residual impacts are predicted during the operational phase. Long-term Slight to Moderate Negative impacts on pedestrians as a result of the reduction in comfort levels associated with the increased volume of passengers on surrounding footways is proposed to be addressed by monitoring of pedestrian comfort around the stations, with regard to the placement of street furniture and footway widths. It is stated that comfort levels are deemed 'Acceptable' on all links.

11.20.72. **Cumulative Impacts**

11.20.73. Potential cumulative traffic and transport impacts are addressed in Section 30.4.1 of the EIAR. Following a screening exercise, a total of 45⁷⁷ No. projects were screened in for potential cumulative impacts, as listed in Table 30.3 of the EIAR.

11.20.74. In the construction phase, the potential for cumulative impacts arises if the construction phase of the projects were to occur at the same time as the proposed development. 27 No. projects were screened in for potential **significant negative cumulative** impacts due to the potential for increased volumes of construction vehicles on the road network (especially the M1, M50 and N2). A further 9 No. were

⁷⁷ I note that the following section 30.4.1.1 refers to 46 No. projects, while Table 30.3 includes 43 No. projects.

screened in for potential **moderate negative cumulative** impacts, again due to increased construction traffic volumes (especially at Dublin Airport and on the R111, R108, Seatown Road East and Seatown Junction, N1, R125/Pinnock Hill). The remaining projects were screened in for potential **slight negative cumulative** impacts.

11.20.75. In the operational phase, 9 No. developments were screened in for **slight positive cumulative** impacts on traffic levels in the GDA and on the provision of more sustainable transport options. These projects, which include the BusConnects, DART+ and Luas projects are assessed quantitatively within the traffic modelling scenarios. 5 No. other developments were screened in for potential **moderate negative cumulative** impacts due to impacts on pedestrian movements.

11.20.76. No specific mitigation measures over and above those already proposed for the proposed development are identified for cumulative impacts. The stated reason for this is that, in most cases the mitigation included in the proposed project, together with standard mitigation measures which would be implemented by the other developments, will be sufficient to reduce cumulative impacts so that they are not significant.

11.20.77. Section 30.5.1 relates to the integration of other major transport projects, noting the cumulative impacts that could arise if construction phases overlap, particularly in the case of projects overlapping MetroLink, such as Ballymun/Finglas to City Centre and the Swords to City Centre BusConnects projects and the Dart+ project. It states that:

“Interface liaison with other major transport projects is taking place through the TII/NTA and will be set out in the Construction Contract, to ensure that there is coordination between projects, that construction access locations remain unobstructed by the proposed Project works and that any additional construction traffic mitigation measures required to deal with cumulative impacts are managed appropriately. For example, where traffic management proposals associated with the other major transport infrastructure projects require temporary lane modifications and/or traffic diversions, the construction traffic management plan shall ensure that appropriate access is maintained, through the roadway construction extents.

Where it is likely that the proposed Project will overlap the Construction Phase with other major transport infrastructure projects, particularly BusConnects and Dart+, the implications of the overlap will be collectively considered such that abortive works can be minimised. This consideration will take place where other major transport infrastructure projects are approved in a similar timeframe for the proposed Project and construction planning and detailed design work is being undertaken. The TII/NTA will help to facilitate this integration between major transport project interfaces.

Where it is identified that other major transport infrastructure project's completion will post-date the proposed Project construction schedule (like for example construction works within the road footprint outside of a proposed Project station for BusConnects), the overlap area works extents will be defined and agreed, and the proposed Project overlap scope of works may be incorporated into the other major transport infrastructure project's constructing scope (i.e. for the area of road footprint outside of a station that incorporates BusConnects).

Should the proposed Project's construction completion pre-date the commencement of the other major transport infrastructure project, the aim will be to design and construct the overlap area works extents as part of the proposed Project on a temporary fit-for-purpose basis, such that appropriate facilities achieve the proposed Project objectives. This would help to minimise the risk of abortive works that could arise during the construction of the other major transport infrastructure project.

With the above integration and interface liaison in place, potential conflicts during construction phases, including traffic management proposals, can be avoided as far as practicable. Furthermore, the overall efficiency of construction for these major transport projects can be increased."

- 11.20.78. **Significant positive cumulative** impacts in the operational phase are identified with the BusConnects and DART+ projects due to the provision of public transport services and a potential for modal shift from private vehicles to public transport. **Moderate negative cumulative** impacts are identified for a number of projects in line with the screening results set out above.

11.20.79. **Oral Hearing**

11.20.80. **Errata**

11.20.81. A number of errata in relation to this chapter and its appendices (including the STMP) were submitted at the oral hearing. I refer the Board to the initial Schedule of Errata and its appendices from the first day of the oral hearing (Ref. OH9) and the final Schedule of Errata (SoE) submitted on 27th March 2024 (Ref. OH374).

11.20.82. This included incorrect junction layouts, incorrect baseline data and incorrect impact identification in the STMP.

11.20.83. Appendix 1 to the initial SoE provides an updated review of the crossing of the R132 in the vicinity of Estuary Court, with the TTMs including diversions of the R132 in various phases. It concludes that the impacts presented within the STMP and assessed within the EIAR remain as presented and do not need to be changed. Whilst there are examples of lane removals and allocation of road space, the impacts remain the same.

11.20.84. Appendix 4 to the initial SoE is entitled 'Chapter 9 Erratum' (Ref. OH10) provides a series of corrections to particular aspects of the EIAR and STMP.

11.20.85. Appendix 7 to the initial SoE provides an updated TTM drawing for Charlemont Station.

11.20.86. Appendix 15 of the initial SoE comprises an addendum, to assess the scenario for the management of waste in the event that the Article 27 notification to the EPA is not successful. If the Article 27 notification is not successful, it is stated that spoil would no longer all go to the Huntstown site but would be distributed to a number of different facilities across Ireland accessed via the M50 and the national primary corridors (i.e. M1, M2, M3, M4, M7 and M11). To reach the M50 or the M1 all of the HGV traffic will continue to use the haulage routes shown in the STMP, with impacts inside the M50 and around the Swords local area remaining unchanged to what is presented within the EIAR.

11.20.87. With the new scenario, the HGV traffic is distributed across the national road network such that the percentage increases will be lower than the increases around the N2/M50 interchange detailed in the EIAR. In this new scenario, all the increases in HGV flows are less than 2% and all the PCU increases on the national road

network are less than 5%, and thus the HGV traffic will only have a slight negative impact on the national road network. It contends that the EIAR provide a worst case assessment of the impact of construction traffic, with all of the traffic associated with the spoil converging on the N2/M50 junction and a section of the N2.

11.20.88. Updates

11.20.89. On the first day of the oral hearing, a document entitled 'New GDA Transport Strategy – Modelling Review' (Ref. OH24) was submitted. The document notes that the Scenario B utilised in the EIAR used the NTA's Transport Strategy for the GDA 2016-2035. Given the subsequent adoption of the GDA Transport Strategy 2022-2042 (GDATS), the document outlines the results of a series of tests to compare the implications of GDATS against the EIAR's Scenario B results.

11.20.90. Re-modelling, with the GDATS projects and utilising an updated NRA Eastern Regional Model, the key findings of the review are as follows:

- Both the original and new GDA models are suitable for the MetroLink appraisal. The newer model shows better level of convergence than the former one.
- The distribution of passengers through metro stations remains consistent in both model scenarios.
- The modifications introduced in the GDATS contribute significantly to non-car modes, presenting favourable implications for the MetroLink project.
- Project has a similar traffic impact on road infrastructure under both transport strategy scenarios.

11.20.91. The report concludes that the impact of the MetroLink project with the new GDATS is of a similar quality, significance and duration to the effects presented within the Scenario B of the EIAR (i.e. using the prior Transport Strategy for the GDA).

11.20.92. An 'Outline Mobility Management Plan' was also submitted on the first day of the oral hearing (Ref. OH27) and I have addressed that in Section 9.21 of this report.

11.20.93. Other relevant traffic related update documents include:

- 'Impact of Dublin City Transport Plan on MetroLink Haulage Routes' (Ref. OH79), submitted on 26th February 2024.
- 'Review of Charlemont Station' (Ref. OH211), submitted on 11th March 2024.
- 'TII Response to Public Representatives' (Ref. OH212), submitted on 11th March 2024.
- MetroLink AZ4 Collins Avenue (Ref. OH217), submitted on 12th March 2024.
- 'Scheme Traffic Management Plan Update: R108 / Collins Avenue Extension / Glasnevin Avenue Junction Modelling; Malahide Road (R106) / R132 Junction Modelling; Griffith Park – BusConnects Bus Gate – Haulage Route' (Ref. OH227), submitted on 13th March 2024. (Supersedes document OH226 submitted on 12th March 2024).
- 'Pedestrian Impact for Dartmouth Road' (Ref. OH264), submitted on 20th March 2024.
- 'NTA State Airports Passenger Survey 2022' (Ref. OH265 and 265A), submitted on 20th March 2024.
- 'NTA's ERM Model' (Ref. OH327), submitted on 26th March 2024.
- 'Cycle Parking Overview' and 'Cycle Parking Review' (Refs. OH352 and OH357), submitted on 27th March 2024.

11.20.94. Cumulative Impact Assessment

11.20.95. An updated cumulative impacts addendum was submitted to the oral hearing on 28th February 2024 (Ref. OH98). The Addendum comprises a more up-to-date review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application.

11.20.96. Where potential negative cumulative impacts are identified, they are generally associated with traffic impacts during the construction phase, should construction be underway at the same time. It is contended that the mitigation measures outlined in the EIAR will minimise the impact of traffic associated with MetroLink.

11.20.97. No additional significant residual cumulative impacts on traffic and transport are identified.

11.20.98. **Post-Oral Hearing**

11.20.99. A further cumulative impact assessment update was submitted on 31st January 2025 as part of the applicant's response to the Wild Ireland Defence CLG oral hearing submission (Ref. OH369).

11.20.100. In relation to traffic and transport, the applicant's position remains unchanged from that outlined in the CIA document submitted at the oral hearing – i.e. that there are potential cumulative impacts in the absence of co-ordinated traffic management with other developments within the vicinity of the MetroLink development. With regard to the other major transport projects it again identifies that co-ordination is required between TII and the NTA to ensure minimal cumulative impacts both during construction and operational phases as per Section 30.5.1 of the EIAR as set out above.

11.20.101. No additional significant residual cumulative impacts on traffic and transport are identified.

11.20.102. An EIAR Addendum was also submitted by the applicant as part of their abovementioned response, addressing impacts associated with the proposed PFAS Management Strategy at Dublin Airport. It states that transport of the potentially contaminated material from the airport sites to the proposed Triage and Material Management Centre (TMMC) will be generally via the haulage routes outlined within the STMP, with the following exceptions:

- HCVs moving towards the TMMC will exit the M50 at Junction 4 and proceed north along the R108 to the TMMC.
- HCVs moving towards Dublin port will leave the TMMC and continue south to the M50 Junction 4, before travelling eastbound on the M50 and then southbound on the M1 towards Dublin Port.

11.20.103. It states that this transport will be in trucks dedicated to this purpose, with loads covered and kept at optimum moisture content to ensure no spillage or dust separation during transport.

11.20.104. Section 4.3 of the EIAR Addendum assesses these additional construction phase HCV movements on the road network around the airport and the variation to the haul route and destination (i.e. Dublin Port).

- 11.20.105. The number of HCV movements associated with this PFAS management is estimated to be an average of 113 movements per day and the EIAR Addendum compares the worst-case scenario of 100% of the material being contaminated and needing to be transported to Dublin Port against the EIAR case. This worst case scenario results in some increase in traffic flows on the M50 from Junction 4 to Junction 3 and from Junction 3 to the end of Port Tunnel, compared to the EIAR analysis.
- 11.20.106. Table 4-3 of the EIAR Addendum compares the percentage impact of these additional daily HCV movements against the overall project construction traffic presented in the EIAR. This demonstrates that the percentage increase in traffic flows on the M50, M1 and Port Tunnel are all less than 5%, thus constituting a **slight** impact. In the case of the section of the R108 between M50 Junction 4 and the entrance to the PFAS site, the increase is 5%, thus constituting a **moderate** impact on that section of road. Following further assessment of the capacity of the R108, the Addendum states that the road will operate well within capacity and that the impact of this additional traffic on road users will overall be **short-term slight negative**.
- 11.20.107. No additional TTM measures are proposed for the PFAS management and consequently no additional significant impacts on private vehicles, public transport, cyclists, pedestrians, local access or parking are identified, above those identified in the EIAR.
- 11.20.108. The Addendum therefore concludes that the impact of the transport of the PFAS contaminated materials will result in a **short term slight negative impact** on the receiving environment and does not change the assessment presented within the EIAR.
- 11.20.109. **Assessment**
- 11.20.110. Submissions that raised traffic issues were generally related to construction traffic related issues, such as congestion, HGV movements and road safety. In the operational phase, submissions that raised issues were generally in relation to whether adequate provision was made for pedestrian movements. The use of the NTAs ERM model was also queried.
- 11.20.111. Prior to considering the potential traffic and transport impacts, I consider it useful to outline the positions of the various prescribed bodies with responsibilities or

competencies relating to traffic, which has evolved over the course of the application lifespan.

11.20.112. The **NTA** made written and oral submissions (S199, OH43) supporting the proposed development with reference to the GDATS policy support, demand management goals and meeting transport demand along the alignment. In particular, they supported the Charlemont Station location as the terminating point for the MetroLink. They also support the applicant's approach to cycle parking provision.

11.20.113. With regard to the two **Local Authorities**, detailed initial written submissions were made by Fingal County Council and Dublin City Council (Ref. S321 and S71, respectively) supporting the proposed development.

11.20.114. I note that the DCC Environment and Transportation Department state that they welcome the project and that "while the construction phase of this project will bring considerable challenges for the city, we believe that it can be managed and that the project is in the interests of the entire city". They go on to state that they have been engaging with the MetroLink team throughout the design process and that there are no major issues of concern which are still outstanding. They consider the use of the NRA's ERM and the modelling methodology to provide a robust basis for the project and its outcomes and advise that it may be on the conservative side. With regard to the STMP, DCC's E&T Dept. state that it should be a dynamic document with constant revision, due to the effects of projects such as BusConnects on travel patterns. The submission contains a large number of recommended conditions.

11.20.115. The FCC submission does not raise any particular traffic issues but notes that the absence of MetroLink will be a significant constraint to the ongoing sustainable development of Fingal and welcomes the proposed level of cycle parking provision.

11.20.116. Subsequently, agreements with both local authorities were submitted at the oral hearing (Ref. OH147 and OH76, respectively). TII has requested that these agreements be included in the Thirteenth Schedule of the Railway Order, if approved.

11.20.117. 'Condition' 15, Items 18 and 19 of the DCC agreement is as follows:

- Prior to commencement of works, Transport Infrastructure Ireland shall engage with Dublin City Council to agree in writing an overall Traffic Plan for

all project works including phasing of works, road closures and diversions etc. and which addresses the cumulative impact on traffic for the whole city.

Transport Infrastructure Ireland shall continually liaise with Dublin City Council during construction through an agreed schedule of regular meetings.

- All roadworks shall be carried out in accordance with the current edition of Dublin City Council's Directive for the Control and Management of Roadworks in Dublin City and unless otherwise agreed with Dublin City Council.

11.20.118. 'Condition' 5 of the FCC agreement is as follows:

- 'Prior to commencement of development a detailed Construction Management Plan and a Construction Traffic Management Plan shall be agreed in writing with Fingal County Council in accordance with the EIAR. This shall address, inter alia:
 - (a) All details regarding safety issues including the appropriate signage and traffic management (as required).
 - (b) All HGV activity associated with the works shall have suitable access to the site that will avoid the potential for queuing of HGV's on the public road.
 - (c) Measures to mitigate the impact of the proposed works on the public road network. All works shall be carried out at the expense of the developer and to the specifications and conditions of the Planning Authority.
 - (d) The working hours as set out in the EIAR shall be applied through the road opening licence process where deemed necessary.
 - (e) All relevant road opening licences setting out lane closures, road closures etc. shall be obtained within the appropriate time periods prior to the commencement of construction works for the development.
 - (f) Where works are required to the property of third parties TII shall submit written evidence that it has all the legal consent/rights of way to undertake the works."

11.20.119. Further submissions were made by the two local authorities following the oral hearing (1FS24 and 1FS20, respectively), but no further traffic related issues were

raised, other than reiteration of their support for the project. As I have advised elsewhere, if the Board is minded to grant the RO, I recommend that both agreements be included in the Thirteenth Schedule. Subject to this inclusion, I do not consider that there is a need to separately incorporate the Local Authorities proposed conditions, as this would comprise unnecessary duplication and potentially create confusion.

11.20.120. **CIÉ and IÉ** made written submissions (S52, S121) but did not participate in the oral hearing or make any further submissions. Their principal concern with regard to traffic and transportation is the duration of the proposed closure of the MGWR and GSWR rail lines at Glasnevin, which they consider to be excessive, resulting in significant disruption to their passenger, freight and maintenance services. They also raise queries regarding the interface between the MetroLink and DART+ West/South West projects.

11.20.121. ***Methodology – Use of NTA’s Eastern Regional Model***

11.20.122. The applicant’s use of the NTA’s Eastern Regional Model (ERM) for the traffic assessment was queried by a number of observers living in the vicinity of the Charlemont Station, who contend that it is a strategic generalised regional model that does not take local factors into account and that its use in the traffic study was inappropriate. The use and accuracy of a regional model was also queried by others, including GADRA and Donal O’Brolcain.

11.20.123. TII’s response to the submissions which raised this issue was that the NTA’s ERM incorporates a wide range of data sources, including demographic data, land use data, transportation network data, and travel survey data and is designed to model a variety of transportation modes, including private vehicles, public transit, walking, and cycling, and to simulate the interactions between these modes.

11.20.124. They note that the ERM model has been validated and calibrated using a range of localised data sources to ensure that it accurately represents the transport network and that the outputs from the model have been combined with local survey data for the more localised modelling such as pedestrian impact assessments or local traffic signals.

- 11.20.125. Colm McCarthy, in an oral submission on behalf of Senator Michael McDowell, contended that the journey time savings had been overstated by the applicant.
- 11.20.126. TII responded to this in the document 'TII Response to Public Representatives' (Ref. OH212), where they note that the journey time savings in the EIAR are point-to-point journey times, i.e. they include a walk time, wait time and the actual journey time for the bus services, extracted from the NTA's ERM, which reflects the modelled travel times, including delays at junctions or on sections of road without bus lanes. TII contend that the ERM is the best available transport model available for Dublin and again noted that it has been calibrated and validated using a range of data.
- 11.20.127. In response to an oral hearing submission by Brendan Heneghan in which he queried passenger figures at Charlemont, the applicant gave a presentation on the ERM on 26th March 2024 (Ref. OH327), outlining how the model was developed, the nature and extent of the data underpinning it, and how it works. They also demonstrated the level of detail within the model, making the point that while it is a regional model, it is sufficiently detailed for assessing impacts at a local level within the city.
- 11.20.128. As noted above DCC, in their initial written submission, state that the use of the NRA's ERM provides a robust basis for the project.
- 11.20.129. Having reviewed the information on calibration and validation submitted by the applicant and noting that the ERM is commonly used on all major traffic and transport projects in the GDA, I am satisfied that the model is comprehensive and sufficiently detailed and I agree with TII that use of the model is appropriate and that it provides a reasonable basis for assessing the impacts of the proposed development on the transport network.
- 11.20.130. Construction Phase
- 11.20.131. **General Road Traffic**
- 11.20.132. At the outset, it is important to note that the construction of such a large linear infrastructural development in a built-up urban environment is likely to have unavoidable adverse impacts on traffic and transportation during the construction

phase. The project will entail a total of c. 3 million cubic metres of material being excavated and removed by HGV from the city, with large quantities of steel, concrete etc. also being brought into the city via HGV. This will clearly require an extremely large number of HGV trips over the lengthy construction phase. In contrast to the stations, the tunnel excavation will create less widespread traffic impacts, given that all excavated material from Northwood to Charlemont will be returned to the Northwood Portal for removal by HGV. The location of the Northwood compound gives easy access onto the M50 for spoil removal, with the majority likely to go to Huntstown Quarry.

11.20.133. Having come to the conclusion elsewhere in this report that the need for the project has been adequately demonstrated and that it enjoys strong policy support and is acceptable in principle, some level of construction phase disruption to traffic must be accepted.

11.20.134. The applicant has proposed very extensive TTM measures across the city to manage traffic in locations where the project interacts with the road network. There are multiple phases to many of these TTMs, particularly due to the Advance Enabling Works to relocate utilities and where there is a need for the alignment to cross a road, such as various locations in the Swords area (particularly on the R132), on the R108 at Northwood (where the station box straddles the R108), at Mater and other locations. The TTMs are described, assessed and illustrated in considerable detail in the Scheme Traffic Management Plan (STMP) included in Appendix A9.5 of the EIAR.

11.20.135. This STMP will be the key means of managing traffic during the construction phase and having reviewed the proposed TTMs, I am satisfied that they are generally well-considered and preserve safe pedestrian routes past works sites. Where feasible, they also provide cycle and bus lane continuity past the works sites, while maintaining at least one general traffic lane to minimise disruption. I note that DCC have confirmed their extensive engagement with TII in the design and preparation of the scheme and confirmed that they have no major issues of concern outstanding.

11.20.136. Given the nature of the proposed development and the receiving environment, with multiple large concurrent construction sites located within a dynamic city

environment, an overly rigid or inflexible STMP has the potential to create as many issues as it resolves. I consider it appropriate that the STMP be a 'living document' which should be updated and evolve as circumstances change, as construction progresses and to proactively address any issues that arise. Any such updating should be undertaken in consultation with relevant stakeholders, including DCC, FCC, NTA and CIÉ as well as representatives of local communities and business interests.

11.20.137. As part of the STMP, a Project Construction Traffic Forum will be set up with representatives from the key stakeholders including DCC, FCC, NTA, Gardai and representatives of local businesses and communities. The forum will meet on a regular basis to review the traffic management arrangement and to provide an opportunity for issues to be discussed and resolved. I consider this to be an important and welcome monitoring and oversight body, which will also allow for traffic issues arising to be proactively addressed.

11.20.138. Having reviewed the EIAR, the various appendices and the errata and update information provided over the course of the oral hearing, I agree with the applicant's assessment of the potential impacts on traffic during the construction phase, namely that there will be a range of significant negative impacts. While many of these can be mitigated to a degree, I consider that a number of short-term significant negative residual impacts will remain in areas AZ1, AZ3 and AZ4, as detailed in the table above.

11.20.139. ***Mobility Management Plan***

11.20.140. A number of observers at different locations along the alignment expressed concerns regarding potential construction worker parking in the vicinity of the works sites and the impacts this would have for local residents.

11.20.141. As noted above, an 'Outline Mobility Management Plan' was submitted on the first day of the oral hearing (Ref. OH27). I have addressed the Outline MMP in Section 9.21 of this report where I conclude that I am satisfied that it has been prepared in accordance with relevant Policy and guidance documents and is acceptable in principle as a framework for the more detailed site-specific MMPs that will be put in place by the contractors' Mobility Managers. Given the numbers of staff at many locations (typically 200 – 500 per site, but up to 1,500 at Dardistown), I

consider that the provision of shuttle bus connections, as outlined in the additional commitment made by TII in the SAEC will be of particular importance, rather than just encouraging workers to use more sustainable options. Subject to implementation of the CEMP, MMPs and the SAEC, I consider that construction worker travel to site can be effectively managed without resulting in undue levels of disruption or congestion in residential areas.

11.20.142. ***Haulage Routes***

11.20.143. I note the assumption in the EIAR that 90% of spoil material goes to Huntstown Quarry. While Huntstown Quarry was only identified as a preferred site (refer to Roadstone letter submitted at the oral hearing) there is now some uncertainty regarding the destination, given the EPA letter in relation to TII's Article 27 notification which was also submitted at the oral hearing. Notwithstanding the uncertainty, I consider that Huntstown is still a reasonable assumption to make for the destination for the majority of spoil, given that there is no reason to believe that the majority of it will ultimately be deemed unsuitable for by-product use.

11.20.144. I also note Appendix 15 of the initial Schedule of Errata, which assesses the implications of spoil instead being distributed to a number of locations instead of Huntstown. It demonstrates that the Huntstown Quarry scenario set out in the EIAR would be a worst case scenario in terms of impacts on the M50, since an alternative scenario would see dispersal of HGV movements across the strategic road network.

11.20.145. I note that the majority of deliveries will be during daytime hours. Given the proximity of the Northwood Portal to the M50, and the relatively low numbers of sensitive receptors in the immediate area of the compound, night-time movements of spoil would, perhaps, have been advisable in terms of mitigating daytime impacts on M50 traffic flows albeit that they are not significant.

11.20.146. I asked the applicant on the first day of the oral hearing if the Dublin City Centre Transport Plan (DCCTP), which was published post-lodgement of the application had implications for the construction of the proposed development, particularly with regard to the proposed haulage routes, given that it proposed changes to traffic management on a number of city centre streets.

11.20.147. The applicant subsequently submitted a document 'Impact of Dublin City Transport Plan on MetroLink Haulage Routes' (Ref. OH79) on 26th February 2024. It

states that the only traffic management proposals that may impact on the MetroLink HGV haulage routes are the 'Beresford Place and Gardiner Street' proposals, where the Transport Plan presents two options: one to close traffic movements on a section of Beresford Place, and create the 'Liberty Plaza', and another option to close Custom House Quay to traffic.

11.20.148. The haulage route for the Tara Station presented in the STMP includes the option of turning right onto Custom House Quay or using the gyratory at Beresford Place to exit from the Tara Street site (i.e. around the rear of the Custom House).

11.20.149. The closure of Custom House Quay would therefore require exiting HGVs to use the gyratory at Beresford Place and thereby use the same general route as set out in the EIAR to access the national road network, with no change to any of the conclusions within the EIAR.

11.20.150. The document confirms that no other haulage routes are impacted by the traffic management proposals within the Dublin City Centre Transport Plan.

11.20.151. Having reviewed the DCCTP and the applicant's response, I am satisfied that the DCCTP does not have any material implications in terms of the identified traffic impacts.

11.20.152. ***Impacts on Postal Services***

11.20.153. An Post (S7) expressed their support for the project but noted the potential for impacts on their deliveries and access arrangements as a result of the construction traffic and the consequences of the TTMs. They noted that they have a number of facilities close to MetroLink sites, including at Swords Business Park, Dublin Airport, North Circular Road, Rutland Place and the GPO. They also queried operational phase impacts on the road network and strategic junctions.

11.20.154. There will be no direct impact on access to An Post facilities. While An Post vehicles will likely experience some delays due to road and lane closures associated with the TTMs, as with general traffic, the implementation of the STMP is likely to ensure that there is no significant impact on postal operations and I also note that access will be maintained to all properties during construction.

11.20.155. In the operational phase, there is likely to be a reduction in traffic flow along key routes, including the various radial national roads into the city and on the M50.

An Post is therefore likely to benefit from the reduced congestion on key links and junctions and associated journey time savings.

11.20.156. ***Tesco Impacts***

11.20.157. A written submission was made on behalf of Tesco Ireland by RMLA Ltd. (S290) with regard to construction and operational phase traffic impacts on their two large distribution centres at Donabate and Ballymun and on their 15 No. stores in the vicinity of the alignment. They note the importance of timely and frequent deliveries to their stores, with the distribution centres operating on a 24 hour basis and, in the case of Ballymun, having a total of 1,200 vehicle movements in and out each day.

11.20.158. Their concern primarily relate to the TTMs and diversions/lane closures on the R132 and R108 and other roads leading to moderate to severe effects, as outlined in the STMP, and their desire to ensure that access is maintained to all of their sites.

11.20.159. In response, the applicant noted the hierarchical approach to traffic management adopted in the STMP, with pedestrian/cyclists, public transport and commercial needs taking preference over private car usage. They note the alternative HGV routes identified within the Swords area which will be promoted as part of the construction traffic management plan, which it is contended has the potential to decrease congestion by 30%. They note that the STMP analysis does not consider these reductions, and thus the impact to general traffic will be reduced beyond what is set out in the STMP.

11.20.160. TII also noted the proposed Project Construction Traffic Forum and their proposed publicity and information campaign to inform the public and businesses of upcoming traffic management measures, with advanced warning of any proposed diversions and disruption through signage and the project website. With regard to Tesco's request for further engagement with the design team to minimise impacts on their deliveries, TII undertook to include Tesco in the Project Construction Traffic Forum, as one of the key stakeholders.

11.20.161. In terms of impacts on the Tesco Donabate distribution centre, TII note that the diversion due to the closure of the R125 eastern arm for 9 months is c. 1.2km with an alternative diversion of 2.1km from the R132 at the Malahide junction via Mountgorry Way.

- 11.20.162. With regard to the large Tesco Ballymun distribution centre located off the Old Ballymun Road, near the Northwood Station, TII confirmed that no closures of that road are proposed during construction of the Northwood Station and that access will be maintained. The construction of the M50 Crossing will require four phases of traffic management, with phases 1 and 2 each taking place over a 3-month period and Phases 3 and 4 only requiring night-time possession. Impacts on traffic volumes on the M50 main carriageway are minor (mainly between 1-2%), and speed restrictions will result in a small journey time increase on the main carriageway (up to 20 seconds between J3 and J5). The removal of one lane on the eastbound on-slip will result in a moderate increase in delay on vehicles accessing the M50, most notable during the evening peak period where there is an increase of almost 4 minutes.
- 11.20.163. TII accept that, due to works at Ballymun and Northwood Stations, there will be an impact on travel times along the R108 due to lane reductions. The maximum delay at the Northwood Avenue Junction, where Tesco vehicles enter the R108 is 50 seconds during the main works, while in the vicinity of the Ballymun Station the delay is minimal on the R108 due to traffic reallocation. TII state that they do not expect major adverse effects to Tesco trucks in this area.
- 11.20.164. In relation to a particular concern of Tesco regarding the operation of the R108/Northwood Avenue junction, TII note that junction modelling found that the junction will operate within capacity in the PM Peak and marginally above capacity at the AM peak. They state that junction operation will be monitored throughout the project and stakeholders will be engaged throughout the project to address any concerns or issues arising.
- 11.20.165. While Tesco, as with An Post and other companies with logistics/transport operations, are likely to experience negative impacts during construction, I consider that the STMP is suitably detailed and comprehensive as to limit the magnitude and significance of many of these impacts. With ongoing engagement through the Project Construction Traffic Forum and regular updating of the STMP, I consider that impacts on Tesco's operation can be effectively mitigated to an acceptable level.
- 11.20.166. In the operational phase, Tesco delivery vehicles will benefit from reduced congestion on roads and journey time savings.

11.20.167. **Glasnevin**

11.20.168. Senator Marie Sherlock raised the issue of traffic impacts around Phibsborough and Glasnevin associated with the haul routes to/from the Glasnevin Station construction site.

11.20.169. TII responded to the Senator in a document 'TII Response to Public Representatives' (Ref. OH212), where they state, with reference to Section 9.6.1.2 of the EIAR that the haulage routes for Glasnevin Station will avoid Phibsborough and will use the R135 to access to/from the M50, with the only HGV traffic travelling through Phibsborough being traffic accessing the Mater Station site (average of 2-3 vehicles per hour).

11.20.170. If BusConnects Ballymun is delivered, TII note that there will be a bus gate at the northern end of St Mobhi Road which will operate from 16:00-20:00 and overlap with the last three hours of operation for the Griffith Park site. For this 3 hour period exiting HGVs will need to travel south, instead of north, and TII consider that the most appropriate option will be to use the right turn at the triangle in Glasnevin to access onto the R135 and then travel northbound along that road. They estimate that an average of 2.5 vehicles per hour will do this movement. A drawing showing this was subsequently submitted (Ref. OH225).

11.20.171. For the Glasnevin Station site, which was a particular concern of the Senator, TII note that there is a 2 year period when the construction vehicles movements will be between 50-100 per a day (an average of 7.5 movements per hour, 4 in and 3.5 out), representing <0.5% of the existing traffic flow in the area. Outside of that 2-year period, vehicle flows are generally less than 50 per day and there are no changes in road network layout proposed. TII contends that there will be minimal impact on other road users, either from the traffic turning right into the site or from the minor increase in traffic flow on the R108.

11.20.172. They also note the proposed MetroLink Construction Traffic Forum to include key stakeholders.

11.20.173. With regard to the interface between the MetroLink, DART+ and BusConnects projects, TII note that the project teams have liaised with each other to ensure that designs are integrated and that the street network can accommodate the increase in pedestrian, cyclist and bus movements in the vicinity of Glasnevin Station.

11.20.174. ***O'Connell Street***

11.20.175. At O'Connell Street Station, written and oral submissions (S304, 1FS41, 2FS12) by Stephen Troy of Troy's Butchers, which is located on Moore Street, opposite the junction with O'Rahilly Parade, raised concerns regarding construction traffic volumes. He noted that 80-100 HGVs per day are anticipated, but that this doesn't include residential traffic for apartment developments on Moore Street or the various Dublin Central sites. He also contended that traffic conflicts would arise with the ILAC service yard, entered from Moore Street, opposite Lidl, as well as service yards on Moore Lane and Sampson's Lane/Coles Lane all of which use the same route as the proposed haulage route (see photographs included in his submissions). His concern is that the traffic volumes will lead to HGVs stacking outside his shop, creating a dirty, noisy trading environment.

11.20.176. Mr Troy noted that the information provided by the applicant at the oral hearing shows traffic existing from Moore Lane and turning left onto Parnell Street and then right onto Parnell Square West. Mr Troy notes, however, that this will not be possible due to the traffic island put in place to facilitate the Luas.

11.20.177. In their response, TII acknowledged that the diagram referenced by Mr Troy, which is slide 6 in the document 'Presentation on O'Connell Street Station' (Ref. OH254) submitted to the oral hearing on 19th March 2024 is incorrect. However, TII state that the diagrams presented on the subsequent slide titled 'Haulage Route' are correct and are extracted from the STMP. For the reason identified by Mr Troy, outbound construction traffic cannot use Parnell Square West, so when leaving Moore Lane will proceed westwards along Parnell Street. Inbound construction traffic will also utilise Parnell Street coming from the east, before turning onto Moore Street and turning into O'Rahilly Parade. Therefore, the section of Parnell Street between the Moore Lane and Moore Street junctions will be utilised by both inbound and outbound construction vehicles, while Moore Street will only be used by inbound traffic.

11.20.178. TII contend that their assessment of traffic and HGV volumes is adequate and that the model outputs indicate only a minor increase in HGV volume during peak periods as a result of MetroLink construction of 1 – 2%. They note that HGVs, including MetroLink HGVs, account for a 13% share of all traffic on this section of

road, contending that their assessment considers both existing and future HGV volumes from other projects.

11.20.179. While a considerable level of HGV traffic will pass Mr Troy's business, I do not consider that the traffic impacts in this vicinity are significant.

11.20.180. ***Charlemont***

11.20.181. Particular traffic and transportation issues at Charlemont were the interchange with Luas/Bus, closure of Dartmouth Road, pedestrian circulation issues and the issue of passenger drop-off, particularly with regard for Charlemont Station to attract airport bound passengers from the wider south Dublin area.

11.20.182. I have addressed those issues in detail in Section 10.12 of this report.

11.20.183. ***Impacts on Public Transport***

11.20.184. The proposed temporary closure of the MGWR (Western commuter) and GSWR (South Western commuter) railway lines in the vicinity of the Glasnevin Station site to facilitate track lowering and other MetroLink works are regrettable aspects of the proposed development that will disrupt rail passengers. The duration of closure is 21 months and 5 months, respectively, which IÉ consider to be excessive.

11.20.185. I note that TII, in their response to the IÉ submission, and contrary to what is stated in the EIAR, state that onward access to Connolly Station will be available throughout the 21 month period of closure of the western rail line. This is to be welcomed although I note that in the case of the shorter closure of the south western line, there is no such commitment to maintaining onward access to Connolly Station. TII also state that the predicted closure durations are worst case and that they will work with IÉ to shorten the duration if possible.

11.20.186. The temporary closure of the commuter rail lines are unfortunately a necessary measure to deliver a metro interchange station at Glasnevin. It is clearly not possible to lower railway lines without closing the affected section of railway line for the period of the works. I consider that there is scope for TII to work with IÉ to minimise the duration of the closure to some degree, but I do consider that the impacts will be short-term significant negative impacts.

- 11.20.187. However, these negative impacts must be weighed against the long-term significant positive impacts of delivering an interchange station at Glasnevin which will integrate two commuter rail lines, the MetroLink line and BusConnects services and provide for greatly improved transport options and journey times for various journeys.
- 11.20.188. With regard to Luas and bus, I agree with the EIAR that no significant negative impacts on operations are likely during the construction phase. While there will be delays to bus journey times in areas where bus lanes have to be temporarily removed and in the vicinity of key junctions, particularly where TTMs are proposed, the impacts will be short-term and not significant.
- 11.20.189. Operational Phase
- 11.20.190. In the operational phase, I agree with the assessment contained in the EIAR, and consider it likely that the proposed development will have a range of positive impacts on traffic and transportation factors, including significant and profound long-term positive impacts.
- 11.20.191. Importantly, all of the significant negative residual impacts identified for the construction phase will be removed in the operational phase.
- 11.20.192. ***Public Transport***
- 11.20.193. While the overall modal shift in the large area of influence is relatively minor, it is far larger within a number of the local assessment zones. I note, for example, that in the Scenario A 2035 AM peak hour, the zones around Swords and Dublin Airport see PT mode share percentage point increases of between 10 and 20. Increases of 5 to 10 percentage points are also predicted along the Ballymun corridor and between 1 and 5 percentage points in Dublin City Centre. Consequently, the Car mode share falls by similar amounts and in 2050 and 2065 the zones around Dublin Airport see a reduction of up to 20 percentage points in Car mode share. Similar results are predicted under Scenario B.
- 11.20.194. I also note the modelling review document submitted on the first day of the oral hearing (Ref. OH9) and in particular the mode share in 2050, based on the GDATS and the updated modelling. While the proposed development has a similar effect on mode share under the two scenarios, it is notable that with the new

GDATS, there is a significantly higher mode share for cycling and a correspondingly significant decrease for car mode share.

11.20.195. The effect of the MetroLink proposal is essentially to slightly reduce the car, walking and cycling mode shares, while increasing the public transport mode share.

Mode Share	Run ID	Do Min (Prior GDA)	Do Scheme (Prior GDA)	Change	Do Min (New GDA)	Do Scheme (New GDA)	Change
Shares	Car	54.54%	54.13%	-0.4	45.43%	45.23%	-0.2
	PT	18.55%	19.42%	+0.9	17.26%	17.99%	+0.7
	Cycle	2.76%	2.67%	-0.1	13.91%	13.65%	-0.3
	Walk	24.14%	23.77%	-0.7	23.40%	23.13%	-0.3

11.20.196. As detailed above and in detail in the EIAR, there will be a range of significant positive impacts on PT network statistics and PT journey times with large numbers of interchange passengers due to the greater integration and interchange opportunities with commuter rail, DART, Luas and bus services, including connections to multiple BusConnects corridors.

11.20.197. In Scenario A, during the 12 hour period, there are additional 26,610 total PT trips made between the 2035 Do Minimum and Do Something scenarios, increasing to 33,272 in 2050 and 43,350 in 2065. In Scenario B the respective increases are 23,644 in 2035, 32,869 in 2050 and 33,194 in 2065.

11.20.198. I note that there are some apparent discrepancies in the identified significance of impacts, with PT journey times experiencing a significant positive impact in Scenario A and a profound positive impact in Scenario B, even though Section 9.6.2.1.3.2.2 of the EIAR states that the journey time savings in Scenario B are less than in Scenario A.

11.20.199. **Road Network**

11.20.200. With regard to the road network, the modal shift resulting from the MetroLink will see a reduction in total road distance travelled and notable reductions in traffic flows on many roads, particularly around Dublin Airport and the R132 in Swords. The presence of the P&R Facility will result in increases in traffic flows in some north Dublin areas (including the M1 to the north of the P&R). With reduction of between 1,000 to 5,000 AADT on many of the key strategic roads (i.e. M1, M2, M4 etc.) I

agree with the applicant that this will overall be a significant positive impact on the road network. The flow reductions will result in improvements in road travel times and again I accept that this is a significant positive impact.

11.20.201. The 3,000 space P&R Facility will clearly be a significant trip attractor however I note that the accesses to the P&R Facility are predicted to operate within capacity during the 2035 AM peak hour 2035, although in the PM peak hour the North Access Road exceeds practical capacity. Overall queue of 35 PCU (202m) is predicted on the R132 Southbound approach to the north junction, during the Weekday AM peak hour, with the left entry lane from the new P&R link road into the P&R Facility predicted to experience a queue of 14 PCU (79m). I consider this to be acceptable, given the scale and function of the facility.

11.20.202. With regard to monitoring of the Estuary P&R Facility, I have outlined elsewhere in Section 10.1 my concern that the 3,000 space MSCP could become a form of remote long-term car park for Dublin Airport if suitable demand management measures are not put in place, such as a progressive parking fee system that penalises or prohibits long-term stays in the car park. Such use of the car park would undermine its strategic role in linking the MetroLink to a wider hinterland in north Dublin and beyond and shifting longer-distance car commuters to the MetroLink. I have recommended a condition to address this matter.

11.20.203. A number of submissions raised concerns regarding local access issues at stations, including set-down spaces and concern regarding loitering vehicles. This was a particular concern at Charlemont Station, as well as the potential for car trips to be attracted from a wide south Dublin hinterland. I do not consider that any significant impact on the environment arises with regard to these local access issues and I have addressed them in the relevant sections of the planning assessment.

11.20.204. ***Dublin Airport***

11.20.205. Colm McCarthy in his oral hearing submission on behalf of Senator McDowell also contended that public transport share at Dublin Airport is already very high and would not increase much with the MetroLink, and that the bus would be as quick to get to/from the airport.

11.20.206. In response, TII noted that the objective of the MetroLink project is not just to serve the airport, but to connect Swords, the airport and the city centre. They noted

that the demand for travel to the airport and Swords is estimated to increase significantly over the project lifetime, with the demand for travel to Dublin Airport increasing by over 29,000 daily trips from 2035 to 2065.

11.20.207. With MetroLink, PT modal shift for flyers accessing the airport is forecast to increase from 42% to 48% in 2035, rising to 66% in 2065. TII state that the modelling indicates that the vast majority (c. 85%) of these additional PT users will utilise MetroLink due to the better connectivity and faster journey speeds.

11.20.208. TII note that bus services to the airport suffer from delays, journey time reliability issues, slow speeds and restricted carrying capacity, due to road constraints. They contend that a bus-based PT solution to the airport would not have sufficient capacity to meet with the future demand. They also note that the M1 corridor is already the busiest radial corridor in the country and is classed as "approaching unstable flow" for 6 hours in the day. An increase in bus flows and traffic flow demand on the M1 corridor in the absence of MetroLink would, TII contend, increase unstable flow conditions on the M1, leading to flow breakdown, delays and congestion on the M1 for all road users, including bus users. With regard to suggestions that greater use could be made of direct bus services from the airport to the city centre via the Dublin Port Tunnel, TII note that this bypass all intervening areas proposed to be served by the MetroLink while undermining the strategic role of the Port Tunnel for commercial traffic.

11.20.209. Mr McCarthy's submission, as with a number of other similar submissions, appears to misunderstand the purpose of the proposed development, by focussing solely on Dublin Airport. While the MetroLink will serve the airport, it will also serve the fast-growing Swords area where very significant population increases are forecast, and which currently is only served by bus mode of public transport. It will also serve various residential, commercial and other uses (e.g. DCU and Mater Hospital) at multiple points between Swords and the city centre as well as providing interchange with BusConnects, rail, DART and Luas services, thus facilitating and opening up a much wider range of public transport journeys. The large P&R Facility will also assist in shifting some long-distance car commuting trips from the north Fingal hinterland (and extending into surrounding counties) into partial public transport trips

11.20.210. ***Pedestrian Impacts***

11.20.211. In terms of adverse impacts identified in the operational phase requiring mitigation measures, I note that these are associated with pedestrian comfort levels at certain locations. The EIAR states that there may be a requirement for further work in conjunction with FCC and DCC to determine full effective mitigation measures, such as reconfiguration of street furniture or reallocation of space to maximise available width.

11.20.212. I note that the updated Chapter 31 of the EIAR, which was submitted at the oral hearing (Ref. OH347) strengthens some of the loose or imprecise language used in the EIAR in relation to mitigation measures. With regard to the operational phase pedestrian impacts, I note that the mitigation has changed from “consider placement of street furniture... to maximise available width” to “placement of street furniture to maximise available width...by agreement with Local Authority”.

11.20.213. Footpaths will generally operate acceptably in the opening year, with issues only arising in future year scenarios at certain locations. This will provide an opportunity for TII in conjunction with the local authorities and NTA, as appropriate, to address matters arising. In particular, this may involve an increased reallocation of what is limited road space away from the private car and towards public transport and active travel modes.

11.20.214. Given the effects that the metro is likely to have on surrounding land uses, particularly in Fingal where there are large areas of zoned greenfield development land in proximity to the stations, it is appropriate that the applicant undertake monitoring of pedestrian comfort levels in the operational phase to ensure that pedestrian facilities keep pace with increased demand.

11.20.215. I consider that this is something that can be addressed in the operational phase in conjunction with the planning authorities, which may see a greater reallocation of road space from private cars to bus, pedestrians and cyclists in line with the goals of GDATS and the Dublin City Centre Traffic Plan. This is ultimately a wider issue than can be addressed within the confines of the MetroLink RO application. I am satisfied that what is proposed is adequate for the opening years and that the metro will operate with reasonable levels of pedestrian comfort.

11.20.216. I recommend a condition requiring assessment of footpath capacity in the operational phase in the opening year and five years after opening.

11.20.217. ***Cycle Issues***

11.20.218. I have addressed cycle issues and cycle parking provision in detail in Section 9.22 of this report. Noting the submissions from NTA, FCC and DCC and the agreements between TII and FCC/DCC, I consider that the proposed cycle parking provision is adequate for the opening year, but that a multi-agency approach will be required to identify and provide suitable additional cycle parking provision in the future years, including Mobility Hubs as described in the GDATS and catering for changing forms of mobility, such as shared mobility and e-bikes/e-scooters. I also note the recent 'National Policy Statement on Shared Mobility and the Provision of Hubs 2025' which notes and supports the role these services can provide in complementing public transport. I have recommended a condition to address this matter.

11.20.219. **Cumulative Impacts**

11.20.220. With regard to cumulative impacts, I consider that the greatest potential for significant cumulative impacts arises with regard to the various large-scale public transport projects, and in particular the DART+ projects and BusConnects. I note that these projects are all included in the modelling scenarios and thus the assessment includes for cumulative impacts. There will be a need for continued engagement and co-ordination between the different design teams and contractors to ensure that the projects can progress concurrently, where necessary, and to manage overlaps during construction, for example with the DART+ West/ DART+ South West works at Glasnevin and the MetroLink works at that location.

11.20.221. In the operational phase I concur with the EIAR assessment that there will be significant positive cumulative impacts with these projects.

11.20.222. **Conclusion on Traffic and Transportation**

11.20.223. I have considered all of the submissions made in relation to traffic and transportation and the relevant contents of the file including the EIAR and the relevant updates submitted at the oral hearing. Subject to specified exceptions below, I am satisfied that the potential for significant adverse traffic and

transportation impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

11.20.224. During the construction phase, I consider that there will be a range of short-term significant residual negative impacts in assessment zone areas AZ1, AZ2 and AZ3 due primarily to the very substantial number of HGV movements associated with the proposed development and the temporary traffic management measures associated with the construction of the alignment and stations and movement of construction vehicles. There will also be short-term significant negative impacts on the western and south western commuter rail lines, due to the need for temporary closure to facilitate track lowering at Glasnevin Station. Given the scale and nature of the project I consider that these impacts are unavoidable and that they cannot be entirely mitigated. I note and accept that, following the completion of the construction phase, these residual impacts will be removed.

11.20.225. In the operational phase, I consider that there will be a range of long-term positive impacts, including significant and profound impacts, due to improvements to public transport and the potential for greater interchange opportunities. This will include significant positive cumulative impacts with other transport projects such as BusConnects and DART+. I consider that there is potential for residual negative impacts on pedestrian comfort levels at certain stations, which will require monitoring in the operational phase and engagement with local authorities to determine if street furniture placement and pavement width can be maximised.

11.21. Material Assets, Cultural Heritage and the Landscape – Heritage

11.21.1. Introduction

11.21.2. Archaeology and Cultural Heritage are addressed in Chapter 25 of the EIAR, while Architectural Heritage is addressed in Chapter 26. Both chapters are supported by a series of figures and appendices.

11.21.3. Methodology

11.21.4. Both chapters are stated to have been prepared in accordance with relevant legislation and guidance and are stated to have involved consultations with stakeholders, including local authorities, the Office of Public Works and the Department of Housing, Local Government and Heritage (the Department) and Waterways Ireland.

11.21.5. The Chapter 25 Archaeology and Cultural Heritage Assessment identifies a study area of 250m on either side of the alignment within greenfield land and, in urban environments where the alignment is in tunnel from Santry Avenue to Charlemont, a distance of 100m on either side of the alignment. The assessment included desk-based assessment, field surveys and archaeological investigations as part of the establishment of the baseline.

11.21.6. The assessment states that identified archaeological and cultural heritage constraints were assigned a rating of 'very high', 'high', 'medium', 'low', 'very low' or 'neutral' based on its importance, sensitivity and existing adverse effects. Impact magnitude is assessed as 'very high', 'high', 'medium', 'low', 'very low' or 'neutral'.

11.21.7. The Chapter 26 Architectural Heritage assessment identifies a study area of 50m from permanent/temporary land-take in urban and parkland environments, 50m from the centreline of tunnel sections and 100m from permanent/temporary land-take for at-grade and greenfield sections (greenfield is clarified as comprising the section north of the M50, other than the tunnelled section at Dublin Airport). Consideration is stated to have been given to specialist vibration, geology and hydrogeology, archaeology and cultural heritage and landscape and visual assessments undertaken elsewhere within the EIAR.

11.21.8. The assessment is stated to have included desk-based assessment and site surveys, to assess known structures of heritage significance and to identify whether

there are other structures within the study area that are of architectural heritage significance. Buildings and structures considered by the assessment were assigned a rating in accordance with the National Inventory of Architectural Heritage (NIAH) system and the category of special interest noted. Buildings/structures are given a rating of 'very high', 'high', 'medium', 'low' or 'very low, negligible or of no architectural heritage value' and impact magnitude is assessed as 'high', 'medium', 'low' or 'negligible'.

11.21.9. **Receiving Environment**

11.21.10. The Chapter 25 Archaeology and Cultural Heritage Assessment outlines the archaeological history of the study area. Below is a brief summary of key aspects of this history.

11.21.11. **AZ1 (Northern Section)**

11.21.12. There is 1 No. National Monument of very high importance in this section of the Study Area, Lissenhall Bridge (ACH020), below ground elements of which remain. There are a further 15 No. recorded monuments of high importance within the study area, 27 No. archaeological and cultural heritage constraints of medium importance, 6 No. archaeological and cultural heritage constraints of low importance, 11 No. archaeological and cultural heritage constraints of very low importance and 21 No. archaeological and cultural heritage constraints of neutral importance.

11.21.13. **AZ2 (Dublin Airport)**

11.21.14. There are no archaeological and cultural heritage constraints of very high, low or very low importance within this section of the study area. There are 2 No. archaeological and cultural heritage constraints of high importance, 2 No. archaeological and cultural heritage constraints of medium importance and 2 No. archaeological and cultural heritage constraints of neutral importance.

11.21.15. **AZ3 (Dardistown to Northwood)**

11.21.16. There are no archaeological and cultural heritage constraints of very high importance within this section of the study area. There are 4 No. archaeological and cultural heritage constraints of high importance, 15 No. archaeological and cultural heritage constraints of medium importance, 2 No. archaeological and cultural heritage constraints of low importance, 1 No. archaeological and cultural heritage

constraint of very low importance and 6 No. archaeological and cultural heritage constraints of neutral importance.

11.21.17. AZ4 (Northwood to Charlemont)

11.21.18. There are 7 No. archaeological and cultural heritage constraints of very high importance, 26 No. archaeological and cultural heritage constraints of high importance, 30 No. archaeological and cultural heritage constraints of medium importance, 40 No. archaeological and cultural heritage constraints of low importance, 4 No. archaeological and cultural heritage constraints of very low importance and 13 No. archaeological and cultural heritage constraints of neutral importance.

11.21.19. Table 25.6 provides a summary of each feature within the individual zones and provides a baseline rating for each.

11.21.20. The Chapter 26 Architectural Heritage assessment also describes the receiving environment, with constraints outlined in tabular form together with their heritage status and evaluation rating. I refer the Board to the various Tables in Section 26.4 of the EIAR.

11.21.21. The assessment identifies a large number of heritage constraints within the study area, comprised of protected structures, NIAH listings and other non-protected designations. The overwhelming majority of heritage constraints are located in zone AZ4, with more than 400 protected structures and NIAH listings present within the study area. Zones AZ1, AZ2 and AZ3, contain much lower numbers of constraints.

11.21.22. Potential Impacts

11.21.23. Archaeology and Cultural Heritage

11.21.24. The assessment predicts that the construction phase has the potential to have **very significant adverse**, permanent impacts on the following: -

- 4 No. enclosures (ACH009, 075, 080 and 096);
- 1 No. ring ditch (ACH003);
- 1 No. structure (ACH059);
- 1 No. burnt mound (ACH073);

- 1 No. field system (ACH074);
- 2 No. burnt spreads (ACH106 and 107);
- 1 No. canal (ACH149);
- 1 No. brickworks (ACH179);
- 1 No. church (ACH196);
- 1 No. hospital (ACH197); and
- St Stephen's Green Park National Monument (ACH211) incorporating below ground remains of its associated boundary ditch (ACH211.1), wall (ACH211.2) and cultural heritage associations.

11.21.25. The assessment predicts that the construction phase has the potential to have **significant adverse**, permanent impacts on the following: -

- 18 No. Areas of Archaeological Potential (AAPs) (ACH001, 004, 019, 021, 051, 068, 077, 081, 086, 093, 108, 110, 127, 132, 136, 166, 177, and 194);
- 1 No. Halting Site (ACH012);
- 4 No. Archaeological Sites identified during investigations (ACH095, 097, 105 and 109);
- 1 No. shrine (ACH053);
- 1 No. public house (ACH145);
- 1 No. railway (ACH147);
- 1 No. Historic Town and associated potential archaeological remains (ACH169);
- 1 No. GAA club (ACH093);
- 1 No. 1916 streetscape (ACH178); and
- 1 No. statue (ACH046).
- 1 No. bridge (indirect impact; ACH020); and
- 1 No. Moore Street National Monument (ACH180).

11.21.26. The assessment predicts that the construction phase has the potential to have moderate adverse impacts on the following: -

- 13 No. townland boundaries (ACH010, 011, 043, 047, 049, 069, 085, 099, 102, 103, 104, 112, and 113);
- 7 No. AAPs (ACH028, 029, 033, 035, 115, 116, and 225);
- 5 No. 'sites of' structures (ACH146, 147.1, 147.2, 147.5 and 149.2); and
- 2 No. railway sidings (ACH147.3 and 147.4).

11.21.27. The assessment predicts that the construction phase has the potential to have slight adverse impacts on the following: -

- 5 No. 'sites' of structures (ACH026, 044, 071, 149.1 and 151);
- 2 No. townland boundaries (ACH067 and 143);
- 1 No. GAA club (ACH131); and
- 1 No. Site of tram (ACH167).

11.21.28. The assessment predicts that the construction phase will not have a significant impact on the following: -

- 6 No. repositories of cultural heritage material (ACH204-208 and 212).

11.21.29. For the operational phase, the assessment predicts that the development has the potential to have a **very significant adverse** indirect impact on St Stephen's Green Park National Monument (ACH211) and a **significant adverse** indirect impact on Lissenhall Bridge National Monument (ACH020).

11.21.30. Architectural Heritage

11.21.31. The assessment addresses potential impacts on a section-by-section basis, for both the construction and operational phases.

11.21.32. **AZ1 (Northern Section)**

11.21.33. For the construction phase, a **very significant adverse** impact on Balheary Demesne is predicted, relating to removal of a 500m section of the demesne wall and some limited hedgerow/tree removal works. A slight impact is predicted for

Lissenhall Little Demesne, arising from loss of short sections of wall and hedgerow removal within the demesne.

11.21.34. For the operational phase, a **very significant adverse** impact on Balheary Demesne is predicted, relating to permanent changes to the demesne landscape. A **very significant adverse** indirect impact is also predicted for Balheary Demesne, associated with changes at the Estuary station, in the vicinity of the demesne. For Lissenhall Little, the impact is predicted to be not significant.

11.21.35. **Profound** impacts are predicted for Lissenhall Bridge and Balheary Bridge, for both the construction and operational phases. For both bridges, construction works for the viaduct are stated to have the potential for damage via vibration or settlement, accidental damage or use by construction vehicles/machinery.

11.21.36. No direct effects are predicted for Lissenhall Bridge and Balheary Bridge during the operational phase. Indirect impacts, in the form of a **very significant adverse** visual impact on the setting of Lissenhall Bridge and a **significant adverse** visual impact on the setting Balheary Bridge, related to the presence of the raised viaduct in proximity to both bridges.

11.21.37. The assessment identifies that two pairs of semi-detached houses will be demolished as part of the construction of the viaduct (on the east and west sides of the R132 at Nevinstown West), with the impact predicted to be slight, in view of the low architectural heritage value of the affected houses.

11.21.38. **AZ2 (Dublin Airport)**

11.21.39. The assessment predicts that the construction phase has the potential to have a **very significant adverse** impact on the Church of Our Lady Queen of Heaven, arising from vibration and settlement, in particular for stained glass within the church.

11.21.40. For the operational phase, the visual impact of above-ground structures such as ventilation grilles, staircases and lifts is predicted to be not significant.

11.21.41. **AZ3 (Dardistown to Northwood)**

11.21.42. The assessment states that there are no structures of architectural heritage significance in the part of this section that lies north of the M50. A number of affected structures are identified on the south side of the M50. Santry Lodge is predicted to

experience a **significant adverse** impact, due to realignment of the Old Ballymun Road, which will bring the route to within c. 60m of the house.

11.21.43. Slight impacts are identified for the gate lodge and gateway at Santry Lodge and for the houses to the north and south, arising from realignment of the Old Ballymun Road.

11.21.44. For the operational phase, Santry Lodge is predicted to experience **significant adverse** visual impacts, including the impact of noise barriers.

11.21.45. **AZ4 (Northwood to Charlemont)**

11.21.46. A substantial number of buildings/structures are predicted to be impacted by the proposed development in this section. The below table summarises the impact assessment:

Construction Phase		
Structure/building	Predicted impact	Issue
Pillar letter box at Albert College Drive	Slight	The letter box is to be removed during construction
Church of Our Lady of Victories	Significant	The forecourt of the church is to be excavated as part of the station and above-ground structures will be provided within the church grounds. The development is also stated to have the potential to give rise to vibration/settlement impacts for the church, particularly for stained glass within the church.
Whitehall College	Very significant	Station construction requires excavation of playing pitches and removal/relocation of gates, piers and railings at the college access.
Dean Swift Bridge	Imperceptible	The potential for settlement impacts is identified.
Railings and gates at Dalcassian Downs	Profound	Railings are to be removed during construction and replaced on completion. A hoarding with appropriate imagery will be erected.
Railings and gates at Dalcassian Downs	Significant	Works in proximity to these elements will affect their setting.
Brian Boru bar, 5 Prospect Road	Very significant	The premises is to be demolished as part of construction of Glasnevin station

Nos. 1-3 Prospect Road	Moderate	The premises is to be demolished as part of construction of Glasnevin station
Railway tunnel at Cross Guns	Very significant	The western section of the tunnel is to be demolished and a retaining wall on the south side of the tunnel will be taken down and rebuilt in order to provide a rail platform
Disused railway bridge west of Cross Guns tunnel	Significant	Construction of Glasnevin station requires removal of the bridge
Lock No. 5, Royal Canal	Moderate	Tunnelling work may give rise to settlement impacts for the lock
Royal Canal	Very Significant	A section of the canal will be closed and dewatered during construction. The tow path will be closed during construction and part of the quay walls may be removed and rebuilt
Royal Canal	Moderate	A retaining wall on the north side of the canal, bordering the rail line will be taken down and rebuilt
Abutments of former railway bridge	Very significant	A temporary bridge will be provided over the canal, to provide access to Coke Oven Cottages and to facilitate access
South Western Commuter Line to Phoenix Park tunnel	Slight	The rail line will be regraded as part of works to provide an interchange at Glasnevin station. The track is itself stated to be not of heritage value, while the historic levels, the embankments and retaining walls will be impacted.
Western commuter line	Slight	c.1200m of track is to be regraded as part of works to provide an interchange at Glasnevin station. The track is itself stated to be not of heritage value, but the historic track bed, embankments and retaining walls would be impacted.
Prospect Lodge	Significant	Stacked site offices will be provided at the west end of a car park close to the shared boundary with Prospect Lodge, affecting its setting.
Mater Hospital	Very Significant	Excavation of the Mater station encroaches to within 14m of the hospital building and includes diversion of utilities. Construction activity, including noise barriers, will affect the setting of the hospital building protected structure.

Four Masters Park	Profound	All park features will be removed and stored during construction, as the construction of the Mater station takes place largely within the park.
Granite kerbing adjacent to Four Masters Park on Eccles Street and Berkeley Road	Significant	These elements will be removed and stored during construction
Historic lamp standards on Eccles Street	Significant	Scotch lamp standards on the southern side of Eccles Street and on the northern side, outside the Mater Hospital will be removed and stored during construction.
St. Joseph's Church, Berkeley Road	Very Significant	Excavation of the Mater station encroaches to within 5m of the church and requires removal and storage of church railings. Construction activity, including noise barriers, will affect the setting of the protected structure.
St. Joseph's Church, Berkeley Road	Profound	Construction of the Mater station requires removal of a grotto (and short-term relocation), a stone pier, a pedestrian gate and approximately 18m of plinth wall and wrought-iron railing on the Berkeley Road frontage of the church
Stone setts at access to St Joseph's Church on Eccles Street	Significant	The traditional paving setts are vulnerable to damage during construction.
Granite kerbing on Berkeley Road to the west of the Mater Hospital	Significant	The northern section of Berkeley Road is affected by construction of the Mater station. Upgrade of paving in this area may affect traditional granite kerbstones.
Granite kerbing outside 39 to 43 Eccles Street	Medium	This area of Eccles Street is affected by construction of the Mater station. Upgrade of paving in this area may affect traditional granite kerbstones.
Coal cellars and coalhole covers on Eccles Street	Very Significant	Paving upgrades outside these houses may damage or remove the coalhole covers and their associated granite flagstones.
20/21 Berkeley Road	Slight	Construction work for the Mater station will take place close to these properties, impacting on the setting.
42 O'Connell Street Upper	Very significant	Demolition of adjacent building at 43 O'Connell Street has implications for the structural

		stability of this building and requires underpinning of party walls and foundations. Blasting works as part of excavation may also damage the building.
O'Connell Street Hall	Significant	Demolition of adjacent building at rear of 43 O'Connell Street and construction activity at O'Connell Street station have implications for the structural stability of this building
42 O'Connell Street Upper and O'Connell Hall	Slight	Both buildings will be affected by the presence of supports for the facades of adjacent buildings.
43 O'Connell Street Upper	Very significant	The building will be demolished, apart from its façade. Cellars will be infilled with concrete to support the façade and a hoarding will be erected along the frontage.
44 O'Connell Street Upper	Very Significant	The building will be demolished, apart from its façade. Cellars will be infilled with concrete to support the façade and a hoarding will be erected along the frontage.
45 O'Connell Street Upper	Very Significant	The building will be demolished, apart from its façade. Cellars will be infilled with concrete to support the façade and a hoarding will be erected along the frontage.
52-54 O'Connell Street Upper	Very Significant	The Carlton Cinema building will be demolished, apart from its façade. Cellars will be infilled with concrete to support the façade and a hoarding will be erected along the frontage.
55-56 O'Connell Street Upper	Significant	The Carlton Cinema building will be demolished, apart from its façade. A hoarding will be erected along the frontage.
57 O'Connell Street Upper	Very Significant	The building will be demolished, apart from its façade. Cellars will be infilled with concrete to support the façade and a hoarding will be erected along the frontage.
58 O'Connell Street	Very Significant	The building will be demolished, apart from its façade. Cellars will be infilled with concrete to support the façade and a hoarding will be erected along the frontage.
59 O'Connell Street	Significant	Demolition of adjacent building at 58 O'Connell Street and construction activity at the O'Connell Street station have implications for

		the structural stability of this building and require underpinning.
59 O'Connell Street	Very Significant	Construction of the O'Connell Street station requires part of the rear of this property and passes close to the return of the building
60 O'Connell Street	Significant	The O'Connell Street station encroaches into the rear of the site, removing the rear boundary wall and a small section of the structure at the rear of the main building.
59-60 O'Connell Street Upper	Slight	Both buildings will be affected by the presence of supports for the facades of adjacent buildings.
60a O'Connell Street	Slight	The building is to be demolished in order to facilitate fire tender access
Historic paving in Moore Lane	Moderate	Paving is to be removed and stored during construction.
15 Moore Street	Very Significant	The building is along the construction haul route and may be impacted by vehicles.
16 Moore Street	Very Significant	The building is along the construction haul route and may be impacted by vehicles.
17 Moore Street	Very Significant	The building is along the construction haul route and may be impacted by vehicles.
Tara Street DART Station and Loop Line Railway	Moderate	The rail line may be affected by settlement during boring activities.
Luke Street railway bridge	Slight	The bridge may be affected by settlement during boring activities.
Townsend Street railway bridge	Slight	The bridge may be affected by settlement during boring activities.
22 Luke Street	Slight	The building will be demolished as part of the construction of the Tara station
24 Townsend Street	Slight	The building will be demolished as part of the construction of the Tara station
St Stephen's Green Park	Profound	Part of the park will become a construction site during the works to provide St Stephen's Green Station, with the removal of paths, railings alongside paths, vegetation, the addition of hoardings, the installation of plant and other equipment, the removal of trees and the carrying out of other works.

		Railings, plinth walls and gates will be removed and stored during construction. Some of the lamp posts and bollards along the eastern perimeter of the park will be removed during construction. The Wolfe Tone monument, including its granite columns and the Famine sculpture will be removed during construction.
St. Stephen's Green and buildings on its north and east sides	Very Significant	During the construction of St Stephen's Green Station, the construction site will be directly to the front of the protected structures at the eastern end of the northern side of St Stephen's Green and those on the eastern side of St Stephen's Green and will detract from the setting of the protected structures.
Historic paving in Hume Street	Very Significant	Widening of the pavement on the northern side of Hume Street may impact the historic paving.
39 to 56 St Stephen's Green	Very Significant	Diversion of utilities and laying of new paving may affect cellars of these buildings located beneath the public roadway.
15 to 17 Hume Street	Very Significant	Diversion of utilities and laying of new paving may affect cellars of these buildings located beneath the public roadway.
Carroll's Building, Grand Parade	Moderate	The building may potentially be impacted by settlement during boring works
Carroll's Building, Grand Parade	Very Significant	The construction of a lift and stairway to the front of the Carroll's Building will impact on the architectural heritage of the front of the building.
Carroll's Building, Grand Parade	Significant	The Charlemont station construction site will be directly to the rear of the building and the pavement to the front of the building will be widened; these works will detract from the setting of the protected structure.
Former Harcourt Street railway line	Moderate	The rail line may potentially be impacted by settlement during boring works
Dartmouth Square and Environs ACA and granite kerbing at Dartmouth Square	Significant	The provision of utilities along Dartmouth Square west will impact the steps leading down from Grand Parade to Dartmouth Square, with potential impact on granite steps, granite kerbing and historic concrete lamp standards.

19 to 25 Dartmouth Road	Moderate	This building will be demolished as part of construction of the Charlemont station
Railway bridge at Dartmouth Road	Slight	The bridge may be affected by settlement during boring activities.

Operational phase		
Structure/building	Predicted impact	Issue
Church of Our Lady of Victories	Significant	Above-ground elements of the station are identified as having a potential visual impact on the setting of the church.
Whitehall College	Moderate	Relocation of the gateway is predicted to impact on the protected structure. The station includes permanent above-ground features to the front of the college and within its curtilage, which will affect the protected structure setting.
Four Masters Park	Moderate	Construction of the Mater station will permanently change the character of the park, through the addition of pop-ups, repositioning of monuments, realignment of boundaries and modification of landscaping.
St. Joseph's Church, Berkeley Road	Imperceptible	Operation of the Mater station will affect the setting of the Church.
St Stephen's Green Park	Very Significant	Permanent changes to the park that are associated with the St. Stephen's Green station, including relocation of monuments and changed landscaping will affect the park's setting.
Railway bridge at Northbrook Road	Slight	The bridge may be affected by settlement during boring activities.

11.21.47. **Mitigation Measures**

11.21.48. Sections 25.6 and 26.7 of the EIAR outline proposed mitigation measures and can be summarised as follows:

11.21.49. **Archaeology & Cultural Heritage**

- A project archaeologist has been appointed to oversee and manage archaeological elements of the development.

- A project conservation architect (PCA) has been appointed, with reference to built heritage constraints.
- Construction phase mitigation is stated to be carried out pre-commencement and may include:
 - Full measured, written, drawn and photographic surveys;
 - Detailed construction methodology (demolition, removal, storage, relocation/reinstatement, rebuilding, repair and rehabilitation of archaeological and cultural heritage monuments; appropriate screening; monitoring of vibration);
 - Dive, underwater and wade surveys (including metal detecting);
 - Geophysical surveys (including Ground Penetrating Radar);
 - Archaeological test excavations;
 - Archaeological monitoring; and
 - Preservation by record (Archaeological excavation).
- Ministerial consent will be required for all works carried out within the zone of proximity to a National Monument, with such consent given on a case-by-case basis.
- A preliminary report and final report will be provided on the findings of archaeological investigations.
- A full written and photographic record of Lissenhall Bridge National Monument will be prepared prior to commencement of development. The proposed viaduct will be screened where possible by tree planting.
- Elements removed from St. Stephen's Green for storage will be conserved and reinstated for completion of construction, in consultation with relevant stakeholders. Hard and soft landscaping will also be reinstated.
- Stations and associated infrastructure will be well-maintained and clean, with failed planting above the station boxes replaced.

11.21.50. Architectural Heritage

- The PCA will undertake pre-construction structural and condition surveys of constraints that require removal for secure storage or protection in-situ. The reports will include specifications for such works, which will be undertaken by specialist heritage works contractors.
- Condition surveys of heritage constraints along the route will be undertaken as part of a property owner protection scheme. The purpose of the condition surveys would be to ascertain the condition of the properties before, during, and after construction to determine whether there has been any deterioration of any of the properties surveyed and whether the same may be attributable to the development and it will recommend repairs as appropriate.
- A record of buildings will be prepared that are to be demolished or which have cellars that are to be infilled.
- Appointed contractors will appoint conservation architects to implement require preservation in situ works.
- Additional mitigation measures related to as-yet unknown heritage constraints will be implemented.
- Table 26.66 outlines site-by-site mitigation proposals for a total of 106 No. identified constraints (numbered AHI1-AHI106). Such works include the preparation of written and photographic records, use of barriers and hoardings, vibration monitoring, landscaping proposals, relocation/reinstatement works, development and implementation of method statements.

11.21.51. **Residual Impacts**

11.21.52. Residual impacts are addressed at Sections 25.7 and 26.7 of the EIAR.

11.21.53. **Archaeology & Cultural Heritage**

11.21.54. No residual significant adverse impacts are predicted. **Residual moderate** impacts are identified in the cases of Lissenhall Bridge National Monument (related to the Broadmeadow and Ward River viaduct) and St. Stephen's Green Park National Monument (related to new structures and landscaping as part of the St. Stephen's Green station). Other predicted impacts are stated to be reduced to slight,

imperceptible or imperceptible to slight following the implementation of the proposed mitigation.

11.21.55. Architectural Heritage

11.21.56. Table 26.66 of the EIAR predicts that the vast majority of residual impacts will be in the range of imperceptible-moderate.

11.21.57. Residual **very significant adverse** impacts are predicted in the cases of Nos. 43-45 O'Connell Street Upper, 52-58 O'Connell Street Upper and 14-17 Moore Street. Residual **significant adverse** impacts are identified in the case of the Brian Boru pub, the railway tunnel at Cross Guns, a disused railway bridge to the west of Cross Guns, Prospect Lodge, Four Masters Park, 60 O'Connell Street Upper, St. Stephen's Green Park and the Carroll's building.

11.21.58. Cumulative Impacts

11.21.59. Potential cumulative Archaeology & Cultural Heritage and Architectural Heritage impacts are addressed at Sections 30.4.17 and 30.4.18 of the EIAR. In both instances, the majority of the 176 'other developments' considered by the assessment were screened out due to their distance, scale and nature.

11.21.60. Of those developments screened in for potential cumulative Archaeology & Cultural Heritage impacts, each relates to the potential for disturbing archaeological deposits during construction and the assessment predicts that the cumulative impact would be not significant.

11.21.61. Of those developments screened in for potential cumulative Architectural Heritage impacts, the assessment predicts that the proposed development and the Grand Parade Trading Co. DAC development (Reg. Ref. 2373/17 and ABP-300873-18) would give rise to a **significant cumulative adverse** impact on the Carroll's Building at Charlemont during the operational phase.

11.21.62. Oral Hearing

11.21.63. Errata

11.21.64. The Schedule of Errata submitted to the oral hearing (Ref. OH374) on 27th March 2024 identified a number of errors in the EIAR Archaeology & Cultural Heritage and Architectural Heritage assessments.

11.21.65. Updates

11.21.66. The applicant provided a number of updated and additional assessments at the oral hearing, including an Architectural Heritage Impact Assessment relating to Santry Lodge (Ref. OH19), a statement regarding the Status of Buildings on Moore Street (Ref. OH291) and a number of updated photomontage images pertaining to St. Stephens's Green Station and its surroundings (Ref. OH382). A series of 'conditions' that have been agreed with the OPW and which shall be applied to all OPW properties (Ref. OH73) was also submitted, together with a series of additional 'conditions' proposed by the applicant (Ref. OH74) relating to OPW properties that were stated to be 'unagreed' with the OPW.

11.21.67. An updated Cumulative Impacts Addendum Report (Ref. OH98) was submitted to the oral hearing on 28th February 2024. The Addendum comprises an updated review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application. It assesses potential cumulative impacts with a substantial number of additional developments but does not predict any additional potential significant cumulative adverse impacts.

11.21.68. The Final Schedule of Additional Environmental Commitments (Ref. OH376) also sets out commitments in relation to heritage.

11.21.69. Post-Oral Hearing

11.21.70. A further cumulative impact assessment update was submitted on 31st January 2025 as part of the applicant's response to the Wild Ireland Defence CLG oral hearing submission. In respect of Archaeology & Cultural Heritage and Architectural Heritage it states that there is no potential for cumulative impact with other developments considered by the assessment.

11.21.71. Assessment

11.21.72. I consider the potential significant impacts in terms of Heritage are as follows:

- Impact on Santry Lodge.
- Impact on Four Masters Park.
- Impact on heritage features at O'Connell Street, Moore Street and Moore Lane.

- Impact on St. Stephen's Green.
- Impacts on other features of archaeological or cultural heritage.
- Impacts on other features of architectural heritage.

11.21.73. Impact on Santry Lodge

11.21.74. The proposed development requires demolition of the gate lodge to Santry Lodge and the gateway and front boundary wall of the property, a second former gate lodge (described as formerly the gate lodge of Tower House) and alterations to the Old Ballymun Road alignment that includes the provision of a new access to serve Santry Lodge. Demolition of an additional house to the north is also required although it should be noted that the EIAR points out it has no statutory status.

11.21.75. Santry Lodge was designated as a Protected Structure (RPS Ref. 0953) under the Fingal County Development Plan 2023-2029 and the Board should note that it was designated following submission of the application. It is described by the Record of Protected Structures as follows:

- 'Mid-18th century, two-storey, eight-bay former royal charter school. Within the grounds are former outbuildings, gate lodges and entrance gates. Currently in use as homeless hostel'

11.21.76. The EIAR understandably does not identify any Protected Structure status for Santry Lodge, however; following its designation, on 19th February 2024, TII provided an Architectural Heritage Impact Assessment (HIA; Ref. OH19) to the oral hearing that describes the Protected Structure and assesses the impact of the development on it. Having considered the HIA in detail, I note that there appears to be some disagreement between the applicant and FCC regarding the classification and historical significance of the main protected structure building. Notwithstanding this, it predicts that the impact on Santry Lodge itself would be very significant adverse, during both construction and operational phases, whilst for both gate lodges and gateway and front boundary wall of Santry Lodge the impact of construction would be profound.

11.21.77. Fingal County Council's submission on the application submits that Santry Lodge is the protected structure that will be most affected by the development and it also advises that during consultations, the applicant was advised that the building

and its setting should be avoided. The submission describes Santry Lodge as being of National Significance, in view of its special cultural, historical and architectural interest.

11.21.78. In its submission on the application, the Department expressed concern regarding the impact of development on this historical demesne and also expressed the view that impacts on the architectural significance and character of the surviving elements of Santry Lodge have not been adequately evaluated. I note that following submission of the HIA at the oral hearing, the Department did not comment further on the matter in its further submission (1FS17).

11.21.79. Photomontage image 12b.3 depicts the changed nature of the landscape in the area adjacent to the Santry Lodge gate lodge, following the completion of construction. I agree with Fingal County Council, that the scale of demolition required and the accumulation of landscape changes that are required, which includes road realignment works, a raised embankment that will allow the alignment descend from the M50 viaduct down to the Northwood portal and clearance/demolition works will have a detrimental impact on the character and setting of the protected structure. It is my opinion that the development will have a very significant adverse impact on Santry Lodge itself, with profound impacts on the gate lodges and front boundary. In saying this, I acknowledge that there is no direct impact on Santry Lodge itself.

11.21.80. Whilst the loss of built heritage is unfortunate, and I note the concerns of both Fingal County Council and the Department, I accept that the proposed alignment necessitates demolition of both gate lodges and the front boundary to Santry Lodge. I also accept that realignment of Old Ballymun Road is required in order to provide ongoing access to housing further north and, also, commercial property to the east. In its Response to Submissions document, TII directly responded to FCC's request that Santry Lodge and its setting should be avoided, pointing out that the interaction is unavoidable in the context of Junction 4 of the M50, as it would require a more elevated crossing of the M50 and the resulting increased gradient to Northwood station would then become incompatible with the metro design standards.

11.21.81. In terms of mitigation, Table 26.66 of the EIAR states that each of the gate lodge to Santry Lodge and second former gate lodge will be recorded by written and photographic means, to English Heritage Level 2, prior to demolition. This approach

is consistent with advice contained within the Architectural Heritage Protection Guidelines for Planning Authorities (2011), Section 6.7.3 of which promotes the preparation of a record in circumstances where demolition is permitted.

11.21.82. Additionally, both the HIA and Table 26.66 state that the stone walls and piers that form the existing gateway entrance to Santry Lodge will be reinstated on a new alignment, with reconstruction carried out in accordance with a method statement prepared by the PCA. The HIA further commits that reinstatement works will be undertaken in accordance with the outcome of discussions that have taken place with FCC.

11.21.83. I draw the Board's attention to the applicant's agreement with FCC, which was submitted at the oral hearing on 4th March 2024 (Ref. OH147). 'Condition' No. 2 of the agreement contains a commitment to agree landscaping proposals and the design and finish of reinstated boundary elements with the Council prior to the commencement of development in accordance with a landscaping plan appended to the agreement.

11.21.84. I consider the proposed mitigation is reasonable in the context of the identified impact and, subject to appropriate specification, new landscaping will contribute to restoring an appropriate setting and backdrop for Santry Lodge. Notwithstanding the implementation of this mitigation, I consider the residual impact of the development on the main protected structure will remain very significant adverse and profound for the demolished elements. I consider there is little further that can be done, in the context of the application, that would have a meaningful effect in reducing the impact of development on the protected structure. Therefore, the Board will have to balance the impacts that I have identified against the wider societal benefits that will accrue from the proposed development.

11.21.85. Impact on Four Masters Park

11.21.86. Four Masters Park is a privately owned park that is enclosed to the north by Eccles Street and to the west and south by Berkeley Road. According to Section 26.4.4.8.2 of the EIAR, the Park dates back to the late 19th Century, where it was originally provided as a means of ensuring a flow of fresh air to the adjacent Mater Hospital. The Park had been locked and inaccessible on a number of occasions

when I visited the site, but it was open to the public when I visited the site on 6th February 2025.

11.21.87. The railings, gates and plinth walls that enclose the Park and also the Four Masters Cross that lies within it are designated as a Protected Structure (RPS Ref. 737) under the Dublin City Development Plan. Section 26.4.4.8.3 of the EIAR states that there is uncertainty as to whether the Park itself is protected but, for the purposes of assessment, it assumes that it is protected along with its contents. The Park is also located in an area designated by the City Development Plan as a Conservation Area and there are a number of Protected Structures in the immediate surroundings, including the original Mater Hospital building (RPS Ref. 2437) and St. Joseph's Church on Berkeley Road (RPS Ref. 737).

11.21.88. The proposed Mater Station is primarily located within Four Masters Park, with its northern end located beneath the junction of Eccles Street and Berkeley Road and its southern end extending into the grounds of St. Joseph's Church. Its construction will require removal of the perimeter railings, together with the Four Masters Cross and Healing Hands sculpture, with the railings to be reinstated and the Cross and sculpture relocated elsewhere in the Park following the completion of construction. Additionally, a grotto and dedicatory plaque that are within the grounds of St. Joseph's Church will be relocated for the duration of construction works.

11.21.89. For the construction phase, the EIAR predicts profound adverse impacts on the Park and its enclosing railings, gates and plinth walls, Four Masters Cross and Healing Hands Sculpture; both profound and very significant adverse impacts on St. Joseph's Church; very significant adverse impacts on the Mater Hospital and coalhole covers and associated coal cellars along Eccles Street; and significant adverse impacts on granite kerbing, stone setts and historic lamp standards in the immediate surrounding area. With the exception of impacts on Four Masters Park, the EIAR assessment predicts that following the implementation of proposed mitigation, adverse impacts on these heritage features will be reduced to the level of moderate adverse, or lower.

11.21.90. Observer submissions raise multiple concerns regarding the impact of the development on Four Masters Park and surrounding features of heritage significance. For example, the submission by Prospect Architectural Conservation

Area (S260) submits that the development will obliterate the park, the submission by Breda Scully (S25) expresses concern regarding the removal of items of heritage interest from the park and a number of submissions including Amanda Hughes (S6), District 7 Community Alliance (S66), Eamonn Smyth (S76) and Dr. Jonathan Healy (S154) raise concerns regarding the design of the station entrance and its impact on both the Conservation Area and on views of the Mater Hospital Protected Structure. The Department (S63) also raises concerns regarding the impact on Four Masters Park.

- 11.21.91. I agree with the EIAR that there will be a range of profound, very significant and significant on the abovementioned features of heritage interest.
- 11.21.92. Proposed mitigation is outlined at Refs. AHI-44 to AHI-61 of Table 26.66 and includes measures to protect the Mater Hospital and St. Joseph's Church from damage during construction and removal, storage and restoration of protected structure elements from the park. This is discussed further below.
- 11.21.93. Regarding Four Masters Park, the mere location of the station within the park necessitates effective clearance of the park and associated items of architectural interest, followed by substantial excavation within it. The park will also be enclosed by site hoardings for the majority of the estimated 105 month construction phase and these hoardings will themselves impede views of the Mater Hospital and other views within the Conservation Area. In this context, I agree that the park will be profoundly impacted by construction of the station.
- 11.21.94. Following the completion of construction the park will be restored, although the Board will note that above ground elements of the station, such as the station entrance, fire lifts, skylights and ventilation grilles, will be located within the park. According to the document 'Mater Railing Length and Green Space' (Ref. OH250) provided to the oral hearing on 19th March 2024, the restored park will be reduced in area by 270m² and that the perimeter railing will be reduced by 10m linear length.
- 11.21.95. The park will be restored to a slightly different layout, with the station entrance and a new plaza provided outside of the western end of the park. As with the St. Stephen's Green station, I accept that there is a requirement to provide and maintain 24/7 access to the station that is not affected by park opening hours and I also accept that this contributes to the different park layout proposed.

- 11.21.96. In terms of the park restoration, I consider that the proposed park layout represents a reasonable attempt to restore its existing shape and form and I am satisfied that the park will be usable and that its character will be gradually restored over time as new landscaping matures. Consideration should also be given to the fact that the park, which will be operated and maintained by the applicant, will be opened to the public permanently in the operational phase. This commitment is outlined within TII's Response to Submissions document and was also outlined verbally following submissions from local residents at the oral hearing on 13th April 2024. I consider this is a welcome benefit for the local community, arising from the development.
- 11.21.97. Notwithstanding the foregoing, I have strong concerns regarding the impact of multiple station elements, which I consider will have significant adverse impacts on the park and surrounding area. Dublin City Council's Conservation Section also raised concerns regarding the impact of the station and associated elements on heritage features in the area.
- 11.21.98. As outlined in the Landscape and Visual Impact Assessment section of this report, the station entrance and fire lifts are very prominent features and both will impede multiple views, including views of the Mater Hospital. The fire lifts design, which is generally consistent across all underground stations, was identified by the project architect at the oral hearing as intended to sit as a subservient element within the public realm but, in this instance, I would dispute this assertion. The lifts structure is a highly noticeable and incongruent feature, as can be seen from photomontage images 19.1-19.5, and I consider they contribute to the erosion of character of the Park and surrounding Conservation Area.
- 11.21.99. Additionally, the 4 No. skylights to be provided within the park are large and they occupy a substantial quantum of space, with each measuring c. 9.5m x 2m. Whilst a commitment was made at the oral hearing to reduce their individual height to max. 1.1m (see Ref. 2.11 of the Final Schedule of Additional Environmental Commitments, OH376), I nevertheless am of the view that they should be omitted, in order to reduce the overall encroachment of station infrastructure into the park's usable area and to assist with overall integration of the station at this location.

11.21.100. The EIAR identifies the adverse impact on the park during the operational phase, predicting a moderate impact. However, I am of the opinion that the impact is significant adverse.

11.21.101. The Board will be aware that I have recommended elsewhere that a condition be attached, requiring specified redesign of the Mater station, which will include:

- The station entrance canopy design shall be revised, to incorporate reduced metal banding and a commensurate increase in glazing;
- Proposed skylights shall be omitted from this station; and
- The passenger and Dublin Fire Brigade lift structures shall comprise glazed structures.

11.21.102. These amendments would result in a more sympathetic station design that will better assimilate into this site, will preserve existing views and will respect the character and setting of the adjacent Mater Hospital Protected Structure. Subject to this recommended design amendment being implemented, I consider the impact on the park during operation will be moderate adverse.

11.21.103. Regarding the suggestions from observers that the station entrance should be relocated, whilst the issue was not discussed directly at the oral hearing, the issue of reconfiguration was discussed in the context of the St. Stephen's Green station and I accept that amendments at ground level affect the operation of the station and can require substantial internal redesign. I therefore do not consider it would be appropriate to attempt such redesign as part of Railway Order conditions. In any case, I have recommended amendments to the proposed station design that I will consider will address the issues I have identified. I do not consider additional design amendments, of the order requested by observers, are required.

11.21.104. The Four Masters Cross and Healing Hands sculpture are to be relocated toward the centre of the Park. I accept that relocation is required, in view of the location of the station entrance, and in the proposed location it will remain visible from both Berkley Road and Eccles Street. I note that Dublin City Council's Conservation Section does not object to the proposed relocation, subject to provision of a conservation method statement (CMS) that will control the removal, restoration and reinstatement of the Cross. The Chapter 26 mitigation strategy provides for the

preparation of method statements for each of the Park elements that will be temporarily removed.

- 11.21.105. In the case of park-enclosing items, granite kerbing, stone setts and historic lamp standards that are to be removed, restored and reinstated, I am satisfied that the impact will be temporary and that restoration will effectively address the issue. Additionally, I welcome the applicant's verbal commitment at the oral hearing on 13th March 2024 that the railings will be restored prior to reinstatement. I observed on a number of occasions when visiting this site that sections of the railing are in poor condition.
- 11.21.106. For St. Joseph's Church the identified impacts relate to the removal of church elements that are within its external grounds, including railings, a grotto and a stone pier and the presence of construction site elements affecting its setting. TII proposes that the grotto will be temporarily relocated and that the removed elements will be stored and reinstated following completion.
- 11.21.107. For the Mater Hospital, the identified impacts relate to potential works that will be required for front façade windows on the building and the presence of construction site elements affecting its setting.
- 11.21.108. In both instances, works are to be led by the project PCA and I am satisfied that the proposed approach will be effective in ensuring significant impacts do not arise.
- 11.21.109. For the coal cellars and associated coalhole covers on Eccles Street, the EIAR identifies that pavement upgrades may damage or remove the covers and associated granite flagstones. The Final Schedule of Errata identifies that the works will avoid the use of heavy machinery over the cellars and works to lift the paving will be carried out in such a way as to avoid damage to the vaulting of the cellars. Additionally, the coalhole covers and their granite flagstones will be removed and stored, to be reinstated on completion of construction. I agree that subject to implementation of this mitigation, the impact will not be significant.
- 11.21.110. The Chapter 25 Archaeology & Cultural Heritage identifies that the station site is in an area of archaeological potential and identifies the potential for a significant adverse impact, in the absence of mitigation, and proposes to undertake test trenching in area of direct impact where possible and to undertake archaeological

monitoring throughout construction. I am satisfied that this approach will ensure adequate consideration is given to any potential archaeological finds and that no significant adverse impact will arise.

11.21.111. The Department's submission raises the issue of potential impacts on surviving elements of Gardiner's unfulfilled ambition for the Georgian City, the Royal Circus. In responding to the submission, the applicant outlines that the street pattern of the Royal Circus is understood and that the development will not alter the street layout in this area.

11.21.112. Whilst the applicant is correct, that the development does not seek to alter the street layout in the area surrounding the station, I note that construction of the station requires excavation on both Berkley Road and Eccles Street, so there is potential to disturb any remaining subsurface features of heritage interest. Whilst there is no specific reference to the Royal Circus in the assessment, the archaeological and cultural heritage assessment contained in Chapter 25 of the EIAR acknowledges that the station site is located in an area of archaeological potential and commits to mitigation, in the form of test trenching or archaeological monitoring, together with further mitigation such as preservation in situ or full excavation where required. This proposed approach is accepted by Dublin City Council's Archaeology section and I consider it will be effective in ensuring that any surviving elements of the Royal Circus are adequately considered during construction.

11.21.113. Impact on Heritage Features at O'Connell Street, Moore Street and Moore Lane

11.21.114. ***O'Connell Street***

11.21.115. The proposed O'Connell Street Station forms part of a wider redevelopment of a large plot at the north end of O'Connell Street that is bordered by O'Connell Street, Moore Lane and Henry Place and according to Section 5.10.8 of the EIAR, station construction will follow one of two potential scenarios, where it will be delivered (a) in tandem with over site development or (b) preceding it. The section states that both scenarios are assessed within the EIAR. The Board will be aware that permission was granted for a proposed over site development, i.e. the Dublin Central development, under ABP-318316-22.

- 11.21.116. The site is located in an Architectural Conservation Area (ACA) and Conservation Area (CA) and there are a number of protected structures in the area, both on the site itself and on adjacent sites. Of relevance to the application, the front facades of 43-44 and 57-58 O'Connell Street Upper (RPS Refs. 6023, 6024, 6026 and 6027), the upper floor facades of 52-54 O'Connell Street Upper (RPS Ref. 6025) and the building at 60 O'Connell Street Upper (RPS Ref. 6028) are protected structures. 42 O'Connell Street Upper (RPS Refs. 6022), which adjoins the site to the north, is also a protected structure.
- 11.21.117. Of these protected structures, Section 5.10.8 of the EIAR outlines that station construction will require partial demolition of 43-44, 52-54 and 57-58 O'Connell Street Upper and, in each instance a very significant adverse impact is predicted. However, I would bring to the Board's attention that in each instance, TII proposes to retain the protected structure itself in full. Partial demolition of 45 and 55-56 O'Connell Street Upper, which are not protected structures but which are listed on the NIAH, and 46-49 O'Connell Street, which have no protected status, is also required. For 45 and 55-56 O'Connell Street, the EIAR predicts very significant and significant impacts, respectively.
- 11.21.118. A number of observers object to the scale of demolition proposed as part of station construction, including those by Brian McGrath (S29) and Frank McDonald (S98).
- 11.21.119. The scale of demolition and clearance works required in order to facilitate station construction is substantial and, in effect comprises most of the city block between 43 and 58 O'Connell Street Upper. I note in this regard that TII had originally proposed that only the facades of 43-44, 52-54 and 57-58 O'Connell Street Upper would be retained, but at the oral hearing on 19th March 2024 it was proposed that all of the existing O'Connell Street façades will be retained in circumstances where MetroLink construction precedes over site development (Ref. OH254). The applicant also undertook at the oral hearing to retain all street trees along the O'Connell Street frontage, having initially outlined within the application that 13 No. London plane trees that are located within the pedestrian pavement would need to be felled in order to facilitate station construction.

11.21.120. I welcome both the increased façade retention and street tree retention proposed but, notwithstanding this, I agree with the EIAR assessment that the impact of the development on architectural heritage will be very significant adverse. It may be the case that only the facades are directly protected under the RPS, but the remaining elements of these buildings to be demolished are physically, visually and functionally connected to them and the scale of demolition across a city block will have a substantial impact on architectural and cultural heritage. A prime example of such loss is the Carlton Cinema, which was described by Frank McDonald in his submission as one of the anchors of O'Connell Street prior to its closure in 1994 and which still retains its entire volume and a significant amount of original fabric.

11.21.121. Photomontage images 20.1-20.6 indicate that retention of the facades would allow the buildings to retain a very similar appearance to the existing situation, but I consider this is unlikely, particularly as window openings will either allow views through to the façade props or false window imagery will be incorporated in order to restrict such views. I would also point out that active ground floor uses within these buildings will cease and the retained extensive blank façade is likely to detract substantially from the character and vibrancy of the northern end of O'Connell Street. The Board will note that this situation will persist until such time as over site development is completed, notwithstanding delivery of the proposed station, as the application does not involve any over site proposals.

11.21.122. Although it is itself unaffected by the development, 42 O'Connell Street is also predicted to be very significantly impacted by development. The building is described by the NIAH as the only intact eighteenth century house to survive on O'Connell Street and is of national significance. In view of the requirement to demolish No. 43, this building will be propped and its proximity to the station box deep excavation may have implications for the building's stability. The O'Connell Hall (NIAH Ref. 50010560), which is at the rear of 42 O'Connell Street Upper, is predicted to be similarly affected. The applicant proposes that propping will be overseen by the PCA and that a scheme of vibration and settlement monitoring will be implemented during construction, which will include a threshold limit that will necessitate a works cessation in the event of any exceedance. I am satisfied that that the applicant's approach will ensure the building is protected from damage during construction and that no significant adverse impact will arise.

11.21.123. With reference to the proposed station design, the station entrance is shown on both the railway order drawings and photomontage image 20.2 as a somewhat utilitarian and uninviting entrance, which is dominated by a disproportionately scaled fascia. At the oral hearing, on 19th March 2024 the applicant presented a revised station entrance design (this design is shown on drawing No. ML-ST 305 F-G2 contained within the combined drawing document, OH323) that retains the character of the existing fascia. I consider this revised station entrance design is a more appropriate and sympathetic design solution, which will assimilate into the streetscape and ACA setting.

11.21.124. The station site is also proximate to a recorded monument, a former brickworks on Moore Lane (DU018-020506), and is stated to be in a zone of archaeological potential. Table 25.9 of the EIAR predicts that the development will have a very significant impact on the monument and a significant impact on the Zone of Archaeological Potential in the absence of specified mitigation. Such mitigation comprises archaeological monitoring during enabling and construction works and this includes a commitment to undertake further investigation in circumstances where archaeological remains are encountered. I am satisfied that the applicant's approach is consistent with standard practice in relation to dealing with archaeology and I note that the approach is supported by the City Council's archaeological section. I am satisfied that, in view of the proposed mitigation, the development will not have a significant impact on this recorded monument.

11.21.125. An observer at the oral hearing, Mr Stephen Troy, advised that an archaeological midden (this is essentially an old dump) has been discovered at Moore Street and he questioned whether a similar find may be discovered at the O'Connell Street Station site. He queried whether the applicant had investigated the potential for such a find and requested that the Board would make it a condition of the Railway Order that adequate archaeological investigations should be undertaken at the site.

11.21.126. As I have outlined above, the applicant has committed to a scheme of archaeological monitoring at the station site and I am satisfied that any underlying features of archaeological interest encountered will receive adequate consideration by the project.

11.21.127. To conclude my assessment, I consider the impact of the development is justified.

11.21.128. ***Moore Street and Moore Lane***

11.21.129. Table 26.20 of the EIAR identifies a number of heritage features at Moore Street, Moore Lane and Henry Place. Of particular relevance to the application, 14-17 Moore Street are designated as Protected Structures under the City Development Plan (RPS Refs. 5282-5285 refer) and, together with buildings at 8-9 Moore Lane, are also designated as a National Monument (Ref. DU018-390). The buildings are of considerable historical and cultural importance, where they are associated with the 1916 Rising. The buildings are located on the west side of Moore Lane and are proximate to the proposed O'Connell Street Station.

11.21.130. The EIAR assessment predicts a significant indirect adverse impact on the National Monument, reduced to slight adverse following the implementation of proposed mitigation. For the Protected Structures, the assessment predicts a very significant adverse impact, reduced to the level of imperceptible following the implementation of proposed mitigation.

11.21.131. Table 25.9 of the EIAR states that the National Monument encroaches to within c.35m of the deep excavation and the assessment identifies that there is potential for building damage arising from vibration and settlement during construction. Proposed mitigation comprises a scheme of vibration and settlement monitoring during construction, which will include a threshold limit that will necessitate a works cessation in the event of any exceedance, following implementation of which the impact is predicted to reduce to slight.

11.21.132. These buildings fall within the identified 1mm settlement contour shown on drawing No. ML1-JAI-EIA-ROUT_XX-DR-Y-21143 that was provided to the oral hearing on 21st March 2024 (Ref. OH300) and, theoretically, they may experience settlement during construction. The applicant's approach to building damage assessment is discussed in detail elsewhere and is therefore not repeated in this section. However, I would repeat for the Board's benefit that in addition to the above-mentioned monitoring scheme, all 'Special Buildings' (which includes protected structures) will be subject to further detailed assessment in respect of the potential for damage arising from settlement (described as Phase 3 assessment) and may

qualify for special protective measures dependent on the predicted scale of impact. Any such works will be undertaken under Ministerial Consent.

11.21.133. I am satisfied that applicant's proposed monitoring and building damage assessment strategy will be effective in ensuring that there is no significant damage to the National Monument at 14-17 Moore Street and 8-9 Moore Lane during construction.

11.21.134. Regarding the protected structures, Table 26.55 of the EIAR identifies the potential impact as relating to direct strikes by construction vehicles, but I note that the Final Schedule of Errata identifies that references to use of Moore Lane as a haul route were in error and do not form part of the project. TII confirmed, within the document 'Status of Buildings on Moore Street' (Ref. OH291) provided to the oral hearing on 21st March 2024, that the section of Moore Lane to the rear of the National Monument will not be used as a haul route. There will therefore be no impact on the protected structures.

11.21.135. I note that, following submissions and questioning at the oral hearing by Stephen Troy, the applicant provided a document entitled 'Status of Buildings on Moore Street' (Ref. OH291) on 21st March 2024, which advises of the decision of Dublin City Council to designate Nos. 10 (RPS Ref. 8908) and 20-21 Moore Street (RPS Ref. 2911), parts of 12 and 13 Moore Street (RPS Refs. 8909 and 8910) and the buildings at 4-8 (RPS Ref. 8906) and 17-18 Henry Place (RPS Ref. 8907) on the RPS as part of the City Development Plan in early 2023, following submission of the Railway Order application. The document further advises that a Judicial Review (Ref. 2023/3 JR) of this decision was taken and at the time of writing this had not been heard.

11.21.136. These buildings are understandably not assessed for potential impacts by the EIAR but they are assessed within the abovementioned document 'Status of Buildings on Moore Street', which states that the development will have no direct or indirect impact on them. I am satisfied that the buildings will not be directly affected by construction. As with the previously discussed protected structures on Moore Street and Moore Lane, these buildings ought to be treated as 'Special Buildings', in view of their protected status, and should be subject to further building damage assessment and the application of any additional measures necessary to protect

against building damage arising from settlement. I am satisfied that such measures will be effective in ensuring that there is no significant damage on these buildings arising from the development.

11.21.137. The Final Schedule of Additional Environmental Commitments (Ref. OH376) contains a number of commitments regarding the requirement for the appointed contractor to undertake further assessment of buildings but I note that there is no commitment to undertake a further baseline survey, in order to ensure all newly added protected structures are taken into consideration by the assessment. Taking a precautionary approach, I recommend a condition be attached to the Railway Order requiring the applicant to undertake further baseline surveys in order to capture all newly added protected structures since the time of the original surveys.

11.21.138. Mr Troy's further submission on the application (1FS41) also expresses the view that the area of Moore Street, Moore Lane, Henry Place and O'Rahilly Parade satisfies criteria laid down by the High Court for preservation as a National Monument. Whilst I note observer's submission, and I acknowledge the cultural and historical importance of this area, this area is not a National Monument and it is not within the Board's remit to give consideration to such a designation. Notwithstanding this, the EIAR identifies that the development will have a significant impact on this 1916 streetscape and proposes archaeological monitoring during enabling and construction works. It also proposes that historic street surfaces on Moore Lane and Henry Place, where directly impacted, will be removed prior to commencement of construction, stored and reinstated following the completion of construction. I am satisfied that this approach will be effective in ensuring that the development will not have a significant impact on this important streetscape.

11.21.139. I note that the Department's submission indicates that the potential for indirect impacts on these buildings during construction requires further consideration, but having considered the submission I am unclear what aspect of the development gives rise to such concerns, particularly as the submission elsewhere identifies the potential for significant indirect impacts and describes the applicant's mitigation strategy as 'appropriate'. As I have previously outlined, I am satisfied that proposed mitigation will be effective in ensuring that there are no significant impacts on these buildings during construction.

- 11.21.140. The EIAR assessment does not predict any direct or indirect impacts on architectural heritage for the operational phase. Whilst I agree that following completion of both the station and over site development, there will be no significant impact on architectural heritage, consideration should be given to the impact of development on Moore Lane in the 'without oversite development' operational phase scenario.
- 11.21.141. In the 'without oversite development' scenario, as Section 5.10.10 of the EIAR outlines, the applicant will assume responsibility for demolition works and the retained facades along O'Connell Street (which have been discussed in detail in the preceding section) will be retained and propped, ready for incorporation into a future development. The appearance of the site in this scenario is depicted in photomontage image 20.11, where it can be seen that the cleared site will remain enclosed by hoardings along Moore Lane (which are shown be adorned with locally historic imagery) and the propped facades will be visible from this area.
- 11.21.142. The site will appear incomplete and potentially derelict in this scenario and will remain so until over site development is completed. However, I consider the existing layout of this side of Moore Lane contains multiple blank street frontages and a number of vacant/derelict buildings and plots and, in my view, detracts from both the urban grain of the city centre and the ACA setting. Importantly demolition works will not affect the layout of this historic streetscape and I do not consider the 'without oversite development' scenario operational phase would have a significant impact on built heritage along Moore Lane.
- 11.21.143. I bring to the Board's attention a discrepancy that I have encountered in the application documents regarding proposed/necessary demolition as part of station construction. Section 26.5.4.10 of the EIAR states that 19 Henry Place/60A Moore Lane is required to be demolished in order to facilitate fire tender access but, a building identified as 19 Henry Place is identified as 'not for demolition and supported' at Section 5.10.8 of the EIAR and, further, is not identified for demolition on EIAR Figure 5.3. Having considered the issue, there appears to me to be some confusion in the application documents regarding the specific numbering of buildings in this area.

- 11.21.144. The building to be preserved at 19 Henry Place is described as a 'reading room and associated structure' and this appears to me to relate to a building at the rear of 59-60 O'Connell Street, that is shown on multiple EIAR images, for example Figures 8.46-8.54 of Appendix A5.3 of the EIAR, as being protected. Property drawing No. ML1-JAI-BOR-ROUT_XX-DR-Y-01090 also identifies that this structure lies to the rear of 59-60 O'Connell Street and, further, it identifies that 19 Henry Place is at the corner of Moore Lane and Henry Place.
- 11.21.145. In view of the stated purpose of proposed demolition, to facilitate fire access, I consider it is reasonable to assume that the applicant proposes to remove the building at the corner of Moore Lane and Henry Place, and this is consistent with the aforementioned property drawing's identification of this corner building being located at 19 Moore Lane. The building at 19 Henry Place is a two-storey flat roofed building that is of no particular architectural merit and I do not object to its demolition as part of the development. This building forms part of the Moore Lane streetscape that I have previously outlined detracts from both the urban grain of the city centre and the ACA setting.
- 11.21.146. I am also satisfied that the reading room and associated structure that are located to the rear of 59-60 O'Connell Street are that are proposed to be retained are capable of being retained as part of the development.
- 11.21.147. Impact on St. Stephen's Green
- 11.21.148. St. Stephen's Green is a public park of considerable cultural and historical importance. The Department's submission advises that it is both a Recorded Monument, a National Monument (DU018-020334) and a Protected Structure (RPS Ref. 7751) and it contains a number of additional Protected Structures, including of particular relevance to this application: the railings, gates and plinth walls of the perimeter boundary (RPS Ref. 7751); and the surrounding bollards and traditional street lamp-posts located on the public footpath that surround the green (RPS Ref. 7752). Further, the Wolfe Tone monument (Ref. 50100265) and Famine Memorial (Ref. 50100264), which are located at the north-eastern corner of the Green, are both listed on the National Inventory of Architectural Heritage and are stated to be of Regional importance. The Green is also located within a designated Conservation Area, under the Dublin City Development Plan 2022-2028.

11.21.149. I bring to the Board's attention that St. Stephen's Green enjoys a particular legal status as a public park under the St. Stephen's Green (Dublin) Act 1877, section 15 of which requires that it shall be maintained as an ornamental park or pleasure ground for the recreation and enjoyment of the public and not for any other purpose. Both the applicant and the OPW submissions (Refs. S239 and OH71) point out that s.116 of the Dublin Transport Act 2008 disapplies the aforementioned s.15 in specified circumstances that includes works pursuant to the grant of a Railway Order or to the operation of a railway, light railway or Metro on or under the Green and both parties agree that the scope of the 2008 Act encompasses the proposed development. In view of the above, I am satisfied that there is no legal impediment to the development being constructed within the Green, if the Railway Order is granted by the Board and subject to Ministerial consent.

11.21.150. The proposed station is located at the north eastern corner of the Green and its construction requires substantial excavation and clearance works within the Green, together with removal of a number of the aforementioned structures of architectural heritage significance. The EIAR assessment predicts a number of profound, very significant and significant impacts, both in terms of the National Monument and Protected Structures, however; following implementation of proposed mitigation, the assessment predicts that impacts would be reduced to the level of moderate adverse or lower.

11.21.151. As can be seen from drawing No. ML-RO 306 C-D provided to the oral hearing on 25th March 2024 (Ref. OH323), the scale of clearance at the north east corner of the Green will clear c. 75m of the Green's perimeter boundary, including removal and relocation of the Wolfe Tone monument and Famine Memorial sculpture, and I consider the scale of clearance will significantly affect the historic character and setting of the Protected Structure, eroding its enclosed character. I note in this respect that the OPW submission (S239) comments on the Green's special character being owed to the fact that it is enclosed and that "there is hardly anything like it in any other European city...". As such, I concur with the EIAR that the accumulation of changes required in order to facilitate construction will have a very significant adverse impact on the north-east corner of the Green.

11.21.152. Regarding the National Monument, Section 25.4.2.7.4 of the EIAR outlines that the designation extends to the kerb line of the perimeter footpath. According to

the OPW submissions, St. Stephen's Green is so designated because of its great heritage importance and they further suggest that the proposed works can be seen as amounting to its partial destruction. Whilst not describing the impact as precisely, I note that the EIAR nevertheless acknowledges that the development will have a very significant adverse impact on the National Monument.

11.21.153. Whilst I concur with the EIAR assessment's predicted impact significances for the construction phase, I struggle to reconcile the applicant's conclusion that following the implementation of mitigation measures the impacts would be reduced to the level of moderate adverse, or lower. This conclusion is also disputed by each of the OPW (Refs. S239 and OH71), the Heritage Council (OH249) and the Department (S63, 1FS17).

11.21.154. Before analysing proposed mitigation and its effectiveness in addressing the above identified impacts, I would reiterate comments from the Landscape and Visual Impact Assessment section of my report, which I consider are important to the discussion of impacts on both the National Monument and Protected Structures. St. Stephen's Green has never been frozen in time and incremental change has occurred in the past (I have outlined a number of examples of such change in the LVIA section), as is acknowledged by the OPW, and this includes change at each of the 4 corners of the park, with each individual installation maintaining the primary purpose of providing access into the park. Indeed, consideration should also be given to the fact that the Board previously consented to the construction of a subterranean station beneath St. Stephen's Green as part of the previously consented Metro North scheme (PL06F.NA0003). I see no reason to object outright to further appropriate change and give consideration to proposed mitigation in the following sections.

11.21.155. Proposed mitigation measures include a restoration strategy, which will involve reinstatement of removed items of heritage significance together with wider park restoration works that will include extensive tree planting. In particular, paving slabs and bollards that will be removed from the public footpath during construction will be restored, as will the plinth walls, railings and gates that form the Green's boundary, and the Wolfe Tone monument and Famine Memorial will be relocated, further west into the Green.

11.21.156. Reinstatement/relocation of heritage items will assist in restoring the Green. However, and as outlined in the Landscape and Visual Impact Assessment section of this Report, I consider that the proposed landscaping strategy will have a limited effect in addressing the overall impact of construction on the Green and I consider it important to acknowledge that it may take decades to restore the Green to anything like its existing mature character. It is also worth repeating the submission to the oral hearing by landscape architect Bernard Seymour on 21st March 2024, where he questioned whether it will be possible to ever restore this centuries-old landscape. I consider the residual impact of the development on St. Stephen's Green will be very significant.

11.21.157. The document 'Metrolink – Architecture Station Integration and Common Components Overview Presentation' provided to the oral hearing on 13th March 2024 (Ref. OH236, Pages 57-70) provides a useful illustration of the changed character of this section of the Green following completion of the development, although it should be noted that these images are not presented as CGIs and should not be treated as such. The Board will therefore have to balance the very significant impact that I have identified, against the wider benefits accruing from the proposed development.

11.21.158. Regarding the specific issue of relocation of the Wolfe Tone monument and Famine Memorial, in response to Inspector questions at the oral hearing regarding the project's approach to relocation of these elements, the project landscape architect and architect both advised that they are an assembly and are proposed to be relocated as such, with a vista created through the corner of the park in order to bestow a sense of visual prominence. While I consider the removal/relocation of these elements is unfortunate and contributes to the changed character of this corner of St. Stephen's Green, I consider the proposed relocation strategy is reasonable in its treatment of these important cultural heritage items. I agree that the impact on these elements is moderate.

11.21.159. A very significant adverse indirect impact on the Green is also likely, arising from disturbance and disruption associated with construction of the station. The construction site will be enclosed by hoardings, which will screen much of the site and ground level activities from view, but taller construction elements will remain visible in multiple views from the surrounding area and noisy phases of construction

are likely to disturb park users. However, the impact will be temporary and I am satisfied that the impact will reduce incrementally as construction progresses.

11.21.160. DCC's Conservation Section expresses concern regarding the provision of secondary elements of the station, such as fire lifts and vents, within the public realm and the impact same will have on the character of the historic streetscape. Whilst I agree that protruding elements on the footpath will have an impact on historic character, I accept that their location is necessary in providing a 24/7 access to the station that is not affected by park opening hours and also in providing ventilation to the subterranean station. I therefore consider they are acceptable as proposed.

11.21.161. Regarding the National Monument, it is questionable whether reinstatement and replanting of the park amounts to its restoration or replacement. However, it should be noted that in view of the fact that the monument is a landscaped parkland, it has always been subject to some amount of organic change, as trees and landscaping die and/or are replaced. I consider the restoration of the park can be viewed similarly, albeit at a substantially greater scale. I would also bring to the Board's attention that Ministerial Consent will also be required for works within the Green, under the National Monuments Act 1930 (or 2023 replacement legislation which had been partially enacted at the time of this Report), and such consent is provided on a case-by-case basis, following assessment and analysis of potential impacts.

11.21.162. The Chapter 25 Archaeology & Cultural Heritage assessment also identifies that the development has the potential to have very significant adverse impacts on a 17th century boundary ditch and 17th century boundary wall that are located within the park. As these features are contained within the National Monument boundary, they will also be subject to Ministerial Consent and I note that the applicant commits to archaeological monitoring and further mitigation as necessary. I am satisfied that the proposed approach will ensure adequate consideration is given to these features during construction and note that DCC's archaeology section supports the proposed approach.

11.21.163. Proposed mitigation includes the appointment of a project archaeologist to oversee and manage further archaeological investigation prior to and during the construction phase. I consider this is an important measure, in view of the residual

very significant impact identified, and whilst I note that a formal programme of such additional investigation is not outlined in the EIAR, I note that these measures will be specified and controlled pursuant to a licence that will be consented under separate legislation. The DCC Archaeology Section (S71) offers support for the proposed mitigation approach and, in this light, I consider it acceptable that a specific programme has not been proposed. I further consider it would be inappropriate of the Board to attach a condition requiring a specific programme of investigation to the Railway Order.

11.21.164. Finally, I would bring to the Board's attention that at the oral hearing the applicant amended the proposed plaza layout at St. Stephen's Green, replacing initially proposed metal hostile vehicle mitigation bollards (HVM) with stone HVM bollards that reflect the character and appearance of existing granite bollards that line the outer edge of the public footpath that surrounds the Green. This revised layout can be seen in the document 'Charlemont and St. Stephen's Green Update' (Ref. OH370) provided to the oral hearing on 27th March 2024. I welcome this amendment, which I consider to be a more appropriate treatment of the plaza area to the front of the station. However, having considered the updated drawings pack provided to the oral hearing on 25th March 2024 (Ref. OH323), I note that drawing No. ML1-JAI-ARD-ROUT_XX-DR-Y-03093 does not depict this revised arrangement, instead appearing to me to depict elements of the originally proposed layout. For completeness, I recommend that a condition be attached requiring that the applicant shall complete the St. Stephen's Green plaza in accordance with details outlined in the document 'Charlemont and St. Stephen's Green Update'.

11.21.165. Impacts on Other Features of Archaeological or Cultural Heritage

11.21.166. Table 25.9 of the EIAR identifies the presence of and assesses potential impacts on a substantial number of additional archaeological heritage items across the alignment and, in a number of instances, identifies either a very significant or significant adverse impact. In the vast majority of cases the applicant proposes mitigation, in the form of one of (a) monitoring, (b) trial trenching and further monitoring or (c) preservation by record and, in each case, mitigation is predicted to reduce the level of impact to the level of slight or imperceptible.

- 11.21.167. Bespoke mitigation is proposed in a number of instances, including in relation to a halting estate at Estuary; Lissenhall Bridge; a statue of Countess Markievicz at Tara; a shrine at Miltonfields, Swords; the Brian Boru pub at Cross Guns; and the Royal Canal Heritage Area.
- 11.21.168. The halting site in question is at the junction of Ennis Lane and the R132. The assessment identifies that the halting site requires relocation in order to facilitate construction of the Estuary station and the park and ride facility. I agree that relocation would reduce the impact on the affected residents to the level of slight adverse.
- 11.21.169. In the case of Lissenhall bridge, the Board will note that it is both a National Monument and a protected structure. To avoid duplication, I assess both aspects in the following paragraphs.
- 11.21.170. The EIAR assessment identifies that construction of the Broadmeadow River and Ward River viaduct may give rise to damage arising from vibration and settlement, that the bridge is at risk from direct strike by construction vehicles and that the presence of the viaduct will affect the bridge's character and setting.
- 11.21.171. The applicant proposes to protect the bridge from direct damage during construction by erecting hoardings to prevent construction machinery from getting too close to it and also proposes a scheme of settlement and vibration monitoring, which will include a threshold limit that will necessitate a works cessation in the event of any exceedance. In its initial submission on the application, the Department (S63) requested clarity regarding the distance from the bridge that such hoardings would be located and at the oral hearing, following Inspector questions on the issue, it was proposed that a 10m setback from the bridge would be maintained. In its further submission on the application, the Department (1FS17) stated that its queries had been resolved and I am similarly satisfied that the proposed setback provides an adequate level of protection to the Bridge from damage during construction.
- 11.21.172. The appearance of the viaduct and its relationship to Lissenhall Bridge are depicted in photomontage images 2.1-2.4. The structure will undoubtedly be a noticeable and modern engineering installation in the vicinity of the bridge, and whilst the applicant states that a considered landscaping scheme will be provided in order

to screen it, I am of the view that landscaping will have a limited screening effect and I consider the residual visual impact will be significant adverse.

11.21.173. I accept that the structure must be elevated above ground level, in order to maintain river floodplain flows, and this contributes to its overall visual impact. I have given consideration to design amendments that could reduce the visual impact of the viaduct, with respect to the proposed overhead catenary system (OCS), however; following Inspector questioning on the issue at the oral hearing and the applicant's responding submission (the document 'Technical Note – OCS/OCR Benefits over Third Rail'; Ref. OH296), I accept that there are operational and safety reasons that require retention of the OCS. Therefore, whilst the impact on Lissenhall Bridge will be significant, there is no practical mitigation available that I consider would meaningfully reduce same. I consider the impact is acceptable in this instance.

11.21.174. The shrine at Miltonfields, Swords is identified as being modern, containing a statue that is located in a wall adjacent to a small stream. The applicant proposes that it will be removed, stored and located, with the revised location agreed with FCC, and that a photographic, condition and written survey of the shrine will be undertaken prior to commencement of construction. I accept that the shrine is directly affected by excavation of the retained cut section and requires to be relocated. Subject to agreement regarding an appropriate alternative location, I am satisfied that the development will not have a significant impact on this shrine.

11.21.175. Hedigans Public House, also known as the Brian Boru Pub, falls within the Glasnevin Station site and its demolition is required in order to facilitate station construction. The Brian Boru is listed on the NIAH (Ref. 50130022) and is of cultural and social importance to the Cross Guns area, as was highlighted by observers including Anne Meehan (S13), Dymphna Rooney (S75) and Lorraine Rooney (S171). It is, however, not a protected structure. The applicant proposes that the building will be recorded by means of photographic and written record, to English Heritage level 3 prior to demolition, following which the impact will be reduced to the level of slight.

11.21.176. A number of observers have objected to the demolition of the Brian Boru, including the abovementioned, Mark O'Connell (S183) and Senator Mary Fitzpatrick (S185), and the issue was discussed at length at the oral hearing, particularly by the Prospect Architectural Conservation Area group.

- 11.21.177. In response to such submissions, the applicant indicated that there is an option to retain the Brian Boru mural that adorns the side of the pub building within the station building, together with additional information pertaining to the historical relevance of the site (this relates to The Battle of Clontarf in 1014). Reference was made to a similar example of such consideration, at the London Bridge Station redevelopment, where a war memorial was incorporated into the public area of the station and is accessible to station users. The Board will note that the commitment to engage on this issue is captured at reference 2.8 of the Final Schedule of Additional Environmental Commitments (Ref. OH376).
- 11.21.178. The proposed demolition of the Brian Boru is clearly sensitive for a number of the observers and I acknowledge its longstanding cultural and social importance to the area. It is one of a number of buildings that are to be demolished to facilitate construction of the Glasnevin Station, with the other buildings being a terrace of three houses, currently in office use, and a building that is in use as a carpet warehouse. The applicant's response to Mark O'Connell's submission outlines that retention of the Brian Boru would be problematic, from a construction perspective, as there are multiple station elements that cut right through the building, including diaphragm walls and secant piles and the area also forms the point of entry/exit to the construction site.
- 11.21.179. The Glasnevin Station site is one of the most complex across the alignment, in view of its proximity to the Royal Canal and relationship to the IÉ western and southwestern commuter lines, and is also one of the most constrained construction sites. An alternative station site is likely to resolve some issues of constraint but would give rise to other consequential issues, in particular the omission of a proposed major interchange with heavy railway lines from the project. In this context, I accept the importance of the proposed station site to the overall success of MetroLink and I accept that demolition of the Brian Boru, which gives rise to a significant adverse impact, is required in order to facilitate station construction.
- 11.21.180. The Royal Canal is identified by the EIAR assessment as an area of industrial heritage. It connects the River Liffey in Dublin to the River Shannon in Longford and is stated to have been completed in 1817. It will be directly impacted by construction, requiring 2 No. separate periods of dewatering between locks 5 and 6, removal of

part of the quay wall and partial infilling of the canal bed, in order to provide for a widened work platform.

11.21.181. In terms of mitigation, the applicant proposes a mix of surveys (underwater, GPR and trial trenching) before the commencement of construction, together with a programme of monitoring during construction. Importantly, the canal will remain open for the vast majority of the construction phase and I am satisfied that it is capable of being fully restored following the completion of station construction. I am therefore satisfied that the development will not have a significant adverse impact on this industrial heritage item during construction.

11.21.182. The statue of Countess Markievicz is sited to the front of the Markievicz Centre/College Gate complex on Townsend Street and I note from the EIAR assessment that it dates to 1998 and is not a recorded or national monument. In this context I am satisfied that a proposed photographic, condition and written survey of the structure, together with a proposal to relocate it to an alternative location in agreement with the city council, will ensure that it receives adequate consideration and that no significant adverse impact will arise.

11.21.183. The proposed PRM drop-off at Charlemont will overhang the Grand Canal and is located within a Conservation Area. The document 'Charlemont Drop-Off' (Ref. OH21) contains an assessment of the impact of the structure and it identifies that the canal waterbody will be avoided and that no element of the structure will be attached to it. In view of this, the assessment does not predict a significant adverse impact, over and above that previously assessed.

11.21.184. The structure, whilst located in a conservation area and overhanging the Grand Canal, is located in the immediate vicinity of an elevated Luas bridge and is also opposite a projecting element on the northern edge of the canal. Whilst the drop-off structure will be visible, particularly from the northern side of the canal, in view of small scale and its surrounding context, I do not consider it will have a significant adverse impact on heritage.

11.21.185. Impacts on Other Features of Architectural Heritage

11.21.186. Table 26.66 of the EIAR identifies the presence of, and assesses, potential impacts on a substantial number of additional architectural heritage items across the

alignment and identifies either a very significant or significant adverse impact in a number of instances.

11.21.187. In Area AZ1 the assessment identifies a very significant adverse impact on Balheary Demesne and a profound adverse impact on Balheary Bridge.

11.21.188. According to the EIAR, construction of Estuary Station and the Park and Ride Facility, together with realignment of Ennis Lane, will require removal of c. 500m of the demesne wall and hedgerows and trees within the demesne. Such works will clearly have an impact on the demesne landscape but I accept that such works are necessary for the delivery of the project.

11.21.189. The applicant proposes a substantial landscaping scheme, both at the station site and route southward, which includes walking routes that will ultimately connect to the proposed R132 linear park. It is proposed that the demesne wall (which will be recorded prior to demolition) will be reinstated on a new alignment where practicable, but there is no indication within the Railway Order drawings as to where such reconstruction may take place. I am satisfied that the landscaping scheme provides opportunities for reinstatement of this wall, in particular along the newly created boundary with Balheary Demesne, and I recommend that a condition be attached requiring the applicant to agree the proposed reinstatement proposals with Fingal County Council. I agree that subject to this, the impact on the wall would be moderate.

11.21.190. Balheary Bridge, similar to Lissenhall Bridge, is identified as at risk from a direct strike from construction vehicles and in order to mitigate the risk, the applicant proposes to erect hoardings and obstructions that will restrict vehicles from coming close to it. Whilst it is not specified within the EIAR, I am of the view that a 10m exclusion zone, similar to Lissenhall Bridge, will be sufficient to ensure the bridge is protected from direct damage during construction and that the risk of a significant adverse impact is avoided. This can be controlled by condition.

11.21.191. In Section AZ2 the assessment identifies a very significant adverse impact on the Church of Our Lady Queen of Heaven at Dublin Airport, with reference to potential building damage arising from settlement and vibration. The Church is a protected structure (RPS No. 0864) under the Fingal County Development Plan and is also listed on the NIAH (Ref. 11349001).

11.21.192. The northern-most corner of the building falls within the 1mm settlement contour shown on drawing No. ML1-JAI-EIA-ROUT_XX-DR-Y-21143 (Ref. OH300) and, theoretically, it may experience settlement during construction. In view of its protected structure status, the building will be subject to further assessment in respect of the potential for damage arising from settlement and may be subject to additional protective measures. Additionally, the applicant proposes that a condition survey will be carried out in order to determine whether sensitive stained glass can be retained in situ during construction and also proposes a scheme of settlement and vibration monitoring during construction, which will include a threshold limit that will necessitate a works cessation in the event of any exceedance. I am satisfied that these measures will be effective in ensuring that there is no significant adverse impact on the church during construction.

11.21.193. FCC's oral hearing opening statement (Ref. OH40) identified concerns regarding the treatment of the public realm that surrounds this church, which according to drawing No. ML-ST 302 C-D1 includes the provision of bus bays (albeit I acknowledge they are only shown in an indicative manner). In response to this, I note that 'condition' No. 15 of the agreement between TII and FCC includes a commitment to agree the surface treatment and landscaping proposals for the area closest to the church. I am satisfied that this approach will be effective in ensuring there is no significant impact on the setting and character of the church arising from this aspect of the project.

11.21.194. In Area AZ4 a number of architectural heritage items are predicted to experience significant or very significant adverse impacts, in the vicinity of Collins Avenue station, Griffith Park station, Glasnevin station and Charlemont station.

11.21.195. Construction of the Collins Avenue station is predicted to have a significant adverse impact on Our Lady of Victories Church, during both the construction and operational phases, where the station box is located partly below its forecourt. Identified impacts relate to potential building damage and visual impact during construction and visual impact during operation.

11.21.196. Whilst not a protected Structure, Our Lady of Victories Church is identified on the NIAH (Ref. 50130121) and it is described in the NIAH appraisal as a dramatic and distinctive church. Its cultural and social importance to the surrounding

community is highlighted in a number of submissions, including those by Our Lady of Victories Church (S243), Paul Cusack (S254), Albert College Residents Association & Ballymun Road North Residents (S1) and Frances Maguire (S97).

11.21.197. In terms of direct building damage, the applicant proposes that the piling methodology for the station box will be developed in conjunction with the PCA, taking account of sensitive building elements, and that a scheme of settlement and vibration monitoring will also be implemented during construction, which will include a threshold limit that will necessitate a works cessation in the event of any exceedance. I am satisfied that these measures will be effective in ensuring that there is no significant adverse impact on the church during construction.

11.21.198. Elsewhere, and as the EIAR assessment outlines, construction of the Collins Avenue station will require excavation of the landscaped forecourt to the front of the church and a number of above-ground elements of the station will be constructed in this area. I agree that the development will have a significant adverse impact on the setting and character of the church throughout construction. I also note that removal of trees within the Church's lawn, which were planted to mark special occasions in the history of the parish, is also required. The presence of site hoardings will also give rise to visual disruption and will also likely affect daily church activities, as is highlighted in the submission by Our Lady of Victories Church.

11.21.199. The EIAR discusses mitigation in the form of landscaping and forecourt reinstatement and predicts that this will reduce the impact to the level of moderate, but the Board will note this only relates to the operational phase and in my opinion the significant construction-phase impact will persist throughout the estimated 99-month construction phase.

11.21.200. Regarding the forecourt reinstatement for the operational phase, I consider the accumulation of tall above ground station elements to the front of the church and adjacent to the R108 will negatively affect views of the church and restored forecourt. I have previously discussed this in the landscape & visual impact section of my report and I have recommended that the height of the proposed skylights should be reduced to a maximum of 1.5m above ground level. This will allow the skylights to retain some visual interest but, importantly, they will not impede or enclose views of the church.

- 11.21.201. Construction of Griffith Park Station is predicted to have very significant adverse impacts on elements of the Whitehall College grounds. Whitehall College is a protected structure (Ref. 7746) under the City Development Plan and is also listed on the NIAH (Ref. 50130149). The elements affected by station construction are the playing field to the front of the main building and the entrance gates, piers and boundary railings and I agree that the impact of construction on the College will be very significant.
- 11.21.202. The applicant proposes that the gates, piers and boundary railings will be recorded by means of photography and written description and will be removed and stored, to be relocated following the completion of construction. I accept that relocation of these elements is necessary, from a MetroLink operational point of view and also from the point of view of security of Whitehall College and I consider the proposed restoration/relocation proposals are appropriate.
- 11.21.203. Whilst the applicant states that the grounds at the entrance to the College will be reinstated insofar as possible, it is my opinion that this area will be substantially changed. The graded incline that rises up from St. Mobhi Road to the playing field will be cleared in order to facilitate station construction and will be replaced by a large retaining wall of varying height (between c. 5.5m at its highest and c. 2m at its lowest) that will enclose the south and west boundaries of the restored playing field (this also encloses the entrance to the underground station) and a public plaza.
- 11.21.204. I accept that the proposed arrangement is necessary, in order to facilitate provision of station elements and also to retain the college vehicular access and I agree that the impact on the protected structure would be moderate.
- 11.21.205. The EIAR predicts profound, very significant or significant adverse impacts for a number of features of interest in the vicinity of Glasnevin station. Additionally, the Final Schedule of Errata identifies an additional significant impact, in respect of the demolition of buildings within the Royal Canal Conservation Area.
- 11.21.206. As I have outlined in Section 10.7, I agree that construction of Glasnevin Station will have a significant impact on the surrounding area, including with reference to demolition works within the CA.
- 11.21.207. The boundary railings and gates at Dalcassian Downs, to the north of the station are a protected structure (Ref. 8698) under the City Development Plan and

are also listed on the NIAH (Ref. 50130021) and, according to Section 26.5.4.6 of the EIAR, construction of the station requires their removal. The impact is predicted to be profound and the applicant proposes that, following removal, they will be reinstated following the completion of construction. Proposed mitigation comprises recording by means of photographic and written record, prior to removal, and following reinstatement the impact is predicted to be imperceptible.

- 11.21.208. I welcome the fact that the protected structure railings will be stored and reinstated following the completion of construction, however I disagree with the applicant's classification of an imperceptible residual impact. In my opinion the residual impact would be moderate. As can be seen from photomontage image 18.3, the streetscape will be substantially altered by the scale of clearance required in order to facilitate station construction and, upon reinstatement, the railings will be visually and functionally connected to built elements of the station.
- 11.21.209. I consider the construction of the Glasnevin Station building will have moderate positive landscape and visual impacts and this can also be said for the CA setting, where it will present a contemporary building and an improved public realm and the point of access/interface with the Royal Canal Way.
- 11.21.210. With reference to railway infrastructure, the EIAR predicts very significant adverse impacts for the Cross Guns railway tunnel and former railway bridge abutments, with significant adverse impacts predicted for a disused railway bridge. In the case of the abutments, I note that the Final Schedule of Errata states that the predicted impact should be reduced to moderate, on the basis of a low baseline rating (the EIAR erroneously provided a high baseline rating). I would highlight to the Board that none of these infrastructure items is a protected structure: the Cross Guns Railway Tunnel is listed on the NIAH (Ref. 50060112) and the abutments and former railway bridge are identified as listed on the Dublin City Industrial Heritage Record.
- 11.21.211. According to Table 26.49 of the EIAR, the western section of the Cross Guns Railway Tunnel will be demolished, with the retaining wall on the southern side of the tunnel and adjacent railway cutting taken down and rebuilt to facilitate the provision of a railway platform. The disused former railway bridge crosses the west end of the tunnel and is also proposed to be demolished. The applicant proposes to record both

structures by means of photographic and written record, to English Heritage Level 2 prior to demolition. In the case of the tunnel, stones from an arch ring at its western end and facing stones from its side walls will be incorporated into the elements of the proposed station.

11.21.212. I welcome the incorporation of heritage items as part of proposed station and tunnel, but I concur with the EIAR that the residual impact of the development on the railway tunnel and disused bridge will be significant adverse. This said, I accept that demolition is required in order to allow access to the below rail line and I am satisfied that the proposed mitigation is appropriate in its treatment of potentially reusable elements as part of the development.

11.21.213. The former railway bridge abutments lie to the south of the Irish Rail line, on both sides of the canal, and are identified by Table 26.49 of the EIAR as required to facilitate erection of a temporary bridge over the canal, which will allow for vehicular access along the Royal Canal Way during construction. The applicant proposes that they will be recorded by photographic and written record, with loose masonry repaired, prior to erection of the temporary bridge and with proposed works overseen by the PCA. I concur with the EIAR, that following the implementation of proposed mitigation, the impact of development on these abutments will be reduced to the level of slight adverse.

11.21.214. For the Royal Canal, identified as a feature of high industrial heritage value, Table 26.49 of the EIAR identifies that temporary closure may involve removal of and/or repair works to elements of the quay wall, with such works undertaken in consultation with Waterways Ireland (WI). WI made a submission on the application, noting that short-term licensing and longer-term property arrangements will be necessary to put in place, in view of the interaction between the proposed development and the canal.

11.21.215. I have discussed the closure of the canal and potential impacts arising from proposed installations in detail elsewhere in this report and note that the applicant has agreed with WI that L-shaped concrete panels will be installed and backfilled, with a protective layer applied to the canal base prior to any works. I am satisfied that this will be effective in protecting the canal basin from direct damage. Regarding the proposal for removal or repair of quay wall elements, I am similarly satisfied that

the applicant's approach will ensure adequate consideration is given to these elements during construction and I agree that following the implementation of mitigation, there will be no significant impact on the Canal.

11.21.216. At Charlemont, the EIAR predicts a very significant adverse impact on the Carroll's Building and a significant adverse impact on Dartmouth Square ACA. The Final Schedule of Errata also identifies an additional significant impact, on the Grand Canal CA.

11.21.217. The Carroll's Building (also known as 2 Grand Parade) is a protected structure (Ref. 3280) under the City Development Plan. It has recently been extended (pursuant to ABP-300873-18) and the proposed Charlemont Station is located partially underneath the extended building.

11.21.218. Table 26.61 of the EIAR identifies that the setting of the protected structure will be affected by the construction of a lift and stairway to the front of the building and also by pavement widening works to the front of the building, with very significant and significant adverse impacts predicted, respectively. The applicant proposes mitigation by design, which is to say that the lift and staircase will be kept as small as possible and will impinge on the frontage of the building to the least possible extent, with the proposed design intended to complement the building and be reversible rather than being tied into the building. Notwithstanding this, the residual impact of the stairs and lift on the protected structure is predicted to be significant adverse. Additionally, the pavement widening works area to the front of the building will be restored following the completion of construction.

11.21.219. At the oral hearing, the owners of the building, Union Investment Real Estate GmbH, objected to the proposed location of the stairs and lift at the front of the building and provided a written submission by David Slattery Conservation Architects Limited (Ref. OH312) which argues the proposal "detrimentally damages the front setting of the protected structure with a new staircase proposed to almost abut its front façade" and would have a profound impact on it. The submission requests that the stairs and lift arrangement should be revised, with the lift relocated to an area adjacent to the Grand Canal and distant from the building and the stairs moved further from the front façade of the building. A schematic drawing of the revised

location and arrangement was provided, prepared by Henry J Lyons Architects (Ref. OH311).

11.21.220. In their proposed location, the combination of stairs and lift are undoubtedly a noticeable addition to the front façade of the protected structure, however I do not agree with the building owner's categorisation of the impact as profound. As photomontage image 23.2 (Ref. OH382) identifies, the stairs and lift shaft are noticeable and are clearly a visual intrusion on the lower part of the facade, but by reference to the narrow thickness of the stairs' frame and the incorporation of glazed balustrades, the proposed design allows for views through to and an appreciation of the clean lines and substantial glazing that distinguish the building's front façade. In this respect I concur with the EIAR, that the impact of the addition is very significant adverse. I also consider the residual impact of the proposal on the protected structure should be very significant adverse.

11.21.221. With reference to the building owner's requested amendments, to do as is requested and relocate these elements closer to the Grand Canal would, in my view, undermine their purpose. Further, to move the passenger lift to the opposite side of Grand Parade (the R111) would likely constrain passenger transfer by requiring lift-users to cross the road in order to access either station. I therefore do not consider this to be a workable alternative solution. I would also bring to the Board's attention that this requested revision will also require in-canal works, as the applicant pointed out when responding to the submission, and this has not been assessed as part of the application.

11.21.222. Regarding the Grand Canal CA, the designation encroaches onto the Grand Parade frontage of the site and I agree that the presence of a construction site for a prolonged period will have an impact on the CA setting. But the presence of construction sites in this area is common, including at 2 Grand Parade in the recent past, and subject to provision of an appropriately sized site hoarding and good housekeeping, in terms of site cleanliness, I do not consider the impact of the construction site would be significant.

11.21.223. Regarding Dartmouth Square ACA, it is immediately east of Charlemont Station and the EIAR assessment states that the provision of utilities along Dartmouth Square West will impact the steps leading down from Grand Parade to

Dartmouth Square, with potential impacts on granite steps, kerbing and historic concrete lamp standards. To mitigate potential impacts, the applicant proposes that utilities works will be carried out in accordance with a method statement that will minimise impacts on these elements. I am satisfied that the proposed approach will ensure that adequate consideration is given to protection of these features of interest during the construction phase and will ensure there is no significant adverse impact arising.

11.21.224. The Department's (S63) submission states that the construction of the station and its integration with commercial development will have a significant impact on the setting and architectural character of the protected structures and ACA of Dartmouth Square.

11.21.225. Whilst I note these concerns, the commercial development referenced by the Department has been completed since submission of the application. The proposed station, as the Department states, is of a subterranean nature and whilst there will be visual impacts associated with the presence of and operation of construction machinery on the construction site (this is discussed in the Landscape and Visual Impact assessment section) I am satisfied that the station and above ground station elements, which are small-scale, will not have a significant adverse impact on the architectural character of the protected structures and ACA of Dartmouth Square.

11.21.226. **Cumulative Impacts**

11.21.227. As the EIAR assessment and Cumulative Impacts Addendum Report (Ref. OH98) point out, other largescale development proposals have the potential to act in tandem with the proposal, giving rise to significant cumulative impacts on features of heritage interest.

11.21.228. Regarding potential cumulative archaeology & cultural heritage impacts, I have previously outlined that the EIAR assessment identifies the potential for disturbing archaeological deposits during construction. The assessment predicts that the impacts will be not significant and no further mitigation is proposed.

11.21.229. I concur with the EIAR that, subject to implementation of proposed mitigation there will be no significant cumulative impacts on features of archaeology & cultural heritage interest. Section 6 of the Cultural Heritage Strategy (Appendix A25.1 of the EIAR) outlines that the 'greenfield land' proportion of the alignment, between Estuary

and the M50, has 'high archaeological potential' and that the Historic Town of Dublin (RMP DU018-020----), housed between the Royal and Grand Canals, is at risk of disturbance from works associated with utility diversions and station box construction. A project archaeologist has been appointed to oversee and manage the archaeological elements of the project and, as I have outlined above, the applicant commits to archaeological trial trenching and monitoring in a number of locations and further mitigation, as necessary. Particularly in the city section of the alignment (Section AZ4), where the alignment passes through city neighbourhoods and interacts with developed lands, primarily, I consider this strategy will be effective in ensuring that any features of archaeology & cultural heritage interest that are encountered are adequately considered during construction. I would also, again note, that the archaeology section of Dublin City Council supports the applicant's mitigation strategy.

11.21.230. Regarding the National Monuments at 14-17 Moore Street and 8-9 Moore Lane and Lissenhall Bridge, I have considered predicted impacts on each in the preceding sections. I am satisfied that the proposal will not directly interact with either National Monument and would note that in both instances the proposal is physically separated from the monument and the applicant further proposes an exclusion zone around the monument. In view of the absence of interaction with these national monuments, I am satisfied that there will be no significant cumulative impacts with other proximate development proposals. The Board will note that any works undertaken in proximity to these features, whether as part of the proposed development or other development proposals, requires Ministerial Consent under the terms of the National Monuments Act 1930. This provides further protection to both.

11.21.231. Regarding St. Stephen's Green, I have identified that the development will have a residual very significant adverse impact on the green and further works within the Green may contribute to or magnify such impact, dependent on scale. But, again, works undertaken within the park require Ministerial Consent under the terms of the National Monuments Act 1930 and such consent is given on a case-by-case basis subject to adequate justification.

11.21.232. Of those developments screened in for potential cumulative Architectural Heritage impacts, the EIAR assessment predicts that the proposed development and the Grand Parade Trading Co. DAC development (Reg. Ref. 2373/17 and ABP-

300873-18) would give rise to a significant cumulative adverse impact on the Carroll's Building at Charlemont during the operational phase. As I have outlined above, the development approved under ABP-300873-18 has been completed since the submission of the application and it now forms part of the baseline.

11.21.233. I have assessed the impact of the proposal on the Carroll's Building in preceding sections and have expressed my view that the development will have a very significant adverse impact on the protected structure.

11.21.234. **Conclusion**

11.21.235. I have considered all of the submissions made in relation to heritage and the relevant contents of the file, including the EIAR, and relevant reports provided to the oral hearing. Subject to specified exceptions below, I am satisfied that the potential for significant adverse impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

11.21.236. Arising from my assessment, I consider there is a likelihood of profound, very significant and significant adverse residual impacts as follows:

- Profound adverse impact on Four Masters Park, its enclosing railings, gates and plinth walls and the Four Masters Cross and Healing Hands Sculpture that lie within the park during the construction phase, arising from the scale of clearance and excavation works proposed and the required presence of construction elements within the park for prolonged periods.
- Profound adverse impact during the construction phase on the setting and character of the Protected Structure Santry Lodge's gate lodges, gateway and front boundary wall, which are part of the Protected Structure listing and which are to be demolished.
- Very significant adverse impact on Santry Lodge during the construction phase, arising from demolition of its gate lodges, gateway and front boundary wall.
- Very significant adverse impact on the setting and character of the Protected Structure and National Monument at St. Stephen's Green, including enclosing items and surrounding bollards and traditional street lamp-posts, arising from

the scale of clearance and excavation works proposed and the required presence of construction elements within the park for prolonged periods.

- Very significant adverse impact on the setting and character of the Protected Structure and National Monument at St. Stephen's Green during the operational phase, arising from the provision of station elements within the park and the limited effectiveness of proposed landscaping in restoring the landscaped eastern boundary of the park.
- Very significant adverse impact on architectural heritage at O'Connell Street Upper, arising from proposed demolition works between Nos. 43-58 O'Connell Street Upper that includes demolition within the curtilage of a Protected Structure.
- Very significant impact on the setting and character of the Protected Structure Carroll's Building at 2 Grand Parade, Dublin 6 during the operational phase, arising from the construction of a stairwell and passenger lift to the front of the building.
- Significant adverse impact on Protected Structure and National Monument Lissenhall Bridge during the operational phase, arising from the construction of an elevated viaduct over the Broadmeadow River.
- Significant adverse impact on Hedigans Public House (also known as the Brian Boru pub), Prospect Road, Glasnevin, Dublin 9 during construction, arising from building demolition.
- Significant adverse impact on Our Lady of Victories Church, Ballymun Road, Dublin 9 during construction, arising from the scale of excavation works proposed and the required presence of construction elements within the church forecourt for prolonged periods.
- Significant adverse impact on the Cross Guns Railway Tunnel during the construction phase, arising from tunnel demolition.

11.21.237. In each instance, I am satisfied that impacts have been correctly identified, assessed and understood. Further, I am satisfied that additional practical mitigation is not available, which would have the effect of reducing an identified impact below the 'significant' level.

11.21.238. In view of the very large scale of the project, the proposed alignment and the nature of the urban environments through which it passes, which includes interactions with built and cultural heritage designations, I consider the likelihood of significant adverse impacts on heritage is unavoidable in some locations. But I consider such impacts must be balanced against the very significant wider societal benefits that will accrue from the provision of a high-quality underground rail system. To conclude my assessment, it is my opinion the long-term benefits of the development outweigh the identified heritage impacts and that none would give rise to an unacceptable impact on a sensitive receptor that would justify a refusal of the Railway Order.

11.22. Material Assets, Cultural Heritage and the Landscape – Landscape and Visual

11.22.1. Introduction

11.22.2. The Landscape is addressed at Chapter 27 of the EIAR. The chapter is supported by a series of appendices, including a series of photomontages and an arboricultural impact assessment. It is stated to describe and assess the impact of the development on landscape and visual amenity during the construction and operational phases.

11.22.3. TII provided a number of updated assessments at the oral hearing, including pertaining to landscaping amendments along the R132 (Ref. OH18) and design changes at Pinnock Hill (Ref. OH383) and Tara Street (Ref. OH384). Updated photomontages were also provided (Refs. OH299, OH370 and OH371). The Schedule of Additional Environmental Commitments, which was updated at numerous stages over the course of the oral hearing, also sets out commitments in relation to landscape and visual aspects.

11.22.4. Methodology

11.22.5. The chapter is stated to have been prepared in accordance with relevant guidance and policy, in particular the EPA's 'Guidelines on the information to be contained in Environmental Impact Assessment Reports' (May 2022). 'Guidelines for Landscape and Visual Impact Assessment' (Landscape Institute and the Institute of Environmental Assessment, 2013) is also identified as a primary source for specific guidance in relation to landscape and visual impacts.

11.22.6. The assessment is stated to have followed a stepped approach, first establishing a zone of visual influence (ZoVI), based on an initial drive-over and then subsequent walkover surveys, gauging intervisibility and determining viewpoints for photomontages. The ZoVI was sub-divided into local landscape character areas (LLCAs), with each LLCA subsequently described, evaluated and classified. A detailed assessment was thereafter undertaken of potential construction and operational phase impacts and their effects on the landscape character and sensitive visual receptors along the alignment, based on these sub-divided LLCAs. The assessment identifies that there are 24 No. LLCAs (extent identified in Figure 27.1).

11.22.7. The assessment comprises two separate aspects – landscape character impact and visual impact. Landscape receptors are stated to include constituent elements of the landscape or urban landscape, e.g. fields, hedgerows, trees, roads, fences, paved areas, buildings and specific aesthetic or perceptual qualities and character, e.g. scenically beautiful, open, expansive, enclosed, intimate, tranquil, bustling, charming, unkempt, derelict. Visual receptors are stated to include individuals or groups of people who will be affected by changes in views or visual amenity at different locations, e.g. residents, occupiers of premises, users of recreational facilities (public footpaths, cycle routes and playgrounds) and sports facilities, tourists and visitors with specific interests.

11.22.8. **Receiving Environment**

11.22.9. The assessment provides both a broad view of the landscape character, based on the 4 assessment zones (i.e. AZ1 – AZ4) and detailed descriptions of each LLCA.

11.22.10. **AZ1 - Estuary to Dublin Airport North Portal**

11.22.11. The northern-most section of the alignment, AZ1, is identified as being located in an agricultural landscape of fields and hedgerows on the northern fringes of Swords town. The land falls gently toward the Broadmeadow River and Ward River, which the alignment traverses via a proposed viaduct that runs parallel to a Protected Structure, Lissenhall medieval bridge. South of the rivers, the land rises up to the sports pitches at Balheary Park, along the east side of which the proposed alignment runs, adjacent to the R132 Regional Road. The alignment crosses under the R125 west of the Estuary Roundabout and subsequently crosses under the R132 and aligns itself closely to the R132 dual carriageway along its eastern side for the extent of the road as far as the Pinnock Hill Roundabout south of Swords.

11.22.12. The R132 is described as a uniform, featureless by-pass of Swords town centre that is tightly defined by narrow and dense roadside tree planting with a central reserve in grass with a continuous hedge, separating the northbound and southbound carriageways.

11.22.13. The alignment runs through Airside Retail Park before turning south-westwards across several open agricultural fields towards Dublin Airport, where it enters the tunnel section under the Airport, just north of the Naul Road.

11.22.14. AZ2 – Airport Section

11.22.15. The alignment is identified as totally underground with only a localised surface entrance/connection west of the Terminal 2 multi-storey carpark. This localised area within the Airport section is the only area of relevance to the Landscape and Visual baseline.

11.22.16. AZ3 – Dardistown to Northwood

11.22.17. The airport tunnel section emerges south of Old Airport Road and runs into an extensive open green landscape of agricultural fields interspersed with sports pitches that leads down to the M50 motorway. There are a number of residential properties along Old Airport Road, in the north-west corner of the zone, and a number of commercial premises in the south-west corner.

11.22.18. The alignment crosses the M50 before dropping down to the level of Old Ballymun Road. The area on the south side of the M50 is described as overgrown and neglected and comprises: remnants of the parkland landscape of the historic Santry Demesne; Santry Lodge and Gatehouse; a substantial private house and garden; a terrace of three cottages and access roads to a distribution depot and Retail Park. Beyond this point, the alignment descends underground, through to its endpoint south of Charlemont station.

11.22.19. AZ4 – Northwood to Charlemont

11.22.20. The receiving environment can be summarised as an isolated, enclosed green/overgrown landscape at the northern end, which gives way to a variety of more tightly enclosed urban landscapes, as the alignment progresses south.

11.22.21. Due to the alignment descending underground, all project elements in this zone are localised and centred on the underground stations, or in the case of Albert College Park, the proposed intervention shaft.

11.22.22. Local Landscape Character Areas

11.22.23. Section 27.4.2 of the EIAR contains detailed descriptions of each of the LLCAs, including a description of the landscape and visual environment, applicable protections/designations and landscape and visual receptors.

11.22.24. Potential Impacts

11.22.25. At a high level, the assessment identifies that the following project elements are common across the length of the alignment and may impact on landscape and visual amenity, with the impact commensurate with the scale of works involved at the particular location: site preparation works; temporary fencing/hoardings; services/utilities diversions; traffic management infrastructure; site excavations/earthworks/storage bunds; site infrastructure and vehicular access; construction traffic, dirt, dust and other emissions; site lighting; site buildings; cranes, crash deck, scaffolding, piling rigs, etc; and storage of materials/construction elements.

11.22.26. Construction compound locations are identified on Figure 5.1 of the EIAR, with a main construction compound and logistics area at Estuary and a series of 'main construction compounds', 'satellite construction compounds', 'satellite construction compound and logistics areas', 'logistics areas' and 'linear working areas' identified in a number of locations along the alignment.

11.22.27. The assessment considers potential impacts through the construction and operational phases for each LLCA, separately, predicting the following likely significant effects.

11.22.28. LLCA01 – Estuary

11.22.29. ***Construction Phase***

11.22.30. According to the assessment, the proposal represents a substantial change to the existing agricultural landscape, with substantial removal of hedgerow and trees and progressive replacement by a comprehensive built landscape comprising a substantial building and a station, along with other ancillary elements. The impact is predicted to be **significant negative**.

11.22.31. **Significant negative** visual impacts are also predicted, arising from the presence of construction elements and the gradual replacement of the agricultural landscape. The assessment states that the main viewpoint into the site, along the R132, will be obstructed by hoarding.

11.22.32. ***Operational Phase***

11.22.33. A **significant negative** landscape impact is predicted for the operational phase, with the assessment stating that the development creates a much busier

ambience in the local landscape, with urban features being introduced to the urban fringe. Proposed landscaping is predicted to improve on existing conditions for biodiversity and to transform the interconnectedness of the area, representing a **significant positive** effect in terms of broad social and cultural amenity.

11.22.34. Regarding visual impact, the Park and Ride facility is predicted to be visible from multiple locations along the adjacent R132, giving rise to a **significant negative** visual impact. The overall scale of the park and ride facility is predicted to be more apparent from elevated sections of the R132 close to the M1 interchange, presenting as a new structure extending for a considerable distance along the road and rising (from 3 to 4 storeys) towards the centre of the site.

11.22.35. LLCA02 – Lissenhall Medieval Bridge

11.22.36. **Construction Phase**

11.22.37. A **significant negative** visual impact is predicted, related to the presence of construction elements and the visibility of construction works from Lissenhall Bridge.

11.22.38. **Operational Phase**

11.22.39. No likely significant effects are identified for the operational phase.

11.22.40. LLCA03 – R132/Balheary Park

11.22.41. No likely significant effects are identified for the construction or operational phases.

11.22.42. LLCA04 – R132/Estuary Roundabout to Seatown Road Roundabout

11.22.43. **Construction Phase**

11.22.44. The development is stated to result in the loss of screen trees and boundary walls to residential areas, together with the loss of access to recreational space, giving rise to a **very significant negative** landscape impact.

11.22.45. **Very significant negative** visual impacts are also predicted, arising from the presence of common construction elements and loss of trees that will allow for greater visibility from surrounding areas.

11.22.46. **Operational Phase**

11.22.47. The assessment predicts **significant positive** impacts on landscape, arising from the provision of a series of small and equipped parks that combine into a comprehensive facility for the local community, transforming the interconnectedness of the area.

11.22.48. **Significant positive** visual impacts are also predicted, arising from design measures that address functional and visual separation between the R132 and surrounding communities.

11.22.49. LLCA05 – R132/Seatown Road Roundabout to Malahide Road Roundabout

11.22.50. **Construction Phase**

11.22.51. Recreational space at Ashley Avenue is stated to be inaccessible during construction which, together with the loss of screen trees and boundary walls to adjacent residential areas, is predicted to result in a **very significant negative** landscape impact.

11.22.52. Loss of amenity along the R132, particularly at Ashley Avenue and Chapel Lane, arising from the presence of common construction elements, are predicted to give rise to a **very significant negative** visual impact.

11.22.53. **Operational Phase**

11.22.54. The series of integrated spaces and parks are predicted to transform the interconnectedness of the area, across and along the road and with the range of local communities and facilities around the eastern side of Swords, representing a significant positive effect in respect of the broader landscape context and the social and cultural amenity of the area. The predicted landscape impacts are **significant positive**.

11.22.55. Landscaping proposals are stated to contribute to improving connectivity between communities on either side of the R132. The visual impact of the development in this area is predicted to be **significant positive**.

11.22.56. LLCA06 – R132/Malahide Road Roundabout to Pinnock Hill Roundabout

11.22.57. **Construction Phase**

- 11.22.58. The assessment states that there will be a high degree of landscape change in this LLCA during construction and a **significant negative** landscape impact is predicted, arising from the loss of mature trees.
- 11.22.59. **Significant negative** visual impacts are also predicted, arising from the presence of common construction elements and loss of trees that will allow for greater visibility from surrounding areas.
- 11.22.60. **Operational Phase**
- 11.22.61. No likely significant effects are identified for the operational phase.
- 11.22.62. LLCA07 (R132/Pinnock Hill roundabout to Airside Retail Park), LLCA08 (Airside Retail Park Junction with R132), LLCA09 (Lands from Bolands Car Dismantlers to Naul Road), LLCA10 (Dublin Airport), LLCA11 (Lands south of Old Airport Road (Dardistown)), LLCA12a (Lands North of M50)
- 11.22.63. No likely significant effects are identified for the construction or operational phases.
- 11.22.64. LLCA12b – Lands south of the M50
- 11.22.65. **Construction Phase**
- 11.22.66. This section of the alignment involves bringing the track down from the M50 bridge to ground level, before turning underground at Northwood. The assessment states that significant vegetation and mature trees will be removed, including at St. Anne's, the red brick house and the gatehouse to Santry Lodge, as part of works to bring the track down from the M50 bridge to ground level before turning underground at Northwood. The combination of works is stated to require a significant land-take and to represent a significant landscape change for the area, with a predicted landscape impact of **significant negative**.
- 11.22.67. **Operational Phase**
- 11.22.68. The assessment states that an existing enclosed atmosphere will be interrupted to a high degree and that the new landscape feature (i.e. raised embankment and rail tracks) will have a visible, abrupt and graceless effect. The magnitude of landscape change is stated to be high and the predicted landscape impact is **significant negative**.

- 11.22.69. LLCA13 (Northwood Avenue/R108 junction (Northwood station)), LLCA14 (Ballymun town centre (Ballymun station))
- 11.22.70. No likely significant effects are identified for the construction or operational phases.
- 11.22.71. LLCA15 – Our Lady of Victories Church (Collins Avenue Station)
- 11.22.72. **Construction Phase**
- 11.22.73. A **significant negative** landscape impact is predicted, as site clearance and construction works will result in the loss of trees on Ballymun Road and disruption to the garden landscape to the front of the Our Lady of Victories Catholic Church. The assessment identifies that construction will take place over an extended period, with disruption limited to the construction site and surroundings, including pedestrian and vehicle diversions.
- 11.22.74. **Significant negative** visual impacts are also predicted, in view of the extent of site clearance and the high degree of landscape change.
- 11.22.75. **Operational Phase**
- 11.22.76. A **significant positive** landscape impact is predicted, as the proposed development is stated to enliven the area to the front of the church, an area which is considered to be dated and tired.
- 11.22.77. LLCA16 – Albert College Park (Intervention Shaft)
- 11.22.78. No likely significant effects are identified for the construction or operational phases.
- 11.22.79. LLCA17 - St Mobhi Road (R108) and Whitehall College of Further Education (Griffith Park Station)
- 11.22.80. **Construction Phase**
- 11.22.81. A **significant negative** landscape impact is predicted, arising from the removal of mature trees, a retaining wall and associated railings, which are together stated to result in significant changes to relationships along the road.
- 11.22.82. A **very significant negative** visual impact is predicted. Clearance works will increase visibility of the construction site in the short-term, but existing road-side trees are stated to provide a fair degree of ongoing screening.

- 11.22.83. **Operational Phase**
- 11.22.84. No likely significant effects are identified for the operational phase.
- 11.22.85. LLCA18 - R108 and Railway at Royal Canal and Whitworth Road (Glasnevin Station and Interchange)
- 11.22.86. **Construction Phase**
- 11.22.87. A **significant negative** landscape impact is predicted for this LLCA. The development is identified as requiring demolition of a licensed premises (the Brian Boru pub), three houses and a carpet warehouse (Des Kelly Carpets), together with reconfiguration of Prospect Road. Open space and car parking at Dalcassian Downs are identified as required for construction, as part of which trees and shrubs will be removed. Railings and a plinth wall at the eastern edge of this space are identified as comprising a protected structure, which will be taken down for storage and reinstated following completion. The canal towpath on the north side of the canal, which is part of the Royal Canal Greenway, is also required to be closed.
- 11.22.88. **Significant negative** visual impacts are also predicted, arising from demolition and clearance works. The extent of excavation and sub-surface works are stated to be substantial and protracted and will involve additional construction vehicle movement, which will further impact on visual amenity.
- 11.22.89. **Operational Phase**
- 11.22.90. A **significant positive** landscape impact is predicted, as Prospect Road is identified as being broadly improved by the provision of the proposed station/interchange and ancillary elements. Improvements to the pedestrian and cycling experience are also identified as significant improvements.
- 11.22.91. Improvements to the built environment are identified as improving visual amenity, replacing diverse and generally poor-quality buildings on the site. The predicted visual impact is **significant positive**.
- 11.22.92. LLCA19 - Mater Hospital at Berkeley Road/Eccles Street (Mater Station)
- 11.22.93. **Construction Phase**
- 11.22.94. The assessment predicts a **very significant negative** landscape impact, as the development is stated to require temporary removal of a substantial area of Four

Masters Park, including removal of railings and a memorial cross and sculpture. Both Eccles Street and Berkeley Road are also identified as affected by construction.

11.22.95. **Very Significant** negative visual impacts are also predicted, as a result of removal of the loss of park elements. Construction hoarding is identified as screening much of the construction activity but will not screen taller elements and will not compensate for the loss of ambience.

11.22.96. **Operational Phase**

11.22.97. Visual amenity is identified as being restored following completion of the project, with a significant positive visual impact predicted. The maturity and ambience of the area is identified as impossible to recreate initially, but this is predicted to return over time.

11.22.98. LLCA20 - O'Connell Street Upper (O'Connell Street Station)

11.22.99. **Construction Phase**

11.22.100. Demolition of buildings and facades fronting onto O'Connell Street, including retention of protected facades, are stated to have substantial impacts and result in a changed landscape for the O'Connell Street area, giving rise to a **significant negative** landscape impact. Similar changes are identified for Moore Lane, albeit in a less sensitive, localised context. The assessment states that there would be no significant landscape effects, either direct or indirect, created by the development on the National Monument at 14-17 Moore Street.

11.22.101. A **significant negative** visual impact is also predicted. The assessment states that shoring elements will introduce a visually disruptive element along this O'Connell Street façade and that this significantly alters views along the length of O'Connell Street Upper. Views from Moore Lane to the west are stated to be substantially prevented but there may be views of the site further west. The assessment states that there would be no significant visual effects, either direct or indirect, created by the proposed Project upon the National Monument at 14-17 Moore Street.

11.22.102. **Operational Phase**

11.22.103. **Significant negative** landscape impacts created during construction are predicted to largely persist beyond completion of the project, with only materials and

plant removed from the site. Retained facades, false facades and site hoarding will remain for the operational phase, until such time as they are removed as part of an approved overground development that incorporates the station. The assessment states that in the interim period the existing sense of completeness to O'Connell Street Upper will remain altered, no businesses will be operating at street level and the sense of place it creates will remain diminished. No significant impacts on the National Monument at 14-17 Moore Street are predicted.

11.22.104. **Significant negative** visual impacts created during construction are similarly predicted to largely persist beyond completion of the project, until such time as they are addressed as part of an approved overground development. The assessment states that there would be no significant visual effects on the National Monument at 14-17 Moore Street, however direct access to the Monument may be improved somewhat.

11.22.105. LLCA21 - Tara Street/Townsend Street/Poolbeg Street (Tara Station)

11.22.106. No likely significant effects are identified for the construction or operational phases.

11.22.107. LLCA22 - St Stephen's Green East

11.22.108. **Construction Phase**

11.22.109. A **very significant negative** landscape impact is predicted for the construction phase, as the development requires removal and storage of a number of park furnishings, including railings, gates, plinth walls, bollards, lamp posts, paving and kerbs, etc, which will be incorporated into the finished scheme. The Wolfe Tone memorial, including stone columns and the Famine memorial are also to be removed for storage, to be reinstalled in a new location within St. Stephen's Green on completion of the project. A large number of mature trees will also be removed. Works to the public realm, including widening the footway on Hume Street, may affect surviving historical paving and coalhole covers on the street.

11.22.110. A **very significant negative** visual impact is also predicted, due to the presence of common construction elements and the site clearance works including tree removal. The assessment states that views along St Stephen's green East, from the eastern end of St Stephen's Green North and from within the Park will be

particularly affected and that there will be greater intervisibility between the eastern side of the Park and St Stephen's Green East.

11.22.111. ***Operational Phase***

11.22.112. The assessment identifies an intention to reinstate the existing landscape as far as is practicable, but that it will take time for replacement planting to mature and that it is difficult to offset impacts on the maturity and wholeness of the Green. As such, the predicted landscape impact is **very significant negative**.

11.22.113. A **very significant negative** visual impact is similarly identified, with reinstatement works stated to partially address negative visual effects associated with construction. The edge of the Green is predicted to remain raw, small-scaled and immature, in comparison to other unaffected sections of the Green. Maturation will take place over time.

11.22.114. LLCA23 - Grand Canal to Dartmouth Road (Charlemont Station)

11.22.115. No likely significant effects are identified for the construction or operational phases.

11.22.116. **Mitigation Measures**

11.22.117. Proposed mitigation measures are contained in Section 27.6 of the EIAR. The assessment states that inherent design measures have been incorporated, together with standard construction and operational management practices, to reduce and avoid potential impacts. Proposed mitigation (identified as secondary mitigation) can be summarised as follows:

- Implementation of site management procedures during construction.
- Location of construction compounds/tunnel launch sites in less sensitive areas.
- Incorporation of various design elements across the project.
- Retention of valuable landscape assets where feasible, including mature trees, historic paving, railings and street furniture elements.
- The provision of hard and soft landscaping, including a maintenance and management strategy.

- Inclusion of mature species in sensitive locations, to assist mitigation of impacts.
- Observance of a general requirement for a minimum depth of 1.5m growing medium/substrate and adequate surface/subsurface drainage and/or permeability of soil substrates in sections of cut and cover.
- Proposals for taking-in-charge of external works by the relevant local authority.
- Incorporation of an external lighting strategy.

11.22.118. **Residual Impacts**

11.22.119. Residual impacts are presented in tabular form at Section 27.13 of the EIAR.

11.22.120. Landscape impacts are as per the impact assessment, for the construction phase. For the operational phase, reduced impacts are predicted for a number of LLCAs, with LLCAs 20 and 22 continuing to experience **significant negative** impacts. LLCAs 04, 05, 15, 18 and 21 are predicted to experience **significant positive** landscape impacts during operation.

11.22.121. Reduced visual impacts are predicted in a number of instances, for both the construction and operational phases. For the construction phase the following LLCAs are identified as continuing to experience **significant negative** visual impacts: 02, 04, 05, 17, 18, 19 and 20. LLCA 22 is predicted to experience a **very significant negative** impact. For the operational phase the following LLCAs are identified as continuing to experience **significant negative** visual impacts: 01, 20 and 22. The following LLCAs are predicted to experience **significant positive** impacts: 04, 05, 18 and 19.

11.22.122. **Cumulative Impacts**

11.22.123. Potential cumulative landscape and visual impacts are addressed in Section 30.4.19 of the EIAR. It states that of the 176 other developments reviewed, the majority were 'screened out' due to distance, scale or nature. Table 30.23 identifies other developments 'screened in' for potential cumulative landscape impacts. I note that the accompanying states that 15 No. developments were 'screened in', however I consider this to be a typographical error as there are 14 No. developments identified in the aforementioned table.

- 11.22.124. For the construction phase, of those other developments 'screened in', it identifies potential significant cumulative landscape and visual impacts associated with the BusConnects projects, as the proposed development is contiguous in several locations, e.g. Griffith Park and Glasnevin Stations.
- 11.22.125. For the operational phase, the BusConnect projects were again identified as giving rise to potential significant cumulative landscape and visual impacts in areas of overlap. Potential moderate/significant cumulative impacts were also identified with the Grand Parade Property Trading Co. DAC development at Charlemont; the Tanat Limited development at Tara Street; and the Arora Dublin T2 Limited development at Dublin Airport. The R132 Connectivity Project was identified as having the potential to give rise to significant positive cumulative impacts.
- 11.22.126. **Oral Hearing**
- 11.22.127. **Errata**
- 11.22.128. The Schedule of Errata submitted to the oral hearing (Ref. OH374) on 27th March 2024 identified a number of typographical errors in the EIAR landscape and visual impact assessment.
- 11.22.129. **Updates**
- 11.22.130. On the opening day of the oral hearing, 19th February 2024, TII provided a document 'R132 Landscape Amendments' (Ref. OH18). The document outlines proposed amendments to the project landscaping scheme along the R132, whereby open space with the Seatown Villas, Estuary Court and Ashley Avenue estates would be effectively returned to their existing enclosed condition rather than being landscaped as part of the proposed R132 linear park. The document assesses the landscape and visual impact on this amendment, outlining that it will remove landscape connectivity benefits but will not significantly affect benefits accruing to the wider area from proposed landscape enhancements.
- 11.22.131. Updated assessments of proposed design changes at Pinnock Hill (Ref. OH383) and Tara Street (Ref. OH384) were submitted to the oral hearing on 28th March 2024. The Pinnock Hill design amendment relates to a proposed change from 'retained cut' to 'cut and cover' and the Tara Street design amendments relate to the provision of additional skylights and revisions to the proposed public realm layout,

including reduced planting and cycle parking. In both instances, the assessment states that the proposed amendments do not affect the original construction phase impact assessment.

11.22.132. An Updated arboricultural impact assessment and associated drawings (Refs. OH317 and OH318) on 25th March 2024, updated photomontages (Ref. OH370) were submitted on 27th March 2024

11.22.133. An updated Cumulative Impacts Addendum Report (Ref. OH98) was submitted to the oral hearing on 28th February 2024. The Addendum comprises an updated review of potential interactions and cumulative impacts with other projects, given the passage of time since lodgement of the application. It identifies potential significant cumulative landscape and visual impacts with the Dublin Central GP Limited development on O'Connell Street (ABP-318316-23) during both the construction and operational phases (positive impacts are predicted for the operational phase) and the BusConnects Ballymun/Finglas (ABP-314610-22) and Swords (ABP-317121-23) schemes during construction. Further, it identifies potential moderate/significant cumulative impacts with the J Murphy (Developments) Limited development of 645 No. apartments and associated works at Fosterstown (ABP-313331-22). In all cases except for the Dublin Central GP Limited development, the assessment predicts that subject to implementation of proposed mitigation measures, significant residual effects are avoided.

11.22.134. The Board will note that a number of design amendments were submitted at various stages of the oral hearing. These amendments are outlined elsewhere in this report and are discussed as relevant in my assessment below.

11.22.135. **Post-Oral Hearing**

11.22.136. A further document Update to the Cumulative Impact Assessment was submitted on 31st January 2025 as part of TII's response to the Wild Ireland Defence CLG oral hearing submission.

11.22.137. In relation to Landscape and Visual Impacts, the assessment identifies a number of additional developments that have the potential to act in concert with the proposed development, giving rise to cumulative impacts. However, no potential significant cumulative impacts are identified.

11.22.138. **Assessment**

11.22.139. My assessment of likely significant impacts is presented on an alignment-wide and area-by-area basis, following the route alignment through Areas AZ1 – AZ4.

11.22.140. Given the nature and scale of the proposed development, there is a degree of crossover between landscape and visual impacts and other environmental factors, including Archaeology & Architectural and Cultural Heritage, which are addressed elsewhere in this report.

11.22.141. A considerable number of observer submissions raise concerns in relation to landscape and visual issues. For example, the submissions made by Estuary Court Residents Association (S89, S90, OH46 and OH199) and Deirdre Byrne and Family (S58) raise concerns in respect of visual impacts in area AZ1 of the alignment; Bernard Seymour (S20 and OH269) raises detailed concerns regarding impacts on St. Stephen's Green; and Amanda Hughes (S6), Andrew Conlon and Maeve Fitzpatrick (S9, 1FS4 and OH241), District 7 Community Alliance (S66, 1FS18 and OH247) and Jonathan Healy (S154) raise concerns regarding visual impacts associated with the Mater station. Similar issues were also raised by multiple speakers at the oral hearing.

11.22.142. The Department of Housing, Local Government and Heritage (S63 and 1FS17) and Dublin City Council (S71 and 1FS20) submissions also raise concerns regarding landscape and visual impacts.

11.22.143. **Alignment-Wide Issues**

11.22.144. As TII states, common construction elements are likely to be present across the route alignment during the construction phase, including site hoarding; utility/traffic diversion works and associated infrastructure; site lighting; large machinery; and construction materials, etc. Such elements are likely to be disruptive at sensitive areas of the alignment and may have significant impacts, for example at the north end of Area AZ1 and at Mater and St. Stephen's Green stations. Good site management practices, as are outlined in the Outline Construction Environmental Management Plan at Appendix A5.1 of the EIAR, are a practical and standard mitigation measure that will assist in minimising the visual impact of construction sites.

11.22.145. All alignment-wide construction sites will be enclosed by site hoarding, which according to Section 5.4.5 of the EIAR will measure minimum 2.4m high and with increased heights provided at specified sensitive locations. I accept that site hoarding will obstruct principal views of construction sites but, as Section 27.5.4.1 of the EIAR states, the hoardings will themselves be significant visible elements in multiple views. It is also notable that the project has a lengthy construction phase, with hoardings likely to be in place in many locations for a number of years. As a means of reducing visual impact and assisting in integrating these structures into the urban environment, and particularly in the context of the prolonged nature of the construction phase, I consider painted finishes and/or artwork should be incorporated onto site hoardings particularly at the above-mentioned sensitive locations. This approach is increasingly common on urban construction sites and, in my view, provides a degree of visual interest, particularly in the context of the prolonged nature of the construction programme. Conversely, there may be areas where a more muted colour scheme may be more appropriate for site hoardings. This can be controlled by condition, with details to be submitted for the agreement of the planning authority.

11.22.146. The underground stations at Dublin Airport, Ballymun, Collins Avenue, Mater and Tara each incorporates a series of raised skylights. They are sloped installations and are not of a uniform height, ranging in height from the tallest of 1.88m-1.58m at Collins Ave to the smallest of 1.78m-1.11m at Tara.

11.22.147. The document Final Schedule of Additional Environmental Commitments (Ref. OH376) provided to the oral hearing on 27th March 2024 states that the skylights will be 'low lying structures that will not create visual segregation within the public realm' and 'will be sensitively integrated within planting' but, in view of the above-outlined heights, I would dispute this statement. At the proposed heights, the skylights are taller than the average human and in a number of locations they contribute to the visual impact of the development.

11.22.148. The document 'Materials Palette' that was submitted with the application discusses these station elements in detail and it is noteworthy that, in addition to their primary function as a means of allowing natural light down to mezzanine and platform levels, they are intended to be "highly interactive elements encourage play and selected views in and out of the gallery below". I am unclear as to why the

skylights are proposed to be so tall, as this is not discussed within the application documents, but I am satisfied that there is no particular security or anti-social behaviour requirement, in view of the fact they are intended to be interactive and encourage play.

11.22.149. As is discussed in detail below, TII amended the proposed skylight heights at Mater Station at the oral hearing, proposing that they be reduced to 1.1m-0.8m above ground level. I see no reason that proposed skylight heights cannot be reduced in other locations and I am satisfied that this will not undermine the proposed station lighting strategy. To this end I recommend that a condition be attached requiring that underground station skylights shall have a maximum height of 1.5m above ground level.

11.22.150. In its further submission on the application, the Department advised that TII's proposals to include wildflower meadows as part of route-wide landscaping is contrary to both good conservation practice and the All Ireland Pollinator Plan and advised that the proposal should be omitted.

11.22.151. In responding to the submission, TII stated that it will work with the local authorities and NPWS to generate a seed mix that complies with the All-Ireland Pollinator Plan and which will also enhance local biodiversity. They do not wish to leave bare ground as this risks soil mobilisation and subsequent run-off to receiving waters.

11.22.152. I consider TII's approach is acceptable and in view of TII's commitment to work with the local authorities and NPWS in relation to this aspect of the project, I do not consider there is a need for the Board to impose any condition requiring TII to undertake specified consultations or works.

11.22.153. Area AZ1 (LLCAs 01 – 09)

11.22.154. I agree with the EIAR assessment, that the development is likely to have significant landscape and visual impacts in a number of areas. The alignment starts in a peri-urban location at Estuary and the track alignment thereafter runs roughly parallel to the R132 as far as Fosterstown, passing through an urban, developed landscape. The local landscape is classified by the Fingal County Development Plan 2023-2029 as being of 'modest value' and is identified by the EIAR as having primarily 'low-medium' or 'medium' baseline sensitivity, with the exception of the area

between Estuary roundabout and Malahide Road roundabout (LLCAs 04 and 05), which is identified as having 'high' baseline sensitivity.

11.22.155. I consider the undeveloped/greenfield sections at the north end and the section between Estuary roundabout and Malahide Road roundabout are sensitive, particularly residential communities including Estuary Court, Seatown Villas and Ashley Avenue, but as the route alignment progresses further south it is set in a largely developed context, including large commercial development, that has a low sensitivity.

11.22.156. The construction phase of Estuary Station is likely to have significant landscape and visual impacts, presenting a substantial change to the existing greenfield/undeveloped environment, requiring a high level of site clearance works prior to the erection of site hoarding. This site is also identified as the main construction compound and logistics area for the project and it is thus likely to contain large quantities of construction materials/machinery, elements of which are very likely to be visible in surrounding views, for a number of years.

11.22.157. Over time a number of project elements, in particular the park and ride facility, the Estuary station structure, rail line and associated elements will become recognisable built features in available views, providing a comprehensive built landscape and transforming the character of this area.

- The Park & Ride Facility in particular is a very large structure, measuring c. 280m long x c. 120m wide x c. 20m tall and providing up to 3,000 parking spaces over 4 floors. This changed landscape is depicted in photomontage images 1.1-1.5, which, in particular, demonstrate the scale and visual dominance of the P&R Facility in available views.
- A c. 260m long viaduct is proposed over the Broadmeadow River and Ward River. This structure will be set on abutment foundations at its north and south ends and, thereafter supported by a series of reinforced concrete piers over its length and with overhead catenary system (OCS) supports extending to a maximum height of c. 13m above ground level. The viaduct is depicted in photomontage images 2.1 – 2.4 and image 2.4 in particular demonstrates the visual significance of the structure in views from the west.

- At Balheary Park, south of Estuary station, TII proposes 12m tall ball-stop netting adjacent to the eastern edge of the Park, together with floodlighting columns that will serve playing pitches. These elements of the project contribute to the changed character of the area, as can be seen in photomontage images 3.1 – 3.2.

11.22.158. Construction of Seatown station and the inter-station track sections to its north and south will have very significant landscape and visual impacts on the immediate surrounding area, which is characterised by sensitive residential communities. The route alignment traverses public open space within a number of the housing estates that are on the east and west sides of the R132, in particular Seatown Villas and Estuary Court, where the open space areas are identified as containing satellite construction compounds. Section 27.5.4.4 of the EIAR identifies that trees and boundary walls will be removed and replaced by site hoarding for the duration of construction. In this regard I note that document AZ1 ‘Seatown West & Estuary Court’ (Ref. OH48) provided to the oral hearing on 21st February 2024 identifies that these construction sites will be operational for c. 50 months of the overall construction programme. Baseline and operational phase conditions are depicted in photomontage images 4.1 – 5.2.

11.22.159. While the originally proposed development included a proposed linear park along the R132 and the permanent removal of walls separating the estates from the R132, TII subsequently proposed amendments to the landscaping proposals on the opening of the oral hearing in the area of the R132, proposing to reinstate existing boundary walls at Seatown Villas, Estuary Court and Ashley Avenue and to replace the relatively elaborate landscaping proposals with larger grassed areas, broadly replicating the existing situation. These amendments are identified in the ‘R132 Landscape Amendments’ document (Ref. OH18).

11.22.160. The omission of proposed landscaping improvements is unfortunate and this is acknowledged by TII in the document ‘R132 Landscape Amendments’ (Ref. OH18), which identifies that reinstatement of these boundaries will remove landscape connectivity benefits and increase journey times to public transport and public areas. However, and as I have outlined in the CPO section of my report, the linear park is not a fundamental part of the MetroLink proposal and TII now proposes that the lands at Estuary Court, Ashley Avenue and Seatown Villas that is not directly

affected by the route alignment will now be subject to temporary acquisition and will be restored to existing condition, following the completion of construction. The amendment appears to be a response to residents' concerns, which are understandable. Importantly, the proposed development will not impede permeability improvements or open space enhancements in the future, should Fingal County Council wish to pursue them.

11.22.161. In addition to written submissions, Seatown Villas Residents and Estuary Court Residents Association attended the oral hearing on 21st February 2024, where they each expressed concerns regarding the impact of construction on open space areas within their estates.

11.22.162. In the case of Seatown Villas, identified concerns related to open space adjacent to the R132 that is affected by a c. 100m section of retained cut forming part of the alignment, and it was requested that this section of the alignment should be provided as cut and cover. This aspect of the development was also questioned during Inspectors questions at the oral hearing on 21st February 2024, where TII was requested to clarify the rationale/requirement underpinning this section of retained cut alignment.

11.22.163. In response to these queries and submissions, TII provided two documents entitled 'R132 Seatown Villas Retained Cut Section' (Refs. OH107 and OH169) to the oral hearing on 28th February 2024 and 5th March 2024, which together discuss and justify the project requirement for this section of retained cut. In response to the aforementioned request by residents of Seatown Villas, TII points out that the proposal would require redesign of this section of the route, in respect of the access point and the introduction of a requirement for mechanical ventilation. The 5th March 2024 submission also contains a proposed amendment to the proposed development, in the form of a 30m reduction in the extent of retained cut at Seatown Villas.

11.22.164. Having considered both of the above reports provided by TII, on balance I consider the proposal for a 30m reduction in the extent of retained cut strikes a reasonable balance between project requirements and the request of the Seatown Villas residents. The open space area at Seatown Villas will be restored in its entirety, with the retained cut section forming part of the new Seatown pumping

station and a newly landscaped space. I therefore consider the amendment proposal is acceptable.

11.22.165. In the case of Estuary Court, concerns relate to the loss of open space and mature trees and boundary walls for the duration of construction.

11.22.166. TII made written ('AZ1 Seatown West & Estuary Court', Ref. OH48) and oral submissions in response to these concerns, on 21st February 2024, and, in particular, clarified the need for the use of the open space in question throughout construction. From these responses, I note that the open space will be required up to year 5 of the construction phase and that the open space is required to facilitate construction of the alignment section approaching Seatown station.

11.22.167. The loss of open space for a prolonged period is likely to have a significant impact on estate residents and there is little that can be done, with reference to mitigation, to address this. This is acknowledged by the EIAR, which identifies very significant residual landscape and visual impacts for the construction phase. However, the impact is temporary and the open space will be restored and will be usable by residents thereafter. I consider the temporary usage of the open space is acceptable.

11.22.168. As the alignment progresses south, significant landscape and visual impacts are likely during construction, in the area of Swords Central station. A large amount of site clearance will be required, including removal of mature trees adjacent to the R132 and a pedestrian footbridge over the R132. As has been discussed above, site hoarding will obstruct principal views of construction sites, but the hoardings will themselves be significant visible elements along the R132. This is acknowledged by the EIAR, which identifies very significant residual landscape and visual impacts for the construction phase.

11.22.169. Area AZ2 (LLCA10)

11.22.170. The alignment descends underground at the Dublin Airport North Portal (DANP) and remains underground until it reaches the Dublin Airport South Portal (DASP) at Dardistown. A large box will be excavated on the north side of Naul Road, to facilitate the launch of the TBM and the Dublin Airport Station will be constructed to the west of the T2 multi-storey carpark, via cut and cover construction. Common construction elements will be clearly visible throughout construction, particularly on

the station site, but as the EIAR states, they will form part of a continually airport campus and will be viewed/interpreted as such.

11.22.171. For the operational phase, the above ground expression of the airport station will be contemporary and lower key than other surrounding buildings.

11.22.172. I agree with the EIAR, that this area has low landscape and visual sensitivity and, in view of the above, I do not consider any significant landscape and visual impacts.

11.22.173. Area AZ3 (LLCAs 11 – 12b)

11.22.174. The DASP and Dardistown Depot, a large operational, maintenance and storage centre for the project, are located in this section. The EIAR identifies that the facility will occupy an area of 19.5ha and will require land restructuring such as clearance, loss of use of recreational facilities, adjustment of boundary lines and diversion of the Turnapin Stream.

11.22.175. I agree with the EIAR assessment, that the primarily hard surfaced area that will be provided across the site will contrast with the softer, more aesthetically pleasing agricultural appearance and character that exists currently. It is noteworthy that the EIAR describes the facility as “practical and utilitarian...and the nature, style and finish of the constituent structures and built elements reflects its purpose”. However, I equally agree with the EIAR, that the majority of this section has low baseline sensitivity and, in this context, I consider significant landscape and visual impacts are unlikely.

11.22.176. An exception to this is at the southern end of the section, where the alignment descends from the M50 viaduct down to the City portal at Northwood. The viaduct itself measures c. 100m in length and as it descends on the south side of the M50, the project involves a high degree of landscape change and I consider significant landscape and visual impacts are likely. Required works include earthen embankments, road realignment works and reconfiguration of the properties known as Santry Lodge and St. Anne's.

11.22.177. This area is currently relatively enclosed from view by dense vegetation, with available views being mostly close range. Road realignment works include the provision of a new 'arm' to the west of rail line, that will require building demolition

(Santry Lodge Gate Lodge and a derelict 2-storey house to its north) and the extent of required clearance works may expose the track to views from the west, in particular, and the regular presence of moving trains will serve to highlight this new addition to the landscape. I agree with the EIAR, that the accumulation of these elements will have an abrupt effect on the landscape. Proposed landscaping will have some effect, in terms of softening the appearance of the embankment, but it will nevertheless exist as a stark feature in the landscape. This changed landscape is depicted in photomontage images 12b.1 – 12b.3.

11.22.178. The Board will note that Santry Lodge has been designated as a Protected Structure in the period since submission of the application and it is itself a sensitive receptor. This is discussed in detailed in the Heritage section of this report.

11.22.179. There are a small number of houses on Old Ballymun Road, including in the immediate vicinity of the track alignment. The proposed alignment requires use of a substantial proportion of the garden of the residential property known as St. Anne's. In view of the very close proximity of construction to this house, together with the extent of clearance works and the elevated nature of some of the works, the construction phase is likely to have a significant visual impact on the occupiers of this house.

11.22.180. Area AZ4 (LLCAs 13 – 23)

11.22.181. I agree with the EIAR assessment, that the construction phase is likely to have significant landscape and visual impacts in a number of areas. From the City portal at Northwood to the terminus at Charlemont, the alignment runs entirely underground through the city. Stations are proposed in a variety of suburban and urban environments, including sensitive residential areas, city parks and commercial areas.

11.22.182. The EIAR identifies a mix of baseline sensitivities, in particular identifying that the following station/intervention shaft locations have either medium-high or high landscape and visual sensitivity: Albert College Park, Griffith Park, Mater, O'Connell Street and St. Stephen's Green. Other station locations are identified as having negligible, low or medium sensitivity.

11.22.183. ***Northwood Station (LLCA13) and Ballymun Station (LLCA14)***

- 11.22.184. Northwood station stretches across both sides of the R108 and is in landscape described by the EIAR as 'low-grade'. Ballymun station is located on a vacant plot in the centre of Ballymun in an area that I consider has similarly low landscape and visual sensitivity.
- 11.22.185. Both stations sites are large and will be noticeable features, with Northwood also acting as launch site for the TBM. Common construction elements will be visible throughout construction, but in view of low level of sensitivity in both locations, I do not consider any significant landscape and/or visual impacts are likely.
- 11.22.186. ***Collins Avenue Station (LLCA15) and Albert College Park Intervention Shaft (LLCA16)***
- 11.22.187. Collins Avenue Station is located in a mature, primarily residential community, south of Ballymun immediately adjacent to Our Lady of Victories (OLV) Church. Section 27.5.4.16 of the EIAR identifies the requirement for site clearance works, including removal of memorial artefacts within the church grounds, and disruption to pedestrian and driving conditions along the R108 during construction. It further identifies that the visual impact of the construction site will extend over a substantial stretch of the R108, impeding views of OLV Church and replacing with site hoarding. I note from Appendix A5.2 of the EIAR, 'Construction Programme Including Tunnel Elements', that construction of this station is estimated to take 99 months.
- 11.22.188. A number of submissions have been received, which express concerns regarding the visual impact of construction on the surrounding communities, and similar concerns were raised at the oral hearing, including for example by ACRA & Ballymun Road North Residents (S1, OH45, OH215), Frances Maguire (S97, OH218), Hampstead Residents CLG (S111, 1FS27, OH61, OH219 and OH387), Kieran Smyth and others (S162) and Cllr Patricia Roe (S249).
- 11.22.189. I agree with the EIAR, that the construction phase is likely to give rise to significant landscape and visual impacts for the surrounding community. The document 'Collins Avenue Station – Utility Works Traffic Management' (Ref. OH217) provided to the oral hearing on 12th March 2024 identifies that there will be a high degree of disruption to traffic on the R108, arising from utility diversion works prior to commencement of the main station construction works, and the main station construction site will itself contain large machinery for prolonged periods.

- 11.22.190. In addition to the visual impact of the presence of such items on the site, construction works will affect both views of the OLV Church and its daily activities, by occupying and excavating a large part of the landscaped area to its immediate west. This issue is highlighted in the submission by Frances Maguire, who questions the visual impact of the construction site on church activities such as funerals, weddings, etc.
- 11.22.191. Site hoardings will have the effect of impeding views of the construction site, but the hoardings will themselves be significant visible elements along the R108 and there will be a high degree of disruption of the existing mature landscape, including impacts on church activities. This is acknowledged by the EIAR, which identifies a significant residual landscape impact for the construction phase. In view of the long term benefits that will accrue to the community from construction of the station in this accessible location, I consider the impact is acceptable.
- 11.22.192. Consideration should also be given to the restored forecourt area to the front of OLV Church during the operational phase. The EIAR predicts that restoration will have a significant positive impact on the landscape and a moderate positive visual impact. Whilst I agree in principle that the restored forecourt area has the potential to have positive landscape and visual impacts, I am concerned that the accumulation of tall aboveground station elements to the front of the church and adjacent to the R132 will negatively affect views of the church and restored forecourt.
- 11.22.193. The station entrance canopy and raised skylights are located either side of the primary access route to the church and as they are relatively tall structures (the station entrance measures 4.4m at its highest point and the skylights measure 1.88m at their highest point) and they may impede views of the church and present as a form of visual barrier. I have commented in previous sections about the excessive height of proposed skylights and this is a location where I consider a reduced height would result in a more appropriate and visually sympathetic form of development.
- 11.22.194. A number of submissions raise concerns regarding the impact of the Albert College Park Intervention Shaft on the general and visual amenity of the Park, including those by Kieran Smyth and others, Cllr Patricia Roe and Hampstead Residents CLG. Whilst the EIAR predicts that construction of the shaft will have

moderate adverse landscape and visual impacts during both construction and operational phases, I am of the view that these impacts would be significant adverse.

11.22.195. As section 27.5.4.17 of the EIAR identifies, this element of the project requires a 35m wide strip of land along the western boundary of the Park and will result in the loss of mature trees in this area. Section 7 of the updated Arboricultural Impact Report submitted to the oral hearing on 25th March 2024 (Ref. OH317) identifies that 95 No. trees will be removed, along a 120m section of the Park, and drawing No. ML1-JAI-EIA-ROUT_XX-DR-Y31093 Rev P02 provided to the oral hearing on the same day identifies that this involves effective clearance of the southern-most part of the Park's western boundary.

11.22.196. Photomontage images 16.2 and 16.3 suggest that the existing tree-lined, enclosed character of the park will be restored for the operational phase. I would question whether the proposed landscaping is likely to have such an effect, at least in the short-term. Rather, I consider it is more likely that this area of the park will remain visually exposed for a prolonged period, whilst replacement tree planting establishes and matures. To assist with restoration of the Park's setting and character, I consider mature replacement tree planting should be incorporated into the project landscaping scheme. This can be controlled by condition.

11.22.197. The size of the shaft site has also been questioned, for example with the Hampstead Residents CLG submission suggesting that the hard shoulder on the R108 could be utilised for emergency parking, thereby reducing land-take from the park. The Board will note that in the document 'TII Response to Hampstead Residents CLG Submission (made on 21 February 2024)' (Ref. OH148) provided to the oral hearing on 4th March 2024, TII states that the site layout complies with the requirements of the Building Regulations (Fire Safety Technical Guidance Document B) and that use of the R108 hard shoulder in an emergency situation would not satisfy the DFB requirements, as discussed with them.

11.22.198. In considering this issue I note that the Building Regulations TGD B was updated in 2024. Notwithstanding this, the requirements of the document remain as per those set out in TII's submission, i.e. in the case of a building fitted with a wet internal fire main, access for a pump appliance should be provided to within 18 m, and within sight of an entrance giving access to the main. I am satisfied that an

access and on-site parking are required, in accordance with the requirements of the updated TGD B and, thus, I consider TII's proposal is acceptable.

11.22.199. The Board will note that the project requires additional temporary occupation of a large portion of Albert College Park during construction, an area that currently contains playing pitches, and following completion of construction the lands will be returned to Dublin City Council, following reinstatement of the playing pitches. As is highlighted in the Hampstead Residents CLG submission, the extent of temporary land-take (shown on drawing ML1-JAI-BOR-ROUT_XX-DR-Y-01071) includes additional trees that line an internal walking route and the question was asked by Hampstead Residents CLG whether further tree felling would be required in order to facilitate reinstatement of playing pitches. I would bring to the Board's attention, in this respect, that TII's response to this submission (contained in the document 'TII Response to Hampstead Residents' CLG Submission (Made on 21 February 2024)', Ref. OH148) states that no trees along the Hampstead Avenue boundary or within the blue line (temporary land-take) boundary shown on this drawing will be removed.

11.22.200. ***Griffith Park Station (LLCA17)***

11.22.201. Griffith Park Station is located under the Home Farm football field, which lies within the Whitehall College of Further Education grounds on St Mobhi Road. Section 27.5.4.18 of the EIAR identifies that construction will require clearance of poor-quality conifer trees on the boundary at the upper pitch level, demolition of an existing retaining wall and removal of associated railings. It further states that the Home Farm football pitch will be unusable for most of the construction phase.

11.22.202. I agree with the EIAR, that there are likely to be significant landscape and visual impacts during construction, with clearance/demolition works allowing for greater visibility of the construction site. Similar to other locations, site hoardings will impede views through to the construction site but, they will themselves be significant features in views, particularly along St. Mobhi Road. Whitehall College of Further Education, which is immediately east of the proposed station, is a Protected Structure and is listed on the National Inventory of Architectural Heritage, and the presence of site hoardings and construction elements for a prolonged periods will affect views from St. Mobhi Road.

- 11.22.203. The submission by Mark O'Connell (S183) expresses the view that the development would destroy Mobhi Road and in particular references the removal of mature trees.
- 11.22.204. There are tree stands along the St. Mobhi Road frontage of the site, both within the construction site itself and lining St. Mobhi Road. Substantial tree clearance is required along the station site boundary, as can be seen from drawing No. ML-ST 304 K-L1, but this does not extend to the mature trees that line St. Mobhi Road. Section 27.5.4.18 of the EIAR states that these in-street trees are unaffected by the project, however; this commitment appears to be contradicted by the Griffith Park Station street level drawing (No. ML-ST 304 K-L1), which identifies that 2 No. mature in-street trees are to be felled.
- 11.22.205. In their response to Mr. O'Connell's submission (and in their response to multiple other submissions, including the OPW) TII reiterate that there will no tree felling along St. Mobhi Road and that these trees will be appropriately protected. I welcome TII's clarification that there will be no tree felling along St. Mobhi Road as part of the project, as these trees contribute to its mature, tree-lined character. In view of the fact that there is an inconsistency between the submitted drawings and other commitments made by TII, I consider it appropriate that a condition should be attached to the Railway Order, requiring that no tree felling shall take place along St. Mobhi Road.
- 11.22.206. For the operational phase, TII states that the grounds of the entrance to Whitehall College will be restored insofar as is possible but it is my opinion that this area will be substantially changed. The graded incline that rises up from St. Mobhi Road to the playing field will be cleared in order to facilitate station construction and will be replaced by a large retaining wall of varying height (between c.5.5m at its highest and c.2m at its lowest) that will enclose the south and west boundaries of the restored playing field (this also encloses the entrance to the underground station) and a public plaza. I accept that the proposed arrangement is necessary, in order to facilitate provision of station elements and also to retain the college vehicular access and I am satisfied that there not be a significant landscape or visual impact.
- 11.22.207. ***Glasnevin Station (LLCA18)***

- 11.22.208. Glasnevin Station is described by the EIAR as a major transport interchange and is one of the biggest stations on the proposed alignment. Section 27.5.4.19 of the EIAR identifies that the proposed development at Glasnevin will provide a combined metro and main line rail station, together with rail line improvement works to provide required gradients.
- 11.22.209. A number of submissions raise a variety of concerns in respect of landscape and visual impacts. For example, Fiona O'Kelly (S96), the Estate of John Quinn (S174) and Mark O'Connell (S183), Claire Dunne (S45 and OH233), Margaret Morrissey (S176), Dr. Mark Campbell and Dr. Aimee O'Farrell (S182) express similar concerns regarding the visual impact of the construction site and associated elements. The Management Company Board on Behalf of The Court (S175, OH84 and OH232), the residential development immediately north of the proposed station, made a detailed submission on the application and also attended the oral hearing, where, additionally, they raised detailed concerns regarding the scale of clearance works required in order to facilitate construction and the loss of open space within their estate for the duration of construction. A number of the submissions, including those by Lorraine Rooney (S171 and OH82), Phibsboro Village Tidy Towns (S258) and Shandon Residents Association (S279 and OH235) question the design of the proposed station building.
- 11.22.210. I agree with the EIAR, that there will be significant landscape and visual impacts, in view of the scale of works involved and the prolonged nature of the construction phase. The station is located in an area designated by the City Development Plan as a Conservation Area.
- 11.22.211. As is stated in the EIAR, construction of the station will necessitate the demolition of a licensed premises (Hedigans, also known as the Brian Boru), 3 No. 2-storey commercial buildings and a carpet warehouse building (Des Kelly Interiors); significant traffic management; canal and towpath closures; occupation of open space and car parking spaces at The Court, Dalcassian Downs and associated site clearance works. Similar to other locations, site hoardings will impede views through to the construction site but, they will themselves be significant features in views.

- 11.22.212. Appendix A5.5 of the EIAR, 'Glasnevin Construction Report', discusses the construction phase of Glasnevin Station in detail and the issue was the subject of detailed discussion and questioning at the oral hearing.
- 11.22.213. For the duration of construction, the site will be enclosed by site hoardings. In the case of housing at The Court, which adjoins the station site to the north, TII confirmed to the oral hearing on 27th February 2024 that site hoardings measuring 4m high will be 1.5m from the front of housing. Whilst I acknowledge that they serve an important noise attenuating function, they will nevertheless present a significant feature and effective barrier to outward views from a number of units within this apartment complex and will thus have a significant visual impact. TII stated at the oral hearing that the top 2m of these hoardings can be made to be transparent, in order to reduce overshadowing but I do not consider this would have any meaningful mitigating effect on the overall visual impact. Site clearance works will also have significant impacts at The Court, where practically all mature trees to the south of the apartment buildings are proposed to be felled and boundary railings, which are a Protected Structure, are to be removed for the duration of construction.
- 11.22.214. Additionally, demolition of the above-mentioned buildings will result in clearance of the site frontage along Prospect Road. Taken together with significant traffic management works; proposed dewatering of the Royal Canal and changes to its navigable area; and the prolonged presence of large construction machinery on the site for a large amount of the overall estimated 102-month construction programme, the establishment of and operation of this construction site is likely to have significant landscape and visual impacts.
- 11.22.215. The question was asked by participants at the oral hearing as to whether the hoardings could be moved further away from affected properties and it was stated by TII that, in view of the constrained nature of the construction site and the need to ensure there is adequate on-site storage space, they need to be maintained in the proposed locations. Having reviewed the construction methodology and sequencing for the Glasnevin Station (see Appendix A5.5 of the EIAR and OH75), I accept TII's position, noting the constrained nature of the site and the highly complex construction works required to provide an interchange between the metro and the two heavy rail lines, in close proximity to the Royal Canal and the R108, a busy arterial route into the city.

- 11.22.216. The significance of the landscape and visual impacts of the construction of Glasnevin Station are acknowledged by the EIAR and it is equally acknowledged that proposed mitigation will have a limited effect in addressing these impacts. I concur with the EIAR, that the residual impact will be significant for the duration of construction. This is an issue where the Board will have to balance the significant localised impact against the wider benefits accruing from the proposed development.
- 11.22.217. For the operational phase, I disagree with the EIAR prediction of significant positive landscape and visual impacts. As is acknowledged by the EIAR, the development will alter the character and demeanour of Prospect Road and will present an improved public realm and a more inviting point of access/interface between the MetroLink station and the Royal Canal Greenway. It is my opinion that the impact would be moderate positive.
- 11.22.218. The Board will note that the public realm layout was amended at the oral hearing, with particular reference to the interface with the Royal Canal, whereby a delineated vehicular route from Prospect Road was identified, together with associated reconfiguration of the public road layout/markings. Drawing No. ML1-JAI-SRD-ROUT_XX-DR-Y-02057 (Ref. OH323) submitted to the oral hearing on 25th March 2024 refers. This followed submissions by residents at Coke Oven Cottages (Ref. OH240) and Inspector questions regarding access arrangements along the Royal Canal towpath, which provides access to Coke Oven Cottages and other property in the area, and potential conflict between moving vehicles and pedestrians in the area closest to Prospect Road.
- 11.22.219. The station building measures 70m long and a minimum of 8.1m high along its east (Prospect Road) elevation and has a contemporary appearance that incorporates a similar overarching design language to other proposed above-ground stations. Whilst I note observers concerns regarding the station's design, I consider it is of its time and the incorporation of similar design elements such as a metal canopy and supporting 'Y' columns help to reinforce a consistent station design approach for surface stations and visually demarcate the building as a MetroLink station. The proposed plaza connects directly onto the Royal Canal Greenway and, in this respect, I agree with TII, that it will activate and enliven this section of the Royal Canal greenway. The provision of commercial/retail/community uses at ground floor level within the station building will further activate this space.

- 11.22.220. The boundary railings at Dalcassian Downs, which are a protected structure and which are to be removed and stored for the duration of construction, will be restored to their original location for the operational phase.
- 11.22.221. A number of participants at the oral hearing, for example Prospect Architectural Conservation Area (S260 and OH223), highlighted the cultural and social importance of Hedigans 'The Brian Boru' pub and queried whether the building or elements of the building could be incorporated into the Glasnevin Station building. In responding to the submissions of Prospect ACA, TII outlined that the Brian Boru mural that currently adorns the façade of the building could be incorporated into the Glasnevin Station building. Whilst I am aware of the cultural and social significance of this building, I consider it is impractical to attempt to control its retention as part of the development, without substantial reconsideration of design and engineering approach to this station. I further consider it would not be appropriate to require such redesign as part of conditions, given the very complex nature of the construction works involved. Again, the localised impact of the loss of this building must be balanced against the significant societal benefits accruing from the development and, in view of the above, I am satisfied that loss of the building is required as part of the proposed development.
- 11.22.222. ***Mater Station (LLCA19)***
- 11.22.223. The proposed Mater station is to be located within Four Masters Park, a private enclosed park that is enclosed by Eccles Street, Berkeley Road and St Joseph's Church. The station is described by Section 27.5.4.20 of the EIAR as a typical underground cut and cover station, with a number of expressions on the surface, including ventilation grilles, air intake shafts, fire access lift, emergency escape stairs and the main station entrance. Existing elements within the Park, including art installations and park railings, will be removed and restored to slightly different locations following completion of construction.
- 11.22.224. Four Masters Park is located in a Conservation Area under the Dublin City Development Plan. Further, the railings, gates and plinth walls that enclose the Park at the corner of Eccles Street and the Four Masters Cross that is stationed within the Park are a Protected Structure under the CDP (RPS Ref. 737) and there are a

number of Protected Structures in the immediate vicinity, including the Mater Hospital (RPS. Ref. 2437) and St. Joseph's Church (RPS Ref. 736).

11.22.225. Observer submissions raise a variety of concerns in respect of landscape and visual impacts. For example, the submission by Eamonn Smyth (S76) expresses concern regarding the impact of the proposed station on the streetscape and the District 7 Community Alliance (S66, 1FS18 and OH247) and Jonathan Healy (S154) question the proposed landscaping scheme. The submission by Paul Hughes (S253) seeks extensive public realm improvements as part of the development. Additionally, a number of observers, both written submissions and participants at the oral hearing, raise concerns regarding the proposed station design and its associated impacts. Examples include the submissions by Amanda Hughes (S6 and 1FS2), Andrew Conlon and Maeve Fitzpatrick (S9, 1FS4 and OH241), Breda Scully (S25, OH88 and OH243), Berkeley Road Area Residents Association (1FS6), District 7 Community Alliance (S66, 1FS18 and OH247) and Eamonn Smyth (S76).

11.22.226. I agree with the EIAR, that there will be very significant landscape and visual impacts during construction, in view of the scale of works involved; the prolonged nature of the construction phase; and the close proximity of the construction site to commercial, community and residential property. The Park will be occupied and enclosed behind site hoardings throughout construction, with the presence of hoardings and common construction elements having significant effects on local views and the streetscape more generally. According to Appendix A5.2 of the EIAR, 'Construction Programme Including Tunnel Elements', the Mater Station construction phase is estimated to take 105 months.

11.22.227. Additionally, for a period of up to 12 months there will be a satellite construction site (identified as Site B) on the west side of Berkeley Road, which will require the provision of a 4m high site hoarding in very close proximity to commercial and residential properties along Berkeley Road. These hoardings, whilst providing an important noise attenuation function, will significantly impede views from the affected properties and, additionally, will block views of a pharmacy building at the corner of Berkeley Road and Sarsfield Street. The owner of this pharmacy, Brendan Flanagan (S26, OH86 and OH244), attended the oral hearing and expressed strong concerns regarding the impact of such visual enclosure on his business, particularly given that

views towards the pharmacy from the Mater hospital and for people attending medical practices along Eccles Street will be obstructed.

11.22.228. This satellite construction site is related to the construction of a ventilation shaft as part of the proposed station. On 13th March 2024 at the oral hearing, Andrew Conlon and Maeve Fitzpatrick requested that this vent would be relocated and provided on the east side of Berkeley Road. Responding to this request, TII stated that it is not possible to relocate it as the ventilation grilles must be maintained clear of a live carriageway and in this instance this cannot be maintained without permanent diversion of Berkeley Road.

11.22.229. The significance of the landscape and visual impacts of the construction of Mater Station are acknowledged by the EIAR and it is equally acknowledged that proposed mitigation will have a limited effect in addressing these impacts, albeit it considers the implementation of mitigation would reduce the visual impact from very significant to significant during construction. I consider the residual impact will be very significant for the duration of construction. This is an issue where the Board will have to balance the significant localised impact against the wider benefits accruing from the proposed development.

11.22.230. Regarding the predicted landscape and visual impacts for the operational phase, I note that the EIAR predicts that the station design would have a moderate positive impact on the landscape and a significant positive visual impact. Having considered the information available to me, I find it difficult to reconcile these predictions.

11.22.231. As is stated by the EIAR, the area has high landscape and visual sensitivity and in this respect I note the statement at Section 27.4.2.20, that Four Masters Park is an integral part of the setting for the original building of the Mater Hospital and is an important landscape feature, playing a major role in creating the green and tranquil atmosphere that pervades the space.

11.22.232. The station itself and associated elements will, in my view, have significant adverse landscape and visual impacts. As can be seen from photomontage images 19.1-19.5, the development will impede views of the Mater Hospital from the south and west and will also impede views through the Park, from the north. The station entrance is a prominent feature in views from the north and west and the lift structure

is a very prominent and, in my view, obtrusive feature in the view from the south. I consider the presence of these structures within the Park erodes what is described by the EIAR as a green and tranquil atmosphere. The presence of a large number of hostile vehicle mitigation (HVM) bollards and large, elevated skylights also contribute to this erosion of character.

11.22.233. Regarding the station entrance design, this aspect of the development was the subject of a presentation at the oral hearing on 13th March 2024, entitled 'Metrolink – Architecture Station Integration and Common Components Overview Presentation' (Ref. OH236), where TII outlined that the size of the covered surface section of the station entrance is a function of the requirement to provide an opening of adequate width and depth to allow for vertical circulation into the stations. It was also stated that the use of a common design approach for the underground station entrances across the alignment is intended to contribute to intuitive wayfinding and a line-wide identity.

11.22.234. I accept that a long station entrance covering is required, in order to provide for protection against the elements, however; I am concerned that greater consideration appears to have been given to a consistent line-wide station entrance design, rather than a bespoke design solution that responds to and compliments a highly sensitive setting such as Four Masters Park. In this respect I consider a reduction in the extent of solid/metal elements within the station entrance cover would serve to reduce its prominence and the overall impact on the streetscape.

11.22.235. The combined passenger/Dublin Fire Brigade lift structure is also of concern, where it presents as a 4m tall, obtrusive feature in the streetscape. The project architect stated at the oral hearing that these structures are intended to sit as subservient elements within the public realm but in the case of the Mater Station, I do not consider this to be the case. Further, and as was pointed out by Andrew Conlon and Maeve Fitzpatrick at the oral hearing, the structure appears to undermine TII's intention of having a readily recognisable station entrance, by impeding the view of the station from the south.

11.22.236. There are other design solutions available to TII, which would retain the overarching function of these lifts, but which would not be so impactful on the surrounding area. For example, page 26 of the 13th March 2024 presentation

document identifies a number of passenger lift designs from other international Metro developments. I consider a more sympathetic design approach would contribute to reducing the overall landscape and visual impacts of the development on the area.

11.22.237. TII proposed amendments to the Mater Station design at the oral hearing, in the form of reduced-height skylights (reduced from 2.25m-0.81m to 1.1m-0.8m) as are shown on drawing No. ML1-JAI-SRD-ROUT_XX-DR-Y-02069 (323). I acknowledge that the reduced height of these structures will have a beneficial effect, in terms of reduced visual prominence, but I do not consider they address my fundamental concerns regarding erosion of character.

11.22.238. In view of the above assessment, it is my view that revisions to the proposed station design are required, in order to reduce its visual and landscape impact. In this respect, I recommend the following condition be attached by the Board, in the event that the Railway Order is granted:

The proposed Mater Station shall be redesigned as follows: -

- The station entrance canopy design shall be revised, to incorporate reduced metal banding and a commensurate increase in glazing;
- Proposed skylights shall be omitted from this station;
- The combined passenger/Dublin Fire Brigade lift structure to the south-west of the station entrance shall comprise a glazed lift shaft;
- The Dublin Fire Brigade lift structure to the west of St. Joseph's Church shall comprise a glazed lift shaft.

11.22.239. Regarding the requirement to omit skylights, I would highlight to the Board that a number of the underground stations are not provided with skylights and I am satisfied that their omission from the Mater station will not in any way undermine the operation of the station.

11.22.240. ***O'Connell Street Station (LLCA20)***

11.22.241. The proposed O'Connell Street Station is located on the west side of the street and forms part of a wider redevelopment of a large plot that is bordered by O'Connell Street, Moore Lane and Henry Place, at its north end. The site is located within both an Architectural Conservation Area and a Conservation Area.

Construction of the station requires demolition works to Nos. 43, 44, 52-54, 57 and 58 O'Connell Street Upper, each of which is a Protected Structure. Numbers 45 and 55-56, which are not Protected Structures, but are included in the NIAH, would also be demolished.

11.22.242. The station differs from other stations, in that it is intended to be provided in tandem with an overground development (known as Dublin Central Site 2). The EIAR outlines two scenarios, where the overhead commercial development progresses first, or where the MetroLink proposal progresses first. The Board will note that permission was granted to Dublin Central GP Limited for a mixed oversite development under Ref. ABP-318316-23.

11.22.243. As is stated by Section 27.5.4.21 of the EIAR, the extent of works involved in construction will have significant landscape and visual impacts.

11.22.244. For the O'Connell Street side of the station, the EIAR identifies that only the protected façades of 43-44, 52-54 and 57-58 O'Connell Street Upper would be retained, with other buildings demolished entirely, but this position was updated at the oral hearing on 19th March 2024, where TII's presentation on construction of the station (document entitled 'O'Connell Street Station', Ref. OH254) outlined that in the event the MetroLink development proceeds before commencement of any overhead development, all of the existing O'Connell Street façades will be retained. TII also proposed in the 19th March 2024 presentation that all in-street trees along O'Connell Street will now be retained as part of the development, where it had initially been proposed that 13 No. London planes would be felled in order to facilitate the development.

11.22.245. Whilst I consider the retention of all façades facing onto O'Connell Street is a more appropriate interim mitigation measure, rather than a proposed false façades solution, and whilst I welcome the proposal to retain all in-street trees, I nevertheless consider the extent of demolition and façade retention/propping works will result in a changed landscape at the north end of O'Connell Street and, for an initial period, there will be a requirement for scaffolding on the O'Connell Street pavement whilst internal demolition works take place, which will further compound the impact.

11.22.246. As is acknowledged by the EIAR, this changed landscape will remain in place for an undetermined period, until such time as an overhead development

commences. In view of the prolonged planning history of this site (permission has been applied for, and granted, on a number of occasions for substantial development on the site (and other surrounding sites) and none has been enacted), I would advise the Board that there is a possibility that the site will remain undeveloped for a prolonged period of time. It could be argued, in this eventuality, that the impact should be elevated to very significant. Having said this, I agree with TII, when questioned on this issue at the oral hearing, that the MetroLink station will act as a driver, significantly enhancing the prospect of redevelopment of the site.

11.22.247. The impact of the development is acknowledged by the EIAR and whilst the EIAR proposed mitigation has been amended by proposals submitted to the oral hearing, I am of the view that the residual landscape and visual impact of the development remain at the level of significant adverse.

11.22.248. I consider two additional specified mitigation measures are warranted in this location: (a) as it is not specified when the scaffolding on the O'Connell Street pavement will be removed, I recommend that TII should be required to remove it immediately following installation of internal propping; and (b) a method statement should be prepared, in respect of works along the O'Connell Street pavement to ensure there are adequate protection measures in place to protect adjacent in-street trees that are now proposed to be retained. These additional requirements can be controlled by condition.

11.22.249. For the Moore Lane side of the station, demolition of the rear of buildings and subsequent propping will be visible, as will common construction elements, albeit the available views will be localised due to the narrow width of the lane and, further, the 3m tall site hoardings will provide a screening barrier to the available views. I note from Section 27.5.4.21 of the EIAR that the hoardings on Moore Lane will be adorned with imagery/artwork, which will help to soften its appearance. This aspect of the development is depicted in updated photomontage image 20.11 provided to the oral hearing on 27th March 2024 (Ref. OH370).

11.22.250. For the operational phase, both the O'Connell Street and Moore Lane frontages of the station are predicted by the EIAR to experience significant adverse landscape and visual impacts, principally related to the incomplete appearance of the site and retention of construction elements such as hoardings and scaffolding,

etc. I am unclear as to why the O'Connell Street hoarding in particular would be required to be retained in circumstances where there is no ongoing construction activity and the retained façades are propped and secured internally. As its presence impedes usage of the pedestrian footpath, I consider it reasonable that TII should be required to remove the site hoarding on completion of construction. Should the Board be amenable to its retention for an undetermined period, I would recommend that TII should be required to incorporate artwork/imagery, similar to that proposed on the Moore Lane frontage, in order to soften its appearance.

11.22.251. ***Tara Station (LLCA21)***

11.22.252. As is stated by Section 27.5.4.22 of the EIAR, construction of Tara Station requires a substantial amount of demolition, including the College Gate apartment complex and the Markiewicz Sport and Fitness Centre, which is contained within the apartment building, Ashford House, 22 Luke Street, 24 Townsend Street, 25-32 Townsend Street and an unnamed 4-storey building on Poolbeg Street. However, the area is evolving and there is a high degree of change associated with new development, for example there are large commercial developments ongoing on sites to the west (the former Hawkins House site) and east, further along Townsend Street.

11.22.253. Demolition of the proposed scale will have an effect on the urban grain, whilst the station undergoes construction, but this will be for a temporary period and will be compensated by the provision of a new public plaza in an area that is underserved in terms of public open space.

11.22.254. The Board will note that the proposed surface layout was amended at the oral hearing, in relation to increased rooflights; reconsideration of the plaza layout; and revised layouts to Luke Street and Poolbeg Street in order to achieve envisaged desire lines. These amendments were stated to have been developed following discussions with DCC and will have the effect of enlarging the usability of the public realm.

11.22.255. I consider the urban landscape has low sensitivity to change and I do not consider any significant landscape and visual impacts arise in this area of the alignment.

11.22.256. ***St. Stephen's Green Station (LLCA22)***

11.22.257. The proposed St. Stephen's Green station is located partially within the park, at its north-east/east end and partially under the adjacent pedestrian footpath.

11.22.258. The Office of Public Works (S239, 1FS36, OH42, OH71-72 and OH325), which manages the Green on behalf of the Minister for Housing, Local Government and Heritage, made a detailed submission on the application, raising a number of issues in respect of landscape and visual impacts associated with the St. Stephen's Green station. It states that the uniqueness of the Green is insufficiently appreciated today, that there is hardly anything like it in any other European city, and that its essence lies in the fact that it is enclosed. Regarding the proposed station, the submission states that it would have a direct, severe, negative, profound and permanent impact on the heritage value of the green. It further advises that the design of the station will have irreparable impacts on the biodiversity, built heritage, landscape and design, and the experience of the park and will dilute its historical significance.

11.22.259. The submissions by the Department of Housing, Local Government and Heritage (S63, 1FS17) and Dublin City Council (S71 and 1FS20) each reference the impact of construction of this station on the amenity and usability of the park. Each submission provides detailed commentary on landscape and visual impacts associated with this station, which for the Board's benefit I would summarise as follows:

- DHLGH describes the Green as "a remarkable C19th planned landscape...retains many features of note including...the Wolfe Tone memorial designed as an entrance to the park, and extensive mature planting and perimeter enclosure." It further states that the Green is a cultural landscape of national significance and is of immeasurable importance to the city. The submission requests that the station box should be relocated further to the east, away from the internal core of St. Stephen's Green, to protect trees and to safeguard the setting and integrity of the Green and, further, it advises that impacts on the amenity and functioning of the Green should not be long-term and should be fully and quickly mitigated.
- Whilst the Dublin City Council submission outlines that subject to appropriate reinstatement following construction, the impact on St. Stephen's Green would be

acceptable, I note that the Council's Parks Department does not support the location of the station within the Green. It further identifies that the proposed station does not comply with development plan policy requirements and recommends that an alternative location, outside of the park, should be sought for the station. The Council's Conservation Officer also expresses concern regarding the location of station elements on the pedestrian footpath, which they consider creates visual clutter and obstructions on the historic streetscape, and the location of HVM bollards, which they consider require further consideration.

11.22.260. A number of observer submissions also raise a variety of concerns in respect of landscape and visual impacts. For example, landscape architect Bernard Seymour (S20 and OH269), Colin Torpay (S47) and Frank McDonald (S98 and OH365) express strong concerns regarding the impact of the development on the character, setting and visual amenity of the Green, and Niall Lynch (S202) questions whether the Green will be irrevocably changed by the development.

11.22.261. I concur with the EIAR prediction, that the station will have very significant adverse landscape and visual impacts during both the construction and operational phases. St. Stephen's Green is a National Monument (Ref. DU018-020334) and it also contains a number of Protected Structures including the railings, gates and plinth walls that form the perimeter boundary of the Green. The Green is identified by Section 27.4.2.23 of the EIAR as a protected public space, one of the most important public spaces in Dublin, and it forms part of a Conservation Area designation under the Dublin City Development Plan. According to the OPW submission, it is a late Victorian rectangular plan urban park, made a city park in 1663 and remodelled as a public park in the 1880s to become an enclosed park with a solid perimeter plantation of trees and shrubs in c.1880.

11.22.262. Construction of the station requires significant clearance works and excavation within the Green, including felling 64 No. mature trees both within and adjacent to the Green, and removal/storage/relocation of the Wolfe Tone monument and Famine memorial. The AIA (Ref. OH317) justifies some of the proposed tree clearance by identifying that a number of these trees are in poor or moderate condition and I accept the point that proposed felling relates to a small proportion of the total number of trees within the park. However, I concur with the submission of Bernard Seymour, a Dublin-based landscape architect who attended the oral hearing

on 21st March 2024, that it is the entire ensemble of trees that combine to make up this landscape, not just the trees that are identified by TII as being in good condition. The project landscape architect acknowledged, in response to Mr. Seymour's submission, that "the loss of trees will make a difference...and is not a positive contribution to the urban landscape".

11.22.263. The OPW submission states that 75% of the trees, shrubs and ground cover that line the eastern boundary of the park are to be removed. In my view, the scale of clearance at this corner of the Green will have a very significant impact on its setting and visual amenity, significantly eroding its enclosed character and exposing both inward and outward views.

11.22.264. The presence of common construction elements and site hoardings to enclose the construction site for a prolonged period within and surrounding the Green will also have a significant disruptive impact on the visual amenity of this Conservation Area.

11.22.265. For the operational phase, as I have stated, the station will be constructed primarily within the Green. The station entrance and passenger lift will be located at the north-east corner of the Green, adjacent to the current location of the Wolfe Tone statue, and will necessitate its relocation along with the stone wall that surrounds it and the Famine Memorial to its west. Further changes, in the form of a reconfigured public realm that includes a new controlled park access, hard and soft landscaping, and HVM bollards are also proposed. Other station surface elements such as ventilation grilles will be interspersed with the new landscaping elements.

11.22.266. The proposed development will change the north-east/east end of the Green, in terms of its character and physical composition and, in this respect, I acknowledge the concerns expressed by the DHLGH, OPW and DCC Council Parks Department and Conservation Officer. However, and as is acknowledged by the OPW in its submission, it is important to note that St. Stephen's Green has never been frozen in time and incremental change has occurred. Examples include: the construction of the Superintendent's Lodge in c. 1882; the erection of the Fusilier's Arch in c.1907; the park maintenance building (date of construction unknown); the Wolfe Tone statue and granite screen erected in 1966; the Famine Memorial sculpture erected in 1967; and a number of other memorials erected in the park. Further, and as the

project landscape architect pointed out at the oral hearing, change has taken place at each of the 4 corners of the park, with each individual installation maintaining the primary purpose of providing access into the park. In this context, I see no reason to object outright to further appropriate change.

11.22.267. Indeed, as the OPW submission points out, it should be noted that railway works, pursuant to a Railway Order, are expressly permitted within the Green, in accordance with s.116 of the Dublin Transport Act 2008.

11.22.268. Notwithstanding the above, I have a number of concerns regarding the proposal, as are set out below.

11.22.269. The combination of station elements, together with relocation of the aforementioned cultural heritage elements, will result in a much-changed appearance to the north east park entrance. As can be seen from CGI images 22.1, 22.2 and 22.6, the station entrance and passenger lift will be the primary visible elements within the plaza, replacing the Wolfe Tone statue. I have concerns regarding the appearance and prominence of the station entrance and, similar to the proposed Mater Station entrance, I am concerned that greater consideration appears to have been given to a consistent line-wide station entrance design, rather than a bespoke design solution that responds to and compliments this highly sensitive setting. I have given consideration to amendments to the station entrance arrangement, which I consider would assist in reducing its overall prominence but, I accept, having questioned TII on this issue at the oral hearing, that such amendments affect the internal layout and functioning of the station and that, in this instance, relocation of the single station entrance would affect passenger circulation to the internal mezzanine level.

11.22.270. Regarding the reconfiguration of the north east corner access to the park, the project landscape architect's offered the view at the oral hearing that the proposed park access arrangement may be considered an improvement over the existing arrangement and further advised that construction of the station entrance in the proposed location necessitates closure of one of the existing park accesses in this location (it should be noted that the landscape architect did not question the quality of existing elements, but rather questioned how they facilitate access into the park). I accept that an enlarged and clearly discernible access into the park may facilitate

improved connectivity into the park and I further accept that TII needs to maintain a certain level of access at this corner, particularly as the close proximity of the station entrance to the park is likely to have a positive effect on usage of the park throughout the operational phase. In this respect I would highlight to the Board that the project landscape architect informed the oral hearing on 26th February 2024 that retaining Wolfe Tone statue and Famine Memorial in their current location would require further tree removal, in order to provide an adequately sized circulation area.

11.22.271. The Wolfe Tone statue and Famine Memorial are both listed on the NIAH and are identified as being of Regional importance. In response to Inspector questions at the oral hearing regarding the project's approach to relocation of these elements, the project landscape architect and architect both advised that that they are an assembly and are proposed to be relocated as such, with a vista created through the corner of the park in order to bestow a sense of visual prominence. While I consider the removal/relocation of these elements is unfortunate and contributes to the changed character of this corner of St. Stephen's Green, I consider the proposed relocation strategy is reasonable in its treatment of these important cultural heritage items.

11.22.272. The proposed restoration strategy includes: a substantial hard and soft landscaping scheme, including the use of mature tree specimens; the use of a more traditional stone HVM bollard style (which was proposed at the oral hearing on 20th March 2024, and which can be seen in OH258); together with the previously discussed relocation of cultural heritage items. I consider this mitigation will have a limited effect in addressing the overall impact of construction on the landscape and visual amenity of the area.

11.22.273. The CGI images provided as part the application, both as part of the original application and to the oral hearing on 28th March 2024 (Ref. OH382), depict proposed landscaping from a high vantage point in +10 years and +30 years scenarios. In particular, the +10 year scenario demonstrates the relative immaturity of replacement planting at this location. I also consider it pertinent to draw the Board's attention to relevant imagery contained within the 'Metrolink – Architecture Station Integration and Common Components Overview Presentation' document submitted to the oral hearing on 13th March 2024 (Ref. OH236, Pages 57-70). Although they are not to be construed as CGIs, they nevertheless depict ground-level views from inside and outside the Green and I consider they provide a useful

illustration of the changed character of this section of the Green following completion of the development.

11.22.274. Successful restoration will take time and I consider it is important to acknowledge that it may take decades to restore the Green to anything like its existing character. In this respect I agree with the submissions by both the OPW and Frank McDonald, that the station will upset the symmetry and character of the park. Indeed, I would highlight to the Board a further submission by Bernard Seymour on 21st March 2024, where he forcefully questioned whether it will be possible to restore this centuries-old landscape. His opinion on the issue was that the scars on the landscape would be 'permanent and irrevocable' and that 'it will be impossible to recreate St. Stephen's Green in its entirety'.

11.22.275. For its part, the EIAR acknowledges the limited effectiveness of mitigation, stating that it will be difficult to offset impacts on the maturity and wholeness of this place and that the edge of the Green will appear raw, small-scaled and immature. However, the claim that landscape scars would be irrevocable was disputed by the project landscape architect, at the oral hearing, who offered the view that landscaping proposals can become a new aspect of the park.

11.22.276. To conclude, this is an issue where the Board will have to balance the significant impacts on the park that have been identified, against the wider benefits accruing from the proposed development.

11.22.277. ***Charlemont Station (LLCA23)***

11.22.278. As Section 27.5.4.24 of the EIAR states, the bulk of the proposed Charlemont Station is located under the Carroll's development and its surface expression is limited to the north and south ends.

11.22.279. For the construction phase, I acknowledge that common construction elements will be visible on the site for a prolonged period and will be visually disruptive to adjacent residents but, overall, I concur with Section 27.4.2.24 of the EIAR, that this location has medium landscape and visual sensitivity and such impacts will not be significant. Moreover, the building 2 Grand Parade, on which the site is located, has itself recently undergone renovation and extension works and there is an ongoing construction project on the opposite side of the Grand Canal, so

the presence of construction machinery/items is a relatively common sight in the area.

11.22.280. For the operational phase, subservient station elements such as the entrances, passenger/DFB lifts and the PRM drop-off structure will be located above ground and will not be prominent features in available views. The station is located within a Conservation Area, under which zonings DCC seeks to protect these areas from development that would have a negative impact on the amenity or architectural quality of the area. Further, 2 Grand Parade, under which the station is located, is a Protected Structure and its recent extension has a contemporary design and incorporates extensive glazing. I agree with the EIAR assessment, that the visual impact of these above ground station elements will be limited, in view of their relatively small scale.

11.22.281. I do not consider any significant landscape and visual impacts arise in this area of the alignment.

11.22.282. **Cumulative Impacts**

11.22.283. As the EIAR and Cumulative Impacts Addendum Report (Ref. OH98) point out, there are locations where other largescale development proposals may act in tandem with the proposal, giving rise to significant cumulative impacts. In preparing this cumulative assessment section, I have given consideration to the EIAR and Cumulative Impacts Addendum Report and I have also analysed available online planning records provided by Fingal County Council and Dublin City Council. I note that the Update to the Cumulative Impact Assessment does not identify additional projects that may give rise to significant cumulative adverse impacts.

11.22.284. **Alignment Wide**

11.22.285. I consider the BusConnects Swords to Dublin City Centre and Ballymun/Finglas to Dublin City Centre Bus Corridor Schemes (Refs. ABP-317121-23 and ABP-314610-22) have the potential to act in tandem with the proposed development, giving rise to significant cumulative impacts.

11.22.286. The BusConnects Swords to Dublin City Centre Bus Corridor Scheme relates to core bus corridor infrastructure works along the R132, between Pinnock Hill Roundabout and Parnell Square. The route of this project is contiguous to the

proposed development between Pinnock Hill and Nevinstown, where the proposed alignment deviates away from the R132 and toward Dublin Airport.

11.22.287. The BusConnects Ballymun/Finglas to Dublin City Centre Bus Corridor Scheme relates to core bus corridor infrastructure works along the R108/R135 and Church Street and Charles' Street. These works are contiguous to a large part of the City section of the proposed alignment, between the Northwood and Glasnevin stations.

11.22.288. I concur with the EIAR, that in circumstances where construction phases overlap there is potential for significant cumulative landscape and visual impacts. I also accept TII's point that there is little that can be done to mitigate the impact, other than the implementation of standard construction mitigation (incorporation of hoardings, protection of valued assets, etc).

11.22.289. Area AZ1

11.22.290. I consider the R132 Connectivity Project (ABP-310145-21) has the potential to act in tandem with the proposed development, giving rise to significant cumulative impacts. I note that the 'J Murphy (Developments) Ltd' development at Fosterstown (ABP-313331-22) referenced within the Addendum was refused permission by the Board on 17th April 2024.

11.22.291. The R132 Connectivity Project runs along the R132 between Lissenhall and Pinnock Hill and primarily comprises a reconfiguration of the carriageway layout and junction arrangements along the Regional Road. The development overlaps with the proposed development in a number of locations and if constructed at the same time, it has the potential to contribute to previously identified significant landscape and visual impacts.

11.22.292. For the operational phase, I concur with the EIAR prediction of significant positive cumulative effects, as both projects designed to integrate with each other and will enhance the landscape along the R132 corridor.

11.22.293. Area AZ2

11.22.294. Whilst I note that the EIAR predicted moderate/significant cumulative effects associated with a permitted hotel development (FCC Ref. 21A/0255 refers), I consider cumulative impacts would be moderate at worst. I do not consider the

landscape setting to be sensitive and, if undertaken together, I am satisfied that both construction sites will be read as part of the evolving character of the airport.

11.22.295. I do not consider any significant cumulative landscape and visual impacts arise in this area of the alignment.

11.22.296. Area AZ3

11.22.297. This section of the alignment is primarily greenfield in nature, lying between Dublin Airport and the M50. The EIAR cumulative impacts assessment and Cumulative Impacts Addendum Report identify an extensive list of other developments that have the potential to overlap with the proposed development and it does not identify potential cumulative landscape and visual impacts at Dardistown.

11.22.298. I have similarly reviewed planning authority records for the area and I do not consider any significant cumulative landscape and visual impacts arise in this area of the alignment.

11.22.299. Area AZ4

11.22.300. As the proposed alignment routes through the City, it will inevitably interact with a number of other proposed developments, including large-scale development. In view of the heavily urbanised character of the route alignment and surrounding area, construction sites and new developments are commonplace and are reflective of an ever-evolving city. I am satisfied, in the main, that the proposed development can be accommodated in tandem with other new developments without significant cumulative landscape and visual impacts arising. Some notable exceptions to this are discussed below.

11.22.301. The Board granted permission on 8th December 2023 for a largescale residential development, in a number of apartment block of up to 9 storeys in height, on land on the opposite side of the Royal Canal to the proposed Glasnevin station (ABP-317840-23 refers). If construction is undertaken at the same time as the proposed development, this development is likely to contribute to previously identified significant visual impacts associated with construction of the proposed Glasnevin station.

11.22.302. On completion, I consider the combination of the two developments is likely to have a moderate to significant impact on this landscape, which is designated as a

Conservation Area under the City Development Plan, by introducing contemporary, high-rise development. I consider this impact would be positive, contributing to activating and enlivening a prominent frontage along both the R108 and the Royal Canal Greenway. In reaching this conclusion, I would note that as part of the grant of permission for ABP-317840-23, the Board required that the approved development should have a maximum height of 9 storeys, on foot of a recommendation from the Inspector, in order to protect and preserve the visual amenity of the area.

11.22.303. The O'Connell Street Station, as I have previously set out, is intended to be provided in tandem with the permitted development known as Dublin Central Site 2. The proposed O'Connell Street station can be constructed in two scenarios, i.e. before overhead development and in-tandem with overhead development and in both scenarios significant demolition works are required. I have previously identified that the construction of the proposed development will have significant landscape and visual impacts and clearly the Dublin Central Site 2 development has the potential to contribute to such significant impacts, if construction of both elements takes place at the same time. I consider in-tandem construction a more preferable approach, as it removes previously discussed uncertainty regarding the retention of propped facades and will provide certainty over the redevelopment of this very important city centre site.

11.22.304. For the operational phase, I concur with TII's prediction of significant positive cumulative landscape and visual impacts. This site is a very important regeneration site on one of Dublin's principal streets and its redevelopment, including integral access to a high-quality public transport corridor, will have a transformative effect on the street.

11.22.305. The Tanat Limited development referenced by TII relates to a 22-storey office and hotel development on lands north of the proposed Tara station (ABP-302980-18 refers). Permission was granted for this development on 2nd April 2019 and the permission appears to have lapsed in late-2024. In the event that this permission were to be implemented, the development will itself have a significant visual impact and taken together with the scale of demolition required as part of the construction of the Tara station, is likely to have a significant cumulative visual impact. In particular the presence of a large, open plaza over the proposed station will further expose views of this adjacent high-rise building.

11.22.306. I note that the EIAR considered the Grand Parade Property Trading Co. DAC development would give rise to moderate-significant cumulative impacts on views in the vicinity. The Grand Parade development has now been completed and I do not consider the cumulative effects of these developments would be significant.

11.22.307. **Conclusion on Landscape and Visual Impacts**

11.22.308. I have considered all of the submissions made in relation to landscape and visual impacts and the relevant contents of the file, including the EIAR and relevant update reports provided to the oral hearing. Subject to specified exceptions below, I am satisfied that the potential for significant adverse impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions.

11.22.309. Arising from my assessment, I consider there is a likelihood of significant adverse landscape and visual impacts in the following locations:

- **Area AZ1:** Alignment section from Estuary to Swords Central Station for both construction and operational phases.
- **Area AZ2:** None.
- **Area AZ3:** Alignment section between the M50 and Northwood portal for both construction and operational phases.
- **Area AZ4:** Collins Avenue Station; Albert College Park Intervention Shaft; Mater Station; O'Connell Street Station and St. Stephen's Green Station for both construction and operational phases. Griffith Park Station and Glasnevin Station for the construction phase.

11.22.310. Additionally, I consider there may be potential significant cumulative adverse landscape and visual impacts during construction in the following locations:

- **Alignment Wide:** Associated with BusConnects Swords to Dublin City Centre and Ballymun/Finglas to Dublin City Centre Bus Corridor Schemes.
- **Area AZ1:** Associated with the R132 Connectivity Project, between Lissenhall and Pinnock Hill.
- **Area AZ2:** None.
- **Area AZ3:** None.

- **Area AZ4:** At Glasnevin Station, associated with redevelopment of 113 Phibsborough Road; at O'Connell Street Station, associated with the Dublin Central Site 2 overhead development; and at Tara Street Station, associated with 2-16 Tara Street/Tara House.

11.22.311. In each instance, I am satisfied that impacts have been correctly identified, assessed and understood. Further, with the exception of additional design amendments recommended within my assessment, I am satisfied that additional practical mitigation is not available, which would have the effect of reducing an identified impact below the 'significant' level.

11.22.312. I consider there is a likelihood of significant cumulative positive landscape and visual impacts in the following locations:

- **Area AZ1:** Along the R132 Regional Road, during the operational phase, arising from cumulative landscape and visual impacts associated with MetroLink and the consented R132 Connectivity Project.
- **Area AZ4:** At O'Connell Street, during the operational phase, arising from cumulative landscape and visual impacts associated with MetroLink and the consented Dublin Central GP Limited oversite development.

11.22.313. In view of the very large scale of the project, the proposed alignment and the nature of the landscapes through which it passes, which includes sensitive residential communities and environmental/architectural designations, I consider the likelihood of significant landscape and visual impacts is unavoidable in some locations. But I consider such impacts must be balanced against the very significant wider societal benefits that will accrue from the provision of a high-quality underground rail system. For example, residential communities in Area AZ1 that will be affected by construction will derive the significant benefit of being proximate to the Metro for its operational life and whilst O'Connell Street will experience significant impacts during construction, the Metro will contribute to revitalisation of this part of the City as part of a comprehensive site redevelopment.

11.22.314. In view of the interconnectedness of MetroLink and both the R132 Connectivity Project at Swords and the Dublin Central GP Limited oversite development at O'Connell Street, the cumulative impacts of delivery of these projects will give rise to significant benefits for the communities in which they are

located, in terms of enhancing and activating/enlivening their immediate surrounding areas.

11.22.315. To conclude my assessment, it is my opinion the long-term benefits of the development outweigh the identified significant landscape and visual impacts and that none would give rise to an unacceptable impact on a sensitive receptor that would justify a refusal of the Railway Order.

11.23. Interactions

11.23.1. Chapter 29 of the EIAR addresses interactions between environmental factors, a summary of which is contained as a matrix in Table 29.1. The assessment states that an interaction of impacts can occur when two or more types of environmental impact associated with a proposed development arise at a particular location or act upon an environmental resource.

11.23.2. Interactions

11.23.3. The potential interactions identified in the EIAR can be summarised as follows:

11.23.4. Interactions between Population and Land Use and Human Health

11.23.5. For the construction phase, community and commercial land-take as part of the development are identified as closely linked to impacts on amenity and general disruption during construction and the acquisition and demolition of private property. Human health impacts are further identified, arising from construction activity, in relation to emissions to air, noise and vibration and other emissions as well as psychosocial impacts, such as stress and anxiety. For the operational phase, the population and human health assessments identify positive impacts on accessibility, with positive outcomes for community and commercial receptors.

11.23.6. Interactions between Population and Land Use, Human Health, Traffic and Transport, Air Quality, Climate, Airborne Noise and Vibration, and Groundborne and Noise and Vibration

11.23.7. The assessment identifies significant interaction between factors, for both the construction and operational phases, with individual impacts addressed within each chapter.

11.23.8. Interactions Between Human Health, Population and Land Use, Air Quality, Climate and Landscape and Visual

11.23.9. For the construction phase, adverse landscape impacts have the potential to impact on community amenity and wellbeing, while tree/hedgerow/habitat removal can have minor impacts on air quality and climate. For the operational phase, improvements to the accessibility, attractiveness and the experience of recreational provision are predicted, which will be beneficial to human health. New/replacement planting will have positive air quality/climate impacts.

- 11.23.10. Interactions Between Electromagnetic Compatibility and Stray Current, Population and Land Use, Human Health and Infrastructure and Utilities
- 11.23.11. For the operational phase, the assessment identifies that the operations system could interfere with identified land uses at specialised research facilities (such as at Trinity College Dublin) and other sensitive land uses such as Dublin Airport, but the assessment considers the likely levels of emissions and receptors would be below guideline exposure levels with appropriate mitigation measures.
- 11.23.12. Interactions Between Airborne Noise and Vibration and Groundborne Noise and Vibration
- 11.23.13. Interactions between human beings and ground and airborne noise and vibration, with the impact stated to be dependent on the sensitivity of the receptor. Proposed mitigation measures are outlined in Chapters 13 and 14.
- 11.23.14. Interactions Between Biodiversity, Traffic and Transport, Airborne Noise and Vibration, Climate, Soils and Geology, Hydrology, Hydrogeology, Air Quality, Land Take, Infrastructure and Utilities and Landscape and Visual
- 11.23.15. For the construction phase, interactions between key ecological receptors and a variety of environmental factors are identified, including between traffic/transport and species mortality; noise, hydrology and air quality, which may contribute to habitat degradation; and soils and geology, whereby non-native species can be spread through soils and which can also be required to be removed. For the operational phase, landscaping proposals will enhance local biodiversity.
- 11.23.16. Interactions Between Climate, Hydrology and Hydrogeology
- 11.23.17. Interactions between climate change and flood risk are captured in the hydrology and hydrogeology assessments with reference to flood risk.
- 11.23.18. Interactions Between Climate, Traffic and Transport, Population and Land Use, Human Health and Air Quality
- 11.23.19. Construction traffic is identified as having the potential impact on air quality, indirectly impacting on communities, health and climate. Positive impacts are identified for communities and health, arising from the provision of a more sustainable traffic mode.

- 11.23.20. Interactions Between Hydrology, Hydrogeology, and Soils and Geology, Traffic and Transport, Population and Land Use and Human Health
- 11.23.21. Both the construction and operational phases are identified as having the potential to impact on surface and groundwaters, thus having indirect impacts on communities and human health, particularly for those using domestic well supplies.
- 11.23.22. Interactions Between Materials and Waste, Land Take, Infrastructure and Utilities, Hydrology, Hydrogeology and Soils and Geology
- 11.23.23. Interactions are identified as primarily occurring during construction. An interaction between material excavation, soil exportation/importation and contaminated land, with the impact dependent on the nature and extent of contaminated land.
- 11.23.24. Removal of and minor diversion of tributaries to main river systems are stated to give rise to interactions between land-take, hydrology, hydrogeology and infrastructure and utilities, alteration of drainage features and flow patterns and removal of overburden and bedrock.
- 11.23.25. Interactions Between Land Take and Population and Land Use
- 11.23.26. The loss of housing during construction will impact the population of the study area, with the loss of commercial properties having an impact on business activity.
- 11.23.27. Interactions Between Land Take, Infrastructure and Utilities and Landscape and Visual
- 11.23.28. Landscape and visual impacts associated with the permanent and temporary land take and utility diversion.
- 11.23.29. Interactions Between Infrastructure and Utilities, Materials and Waste, Traffic and Transport and Population and Land Use
- 11.23.30. Utility diversions and new installations have the potential to impact on the road network as lane closures may be required to facilitate these works. Transport of waste during construction will result in a presence of construction vehicles on the road network.
- 11.23.31. Interactions Between Agronomy and Traffic and Transport

- 11.23.32. Farming operations are identified as potentially impacted by construction traffic, with construction works also affecting agricultural activity and resulting in severance of agricultural land.
- 11.23.33. Interactions Between Agronomy, Population and Land Use, Land Take and Infrastructure and Utilities
- 11.23.34. Interruptions to utilities may occur during construction, due to land-take requirements. Economic activity is also anticipated to expand around the alignment.
- 11.23.35. Interactions Between Agronomy, Airborne Noise and Vibration, Air Quality, Climate, Biodiversity and Soils and Geology
- 11.23.36. Emission of pollutants and noise may give rise to indirect impacts on agricultural land during construction and construction activities can have a direct impact on soil quality, through removal or by degradation and the spread of non-native species or soil-borne diseases. For the operational phase, the project is identified as potentially accelerating land-use changes, with such changes potentially affecting climate sinks.
- 11.23.37. Interactions Between Materials and Waste, Infrastructure and Utilities, Traffic and Transport, Population and Land Use, Human Health, Air Quality, Climate, Soils and Geology
- 11.23.38. Materials stockpiling on-site during construction is identified as potentially having an impact on communities and human health, via air quality and traffic levels and the potential for vermin. Embedded carbon in materials and waste will also have an impact on climate. Positive impacts are predicted for the operational phase, for surrounding communities and climate, from the provision of a sustainable travel mode.
- 11.23.39. Interactions Between Materials and Waste, Biodiversity, Hydrology and Hydrogeology
- 11.23.40. Potential impact on key ecological receptors during construction due to interactions between materials and waste management and the hydrological and hydrogeological environment.
- 11.23.41. Interactions Between Archaeology and Cultural Heritage, Architectural Heritage, Hydrogeology and Soils and Geology

- 11.23.42. Dewatering and tunnelling are stated to have the potential to result in settlement, which may directly impact geological features and/or sensitive heritage structures.
- 11.23.43. Interactions Between Architectural Heritage, Airborne Noise and Vibration and Groundborne Noise and Vibration
- 11.23.44. Vibration may directly impact on the stability of heritage structures, with particular reference to tunnelling works below ground level.
- 11.23.45. Interactions Between Archaeology and Cultural Heritage, Architectural Heritage, Population and Land Use, Land Take and Infrastructure and Utilities
- 11.23.46. Both the construction and operational phases are identified as having the potential for impacting on heritage features (both direct and indirect) and indirectly on community amenity.
- 11.23.47. Interactions Between Archaeology and Cultural Heritage, Architectural Heritage and Landscape and Visual
- 11.23.48. The construction phase will impact on a number of local features of heritage value, with impacts on archaeology, cultural heritage and architectural heritage identified as the primary impacts.
- 11.23.49. The conclusion of Chapter 29 of the EIAR states that:

“Many of the potential impacts arising from the potential interactions were identified at a very early stage in the design process and in the EIAR preparation. This allowed for these interactions to be addressed in the design of the proposed Project and in the baseline and impact assessment studies undertaken for the EIAR. As a result, the potential impacts were either avoided altogether through design measures or they were addressed through specific mitigation measures, as summarised in Chapter 31 (Summaries of the Route Wide Mitigation & Monitoring Proposed). This early identification process helped to identify and minimise the potential for significant interactions of impacts arising. The mitigation proposals for specific environmental aspects also help to mitigate the potential effects of impact interactions as far as practicable.”
- 11.23.50. Assessment

- 11.23.51. Having regard to the nature and scale of the proposed development, and the characteristics of the receiving environment, I consider that there is potential for a wide variety of interactions between the various environmental factors.
- 11.23.52. Having reviewed the information submitted by the applicant, I consider that the EIAR has adequately identified the main potential interactions between the various environmental factors, as summarised above and in matrix format in Table 29.1 of the EIAR. Furthermore, having reviewed, assessed and interrogated the methodology, assumptions and evaluation of the likely significant impacts and the associated mitigation measures for various environmental factors over the course of the oral hearing, and throughout this report, I consider that the applicant's conclusion with regard to the interactions of environment impacts as set out above is robust and complete.
- 11.23.53. I accept that early identification and consideration of potential interactions has generally allowed for them to be avoided through design or addressed by means of mitigation measures, as set out in the corresponding sections of the EIAR and supplemented by additional commitments made over the course of the oral hearing.
- 11.23.54. In my assessment I have considered the interactions between factors and whether these might, as a whole, affect the environment even though the effects may be acceptable when considered on an individual basis. In my assessment of each environmental topic, I have considered the likelihood of significant effects arising as a consequence of interactions between factors. Most interactions such as, for example, the impact of air quality and noise and vibration on population and human health are addressed under individual topic headings. Having regard to the impacts which are predicted to occur having regard to the nature of the proposed development, mitigation measures, or as a consequence of proposed conditions, I do not foresee any likelihood of any of these interactions giving rise to significant additional effects on the environment beyond those identified under the relevant environmental topics.
- 11.23.55. In conclusion, therefore, I am satisfied that the applicant has adequately addressed the issue of interactions between environmental factors in accordance with the requirements of the EIA Directive and the 2001 Act. I am satisfied that there are no such additional effects, beyond those identified under the various

environmental topics and, therefore, nothing to prevent the approval for the development on the grounds of interaction between factors.

11.24. Reasoned Conclusion

11.24.1. Having regard to the examination of environmental information contained above, and in particular to the EIAR and supplementary information provided by the applicant, and the submissions from the planning authorities, prescribed bodies and observers in the course of the application, including submissions made to the oral hearing, it is considered that the main significant direct and indirect effects of the proposed development on the environment with the implementation of the proposed mitigation measures are as follows:

- **Population and Human Health:**

- The construction and operation of MetroLink will provide a high-frequency, high-capacity metro railway between Estuary and Charlemont that will have a long-term positive impact on population and human health in that it will aid in improving sustainable connectivity, support compact growth, reduce transport congestion and emissions, and reduce reliance on private vehicle trips, with consequent reductions in vehicle emissions, thus assisting in the delivery of climate change goals.
- Significant, permanent adverse impacts in respect of the compulsory acquisition of occupied housing at a number of locations and demolition of the Markiewicz Leisure Centre at Townsend Street, Dublin 2.
- Significant, temporary adverse impacts on population during construction, arising from airborne and groundborne noise and vibration, dust and traffic disruption. These will be mitigated through compliance with a Construction Environmental Management Plan, a Construction Noise and Vibration Management Plan, and best practice construction methods. Noise mitigation, including temporary rehousing as necessary, will be offered to eligible owners/occupiers where the construction is predicted to give rise to airborne construction noise level that exceeds specified parameters.
- Significant, temporary adverse impact on population during construction, arising from closure of the south western commuter rail line for a period of 5 months.

- **Biodiversity:**

- Significant, permanent adverse impacts on biodiversity during construction, arising from loss of Local Importance (Higher Value) habitat, including cumulative impacts arising from the loss of similar habitat as part of other developments, and the permanent loss of suitable Yellowhammer breeding habitat.
- **Land, Soils, Water, Air and Climate:**
 - Land Take and Agronomy: Significant, very significant and profound adverse impacts on a number of property owners affected by compulsory acquisition, which will not be mitigated other than through the payment of compensation and a commitment from TII in respect of engagement and assistance.
 - Soils and Geology: The potential for significant adverse impacts on soils and geology can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on soils and geology.
 - Water: The potential for significant adverse impacts on water can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on water.
 - Air and Climate: The potential for significant adverse impacts on air and climate can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on air and climate.
 - Airborne Noise and Vibration: In view of the nature and scale of construction works required to build MetroLink and, taken together with the urban and developed neighbourhoods through which it routes, there is a high level of noise that is unavoidable, at certain locations and at points of

the construction programme. There is a likelihood of significant residual adverse noise impacts in each of Area AZ1, AZ2, AZ3 and AZ4 at various stages of construction. The applicant proposes the erection of enhanced site hoardings at multiple construction site locations, which will attenuate noise to a certain degree, and in locations where noise levels remain above specified thresholds for extended periods, there will be access to additional mitigation under a Noise Mitigation Policy.

- Groundborne Noise and Vibration: Due to the nature of tunnelling with a Tunnel Boring Machine, unavoidable temporary adverse significant groundborne noise impacts are likely on all receptors within 65-75m of the tunnel centreline in areas where TBM tunnelling will take place (i.e. areas AZ2 and AZ4). I note that any one receptor is likely to experience these impacts for c. 2 weeks. Temporary adverse significant residual groundborne noise impacts are also likely for some receptors during mechanical excavation of station boxes at Glasnevin, Mater, Tara and Charlemont Stations and I am satisfied that these impacts cannot be avoided or mitigated due to the nature of groundborne noise, the extent and depth of the required excavations and the proximity to receptors, all of which are necessary to deliver a metro system within an urban environment.
- Electromagnetism and Stray Current: The potential for significant adverse impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on sensitive receptors.
- **Material Assets, Cultural Heritage and the Landscape**
 - Material Assets: In view of the primarily subterranean nature of the project, that requires very substantial excavation as part of tunnelling and station construction, the generation of large amounts of spoil that requires disposal is unavoidable. TII's approach to mitigating impacts on landfill capacity accords with the circular economy model, by seeking to minimise the

amount of material requiring disposal in this manner by seeking to have classified as a by-product (which can be reused) or by disposing of material to a soil recovery facility. Notwithstanding this, there is a likelihood of a significant adverse impact on national landfill capacity during construction, where the amount of excavated material requiring disposal to landfill is predicted to reduce overall national landfill capacity by 1-5%.

○ Traffic and Transportation:

- During the construction phase, I consider that there will be a range of short-term significant residual negative impacts in assessment zone areas AZ1, AZ2 and AZ3 due primarily to the very substantial number of HGV movements associated with the proposed development and the temporary traffic management measures associated with the construction of the alignment and stations and movement of construction vehicles. There will also be short-term significant negative impacts on the western and south western commuter rail lines, due to the need for temporary closure to facilitate track lowering at Glasnevin Station.
- In the operational phase, I consider that there will be a range of long-term positive impacts, including significant and profound impacts, due to improvements to public transport and the potential for greater interchange opportunities. This will include significant positive cumulative impacts with other transport projects such as BusConnects and DART+. I consider that there is potential for residual negative impacts on pedestrian comfort levels at certain stations, which will require monitoring in the operational phase and engagement with local authorities to determine if street furniture placement and pavement width can be maximised.

○ Heritage:

- Profound adverse impacts on Four Masters Park, its enclosing railings, gates and plinth walls and the Four Masters Cross and Healing Hands Sculpture that lie within the park during the construction phase, arising from the scale of clearance and excavation works proposed and the required presence of construction elements within the park for prolonged periods. Following the completion of construction, the Park will be restored

to a slightly different alignment and with a reduced area and with enclosing items reinstated (following restoration) and with the Four Masters Cross and Healing Hands sculpture relocated toward the centre of the Park.

- Profound adverse impact on the setting and character of the Protected Structure Santry Lodge's gate lodges, gateway and front boundary wall, which are part of the Protected Structure listing and which are to be demolished during construction. There will also be a very significant impact on Santry Lodge itself, arising from demolition of its gate lodges, gateway and front boundary wall. TII proposes to relocate the entrance arrangement, including stone walls, on a new alignment and further proposes to agree details of this relocation, together with wider landscaping, with Fingal County Council prior to the commencement of works in the vicinity of Santry Lodge.
- Very significant adverse impact on the setting and character of the Protected Structure and National Monument at St. Stephen's Green, including enclosing items and surrounding bollards and traditional street lamp-posts, during construction, arising from the scale of clearance and excavation works proposed and the required presence of construction elements within the park for prolonged periods. Following the completion of construction, TII proposes to restore the Green, including restoration of enclosing itself and relocation of the Wolfe Tone Sculpture and Famine Memorial. The restored Green will contain station elements and the restoration landscaping strategy will have a limited effect in addressing the overall impact of construction for a period of at least a number of years. The impact for the operational phase will therefore remain at the level of very significant.
- Very significant adverse impact on architectural heritage at O'Connell Street Upper, arising from proposed demolition works between Nos. 43-58 O'Connell Street Upper that includes demolition within the curtilage of a Protected Structure. Construction of O'Connell Street Station may take place in one of two scenarios (in tandem with or without oversite development) and in circumstances where station construction takes place

ahead of oversite development, TII proposes to prop and retain all of the O'Connell Street facades.

- Very significant adverse impact on the setting and character of the Protected Structure Carroll's Building at 2 Grand Parade, Dublin 6 during the operational phase, arising from the construction of a stairwell and passenger lift to the front of the building. I accept that these structures are required in their proposed locations, in order to provide for connectivity between the Luas Green Line and MetroLink at Charlemont.
- Significant adverse impact on Lissenhall Bridge, a Protected Structure and National Monument, during operation, arising from the construction of an elevated viaduct over the Broadmeadow River.
- Significant adverse impacts on Hedigans Public House (also known as the Brian Boru pub) at Prospect Road, Glasnevin, Dublin 9, and the Cross Guns Railway Tunnel, both of which will be demolished during construction. Regarding the Brian Boru pub, following multiple submissions on the loss of this community asset, TII proposes to engage with the pub owners to integrate or reference an element of the pub into the design of the proposed Glasnevin Station.
- Significant adverse impact on Our Lady of Victories Church, Ballymun Road, Dublin 9 during construction, arising from the scale of excavation works proposed and the required presence of construction elements within the church forecourt for prolonged periods. Following the completion of construction, TII proposes to reinstate and landscape the church forecourt.
- Landscape:
 - Significant adverse landscape and visual impacts at various locations in alignment areas AZ1, AZ3 and in AZ4 at Collins Avenue Station; Albert College Park Intervention Shaft; Mater Station; O'Connell Street Station and St. Stephen's Green Station for both construction and operational phases. Griffith Park Station and Glasnevin Station during the construction phase, related to the extent of clearance, demolition and (in some cases) demolition works required and the presence of large items of plant and machinery on construction sites for prolonged periods.

- Significant cumulative adverse landscape and visual impacts during construction, associated with the BusConnects Swords to Dublin City Centre and Ballymun/Finglas to Dublin City Centre Bus Corridor Schemes, the R132 Connectivity Project and at Glasnevin, O'Connell Street and Tara, associated with largescale developments in close proximity to the stations sites.
- Significant cumulative positive landscape and visual impacts in the operational phase in Area AZ1 associated with completion of both MetroLink and the R132 Connectivity Project, and in Area AZ4 at O'Connell Street associated with the oversite Dublin Central GP Limited development.

11.24.2. It is clear from the above that the proposed development will have a range of significant negative impacts, which will primarily occur during the construction phase of what will be one of the largest infrastructural projects ever completed in Dublin. Comprehensive mitigation measures and monitoring proposals have been proposed, but significant residual negative impacts remain in relation to a number of environmental factors. Notwithstanding the inability of the proposed measures to fully mitigate the significant impacts, I consider that the environmental effects would not justify a refusal to grant the Railway Order having regard to the overall benefits of the proposed development. I consider that it is not possible to construct a metro line in an existing urban/suburban area without negative impacts during the construction stage, due to the nature of the works and the necessary proximity to sensitive receptors.

11.24.3. In the operational phase, the proposed development will have a range of significant positive impacts for communities in the vicinity of stations as well as for the city and wider region and will assist the transition to more sustainable modes of transport and the transition to a carbon neutral society and economy. The proposed development is also likely to be transformative for the city in the longer term, in terms of providing high capacity public transport connections to greenfield lands that are zoned for development and to other lands in the vicinity of stations that may be able to support compact growth and more sustainable densities. The proposed development will also provide a high quality, high frequency and segregated metro railway connection

between the fast-growing town of Swords, Dublin Airport and Dublin City Centre, providing significant socio-economic benefits.

- 11.24.4. The negative impacts on affected landowners, noting in particular the large number of residential properties to be compulsorily acquired, is particularly notable and is a regrettable aspect of the proposed development. I consider, however, that the acquisition of the identified lands and properties is justified by the exigencies of the common good and the established need to construct a metro line and stations within existing urban and suburban areas that will connects to other public transport modes at key interchange locations and deliver very significant benefits to the city.
- 11.24.5. On balance, I consider that the long-term positive impacts for the common good which will be supported by the proposed development outweigh the primarily short-term negative impacts on particular receptors and aspects of the environment during construction.

12.0 Compulsory Acquisition

12.1. Format of Draft Railway Order

12.1.1. Part 3 of the Draft Railway Order relates to 'Acquisition and Possession of Land and Rights' and contains a series of Articles setting out the powers of TII to: acquire lands, easements and other rights over lands; extinguish public rights of way; extinguish and/or interfere with private rights; use air space; take temporary possession of land. It also sets out the period within which TII may compulsorily acquire land and interests in land.

12.1.2. The Draft Railway Order includes a series of Schedules, of which the following are relevant to the issue of land acquisition:

- **Second Schedule:** Land which may be acquired.
- **Third Schedule:** Substratum land which may be acquired.
- **Fourth Schedule:** Land of which temporary possession may be taken.
- **Fifth Schedule:** Land over which rights of way and other easements may be acquired.
- **Sixth Schedule:** Basements (under a public road) which may in whole or in part be acquired or affected.
- **Seventh Schedule:** Structures to which brackets, cables, wires or other fixtures may be attached.
- **Eighth Schedule:** Land upon which pole(s) may be erected.
- **Ninth Schedule:** Public rights of way which may be extinguished.
- **Tenth Schedule:** Private rights which may be extinguished.
- **Eleventh Schedule:** New roads which may be constructed.
- **Twelfth Schedule:** Public roads which may be altered.
- **Thirteenth Schedule:** Agreements presented to Oral Hearing.

12.1.3. The affected lands are also identified in the Book of Reference and are illustrated in a series of Property Details drawings.

12.2. Updates

12.2.1. Oral Hearing

- 12.2.2. The applicant submitted a number of documents and drawings relevant to the issue of compulsory acquisition at the oral hearing.
- 12.2.3. On 19th February 2024 a submission was made to the oral hearing by Michael Horan, TII's Head of Land & Property Acquisition (Ref. OH34). Mr Horan's submission related to updates to the Book of Reference and the MetroLink 'Land Acquisition Strategy' (LAS).
- 12.2.4. The proposed changes and updates to the Book of Reference were stated to have arisen due to changes in ownership, new information coming to light, requests for service of documents to an alternative address and other events. The proposed amendments, and the reasons for each change, are set out in Appendix 1 of Mr Horan's submission (recorded separately as OH35). Mr Horan advised that these proposed amendments related to 793 interests out of a total of 5,944 interests contained in the original submitted Book of Reference.
- 12.2.5. Mr Horan also provided an overview of the MetroLink LAS, a copy of which was appended to his submission (Ref. OH36). The LAS sets out TII's proposed arrangements for the provision of information and assistance to residential and commercial property interests affected by the CPO. A key aspect of the LAS was stated to be early engagement with affected persons prior to confirmation of the RO and service of a notice to treat in an effort to assess their needs, individual circumstances and, if possible, reach a conditional pre-agreement. Mr Horan stated that TII acknowledges the importance for residential property owners to be able to plan their affairs with as much notice and certainty as possible, hence the introduction of a discretionary pre-agreement scheme, which is non-binding on property owners.
- 12.2.6. It is proposed to provide owner-occupiers with the services of a Buyer's Agent, funded by TII, to search for and assist in sourcing suitable alternative accommodation property. For residential tenants, a Lettings Agency will be appointed to help identify alternative accommodation with TII considering meeting

relevant and reasonable costs, such as rent payments for a period of up to one year, together with any reasonable costs.

- 12.2.7. For commercial property, it was stated that TII will assist businesses in their business planning through information provision and dialogue and that an agency service will be provided to assist in the search for suitable alternative accommodation. Mr Horan stated that TII recognises the importance of advance information to ensure a smooth relocation of businesses and that TII will seek to provide a longer relocation period than the normal statutory process provides.
- 12.2.8. A copy of the MetroLink CPO Guidelines, dated September 2022, was also appended to Mr Horan's submission (Ref. OH37). This is an information document provided to the public during public consultation and comprises guidance for affected landowners in the form of 'Frequently Asked Questions'.
- 12.2.9. Also on 19th February 2024, the applicant submitted amendments to proposed landscaping along the R132 corridor, together with associated amendments to the proposed CPO schedule (Ref. OH23). The proposed amendments are discussed in the Schedule of Updates (Ref. OH17), where the applicant states that residents have requested that green space is returned to its existing condition following the completion of construction, rather than the proposed network of footpaths that is proposed in the Railway Order. They are also shown in the document 'R132 Landscape Amendments' (Ref. OH18). The proposed landscaping amendments have implications for the proposed CPO process, as shown in property drawing No. ML1-JAI-BOR-ROUT_XX-DR-Y-01012, which confirms that the northern-most area of open space at Estuary Court and open space at Seatown Villas that is not directly affected by the route alignment will now be subject to temporary acquisition.
- 12.2.10. Over the course of the oral hearing TII provided letters from Dublin City Council (Ref. OH76) and Fingal County Council (Ref. OH147) that contain agreed 'conditions' that they are requesting be included in the Thirteenth Schedule of the Railway Order, a number of which are relevant to CPO. Letters were also provided from Waterways Ireland (Ref. OH166) and Uisce Éireann (Ref. OH89), which includes discussion of issues pertaining to CPO.
- 12.2.11. On 19th February 2024 TII submitted a document to the oral hearing entitled 'Charlemont Drop-Off' (Ref. OH21), which contained an environmental assessment

of the proposed PRM drop-off facility at Charlemont, which was shown on the original alignment and structures drawings but which was not identified on the original property drawings. This PRM facility was also identified in the updated drawings pack provided on 25th March 2024 (Ref. OH323) as requiring permanent and temporary land acquisition.

12.2.12. On 21st February 2024 TII provided a 'Draft Guidance Note for Developers' (dated 2023) to the oral hearing, which outlines safeguarding requirements, including designated exclusion and protection zones. This Guidance was subsequently updated on 27th March 2024 (Ref. OH378) and I note that its status was updated from 'Draft' to 'Outline'.

12.2.13. On 25th March 2024 TII provided an updated drawings pack (Ref. OH323) to the oral hearing that includes updates to the property drawings at various locations along the route alignment.

12.2.14. On the final day of the oral hearing, 28th March 2024, the applicant's legal representative Declan McGrath SC outlined to the oral hearing that further proposed updates to the Book of Reference were required, but that these would take time to produce. This was subsequently requested by way of a request for further information, as detailed below.

12.2.15. **Further Information**

12.2.16. Subsequent to the close of the oral hearing, the Board requested the following further information from TII on 26th April 2024:

"It is noted from TII's written responses to the written submissions and subsequent submissions at the oral hearing that a number of modifications are proposed to the Draft Railway Order Book of Reference to address errors, to clarify extent or nature of proposed acquisition and to reflect proposed modifications arising from the oral hearing.

You are requested to submit an updated Book of Reference and associated property drawings, as appropriate, to clarify this matter. In the interests of clarity this updated Book of Reference should also incorporate the proposed updates presented at the oral hearing (for example in the witness statement of

Michael Horan and the R132 landscape amendments, both presented on 19th February 2024).

Any proposed changes to the Book of Reference should be clearly indicated through the use of colour or with a table in a separate cover letter.”

12.2.17. Following the granting of additional time, the applicant submitted a response on 12th June 2024, which included an updated Book of Reference (i.e. updated Schedules to the draft Railway Order). The cover letter states that this captures all modifications to the Book of Reference since its submission with the Railway Order application. Two tables were also provided to identify the proposed changes. Table 1 describes all the changes as presented at the oral hearing on 19th February 2024 and it is stated that the only changes since the 19th February 2024 are entries that have been updated as a result of changes to the Property Plans. With regard to those Property Plans, the cover letter stated that the only proposed changes are those that were submitted during the course of the oral hearing, which are listed in the submitted Table 2.

12.2.18. For the Board’s reference, the affected Property Plans are:

- ML-P 304 5-6 (Ref. OH29), submitted on 19th February 2024.
- ML-P 301 H-J, ML-P 301 T-U and ML-P 307 O-A (Ref. OH323), all submitted on 25th March 2024.

12.2.19. The cover letter notes that a further updated property plan ML-P 301 S-T was submitted at the oral hearing on 25th March 2024 (Ref. OH323), but that its only purpose was to update an element of the alignment drawing and that it was not associated with any changes to the Book of Reference.

12.2.20. Should the Board be minded to approve the Railway Order, I recommend that these changes be incorporated into the appropriate Schedules.

12.2.21. Given the nature and extent of documentation submitted by the applicant over the course of the oral hearing, they were requested to place new public notices, inviting the making of further submissions in relation to this information and the updated Book of Reference detailed above. A total of 42 No. further submissions were received (2 No. of which were subsequently withdrawn) and these are detailed and summarised in Appendix 2. The submissions by Estuary Court Residents

Association (1FS23), the McGreevy and Taylor Families (1FS31), Lidl Ireland GmbH (1FS30) raised the topic of compulsory acquisition.

12.2.22. **Post-Oral Hearing**

12.2.23. The applicant's response to the Wild Ireland Defence CLG oral hearing submission, which was submitted to the Board on 31st January 2025, provides details of a proposed PFAS Management Strategy at Dublin Airport. In relation to the topic of land take, I note the applicant's statement that there is no change, as the proposed area to be used for material management is within the proposed temporary land take.

12.2.24. This information was circulated to observers for further submissions. A total of 12 No. were received, none of which related to the topic of compulsory land acquisition.

12.3. **Assessment**

12.3.1. The matters that the Board must consider before confirming the compulsory acquisition of lands are not clearly prescribed in legislation. Case law indicates that the Board must be satisfied that the applicant has demonstrated that the CPO is clearly justified by the exigencies of the common good and that the acquisition must be both lawful within the powers of compulsory purchase and proportionate to the objective to be met.

12.3.2. Generally, this requires the following minimum criteria to be satisfied:

- There is a community need that is to be met by the acquisition of the lands in question,
- The proposed project and the associated acquisition of lands are suitable to meet that community need,
- Any alternatives proposed to meet the community need have been considered but are not demonstrably preferable,
- The works to be carried out should accord with or at least not be in material contravention of the provisions of the statutory development plan, and
- The extent of land-take should have due regard to the issue of proportionality.

- 12.3.3. I will address each of these criteria in turn below, along with other issues arising from the submissions received from affected landowners/occupiers. The Board will note that some of the criteria have also been addressed in other sections of this report, and, therefore, this Section should be read in conjunction with same, where relevant.
- 12.3.4. The applicant's position with regard to the principles to be applied in confirmation of a CPO are set out in Section III of Declan McGrath SC's legal submission to the oral hearing on 19th February 2024 (Ref. OH39). This includes relevant extracts from case law and is generally consistent with the criteria set out above, although I note that the applicant does not refer to a need to demonstrate that works should accord with or at least not materially contravene the Development Plan. As addressed elsewhere in this report, the applicant's position is that the concept of material contravention of a development plan is not one which has any application to the approval of a Railway Order under the 2001 Act, as the jurisdiction of the Board to grant planning permission in material contravention of a development plan under section 37(2) of the 2000 Act is only relevant in the context of an application for planning permission made under the 2000 Act.

12.4. Community Need

- 12.4.1. The applicant's legal submission states that there is a clear community need which will be met by the approval of the Railway Order, as addressed in Chapter 3 of the EIAR.
- 12.4.2. As detailed in Section 9.3 above, I consider the need and justification for the proposed development has been adequately established. It is identified in the applicant's Planning Report as having been included in every relevant transport study and policy document going back as far as 'A Platform for Change - An integrated transportation strategy for the Greater Dublin Area (GDA) 2000 to 2016' (Dublin Transportation Office 2001). It is further identified in the Planning Report as a critical part of the proposed integrated transport system for the Greater Dublin Area and I note that it is supported by the GDA Transport Strategy 2022-2042. I also note that it is directly identified in the recently published National Planning Framework First Revision (April 2025) as a key priority for the sustainable growth of Dublin into the future (Page 31) and a key future growth enabler for Dublin (Page 33).

- 12.4.3. I accept the comment in Section 3.3.1 of the EIAR that the project will contribute to transformation of the lives of the c.1.6m people projected to live in the Dublin region by 2040 and I consider that it will help Ireland meet its climate change targets in line with Climate Action Plans 2024 and 2025.
- 12.4.4. In view of the above, I consider the proposed development will benefit the community as a whole at a local, county, regional and national level. While there will be adverse impacts, including significant and profound impacts, for individual land and property owners, occupiers and people whose homes are to be acquired, I consider that the proposed acquisition can be justified by the exigencies of the common good. I conclude, therefore, that the community need for the proposed development has been established.

12.5. Suitability of Project and Lands to Meet Community Need

- 12.5.1. The applicant's legal submission notes the Board's obligation to be satisfied that each parcel of land which is the subject of acquisition is suitable for carrying out the scheme and that its acquisition is reasonably required for the construction and/or operation of the scheme, such that Metrolink cannot be constructed and/or operated without the acquisition of the land. It also notes that the Board will have to be satisfied that any period of temporary acquisition is as short as reasonably possible and that any land to be permanently acquired cannot reasonably be acquired for a temporary period only. The submission refers to Chapter 21 of the EIAR ("land take") which, it contends, provides the basis for the Board to be satisfied that it is necessary for each of the parcels of land identified to be acquired.
- 12.5.2. The lands that it is proposed to compulsorily acquire are a mix of greenfield and brownfield/previously developed lands, including the acquisition of buildings to be demolished. Through alignment sections AZ1-AZ3 the route passes primarily through undeveloped, greenfield lands, whereas in section AZ4 the alignment runs through a more developed, city environment. Of particular note, Table 11.53 of the EIAR identifies that 14 No. occupied residential buildings will be acquired and demolished across the alignment - 5 No. buildings in section AZ1, 3 No. buildings in sections AZ2 and AZ3 and 6 No. buildings in section AZ4. Section 24.6.1.2 of the

EIAR states that 85 No. residential units will be acquired in total, including the College Gate apartment complex at Townsend Street, which contains 70 No. units.

- 12.5.3. Chapter 21 of the EIAR, Land Take, discusses the impact of the development on residential, commercial and public areas that are to be acquired either permanently or temporarily as part of the project. Predicted impacts range from slight to profound, dependent on the sensitivity of the receptor, and I note that Section 21.5.1.1. of the EIAR states that temporary land take required for construction activities has been minimised wherever possible and boundaries adjusted to avoid and/or minimise impacts as far as possible.
- 12.5.4. I refer to the planning assessments carried out in Sections 9 and 10 above and the Environmental Impact Assessment and Appropriate Assessment carried out in Sections 11 and 13 of this report. I have reviewed the submitted drawings and application documentation, considered the submissions made, conducted a number of site inspections and held an oral hearing. Having considered these matters, I am satisfied that the extent of land that would be permanently or temporarily acquired is determined by the specifications for the proposed development and is generally driven by technical engineering requirements.
- 12.5.5. I consider that the extent of lands that it is proposed to acquire is proportionate to the identified community need and I do not consider that the applicant is seeking to acquire lands in excess of the minimum required to achieve the project objectives. Further, I am satisfied that all of the lands identified in the relevant Railway Order Schedules are required in connection with the proposed development and that they are suitable for such use.

12.6. Consideration of Alternatives

- 12.6.1. The applicant's legal submission states that alternatives to the scheme are addressed in Chapter 7 of the EIAR and that this includes an assessment of alternative route options and an explanation of the evolution of the design of the route of MetroLink. It also states that a copy of the MetroLink Preferred Route Design Development Report 2019 was provided at the oral hearing. The applicant considers that the evidence before the Board demonstrates that there are no

alternative means reasonably available that better meets the identified community need.

- 12.6.2. I have assessed the issue of alternatives in detail in Section 11.4 above. I note that the examination of alternatives included an evaluation of Do Nothing, extensive consideration of alternative alignments, station options, construction methods and related matters.
- 12.6.3. There is much opposition within the submissions received to the proposed route alignment, particularly with regard to the Swords area, certain parts of the city centre alignment and the proposed termination point at Charlemont. The location of certain stations such as Collins Avenue, Mater, Tara Street and St. Stephen's Green, as well as the Albert College Intervention Shaft, were also queried. These matters were the subject of considerable debate during the oral hearing, as detailed in the abovementioned sections of this report.
- 12.6.4. However, as per my assessment in Section 11.4, I consider that the process undertaken by the applicant has included a robust and extensive assessment of alternative options having regard to planning and environmental considerations, policy context, economic and social factors, as well as the stated project need and objectives. This iterative process took place over a number of years and involved extensive public and stakeholder consultation. I consider the applicant's approach to the consideration of alternatives was reasonable and rigorous, and I consider the proposed alignment and station locations are those which best satisfy these factors and objectives. I generally concur with the reasons for choosing the preferred option, as presented in the EIAR, and subject to the additional modifications and commitments presented at the oral hearing.
- 12.6.5. With regard to Tara Station, the construction of this station will entail very extensive demolition of both commercial and residential buildings, including the College Gate apartment building that also accommodates the Markievicz Leisure Centre.
- 12.6.6. When considering alternatives, I would note that it is not simply a 'numbers game' where the option with the least amount of property acquisition is automatically the optimal option. The documentation submitted with the Railway Order application sets out the considerable number of options/alternatives that were considered at Tara Station (and at other stations). Having regard to the project objectives and the desire

to achieve a high level of inter-connectivity to other transport modes, I consider the principle of a station at Tara Street, which facilitates connectivity to the Irish Rail network, to be a key element of the project. Given the urban context of the existing railway station, which is heavily constrained by existing development on all sides (other than the vacant site at the corner of Tara Street and Poolbeg Street where permission is in place for sizable commercial development), it is clear that any attempt to construct a metro station at this location would require extensive acquisition and demolition.

- 12.6.7. The property acquisition at Tara Street will have negative impacts on both the owners and occupiers of the residential units, particularly in the context of an ongoing housing crisis. I would also acknowledge that there will be a wider impact on the Inner City as a result of the loss of Markievicz Leisure Centre, which is a valuable public amenity and is described by observers as the only large public swimming pool in the city centre.
- 12.6.8. For any particular property, there is generally an alternative available, i.e. to shift the tunnel alignment laterally. However, in a city environment this will likely just shift the impact onward, to a different landowner/occupier(s). I also consider it important to acknowledge that in a city environment there is a high likelihood of interaction with residential communities and, in view of the scale of the required station boxes in particular, it is likely to be impossible to construct a Metro without some level of building demolition. What is important is the iterative design process and that there is a detailed consideration of alternatives, in terms of alignment, station location and layout and construction methodology, etc. I am satisfied that this was undertaken by TII, as detailed in Section 11.4.

12.7. Accordance with Policy

- 12.7.1. As detailed in Section 9.2 above, I am satisfied that the principle of the proposed development has strong support at national, regional and local levels in terms of planning, climate and transport policy.
- 12.7.2. I am satisfied that the proposed development is generally consistent with applicable planning policy and, more particularly, is explicitly supported by policies and objectives of both the Fingal County Development Plan 2023-2029 and the Dublin

City Development Plan 2022-2028. This consistency is discussed in detail in Section 9.2 of my report.

- 12.7.3. Notwithstanding the foregoing there are, however, a number of aspects of the proposed development that are not consistent with particular policies and objectives of the two Development Plans. These are addressed throughout my report and include issues relating to Biodiversity, Heritage, green infrastructure and cycle parking provision. The issue of material contravention is raised in a number of the submissions received, whereby it is claimed that granting permission for MetroLink would be a material contravention of the relevant CDP. I note TII's Legal Submission, which makes the following point regarding the concept of 'material contravention' in the context of a Railway Order application:

"It is suggested in certain submissions to the Board that the grant of approval for Metrolink would be a material contravention of either the Fingal County Development Plan or the Dublin City Council Development Plan. It is important to emphasise that the concept of material contravention of a development plan is not one which has any application to the grant of 4 approval under the 2001 Act. Section 37(2) of the 2000 Act establishes the jurisdiction of the Board to grant planning permission in material contravention of a development plan. However, that section is only relevant in the context of an application for planning permission made under the 2000 Act. It has no application to the consideration of an application for approval of a Railway Order under the 2001 Act."

- 12.7.4. As addressed in Section 9.17, I have concluded that the most reasonable approach to take is that the issue of 'material contravention' is not one that arises with regard to a Railway Order application, which is not a planning application, and which is not made under the 2000 Act.

12.8. **Issue of Proportionality**

- 12.8.1. In considering the compulsory acquisition issue, the Board is required to apply a test of proportionality and to satisfy itself that the impairment of affected property owners' rights arising from the compulsory acquisition is not disproportionate. The applicant's legal submission refers to the Supreme Court judgment of McKechnie J in Reid v

Industrial Development Authority, where it was found that the exercise of the power of compulsory acquisition “must be granted and carried out in such a way that the impairment of the individual's rights must not exceed that which is necessary to attain the legitimate object sought to be pursued”.

- 12.8.2. The applicant contends that there is sufficient information before the Board for it to be satisfied that the approval of the Railway Order and the confirmation of the acquisition of the identified lands are a proportionate response to the identified community need and that the acquisition of the lands are reasonable, necessary for the construction and/or operation of MetroLink and that the impairment of the rights of property owners goes no further than reasonably required to meet the community need.
- 12.8.3. While the community need for the proposed development has been adequately established, the extent of land and property acquisition that is proposed in this Railway Order application is substantial. In particular, I believe that the number of dwellings that it is proposed to acquire is unprecedented in recent times. Given the constitutional protections afforded to private property rights, the issue of proportionality therefore needs careful consideration.
- 12.8.4. At the outset, it must be noted that any attempt to retrofit an entirely new partially underground railway corridor, including large station boxes, through primarily developed urban and suburban areas will unavoidably require substantial land acquisition, be it above or below ground, as well as land for stations and associated infrastructure such as depots etc. I acknowledge that efforts could be made to avoid areas where largescale acquisition of housing is required, however it must be borne in mind that avoidance of residential neighbourhoods will have consequential impacts on accessibility and the level of integration of MetroLink into the city's residential neighbourhoods. This approach may jeopardise the ultimate success of the system. Further, in the case of Tara Station, it would result in the omission of an interchange with the Irish Rail network in the City Centre, constraining the ability of the system to accommodate more distant users.
- 12.8.5. On balance, therefore, I consider the extent of proposed land and property acquisition to be proportionate to the very significant public benefits that will accrue from the delivery of a high quality and high-capacity electrified metro railway linking

the fast-growing town of Swords to Dublin Airport and the city centre. These benefits will be economic, social and environmental and, given the climate crisis, the proposed development is likely to encourage a modal shift to public transport.

- 12.8.6. An issue that I consider to be of relevance to the issue of proportionality is the application of 'Limits of Deviation' (LoDs), which effectively allow for micro-siting of the tunnel alignment within a 3-dimensional defined corridor. As detailed in Section 9.18, I consider the principle of LoDs to be acceptable, given the heterogeneous receiving environment above and below ground and the complexities and complications that may arise during detailed design and construction. I further note that the use of such LoD has a long tradition in Ireland's railway consenting process and were applied by the Board in the previous Metro North and DART Underground Railway Orders.
- 12.8.7. I note that the applicant has proposed restrictions to the originally proposed LoDs, both scheme-wide and in certain sections of the alignment. For example, on 19th February 2024 the applicant proposed that the upward LoD be reduced to 1m (Ref. OH8) and reference 3.17 of the Final Schedule of Additional Environmental Commitments (Ref. OH376) contains a number of commitments to constrain the LoDs in specified areas.
- 12.8.8. I consider it reasonable and prudent that appropriate LoDs be applied to the land acquisition in circumstances where the applicant does not have a full appreciation of all ground conditions across the alignment and where they cannot reasonably be expected have such information until more extensive ground investigations are undertaken, as part of the final construction specification, by the appointed contractor.
- 12.8.9. I am satisfied, therefore, that the principle of LoDs is compatible with the issue of proportionality, which is a core element that the Board must consider in deciding whether to grant the Railway Order.

12.9. Issues Common to Multiple Submissions

- 12.9.1. Many of the submissions received from affected landowners/occupiers raise issues relating to planning and environmental matters as well as issues relating to the proposed land acquisition. Indeed, many landowner/occupier submissions solely

raise planning and environmental issues and no specific objection is made to the proposed compulsory land acquisition. Planning and environmental issues are addressed in detail in the relevant sections of this report and this section is therefore limited to addressing matters directly relating to the proposed land acquisition.

12.9.2. At the outset, I note that the EIAR acknowledges that the permanent acquisition associated with the proposed development will result in negative impacts, including significant to profound impacts, on many property owners/occupiers, with the principal mitigation measure being the compensation process.

12.9.3. Acquisition of Residential Units

12.9.4. A stated total of 85 No. dwellings are proposed to be acquired and objections have been received from a number of the affected residents, including Julianna and Joe Boland and Family (Refs. S155, OH201 and 2FS8), Aine Wellard (Ref. S4), Maria O'Connor (Ref. S178), Marie Balfe (Ref. S179), Monica Deering (Ref. S195) and a number of apartment owners/occupiers at the College Gate complex (Refs. S17, S38, S61, S77, S103, S147, S158, S177, S184, S201, S206, S285, S294, S302, S308, OH255, OH256 and OH257).

12.9.5. I am satisfied that the applicant has demonstrated that the CPO "is clearly justified by the exigencies of the common good" and has satisfied the minimum criteria as outlined above, but the number of occupied homes that are proposed to be acquired is very substantial and would appear to be unparalleled in recent times.

12.9.6. The number of dwellings affected by the development is a function of the urban landscape through which the route alignment runs, the large size of underground station boxes and the proposed construction methodology. In the northern section, the alignment closely follows the R132 Swords Road, before turning underground north of Dublin airport, and from Northwood the alignment turns underground, running below densely developed areas of the city. Station locations are primarily greenfield or undeveloped, but in a number of city locations in particular the scale of station boxes extends onto developed lands and the proposed construction methodology necessitates above ground clearance. The location where the greatest acquisition of housing is required is at Tara Station, where the College Gate development, a complex of 70 No. apartment units (and additional ground floor community uses), will be demolished in order to facilitate station construction. I

consider the loss of occupied housing is one of the most significant construction phase impacts of the proposed development but, I acknowledge that this is an unavoidable consequence of the proposed development as each of the housing units to be acquired and demolished is either located along the tunnel/route alignment or is within a station box footprint.

- 12.9.7. The written and oral hearing submissions by Julianna and Joe Boland highlight the mental and emotional stress of long-term uncertainty that her family has lived with, associated with the previously approved Metro North project and the current proposal, both of which involve compulsory purchase of their family home and business. The submissions by Maria O'Connor, Marie Balfe and Monica Deering similarly raise the issue of stress and the impact of housing loss on the inner city community. A common submission was made by a number of owners of units at College Gate, expressing frustration regarding the impact of uncertainty on the appearance and condition of common areas within the building and regarding delays with the acquisition of apartments by the applicant.
- 12.9.8. In responding to these objections, both in the Response to Submission document and at the oral hearing, the applicant acknowledged the need for residents affected by compulsory acquisition to be able to plan their affairs with as much notice and certainty as possible and referred to provisions contained within the LAS, whereby the applicant proposes early engagement with affected residents and with the intention of reaching a conditional pre-agreement. A buyers agent or lettings agent will also be funded, to assist affected residents with sourcing a replacement property.
- 12.9.9. In relation to the submissions by Maria O'Connor, Marie Balfe and Monica Deering, who are tenants of the DCC housing at Townsend Street, I note that 'condition' No. 2 of the agreement between TII and DCC (Ref. OH76) contains a commitment that TII will continue to liaise with DCC on all aspects of the relocation of the residents of Luke Street and Townsend Street (specifically 23 and 34 Luke Street and 25-32 Townsend Street).
- 12.9.10. As I have set out in Section 9.3, I consider the applicant has demonstrated a need that will advance the common good and which will be met by the proposed development and facilitated by its associated CPO. I further consider that the acquisition of the identified housing is necessary to deliver the proposed

development, that the extent of acquisition is proportionate to the identified need and that a thorough consideration of alternatives, including alternative route alignments has taken place over a prolonged period. While the acquisition will have significant and profound impacts on individual properties and the people residing therein, the delivery of the proposed development is of strategic importance at a local, regional and national level, and will be of significant benefit to the common good of the population and economy of Dublin City and the Eastern Region, in terms of the provision of high-capacity public transport and facilitating economic development and the considerable level of compact growth that is forecast for the City under the National Planning Framework.

12.9.11. I acknowledge the applicant's proposed implementation of a LAS, which I consider represents a reasonable framework under which to engage and assist affected homeowners/occupiers. However, I do not consider this will fully mitigate the impact of the development on those affected by the loss of their home. This is a difficult case for the Board to determine. Ultimately, however, I consider that the wider benefits accruing from the development outweigh the impacts on affected homeowners and, on that basis, I consider the proposed acquisition of the identified dwellings to be acceptable.

12.9.12. Compensation and Tax Treatment

12.9.13. A number of observers raised matters relating to compensation for land acquisition. Such matters are not within the remit of the Board and will be subject to separate compulsory purchase practice and procedures, should the Board approve the Railway Order.

12.9.14. Another matter raised in relation to compensation (refer, for example to the submission made by Anne G Meehan (Refs. S13, OH83 and OH222) related to substratum land acquisition. Rule 17, introduced by s.48 of the Planning and Development (Strategic Infrastructure) Act 2006 states that:

"The value of any land lying 10 metres or more below the surface of that land shall be taken to be nil, unless it is shown to be of a greater value by the claimant."

- 12.9.15. The submissions by Sudway & Company Ltd. on behalf of Harcourt Terrace owners (S85, S167, S250, S314) contend that it is not credible that such legislation can be introduced and asks that the Board seek legal clarity from the Courts on this matter.
- 12.9.16. Again, the Board has no role in the assessment of compensation payments or in the formulation of legislation and I do not consider that there is any need for the Board to refer this matter to the Courts.
- 12.9.17. Both the Townsend Apartment Management Company (Ref. OH255) and Tom Corr (Ref OH257), who made a submission on behalf of investor owners of apartments in the College Gate building (Ref. OH257), also raised the issue of Capital Gains Tax for investors who own property to be acquired and outlined what they consider to be unfair tax treatment under the CPO process, with regard to the availability of roll-over relief. As with compensation more generally, the tax treatment of said compensation is a matter entirely outside the remit of the Board.
- 12.9.18. Limits of Deviation
- 12.9.19. As noted in my discussion of proportionality above, the proposed subsurface land acquisition comprises a 3-dimensional band, described as 'limits of deviation' (LoDs), comprising the tunnel/station box extents and with additional buffer that will facilitate both horizontal and vertical movement of the structures as detailed design and construction progresses. The LoDs are described in detail in Section 9.18 of my report, including proposed reductions and restrictions that were presented at the oral hearing.
- 12.9.20. The submission by Sudway & Company Ltd. on behalf of Harcourt Terrace owners (S85, S167, S250, S314) contends that LoDs are not provided for in law, with reference to the 1966 Housing Act, which states that the CPO shall be in a prescribed form and shall describe by reference to a map the land to which it relates, it is contended that the documentation does not meet legal requirements. The submission by GADRA (S99) expresses the view that the LoDs are excessive and are unjustified.
- 12.9.21. In their response to these submissions, TII outline that they are required to allow for unforeseen obstructions and construction tolerances which may necessitate a change to the alignment and that other railway authorisations going back to at least the 1840s have incorporated such provision.

12.9.22. Further, and in response to Mr Sudway, TII provided a further legal submission entitled 'Note on Issues Raised by Residents of Harcourt Terrace' (Ref. OH293), which discusses the LoDs at length. It states that the lands that will be authorised for acquisition for the purposes of the tunnel take the shape of a continuous tube with a rectangular face, 30m in width and 20.2m in height. The Note draws attention to the provisions of section 45(1) of the 2001 Act, which provides for the acquisition of substratum land, and states that the granting of the Railway Order will entitle TII to acquire all lands identified within the Order including substratum lands.

12.9.23. As stated by the applicant, LoDs have been incorporated in previous Railway Orders granted by the Board, including the previous Metro North project. Given the nature of the proposed development, the proposed construction methodology and noting the heterogenous nature of the subsurface environment, I consider it reasonable and prudent that appropriate limits of deviation be applied in the context of land acquisition. The Wider Effects Report documents constraints to be applied to the LoDs in certain areas and, as I outlined previously, reference 3.17 of the Final Schedule of Additional Environmental Commitments (Ref. OH376) identifies additional constraints to the LoDs.

12.9.24. Implications for Future Development Potential

12.9.25. The document 'Outline Guidance Note for Developers' (Ref. OH378) is an asset protection policy and it contains measures that, amongst other things, are intended to ensure the structural integrity of MetroLink structures are retained and are not put at risk by developer activities. It defines exclusion and protection zones and loading conditions that are intended to protect subsurface structures from the impact of third-party development activities.

12.9.26. Exclusion zones range from 3m to 6m wide and are defined as follows:

"Exclusion Zone is the volume of subsoil along the bored tunnel, cut and cover tunnel and retained cut alignment in which no future works or developments are allowed to encroach. Future surface works or developments are allowed above a subsurface Exclusion Zone, provided the foundation of the proposed development does not intrude into the Exclusion Zone and the MetroLink structures are not adversely affected."

12.9.27. Protection zones range from 12m to 24m wide are defined as follows:

“Protection Zone is the volume of subsoil and the area on the ground surface along the bored tunnel, cut-and-cover tunnel and retained cut alignment in which future works or developments could impact the MetroLink structures. Future works or developments are allowed in the Protection Zone with any depth of foundation, provided it does not adversely affect the MetroLink structures and is subject to written agreement with TII.”

- 12.9.28. This issue of impacts on future development potential was raised by a number of observers, including Lidl Ireland GmbH (S169, 1FS30), Tanat Ltd (Ref. S287), Earlsfort Basin Ltd (Ref. S80), Hines Real Estate Limited Ireland (Ref. S117), Irish Life Assurance Plc (Refs. S129, S130, S131, S132), Wynn’s Hotel (Ref. S317) and RGRE Burlington Ltd and RGRE Harcourt Terrace Ltd (Ref. S265) submissions. It was also the subject of lengthy questioning at the oral hearing, particularly on 11th March 2024, by representatives of Lidl Ireland GmbH, and on 21st March 2024, by representatives of Hines Real Estate Limited Ireland and Irish Life Assurance PLC.
- 12.9.29. Lidl made the point that there is a planning policy imperative for high-density, mixed-use development on the site, but adherence to the requirements of the Guidance Note would prevent such development on a large portion of their site. Hines questioned the load bearing capacity provisions specified within the Guidance Note and whether specified maximum loads will be adequate to allow for over-site development in accordance with the provisions of the development plan.
- 12.9.30. In responding to these submissions, TII stated that the tunnel has been designed to the appropriate standard and has been designed with a load bearing capacity in excess of that commonly used for tunnels in London. Section 2.3.1 of the Guidance Note states that the tunnel lining design has been prepared on the basis that the bored and mined tunnels are able to carry a surcharge load of 75kN/m².
- 12.9.31. I have addressed the over-site development in detail in Section 9.20. Subject to conditions, I consider the applicant’s proposals to be acceptable, noting that any impacts that substratum land acquisition has on development potential and value of land overhead is ultimately a matter for property arbitration and the compensation process if deemed appropriate.
- 12.9.32. Proposed Landscaping at Seatown Villas, Estuary Court and Ashley Avenue

- 12.9.33. A number of observers, including Estuary Court Residents Association (S89, S90), Sinead Quilty (S281), Ashley Estate Residents (S14), Deirdre Byrne and Family (S58) and Seatown Villas Residents (S277) objected to proposed landscaping of green spaces at Estuary Court and Ashley Avenue, which would have seen the areas closest to the route alignment landscaped as part of a new linear park that runs parallel to the R132. Concerns raised relate to intended connectivity improvements, which observers consider would give rise to security and safety issues.
- 12.9.34. Following these submissions, the applicant submitted amended landscaping proposals on 19th February 2024 (Ref. OH18), which proposed to reinstate the affected green spaces to their existing condition, rather than landscape them as part of a new linear park parallel to the R132. With respect to the CPO, each of the open space areas at Seatown Villas, Estuary Court and Ashley Avenue were originally identified as required for permanent acquisition, but amended property drawing No. ML1-JAI-BOR-ROUT_XX-DR-Y-01012 identifies that the northern-most area of open space at Estuary Court and open space at Seatown Villas that is not directly affected by the route alignment will now be subject to temporary acquisition. No updated property drawing for the Ashley Avenue open space was provided.
- 12.9.35. Whilst the identified concerns of observers are understandable, I consider the omission of proposed landscaping improvements is unfortunate as they would have improved residential amenity and permeability and would have assisted in creating a more active travel friendly environment. However, and as I have outlined elsewhere, the linear park is not a fundamental part of this public transport development proposal. While it would have been a welcome element of planning gain, for the reasons outlined, I consider the residents' concerns are understandable and reasonable. Importantly, the proposed development will not impede permeability improvements or open space enhancements in the future, should the County Council wish to pursue them.

As I have also outlined elsewhere, if the Board disagrees with me and wishes to direct the applicant to deliver the original landscaping proposal, it will have to consider the implications in terms of the standard CPO tests and the issue of proportionality. Section 5.3.4 of the document 'R132 Landscape Amendments' (Ref. OH18) states that, as the open spaces are being returned to their former usage, this

equates to a temporary land-take. This is reflected on drawing No. ML-P 301 H-J (Ref. OH323), which confirms that the northern-most area of open space at Estuary Court and open space at Seatown Villas that is not directly affected by the route alignment will now be subject to temporary acquisition.

12.10. **Site-Specific Issues**

- 12.10.1. As outlined in Section 4.3, a number of observers/objectors have either withdrawn their submissions or have submitted correspondence to the Board during the oral hearing essentially stating that the concerns set out in their earlier written submissions have been addressed and that they support the project. This section will therefore only address the remaining observers who raised matters relating to land acquisition and who have not withdrawn or submitted such correspondence to the Board.
- 12.10.2. The Board will note that a number of affected landowners/occupiers have made submissions that entirely relate to planning and environmental matters, rather than objecting to the temporary/permanent acquisition of lands. The issues raised in those submissions are addressed elsewhere in this report.
- 12.10.3. AZ1 Northern Section
- 12.10.4. ***Fingallians GAA Club (S95)***
- 12.10.5. The applicant proposes to permanently acquire a strip of land adjacent to Estuary Roundabout and on the north side the R125, for the purposes of providing an attenuation pond. It is also proposed to temporarily acquire the sports pitches within Balheary Park, to facilitate their relocation and realignment. The lands that are proposed for temporary and permanent acquisition are identified on Plan Nos. ML-P 301 E-F, ML-P 301 F-G and ML-P 301 G-H.
- 12.10.6. A written submission was made by Fingallians GAA Club and a submission was subsequently made at the oral hearing on 7th March 2024 (Refs. OH200, OH200A). Both submissions relate to the Fingallians GAA facilities at Balheary Park and concerns have been raised that the club will be significantly worse off, arising from the proposed development, in terms of available playing facilities. In particular, Fingallians GAA seeks the provision of 2 No. full-sized playing pitches as part of the park restoration works and they also seek a guarantee that alternative facilities will

be provided for the duration of construction, where the pitches are to be temporarily acquired.

12.10.7. In their Response to Submissions document, TII point out that there is only 1 full-size playing pitch at Balheary Park and that works within Balheary Park will be undertaken with due regard to the requirement for ongoing usage of the pitch. It is also noteworthy that the applicant commits to this pitch at all times complying with the minimum dimensions for a football pitch.

12.10.8. With regard to the second pitch, this is identified by TII as slightly below full size (144m x 75m) and is primarily used for training of juvenile groups. The Board will note that this point was not subsequently disputed by Fingallians GAA, at the oral hearing. In respect of restoration, TII outlines that the restored pitch will have a reduced width of 60m and that it will be restored as an artificial pitch, following requests by both Fingallians GAA and Fingal County Council. In acknowledging that this pitch will be unusable during construction, TII states that it will identify suitable alternative training facilities which will be in place in advance of the commencement of works to this pitch.

12.10.9. TII submitted revised proposals to the oral hearing, in respect of floodlighting and boundary arrangements, for the Balheary Park playing pitches on 19th March 2024 (Ref. OH253) and 25th March 2024 (Ref. OH323). These revisions relate to the relocation of proposed floodlighting to the southern-most, full-sized, playing pitch and the provision of ball stop netting adjacent to the R132 and were stated to arise from agreement reached with Fingallians GAA.

12.10.10. I agree with TII's submission that subject to the above, Fingallians GAA will not be significantly worse off in terms of playing facilities. However, I would highlight to the Board that an unresolved issue relates to the alternative training facilities that TII intends to provide prior to commencement of works on the second pitch. At the oral hearing TII reiterated that no such pitch had been identified and, in this context, I consider it reasonable that a condition should be attached requiring that a temporary alternative training facility shall be made available to Fingallians GAA prior to the commencement of works at the existing training pitch within Balheary Park.

12.10.11. Other matters raised in the submissions, such as the removal of the R132 footbridge, are addressed elsewhere in my report.

- 12.10.12. ***Caitriona and Ciaran Byrne (S33)***
- 12.10.13. The observers are residents at Seatown West, Swords, Co. Dublin. The property is affected by permanent land acquisition, which is identified on Plan No. ML-P 301 G-H.
- 12.10.14. The issues raised in the submission generally relate to potential impacts on the property during construction and operation of MetroLink and are addressed elsewhere in this report. No specific objection is made to the proposed acquisition of land and I note that the observer did not appear at the oral hearing.
- 12.10.15. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.16. ***Woodies DIY c/o Grafton Group PLC (S315)***
- 12.10.17. A written submission was made on behalf of the observer by O'Connor Whelan planning consultants. A submission was subsequently made on their behalf at the oral hearing on 7th March 2024 by RK Nowlan & Associates planning consultants.
- 12.10.18. The submission relates to the Woodies DIY retail unit in Seatown, Swords, Co. Dublin. The site is located adjacent to the existing Seatown Roundabout, to the east of the R132 and north of Seatown Road. The site, of which Woodies DIY are a tenant/occupier, comprises a retail unit, outdoor garden centre, service yard and car parking area with c.170 No. spaces.
- 12.10.19. It is proposed to permanently acquire a strip of land along the R132 for the railway alignment, which is in cut and cover at this location, and ancillary elements including a portion of reconfigured car park and to temporarily acquire additional lands, including the majority of the car park. More particularly, the lands that it is proposed to temporarily and permanently acquire are identified on Plan No. ML-P 301 J-K.
- 12.10.20. The submission contends that there will be an unacceptable impact on the operation of the retail unit, which may affect its viability. This impact is stated to be

due to the long and uncertain time period for construction, closing off of access to the site, loss of the R132 footbridge, and the loss of car parking and garden centre for 2 years. Issues are also raised with regard to proximity to the construction site, noise, dust and vibration.

12.10.21. In its Response to Submissions document, TII outlines that selection of the proposed route alignment leaves limited options to avoid CPO of the lands in question and that the extent of CPO has been minimised. In acknowledging the potential impact on Woodies' business, TII outlines that the construction programme has been optimised and minimised and construction in this area is scheduled to be completed in 54 months after which the area will be reinstated and landscaped. With particular reference to specified concerns for the operation of the business, TII: (a) refers to Appendix A9.5 of the EIAR in respect of provisions that have been made for ongoing access to the car park and Woodies shop, whilst acknowledging the temporary loss of 67 No. parking spaces during construction; and (b) contests the observers claim that c.50% of the external garden centre will be permanently acquired and would force Woodies to relocate the garden centre on the site. They also acknowledge the effect of construction on customer experience at this site, in terms of construction impacts.

12.10.22. I acknowledge the Woodies' concerns in respect of the impact of temporary and permanent land acquisition on its commercial operation. However, I accept that construction of the proposed development requires the development of numerous temporary site compounds, including the one proposed at the Woodies DIY site. This site is on the route alignment and noting that it is primarily the surface car park that is affected by acquisition, I consider this is a suitable site for the purpose proposed.

12.10.23. I accept that a high level of traffic management will be required in order to maintain access to the site and I note the applicant's proposals in this respect include a commitment to work with Woodies DIY in order to minimise disruption. In view of the evolving nature of the construction programme, such management is likely to be dynamic and subject to regular change. I thus do not consider it would be appropriate or reasonable for the Board to attempt to specify or control traffic management measures.

- 12.10.24. With respect to the loss of external garden centre floorspace, I agree with TII that the acquisition of this land is unlikely to materially affect the operation of the garden centre element of the store. The affected area is a small proportion of the overall garden centre area (which can be seen clearly on available aerial photography) and I consider there is ample remaining space for Woodies to operate this element of the store.
- 12.10.25. Permanently acquired land closest to the R132 will form part of the scheme landscaping layout and whilst I would again highlight to the Board that the landscaped linear park adjacent to the R132 is no longer proposed (this is discussed in detail in preceding sections), there is still a landscaped corridor proposed on the approach to the proposed Seatown Station, which I consider serves an important function in contributing to placemaking and public realm enhancement in this area. I consider these are welcome and important elements of the project, particularly in the context of the proposed station location, which is currently dominated by a very wide carriageway and which is not very welcoming for pedestrians.
- 12.10.26. In view of the above, I consider that the proposed acquisition of the lands in question is warranted and that the lands are suitable for the purposes required.
- 12.10.27. Other aspects of the submission, including related to the impact of construction of the customer experience, are discussed elsewhere in my report.
- 12.10.28. ***Hertz Europe Service Centre Limited (S115)***
- 12.10.29. A written submission was made on behalf of the observer by Corr Property Consultants. The submission relates to the Hertz service centre, a large business premises in Swords Business Park, at Seatown, Swords, Co. Dublin. The site is located adjacent to the existing Seatown Roundabout, to the east of the R132 and south of Seatown Road. Tom Corr subsequently made submissions on behalf of Hertz at the oral hearing on 21st February 2024 and 20th March 2024.
- 12.10.30. It is proposed to permanently acquire a strip of land along the R132 for the Seatown Station, the railway alignment, bicycle hub building, attenuation storage and ancillary elements and to temporarily acquire additional lands around the Hertz premises, including part of the car park. More particularly, the lands that it is proposed to temporarily and permanently acquire are identified on Plan Nos. ML-P 301 K-L and ML-P 301 L-M.

- 12.10.31. It is also proposed to acquire rights of way and other easements over certain lands indicated on the same plans, relating to an existing access road through the Hertz premises and is described in the Fifth Schedule as “the right for TII its successors, assigns, servants, agents, licensees, invitees, tenants and undertenants to install, lay, connect to, inspect, cleanse, repair and renew pipes and other conduits in, on or under the property and the free passage of all services through same”.
- 12.10.32. The written submission contends that surplus permanent acquisition of lands is proposed, with particular reference to a bicycle hub and attenuation area. It is also contended that surplus temporary lands are being acquired which will have extreme consequences for business operations. Issues identified relate to the blocking of fire exits, relocation of and blocking of access to services and loss of car parking. The submission also expresses concern that there is no definite time frame for the MetroLink project, leading to the Hertz premises being blighted as a property.
- 12.10.33. In its written response to the submission, TII disputed that proposed temporary land acquisition is excessive, with all land take required in order to facilitate construction, and TII stated that they are committed to working with Hertz. A commitment was made to maintain a 2m minimum access width and that works will not impede access to cooling units. I also note that reference 3.1 of the Final Schedule of Additional Environmental Commitments (Ref. OH376) states that access around the Hertz Building to plant and equipment and emergency access will be maintained during the construction phase.
- 12.10.34. In his submission to the oral hearing on 20th March 2024, Mr. Corr advised that engagement between the parties had resulted in resolution of a number of Hertz’s concerns, in particular in relation to the impact of temporary land acquisition on daily operations. It thus appears to me that many CPO issues identified by Hertz have been resolved.
- 12.10.35. As I have outlined elsewhere, in order to construct the proposed development access to adjacent lands is required, both from a construction point of view and in order to provide necessary supporting elements. The Hertz site is directly adjacent to the proposed Seatown station and, in the long term, is likely to derive the substantial benefit of being served by MetroLink. The site will be used for the provision of cycle

storage and an attenuation feature, together with other associated elements. I consider that the temporary acquisition of the lands is warranted and that the lands are suitable for the purposes required.

12.10.36. Other issues raised in this submission, including noise, vibration, dust, drainage and other construction related issues are addressed elsewhere in this report.

12.10.37. ***Rohan Holdings Limited (S268)***

12.10.38. A written submission was made on behalf of the observer by John Spain Associates, in relation to undeveloped lands at North Dublin Corporate Park, on the eastern side of the R132 in the vicinity of the proposed Seatown Station, to the south of Hertz. The lands are divided into two parcels, separated by an access road serving the developed portion of the Corporate Park. No submission was made at the oral hearing on their behalf.

12.10.39. It is proposed to permanently acquire a strip of land along the R132 for the railway alignment and to temporarily acquire the remainder of the lands. More particularly, the lands that it is proposed to temporarily and permanently acquire are identified on Plan No. ML-P 301 L-M.

12.10.40. The lands are zoned 'ME – Metro Economic Corridor' and the submission states that they have been sterilised for 15 years due to former Metro North and the current MetroLink proposals. The submission expresses concern regarding the temporary acquisition for construction compounds, due to the lack of timescale for return of the lands and the sterilisation effect on lands which could provide urgently needed housing. A feasibility assessment by O'Mahony Pike architects that accompanied the submission identifies the potential for c. 240 No. residential units on the lands. The submission states that the observer supports MetroLink in general, but requests that the temporary land take be omitted and the construction compounds relocated.

12.10.41. In its Response to Submissions document, TII states that construction of the MetroLink necessitates the use of the designated lands and that they are only occupying lands necessary for the delivery of MetroLink. They assert that MetroLink will be a catalyst for future development in line with the zoning objective, at the same time acknowledging that development potential will be hindered during construction.

TII also state that they will collaborate with the developer to minimise the construction duration and return the lands as soon as is reasonably practical. With regard to the duration of temporary acquisition, TII refer to the programme of works in EIAR Appendix A5.2. It is stated that the final extent of land take and duration of use will be confirmed by the appointed contractor but that TII will work with the contractor to optimise land take requirements and reduce the duration of use, which is stated to be currently estimated as 6 years.

12.10.42. I note that the objections raised in the submission are in relation to the temporary landtake, not the permanent landtake along the R132 edge of the site, and that the observer is generally supportive of the MetroLink project in principle. In order to construct the project, numerous temporary site compounds are required and given the proximity of this site to the alignment and the Seatown Station and noting that it is currently undeveloped, I consider this to be an eminently suitable site for the purposes required. The temporary acquisition of the site will prevent its development for other purposes for a number of years, but ultimately it will be a greenfield zoned development site in very close proximity to a metro station and thus is likely to have considerable development potential, subject to planning permission. I consider that the temporary acquisition of the lands is warranted and that the lands are suitable for the purposes required.

12.10.43. ***Devonmill Limited (S64)***

12.10.44. A written submission was made on behalf of the observer by Tom Phillips + Associates Planning Consultants, in relation to the Travelodge Hotel and associated lands (which includes a restaurant unit occupied by Smokin' Bones) at Pinnock Hill, Swords, Co. Dublin, located to the south of the R132 and east of the R125, with access from the R125 via the existing Pinnock Hill roundabout. The hotel is stated to have 130 No. bedrooms and 116 No. car parking spaces with extant planning permission for a further 55 No. bedrooms. No submission was made at the oral hearing by this observer.

12.10.45. It is proposed to permanently acquire a strip of land to the north of the hotel building, along the R132, for the railway alignment, which is in cut and cover in this location. The lands in question are currently part of the car park and a reconfigured car park is proposed to be provided, following the completion of construction. More

particularly, the lands that it is proposed to permanently acquire are identified on Plan No. ML-P 301 S-T.

12.10.46. The submission, which supports the MetroLink project in principle, states that the acquisition will result in a loss of 24 No. car parking spaces and requests that consideration be given to an alternative/interim car parking solution for the duration of construction. The submission also notes that there is provision for restoration of the car parking spaces following completion of construction, notwithstanding the fact that the land is to be permanently acquired. Clarification is sought on this issue. The submission requests that the Board should delay granting the Railway Order until it is satisfied that there is funding in place for completion of the project.

12.10.47. In its Response to Submissions document, TII points out that a portion of the hotel car park is required to facilitate the cut and cover section of the project past the Travelodge hotel and it will be reinstated, as per landscaping drawings, following the completion of construction. Regarding the request for alternative parking, TII say this cannot be provided at the site during construction.

12.10.48. I note that the observer is generally supportive of the MetroLink project and is seeking to preserve daily hotel operations during construction. I acknowledge the observer's concern regarding the loss of parking, which I consider is an understandable concern. However, as the applicant states, the route alignment passes through the car park and usage of this area is required in order to deliver the MetroLink development. I also note, further to the applicant's submission, that the landscaping drawings confirm the reinstatement of affected parking spaces following the completion of construction. The acquisition of land will prevent its usage for a number of years during construction but I am satisfied that this is warranted, in view of the wider benefits accruing from the development, and that the lands are suitable for the purposes required.

12.10.49. Other issues raised in the submission, such as impact on future development potential, impact on current hotel operations, noise, disturbance, access, are addressed elsewhere in this report.

12.10.50. ***Smokin' Bones Limited (S282)***

- 12.10.51. This submission relates to the tenant of the 'Smokin' Bones' restaurant on the Travelodge Hotel site at Pinnock Hill, Swords, Co. Dublin. No submission was made at the oral hearing by this observer.
- 12.10.52. The extent of proposed permanent land acquisition at the Travelodge Hotel site is as outlined under the Devonmill Limited submission above.
- 12.10.53. Whilst supportive of the MetroLink proposal in principle, the submission contends that the project will negatively impact on the restaurant business during the construction phase, due to the loss of car parking spaces, loss of direct access due to roundabout closure, impact of noise and dust on restaurant customers and loss of visibility of restaurant signage when construction commences.
- 12.10.54. In its Response to Submissions document, TII points out that up to 20% of the Travelodge car park will be lost during construction. Whilst it is not highlighted in this particular response, I would highlight to the Board that the response to the Travelodge submission states that affected car parking spaces will be reinstated following the completion of construction.
- 12.10.55. As with the wider Travelodge hotel site, I acknowledge the observer's concern regarding the loss of parking, which I consider is an understandable concern. However, as the applicant states, the route alignment passes through the car park and usage of this area is clearly required in order to deliver the MetroLink development. The acquisition of land will prevent usage for the purposes of car parking for a number of years during construction but I am satisfied that this is warranted, in view of the wider benefits accruing from the development, and that the lands are suitable for the purposes required.
- 12.10.56. ***John McGreevy (S152) / McGreevy & Taylor Families (1FS31)***
- 12.10.57. A written submission was made by Davey-Smith Architects on behalf of Mr McGreevy, in relation to lands at Fosterstown, Swords, Co. Dublin, and a number of submissions were subsequently made on his behalf at the oral hearing by Dermot Flanagan SC, on 11th and 13th March 2024.
- 12.10.58. The written submission requests that Mr McGreevy's lands at Fosterstown should not be acquired for the purposes of accommodating a telecommunications

mast that is directly affected by the route alignment and is to be relocated further east.

12.10.59. At the oral hearing on 11th March 2024 Mr Flanagan submitted a copy of a legal agreement between the McGreevy family and Vantage Towers Limited ('VTL'; Ref. OH203), which relates to an undertaking by VTL to remove the subject mast on or before 30th September 2024. In view of the proposed removal, Mr Flanagan submitted that there would therefore be no requirement to serve Notice to Treat in respect of the land parcel (Ref. ML1T-A2 refers) that had been intended to accommodate the relocated mast.

12.10.60. The matter was further discussed on 13th March 2024 and TII committed to sub-dividing Mr McGreevy's lands in this area into separate plots, in order to facilitate the aforementioned non-service of a Notice to Treat in circumstances where the mast has already been removed from the lands. The Board will note that drawing No. ML-P 301 T-U submitted to the oral hearing on 25th March 2024 (Ref. OH323) subdivides the McGreevy lands, as discussed above. (I note that the mast has now been removed.)

12.10.61. Another submission was made by Mr Flanagan on 13th March 2024 (Ref. OH228 and OH229) relating to the means of access to the retained McGreevy lands, in particular submitting that provision should be made for access to the McGreevy lands from the proposed access road that serves Fosterstown Station and which routes through lands at Airside Retail Park. Mr Flanagan contended that, as the station access road will be utilised by the public, it should be subject to an easement for right of way usage by the public, including his client.

12.10.62. In responding to the submission, TII pointed out that the route lands at Airside Retail Park are privately owned and that provision will be made for a wayleave, in order that patrons of the proposed Fosterstown Station can use this means of access to the station. Regarding the question of Mr McGreevy wishing to access his lands from Airside Retail Park, TII asserted that a private agreement would be required between Mr McGreevy and the private landowner.

12.10.63. Having considered the matter, I agree with TII that Mr McGreevy's ability to access his lands through the Airside Retail Park car park site is a private matter

between landowners and is not a matter to be considered by the Board as part of this application.

12.10.64. Whilst a question arose, from the original landscaping drawing No. ML1-JAI-ARL-SC03_XX-DR-Y-00006 as to whether TII was retaining the existing agricultural access from the R132 to Mr. McGreevy's lands, (the drawing does not clearly identify access to these lands), TII clarified the issue in its submission of updated drawing No. ML-RO-301 S-T (Ref. OH323), which identified a new permanent access to Mr McGreevy's lands from the R132 over an extended cut-and-cover section that was proposed in the area south of Pinnock Hill Roundabout at O'Scanail's Veterinary Hospital. This, thus, ensures that Mr McGreevy is provided with ongoing access to his retained lands.

12.10.65. A further written submission was made on behalf of the McGreevy and Taylor families by Pearse Mehigan Solicitors LLP (1FS31), which asserts that the extent of proposed permanent acquisition is excessive and which further objects to the stopping up or removal of the sole means of access to the subject lands. I note that John McGreevy is not one of the identified McGreevy family members in that submission.

12.10.66. In its 'Response to Submissions Received' document TII disputes that the extent of permanent acquisition is excessive, stating that only a narrow strip of land is required alongside the retained cut section that routes through these lands, sufficient to allow for landscaping and maintenance access, and that land at the southern end of the landholding forms part of the station development. They also point out that the project drawings were amended at the oral hearing, in order to address concerns raised in respect of these lands.

12.10.67. In respect of the issue of permanent landtake, as TII states the extent of permanent landtake at the northern end of these lands closely follows the retained cut and it broadens at the southern end, where the proposed Fosterstown station and associated elements are located. I am satisfied that the extent of permanent landtake is warranted and is required in order to facilitate construction of the MetroLink development. I have previously outlined that TII agreed to subdivide the McGreevy plot, in order to allow for non-service of a Notice to Treat in respect of the lands identified to accommodate a relocated mast. This will clearly have the effect of

reducing proposed permanent landtake, in circumstances where there is no longer a requirement to relocate a telecommunications mast.

12.10.68. In relation to the issue of access, I have outlined above that updated drawing No. ML-RO-301 S-T (Ref. OH323) identifies a new permanent access to Mr McGreevy's lands from the R132 over an extended cut-and-cover section that was proposed in the area south of Pinnock Hill Roundabout, ensuring that the retained lands are provided with ongoing access in the vicinity of the existing access point.

12.10.69. ***Smyths Toys Superstores (S283)***

12.10.70. A written submission was made on behalf of the observer by RW Nowlan & Associates, in relation to the Smyths Toys retail unit, located at Unit 1, Airside Retail Park, Swords, Co. Dublin. It is proposed to permanently acquire the retail unit so that it can be demolished to accommodate Fosterstown Station, the rail alignment, an access road to the Station and retained lands, relocated substations and other ancillary elements. The lands that it is proposed to permanently acquire are identified on Plan No. ML-P 301 T-U. No submission was made at the oral hearing on their behalf.

12.10.71. The retail unit has a stated ground floor area of 2,600 sq m and mezzanine floor of 700 sq and employs 50 people, increasing to 90 at peak trading times.

12.10.72. The loss of this retail unit is undoubtedly a significant impact for the observer and the points raised with regard to the difficulties finding a suitable alternative site in the area are valid, due to the particular requirements of a large retail store. Nevertheless, I consider that the public benefits of constructing a metro station and alignment in this location outweigh the disbenefits to the observer. I note that in its Response to Submissions document, TII states that it will assist with the identification of suitable alternative sites and that it undertakes to provide as much notice as possible in relation to proposed acquisition. Compensation will be payable for the acquisition of the property under various headings, in accordance with established CPO practice, and ultimately I consider that this is the only form of mitigation available in this instance.

12.10.73. While the observer is seeking that an alternative site be provided, it would not be appropriate, in my opinion, for the applicant to seek to compulsorily acquire other private property for the benefit of this observer. The needs of a retail company in

terms of site location and requirements are complex and very particular to that company's retail strategy, as outlined in the submission. Ultimately, I consider that this matter is most appropriately dealt with through the compensation process.

12.10.74. ***Tanrat Limited T/A Starbucks (S288)***

12.10.75. A written submission was made on behalf of the observer by RW Nowlan & Associates. Tanrat Ltd. operate a Starbucks coffee shop within the Smyths Airside Retail Park, Swords. The coffee shop is stated to be sublet from Smyths under a 20-year lease, beginning in 2015. The observer is affected by the proposed permanent acquisition and demolition of the Smyths Toys retail unit and the relevant property drawing and plot numbers are listed in preceding sections.

12.10.76. No submission was made at the oral hearing on their behalf.

12.10.77. I acknowledge the impact of the loss of the observer's coffee shop as part of the proposed development. However, and as with the Smyths Toy Store submission, I consider that the public benefits of constructing a metro station and alignment in this location outweigh the disbenefits to the observer. In its Response to Submissions document, TII points out it will work with Smyths to identify an alternative site for its operations and that it may also meet the needs of Starbucks and they further commit to giving as much notice as possible in relation to proposed acquisition. Compensation will be payable for the acquisition of the property under various headings, in accordance with established CPO practice, and ultimately I consider that this is the only form of mitigation available in this instance.

12.10.78. ***Juliana and Joe Boland and Family (S155)***

12.10.79. The observer made written submissions (S155 and 2FS8) and also attended and made submissions at the oral hearing on 10th March 2024 (Ref. OH201). It is proposed to acquire property from the Boland family to the east and west of the R132 at Nevinstown, Swords, Co. Dublin. The property includes the Boland family home, known as Nevinstown Lodge, another cottage owned by the family and part of their adjoining business premises, known as Joe Boland Motor Salvage. The property that it is proposed to permanently acquire is identified on Plan Nos. ML-P 301 U-V and ML-P 301 V-W.

12.10.80. The original submission noted that this is the second Railway Order which the Boland family has been subject to, after the original Metro North proposal, and also outlined the protracted nature of the two RO applications and the various communications held regarding the CPO of their property with TII and previously the RPA. The observer states that their lives have been put on hold since 2008, owing to uncertainty over whether the project would go ahead, and noted that they are not only potentially losing their family home but also their family business. The submission also outlined the difficulty in identifying suitable alternative premises in the area, with only 3 No. such properties found over the period of 14 years. It noted that one suitable property was identified in 2022, but that TII advised that they could not agree and pay financial recompense until a Business Plan was agreed by the Government and a Railway Order obtained. The submission states that this process puts them in an unrealistic position. The submission also contends that property valuation under CPO guidance is unfair to property owners.

12.10.81. In its Response to Submissions document, TII acknowledged the frustrations experienced by the Boland family and outlined that they were committed to implementing the MetroLink project. They acknowledged the importance for residential property owners and businesses to plan their affairs with as much notice as possible and drew attention to their CPO Guidelines and LAS and the discretionary scheme for residential property owners to enter into a pre-agreement on acquisition terms, to accelerate the process following receipt of an enforceable Railway Order. With regard to the business, they stated that an agency service will be established to support the search for alternative accommodation and that they will endeavour to provide a longer period for businesses to relocate. They noted that compensation would be paid in accordance with the compensation code and depending upon individual circumstances.

12.10.82. Mrs Boland subsequently made a submission at the oral hearing on 7th March 2024 (Ref. OH201), where she questioned multiple aspects of the CPO process and also highlighted the mental and emotional stress that the project has caused.

12.10.83. In response to these submissions, TII's Michael Horan restated TII's approach to compulsory purchase, including mechanisms that have been brought forward as a means of generating advance engagement with affected parties and to provide a level of certainty in respect to the quantum of compensation that will be payable. He

outlined that the engagement strategy is designed to give affected parties as much certainty as possible, with respect to assessing future options. He also restated that TII is not in a position to acquire property in advance of the granting of the Railway Order

12.10.84. I sympathise with and acknowledge the frustrations expressed by the Boland family, which I consider are entirely understandable, given the prolonged uncertainty and personal stress that has evidently arisen from both the previous Metro North project and the current MetroLink proposal. I also acknowledge the stated challenges of finding and acquiring an alternative suitable location that can provide both a home and business.

12.10.85. However, ultimately, having established that the proposed development is necessary and that the alignment chosen is acceptable, it is my view that the matters raised by the Boland family can only be mitigated by means of compensation. I note the assistance that TII propose to offer to affected parties in terms of the LAS and discretionary scheme for pre-agreement. Whilst they do not provide the level of certainty that perhaps the observer is seeking, I consider TII's engagement strategy is reasonable in its approach and is likely to be of assistance in allowing the Boland family to plan for their future.

12.10.86. In relation to the issue of uncertainty over the acquisition of the observer's property, like other public agencies, TII is subject to Government approval in respect of capital funding for the MetroLink project and it will only be in a position to seek approval to proceed with the project, including the compulsory purchase of property, if a Railway Order is granted. This can lead to uncertainty, with knock-on consequences for those affected by compulsory acquisition, and I acknowledge it is an unfortunate consequence of the way in which large infrastructure projects such as this are funded. However, this is not an area where the Board has any power and it is for others to consider. I would bring to the Board's attention that TII have stated on multiple occasions that it is committed to developing the proposed MetroLink project and there is nothing within the application documents that would lead me to question this. Other issues raised in the submissions, including relating to biodiversity, are addressed elsewhere in my report.

12.10.87. AZ2 Airport Section

12.10.88. ***Dublin Airport Authority (S68)***

12.10.89. A written submission was received from DAA and raised various matters. Subsequently, an agreement between TII and DAA was submitted at the oral hearing on 26th February 2024 (Ref. OH77). The following items in the agreement are noted:

- 2. Future potential development: The MetroLink structures shall be constructed so as to accommodate future development above the station and tunnels.
- 11. Areas constructed by MetroLink that will be operated and maintained by Dublin Airport: Prior to construction the details of areas constructed by MetroLink and operated and maintained by DAA must be agreed with DAA as the landowner.

12.10.90. Noting the agreement between TII and DAA, which I have recommended be included in the Thirteenth Schedule of the Railway Order, if approved, I do not consider that any further matters relating to land acquisition arise in relation to Dublin Airport.

12.10.91. AZ3 Dardistown Section

12.10.92. ***Lidl Ireland GmbH (S169, 1FS30)***

12.10.93. A written submission was made on behalf of Lidl Ireland GmbH by Tony Bamford Planning, in relation to lands at Northwood, east of the R108 Ballymun Road and west of the Old Ballymun Road. The lands that it is proposed to temporarily and permanently acquire are identified on Plan Nos. ML-P 303 K-L and ML-P 303 L-M.

12.10.94. Submissions were subsequently made on behalf of Lidl at the oral hearing, in Module 1 on 21st February 2024 (Refs. OH55 – OH57), and in Module 2 on 11th March 2024 (Refs. OH204 – OH210), by Eamon Galligan SC, Tony Bamford, MCA Architects and Punch Consulting Engineers.

12.10.95. The submissions made in Module 1 related primarily to matters of fair procedures and waste management, which are addressed elsewhere. Module 2 submissions related to over-site development and in particular, concerns were expressed that the provisions of the Guidance Note for Developers would prevent high-density development on a large portion of Lidl's lands. Lidl's representatives

presented an emerging proposal to the oral hearing for a planned 15-storey, mixed-use development on the site that would be partially located overtop the Northwood station box and, essentially, made the case that MetroLink structures should be designed to accommodate this development.

12.10.96. In responding, TII expressed their surprise at the submissions made by Lidl's representatives and stated that they had worked with Lidl over a number of years in relation to a high-density adjacent site development and that the station design has been developed to allow for the construction of two buildings adjacent to the station box. TII stated that the proposal tabled by Lidl at the oral hearing was the first time it had been tabled, with development proposed directly over the station box, and that the station box would have to be completely redesigned in order to accommodate it.

12.10.97. In its further submission, Lidl disputed that the presented emerging proposal was being shown for the first time at the oral hearing and outlined that an over station, mixed employment and residential led project had been discussed with TII in the lead up to the oral hearing.

12.10.98. In responding to the further submission, TII again stated that it had met Lidl in relation to adjacent site development proposals and that the engagement was part of a process that has been laid out in the Guidance Note, to assist developers with such development. The response further states that if Lidl wish explore alternative adjacent site development or over site development proposals, rather than pursue the design developed in cooperation with TII, there will be ongoing engagement with a view to developing a design that meets the needs of both Lidl and MetroLink.

I have discussed TII's approach to over-site development in detail in preceding sections and in more detail in Section 9.20. In summary, I consider it reasonable that TII would seek to limit over-site development to an appropriate level, given the complexities and interactions that would arise.

12.10.99. In the specific case of the Lidl lands, I would bring to the Board's attention that TII is proposing to permanently acquire the lands directly above the station box, as can be seen from drawing No. ML-P 303 L-M (plot No. ML3L-A4 refers). This includes the lands outlined by Lidl's representatives as containing the over-site development and was acknowledged as such by Lidl's representatives when I directly questioned them on it. Should the Board approve the Railway Order,

following compulsory acquisition the lands will no longer be Lidl's to develop. It therefore appears to me that the representations made by Lidl's representatives are moot.

12.10.100. Lidl will retain residual lands that are not permanently required and I do not consider that there is any fundamental reason why these lands would not be capable of being developed, subject to planning permission, given that they are zoned and would be in close proximity to high capacity public transport. Indeed, I note TII's submission that it has been working with Lidl in relation to such a development. As I have outlined elsewhere, the Outline Guidance Note for Developers contains measures that are intended to ensure the structural integrity of MetroLink structures are retained and are not put at risk by developer activities. TII will engage with Lidl as part of any future application under the terms of this guidance.

12.10.101. To conclude, I am satisfied that the acquisition of these lands is warranted, in view of the wider benefits accruing from the development, and that the lands are suitable for the purposes required. I am further satisfied that TII has given adequate consideration to the facilitation of appropriate over-site development, subject to other relevant considerations.

12.10.102. AZ4 City Section

12.10.103. ***ESB Telecoms Limited (S87)***

12.10.104. This submission relates to a telecommunications base station located at the ESB Ballymun 38kV substation, at the junction of the R108 Ballymun Road and the R103 Collins Avenue. It is proposed to temporarily acquire the substation site and the lands are identified on drawing No. ML-P 304 D-E. No submission was made at the oral hearing by this observer.

12.10.105. The submission expresses support for MetroLink, but highlights the need to provide uninterrupted service, with a need for unrestricted access to the site and no disruption to the electricity supply. They do not support the temporary acquisition of the lands in question and outline the difficulties in identifying alternative sites for telecommunications structures in urban areas.

12.10.106. In the Response to Submissions document, TII state that the potential for any service disruption is limited and that where planned service disruptions will be

required, cognisance will be taken of the utility providers requirements. They state that in most cases the duration of disruption should be no more than a number of hours and that all impacted utilities will be reinstated in accordance with ESBT's standards and specifications. The response also acknowledges that the temporary landtake drawing could be clearer and states that the site is required only to allow for a grid connection for MetroLink, with no requirement for the mast and base station to be relocated. It is stated that the provision of the grid connection would be undertaken by an ESB/Eirgrid approved contractor based on a Grid Connection approval. TII state that access, security and site safety would therefore be fully within the control of ESB, with no direct MetroLink involvement.

12.10.107. Having reviewed the relevant drawings and information submitted, I am satisfied that the temporary acquisition is appropriate, and that the applicant has given sufficient undertakings with regard to the continuity of service and access to the ESBT site, other than minor short-term planned service interruption which will be undertaken in consultation with the service provider. I am also satisfied that the acquisition of these lands is warranted and that the lands are suitable for the purposes required.

12.10.108. ESBT also express concern regarding potential vibration impacts on the telecommunications equipment. The issue of vibration is addressed elsewhere in this report.

12.10.109. ***Jian Cheng (S141)***

12.10.110. This observer is the resident of 164 Ballymun Road, Dublin 9. The property is affected by proposed substratum land acquisition, which is identified on Plan No. ML-P 304 E-F.

12.10.111. The issues raised in the submission generally relate to potential impacts on the property during construction and operation of MetroLink and are addressed elsewhere in this report. No specific objection is made to the proposed acquisition of substratum land and I note that the observer did not appear at the oral hearing.

12.10.112. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am

satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.113. ***Our Lady of Victories Church (S243)***

12.10.114. The Parish Pastoral Council made a submission on behalf of parishioners, raising a number of issues including related to access, noise, building damage and, in respect of CPO, the loss of the area to the front of the church, which is to be developed as part of the proposed Collins Avenue Station. It is proposed to acquire lands at Our Lady of Victories both permanently and temporarily and the affected lands are identified on drawing No. ML-P 304 E-F. No submission was made at the oral hearing by this observer.

12.10.115. In their Response to Submissions document, TII point out that the church will remain accessible and operational during construction phase. Regarding the area to the front of the church, the response states that this area cannot be restored to its existing condition and that the landscaping proposals will better define the public space from the garden area that is clearly related to the church. TII state that it is their intention that the restored green area will continue to be available for parish usage and that they will work closely with the church to encourage and facilitate events.

12.10.116. Whilst I acknowledge that construction of the proposed Collins Avenue Station will undoubtedly impact on activities at Our Lady of Victories Church, having established that the proposed development is necessary and that the alignment chosen is acceptable, I ultimately consider this impact needs to be weighed against the substantial benefits that will accrue to the surrounding community, arising from the construction of an underground MetroLink station in this location. I note that access to the church will be maintained throughout construction and I consider this to be an important provision, whereby daily/weekly operations can continue at the church notwithstanding its proximity to a large construction site.

12.10.117. Having reviewed the relevant drawings and information submitted, I am satisfied that the acquisition of these lands is warranted and required in order to facilitate construction of the proposed Collins Avenue Station and that the lands are suitable for the purposes required.

12.10.118. ***Hampstead Residents CLG (S111, 1FS27, 2FS6)***

- 12.10.119. Hampstead Residents CLG made submissions on each of the of the consultation stages and also attended and made submissions to the oral hearing, on 21st February 2024 (Ref. OH61) and 12th March 2024 (Ref. OH219). These submissions raise a number of issues regarding the project, including related to CPO, alternatives, noise and vibration, disruption, working hours and public consultation. Regarding CPO, their submissions relate to the proposed temporary acquisition of lands within Albert College Park, which is identified on drawing No. ML-P 304 1-2.
- 12.10.120. The observer expressed concerns within the submissions and also at the oral hearing regarding the proposed temporary CPO of lands at Albert College Park, in particular requesting that no trees along the Hampstead Avenue boundary of the park will be removed and that the affected land would only be used in connection with works within the park and would not be used in support of other aspects of the project.
- 12.10.121. In responding to these concerns, both at the oral hearing (Ref. OH148) and in the second Response to Submissions – Secondary Consultation document, TII confirmed that no trees along the Hampstead Avenue boundary will be removed. They also confirmed that the park area outside of the Construction Compound lands will not be used as a storage/staging ground and the construction compound lands will only be used in relation to the construction of the MetroLink facility that is located in the park.
- 12.10.122. Noting that TII has agreed to the observer's requests, I do not consider that any further matters relating to land acquisition arise in relation to Albert College Park.
- 12.10.123. Other issues raised within the Hampstead Residents CLG submissions are dealt with elsewhere in my report.
- 12.10.124. ***Louise Boughton and Glenn Sharpe (S173)***
- 12.10.125. The observers are the owners of The White House, 114 Ballymun Road, Dublin 9. The property is affected by proposed substratum land acquisition, which is identified on Plan No. ML-P 304 G-H. Louise Boughton made submissions at the oral hearing on 22nd February 2024 (Ref. OH62-OH65) and 12th March 2024 (Ref. OH220).

- 12.10.126. The issues raised in the submissions generally relate to potential impacts on the property during construction and are addressed elsewhere in this report. No specific objection is made to the proposed acquisition of substratum land.
- 12.10.127. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.128. ***CLG Na Fianna (S46)***
- 12.10.129. CLG Na Fianna made a submission on the application, in relation to a number of sites that are directly and indirectly affected by the MetroLink proposals. Sites directly affected are identified at St. Mobhi Road, Dublin 9 and Collinstown Lane, Co. Dublin, while sites at Albert College Park, Ballymun Road and St Vincents CBS, Dublin 9 are identified as indirectly affected. Lands where Na Fianna is identified as an owner or occupier and which are affected by the CPO are identified on drawing Nos. ML-P 303 3-4, ML-P 303 4-5, ML-P 303 5-6, ML-P 303 A-B, ML-P 304 J-K. Na Fianna also attended and spoke at the oral hearing, on 5th March 2024.
- 12.10.130. The issues raised in the submission generally relate to potential impacts on lands utilised by the club during construction and are addressed elsewhere in this report. No specific objection is made to the proposed CPO.
- 12.10.131. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.132. ***Peter and Breda Gregory (S255)***
- 12.10.133. The observers are the owner and occupier of 78 Botanic Road, Glasnevin, Dublin 9. This property is affected by proposed substratum land acquisition, identified on Plan No. ML-P 304 H-J. No submission was made at the oral hearing by this observer.

- 12.10.134. The submission expresses concern regarding construction noise and traffic and potential building damage during construction. No specific objection is made to the proposed acquisition of substratum land.
- 12.10.135. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.136. Other issues raised in the submission are addressed elsewhere in this report.
- 12.10.137. ***Brendan Howley (S28)***
- 12.10.138. This observer is the owner and occupier of 5 St Mobhi Road, Glasnevin, Dublin 9. This property is affected by proposed substratum land acquisition, identified on Plan No. ML-P 304 H-J. No submission was made at the oral hearing by this observer.
- 12.10.139. The submission expresses concern regarding groundborne noise and vibration and states that the proposed development will substantially affect the value of his property. No specific objection is made to the proposed acquisition of substratum land.
- 12.10.140. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.141. Groundborne noise and vibration impacts are addressed elsewhere in this report.
- 12.10.142. ***Shira Mehlman (S280)***
- 12.10.143. This observer is the owner of 100 Botanic Road, Glasnevin, Dublin 9. This property is affected by proposed substratum land acquisition, identified on Plan No. ML-P 304 M-N. No submission was made at the oral hearing by this observer.
- 12.10.144. The submission raises concerns regarding TII's assessment of predicted impacts, as presented in the EIAR and TII's communication/engagement strategy

with affected property owners. No specific objection is made to the proposed acquisition of substratum land.

12.10.145. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.146. Other issues raised in the submission are addressed elsewhere in this report.

12.10.147. ***Olan O'Brien (S212)***

12.10.148. This observer is the owner of 66 St. Joseph's Place, Dublin 7. This property is affected by proposed substratum land acquisition, identified on Plan No. ML-P 305 C-D. No submission was made at the oral hearing by this observer.

12.10.149. The submission expresses concern regarding the impact of construction, including related to noise and vibration, settlement, traffic impacts and impacts on ground and surface water. No specific objection is made to the proposed acquisition of substratum land.

12.10.150. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.151. Other issues raised in the submission are addressed elsewhere in this report.

12.10.152. ***Anne Confrey (S12)***

12.10.153. This observer is the owner and occupier of 1 Fairfield Road, Glasnevin, Dublin 9. This property is affected by proposed substratum land acquisition, identified on Plan No. ML-P 304 L-M. No submission was made at the oral hearing by this observer.

12.10.154. The submission expresses multiple concerns regarding the impact of construction on her property, including related to the risk of building damage, impact on utilities, property devaluation/impact on ability to extend in the future, noise and vibration and other associated issues such as flood risk, traffic generation, loss of

trees and hedgerows, loss of privacy and dust. No specific objection is made to the proposed acquisition of substratum land.

12.10.155. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.156. Other issues raised in the submission are addressed elsewhere in this report.

12.10.157. ***Deirdre Vaughan (S59)***

12.10.158. This observer is the owner and occupier of 7 Fairfield Road, Glasnevin, Dublin 9. This property is affected by proposed substratum land acquisition, identified on Plan No. ML-P 304 L-M. No submission was made at the oral hearing by this observer.

12.10.159. The submission expresses concern regarding the impact of construction on her property, including related to trespass, potential building damage, and other associated issues such as noise and vibration and flood risk. No specific objection is made to the proposed acquisition of substratum land.

12.10.160. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.161. Other issues raised in the submission are addressed elsewhere in this report.

12.10.162. ***Dympna Rooney (S75)***

12.10.163. This observer is the owner and occupier of 102 Botanic Road, Glasnevin, Dublin 9. This property is affected by proposed substratum land acquisition, identified on Plan No. ML-P 304 M-N. The observer was represented at the oral hearing by her daughter, Lorraine Rooney (who also made a submission on the application (S171) but is not affected by proposed acquisition).

12.10.164. The written submission expresses concern regarding the impact of construction on her property, including related to potential building damage, and

other associated issues such as the nature and timing of building damage repairs, noise and vibration and flood risk. She also questions the proposed Glasnevin Station design, TII's communication and the level of information provided with the application and seeks liaison regarding blasting requirements for the project and the implementation of a steering and monitoring group.

12.10.165. The oral hearing submission raised similar concerns regarding building damage during construction and communication from TII and also questioned the adequacy of the POPS scheme and the daily operational hours of MetroLink. Further concerns were raised regarding aspects of construction, including soil contamination and protection of utilities

12.10.166. No specific objection was made in either submission to the proposed acquisition of substratum land.

12.10.167. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.168. Other issues raised in the submissions are addressed elsewhere in this report.

12.10.169. ***Jennie McGee and Ian Kelly (S139)***

12.10.170. The observers are the owner and occupier of 80 Botanic Road, Glasnevin, Dublin 9. This property is affected by proposed substratum land acquisition, identified on Plan No. ML-P 304 M-N. No submission was made at the oral hearing by the observers.

12.10.171. The submission expresses concern regarding potential building damage during construction, the impact of construction traffic on local road network and the associated impacts of dust and pollution. It also seeks the implementation of a residents monitoring group and the creation of a community fund. No specific objection is made in the submission to the proposed acquisition of substratum land.

12.10.172. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition

related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.173. Other issues raised in the submission are addressed elsewhere in this report.

12.10.174. ***Thomas Harty (S297) and Johann Harty (S143)***

12.10.175. The observers are the owners of 3-3A St. Mobhi Road, Glasnevin, Dublin 9. This property is affected by proposed substratum land acquisition, identified on Plan No. ML-P 304 H-J. No submission was made at the oral hearing by this observer.

12.10.176. The submissions expresses concern regarding potential building damage during construction and seeks indemnification against building damage and loss of earnings attributable to MetroLink construction. No specific objection is made in the submission to the proposed acquisition of substratum land.

12.10.177. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.178. Other issues raised in the submission are addressed elsewhere in this report.

12.10.179. ***Marie McMahon (S180)***

12.10.180. This observer is the owner and occupier of 111 Botanic Road, Glasnevin, Dublin 9. This property is affected by proposed substratum land acquisition, identified on Plan No. ML-P 304 L-M. No submission was made at the oral hearing by this observer.

12.10.181. The submission expresses concern regarding potential building damage during construction and makes the point that promises were made regarding property surveys, but that these promises were not honoured. No specific objection is made in the submission to the proposed acquisition of substratum land.

12.10.182. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am

satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.183. Other issues raised in the submission are addressed elsewhere in this report.

12.10.184. ***Management Company on Behalf of The Court (S175), Fiona O’Kelly (S96), the Estate of John Quinn (Deceased) (S174), Margaret Morrissey (S176), Mark Campbell and Aimee O’Farrell (S182) and Sarah Meredith (S275)***

The Court is an apartment complex located at Dalcassian Downs, Glasnevin, Dublin. Mr. Quinn was the owner of 10 The Court, Ms O’Kelly is the owner of 26 The Court, Ms Morrissey is the owner of 22 The Court, Mr Campbell and Ms O’Farrell are owners of 11 The Court and Ms Meredith is the owner of 35 The Court. Lands at The Court are affected by proposed permanent, temporary and substratum land acquisition, as identified on drawing No. ML-P 304 N-O.

Each submission expresses concern regarding the impact of station construction on residents. Of relevance to the issue of CPO, submissions S96, S174, S175 and S176 raise the issue of loss of car parking spaces. Submissions S96, S174 and S175 additionally identify the loss of garden space during construction. The Management Company on Behalf of The Court also appeared at the oral hearing on 27th February 2024 and 13th March 2024 (OH84 and OH232).

12.10.185. In its Response to Submissions document, TII pointed out that temporary parking will be provided during construction, with discussions ongoing to identify a suitable location in the immediate vicinity, and that an equivalent number of parking will be reinstated on a new alignment once construction is completed. Regarding the loss of garden space, TII stated that a landscaped space of reduced area will be provided following completion of construction and that compensation will be paid in respect of open space that will be acquired and not replaced.

12.10.186. The issues were also discussed at the oral hearing, on 13th March 2024, where Charlie Lowe (on behalf of The Court Management Company) requested that the Board would impose conditions requiring: -

- (a) That alternative parking spaces should be provided prior to the commencement of construction and that such parking must be

provided within a cordoned off area within the Glasnevin Station construction site.

(b) That open space should be restored to a standard that is to be agreed with The Court Management Company.

12.10.187. Responding to the requests, TII reiterated that it has engaged with DCC regarding the issue of replacement parking but has not been able to resolve the issue. They also confirmed that there is no space within the Glasnevin Station construction site on which to locate displaced parking spaces. Regarding landscaping, TII confirmed the garden area will be reinstated on a like-for-like basis.

12.10.188. I have previously outlined that MetroLink meets a clear public need, is consistent with all applicable policy, and that the proposed Glasnevin Station will provide a welcome and highly beneficial interchange with heavy rail services. In this context it is worth restating that this station is necessarily fixed in terms of its location, due to the location and alignment of the aforementioned heavy rail lines and the station extent encroaches onto the parking spaces and garden area in question. I acknowledge that the loss of parking and open space at The Court will be disruptive to residents, but this needs to be balanced against wider benefits accruing from the delivery of this infrastructure project. In my view, the wider benefits outweigh the localised impacts in this instance.

12.10.189. In the circumstances, I consider it reasonable that a condition should be attached, requiring that TII shall make alternative temporary parking available to the residents of the Court apartments prior to the commencement of construction of the Glasnevin Station.

12.10.190. Regarding the requested open space restoration condition, property drawing No. ML-ST 304 N-O1 identifies that the parking layout will be reconfigured and it also identifies that the garden area will be restored around this layout. I consider this proposal is acceptable and that there is no need for the requested condition.

12.10.191. Having reviewed the relevant drawings and information submitted, I am satisfied that the acquisition of these lands is warranted and required in order to facilitate construction of the proposed Collins Avenue Station and that the lands are suitable for the purposes required.

- 12.10.192. ***Shandon Mill Owners Management Company CLG (S278)***
- 12.10.193. A written submission was received on the observer's behalf by O'Malley Associates and the observers also appeared at the oral hearing on 13th March 2024 (Ref. OH239). Lands at Shandon Mills are proposed to be temporarily acquired, as can be seen on drawing No. ML-P 304 5-6.
- 12.10.194. The written submission objects to TII taking exclusive temporary possession of the required parcels of land at Shandon Mills. The lands include the sole means of access/egress from Shandon Mills, parking spaces and circulation space and the issues identified in the submission include loss of control of the site access/egress, inadequate structural capacity of the access road to accommodate new traffic, road and pedestrian safety issues, removal of a boundary wall and security issues. The submission also identifies what are considered to be more suitable route options available.
- 12.10.195. The written submission also includes a request for multiple conditions, in the event that the Board decides to permit temporary acquisition of lands at Shandon Mill. The requested conditions, amongst other things, seek to require that the applicant would be required to (a) ensure the access/egress is designed, constructed, maintained and managed to highest standards so that specified vehicles can route safely without damaging pavements or underground services, (b) provide 3 No. replacement parking spaces, (c) only utilise Shandon Mills during specified working hours and (d) that a €250,000 bond shall be given to the landowner to secure satisfactory reinstatement of the lands.
- 12.10.196. In its Response to Submissions document, TII state that it is not their intention to have exclusive use of affected lands and that access to Shandon Mills will be maintained. With reference to parking spaces and a bin store that will be lost temporarily, TII state that they will be relocated within the complex. In respect of requested conditions, TII state that they do not agree to any of the proposed conditions at this point in time.
- 12.10.197. The oral hearing submission continued to object to the temporary acquisition of lands at Shandon Mill and reiterated that there are other more suitable options available to TII. In particular, the observer argued that the case presented by TII represents a disproportionate impairment of the rights of property owners and is not

necessary to attain the legitimate object sought to be pursued. The submission also requested that the Board, in the event that it grants the Railway Order, would attach a condition limiting the duration of the detour to 6 months and that it would be restricted to vehicular traffic associated with Coke Oven Cottages only. A number of further conditions were also requested, in addition to those contained within the original written submission, including a requirement that TII would provide a permanent route on the north side of the canal bank in order to accommodate construction activities and traffic associated with Coke Oven Cottages.

12.10.198. The substantive part of the observers' submission is a contention that there are other, better options available to TII rather than acquisition and usage of land at Shandon Mills. The issue was discussed at the oral hearing and TII remain of the view that the proposed diversion strategy, i.e. through Shandon Mills, is the best available option.

12.10.199. This area is unquestionably heavily constrained by the presence of both the Irish Rail lines and the Royal Canal and, whilst there may theoretically be other options available to TII that would avoid the use of Shandon Mill, the practical viability of any is questionable. Of the options put forward by the observer, (a) for alternative option AR1, TII pointed out that a bridge accessing onto Shandon Gardens will require substantial ground works in order to provide an elevated bridge; (b) for alternative option AR2, the heavily constrained nature of the Glasnevin Station construction site means that there is no option of routeing through it; (c) for the oral hearing suggestion of a road lane on the north bank of the canal, TII advised that this would result in the affected section of the Royal Canal being unnavigable for a considerable period. Further, and although not commented on by TII at the hearing, I note that in order to provide alternative option AR3, the narrow width of the towpath on the south side of the canal will require in-water backfilling in order to provide a carriageway of adequate width and alternative option AR4 involves utilisation of the private garden of a detached residential property (43 Shandon Road).

12.10.200. Whilst I acknowledge that the temporary acquisition of lands at Shandon Mill will disrupt and inconvenience residents, I note that TII commits to relocating displaced parking spaces and bin storage within the site, so there will be no loss of services for the duration of the temporary acquisition. The proposal also allows for use of existing abutments at lock 6 on the Royal Canal, minimising the extent of

ground works required. In view of the foregoing, I concur with TII that it represents the best available option for maintaining access along the Royal Canal Towpath.

12.10.201. I disagree with the observer's suggestion that permission ought to be refused for the proposed Glasnevin station (described in the submission as the Irish Rail interchange station) or that the interchange element should be omitted, in order to address impacts on the occupiers at Shandon Mill. I have previously outlined that MetroLink meets a clear public need, in a manner consistent with all applicable policy, and the proposed Glasnevin Station will provide a welcome and highly beneficial interchange with heavy rail services. I have acknowledged the disruptive impact of the development on residents at Shandon Mill but this needs to be balanced against wider benefits accruing from the delivery of this infrastructure project. In my view, the wider benefits outweigh the localised impacts in this instance.

12.10.202. I also do not support the observers' claim that TII's proposals represent a disproportionate impairment of the rights of property owners and is not necessary to attain the legitimate object sought to be pursued. TII are required to provide a safe means of access/egress from the Royal Canal Way and in temporarily acquiring parking spaces and storage space at Shandon Mill, have undertaken to relocate the displaced facilities within the immediate vicinity. Having considered the application documents and submissions received, I am satisfied that the proposed temporary land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.203. ***Nigel Mallen (S209)***

12.10.204. This observer is the owner and occupier of 23 Daneswell Road, Glasnevin, Dublin 9. This property is affected by proposed substratum land acquisition, identified on Plan No. ML-P 304 L-M. No submission was made at the oral hearing by this observer.

12.10.205. The submission objects to the development on the grounds of noise and vibration, potential building damage during construction, groundwater and the risk of electromagnetic and stray current. The submission also objects to proposed acquisition of substratum lands under the observer's home.

- 12.10.206. In responding to the submission, TII pointed out that if the Railway Order is granted, they will be authorised to acquire the lands specified within the RO in order to ensure the delivery of MetroLink. The response further points out that where lands are acquired compulsorily, compensation will be provided in accordance with the compensation code.
- 12.10.207. Mr Mallen's property falls within the LoD associated with the city tunnel and I have previously outlined that I consider the concept of the LoD to be acceptable, in view of the complexities and complications that may arise during detailed design and construction. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.208. Other issues raised in the submission are addressed elsewhere in this Report.
- 12.10.209. ***Pat and Barbara McCormack (S248)***
- 12.10.210. The observers are the owner of 1-1A St, Mobhi Road, Glasnevin, Dublin 9. This property is affected by proposed substratum land acquisition, identified on Plan No. ML-P 304 H-J. No submission was made at the oral hearing by the observers.
- 12.10.211. The submission seeks indemnification against building damage and any loss of rental income that is attributable to MetroLink construction. No specific objection is made in the submission to the proposed acquisition of substratum land.
- 12.10.212. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.213. Other issues raised in the submission are addressed elsewhere in this report.
- 12.10.214. ***Paul and Brian Connell (S251)***
- 12.10.215. This observers are the owner of 105 Phibsborough Road, Dublin 7. This property is affected by proposed substratum land acquisition, identified on Plan No. ML-P 305 O-A. No submission was made at the oral hearing by the observers.

12.10.216. The submission expresses concern regarding potential building damage during construction together with noise and vibration impacts during operation associated with train movements. No specific objection is made in the submission to the proposed acquisition of substratum land.

12.10.217. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.218. Other issues raised in the submission are addressed elsewhere in this report.

12.10.219. ***Royal Canal Clean-Up Group (S270)***

12.10.220. The Royal Canal Clean-Up Group is a volunteer led group that coordinates a monthly canal clean-up and has been active since 2013. Lands identified in the fourth schedule of the Railway Order that are part-owned or occupied by the Group are identified for temporary acquisition. These lands are identified on drawing No. ML-P 304 N-O.

12.10.221. The submission focusses on a storage container that is currently located on the northern side of the Royal Canal at Cross Guns and which the observer believes will need to be moved to allow for construction of the proposed Glasnevin Station. The submission also expresses concern regarding the impact of construction on local ecology. No specific objection is made in the submission to the proposed acquisition of substratum land.

12.10.222. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.223. Other issues raised in the submission are addressed elsewhere in this report.

12.10.224. ***Farrier Technology Limited (S93)***

12.10.225. A submission was received on behalf of Farrier Technology, by Downey Planning. The observer is the owner of Prospect House, 2-3 Prospect Road,

Glasnevin, Dublin 9, which is proposed to be acquired and demolished to construct Glasnevin Station. It is proposed to permanently acquire Prospect House, as can be seen drawing No. ML-P 304 N-O and it should be noted that Farrier Technology are also identified as a co-owner/occupier of other adjacent plots, which relate to the Royal Canal towpath. Downey Planning subsequently appeared at the oral hearing on 13th March 2024.

12.10.226. The written submission highlights the ongoing effect of MetroLink proposals on Prospect House, with permission refused for an extension due to the conflict with the MetroLink proposal (Reg. Ref. 3526/24; ABP-312150-21). It highlights the need for early engagement with affected parties, in order to assess the full impact and needs of affected businesses. The issue of tenant loss was also raised and the point is made that the EIAR has downplayed the impacts on businesses such as this. The submission requests that the Board ensure that the Railway Order puts emphasis on TII to confirm timelines, stages and implementation plans, particularly with regard to land acquisition.

12.10.227. The oral hearing submission (Ref. OH230) highlighted that the building is occupied by 4 commercial tenants that together employ 63 people and reiterated that MetroLink proposals are having an ongoing impact on future plans. In this respect the observer wanted the impact of MetroLink on business operations to be recognised, rather than the impact on the bricks and mortar of the building. Concerns were also raised regarding TII's LAS and the observer pointed out that TII's response to the original written submission is materially different to its responses to other submissions, in respect of how TII will approach property valuation. Requests were made for further consideration of the impact of MetroLink on the property and occupiers; further engagement between TII and the observer; and a clearer timeline for business relocation.

12.10.228. In its Response to Submissions document TII confirmed that this building is required for construction of the proposed Glasnevin Station and both within this document and at the oral hearing they outlined commitments to engage with parties affected by the MetroLink proposals. Regarding the CPO, the written response state that powers will come into effect after the granting of a Railway Order and that this will be the forum for compensation claims and agreement. Within both the written response and at the oral hearing, TII disputed the claim that the EIAR downplayed

the impact of development on this property, including by clarifying the baseline categorisation and impact assessment methodology.

12.10.229. I acknowledge the impact that uncertainty regarding timelines for implementation of the development has had on the observer's business and I also acknowledge that finding and acquiring an alternative suitable location will be challenging. However, and having established that the proposed MetroLink project is acceptable in principle, meeting a clear public need in a manner consistent with all applicable policy, and that a new station at Glasnevin, at the intersection point with two existing commuter rail lines would be extremely beneficial in terms of achieving the delivery of an integrated public transport system for the Greater Dublin Area, I consider that the acquisition of this property is warranted in the public interest.

12.10.230. Given the location of the building directly above the proposed station location, the position of which is unavoidably fixed by the presence of the existing railway lines, I do not consider that there is any reasonable alternative that would avoid the need to permanently acquire and demolish the building.

12.10.231. Whilst I acknowledge that there will be negative impacts on the property owner and all of the tenants of the building, I consider that this matter is best addressed through the separate compensation process and in accordance with TII's LAS, which undertakes to provide assistance in locating alternative premises.

12.10.232. ***Father Paul Churchill and Others (S94)***

12.10.233. The observer's submission relates to St. Joseph's Church, Berkeley Road, Dublin 7. It expresses concern regarding potential building damage, ground conditions and project alternatives. Regarding CPO, it expresses concern that the extent of proposed land acquisition may result in church offices and the main access route, which is used for church events such as weddings, etc being unusable for the duration of construction. St. Joseph's Church is affected by proposed permanent, temporary and substratum land acquisition, as identified on drawing No. ML-P 305 B-C. I note that the observer did not appear at the oral hearing.

12.10.234. In its Response to Submissions document, TII state that access to the church (including offices) will be maintained throughout construction, that vehicular access will be maintained, and that the church and offices will not be taken out of use. The submission includes a description of how vehicular access will be facilitated

throughout the various phases of construction. Regarding the extent of permanent land acquisition, the submission identifies that part of the area above the station box could be returned to the church if it is not needed post construction.

12.10.235. The proposed Mater Station box projects beyond the boundary of Four Masters Park and into the ground of St. Joseph's Church. Having considered the observer's submission I note that identified concerns relate to church operations and, in this respect, I note that TII have committed to maintaining and facilitating usage of the church throughout construction.

12.10.236. I have previously discussed the level of planning policy support for MetroLink and the proposed Mater Station will provide substantial benefits to the surrounding community, arising from the provision of a high-quality, high-frequency public transport service. I am satisfied that the extent of land acquisition in this location is warranted and necessary for the delivery of the proposed Mater Station and I am satisfied that TII has made adequate provision for the ongoing operation of St. Joseph's Church during construction.

12.10.237. Other issues raised in the submission are addressed elsewhere in this Report.

12.10.238. ***Yu Miao Yang, YMY Ltd. (S318)***

12.10.239. YMY Ltd. own property at No. 8 Blessington Street, Dublin 7. The property is affected by proposed substratum land acquisition, which is identified on Plan No. ML-P 305 C-D.

12.10.240. The issues raised in the submission generally relate to potential impacts on the property during construction and operation of MetroLink and are addressed elsewhere in this report. No specific objection is made to the proposed acquisition of substratum land and I note that YMY Ltd. did not appear at the oral hearing.

12.10.241. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.242. ***Westward Group Ltd (S313)***

- 12.10.243. The observer is the owner of 24-27 Frederick Street North, Dublin 1. The property is affected by proposed substratum land acquisition, which is identified on Plan No. ML-P 305 D-E.
- 12.10.244. The submission requests that TII would undertake pre-construction building surveys and would affix monitors to the observer's building and that property owners should be indemnified against adverse impacts on their property. No specific objection is made to the proposed acquisition of substratum land and I note that the observer did not appear at the oral hearing.
- 12.10.245. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.246. Other issues raised in the submission are addressed elsewhere in this report.
- 12.10.247. ***Wynn's Hotel (S317)***
- 12.10.248. The observer owns Wynn's Hotel, at 35-29 Abbey Street Lower, Dublin 1. The property is affected by proposed substratum land acquisition, which is identified on Plan No. ML-P 305 G-O. The observer was represented at the oral hearing by John Spain Associates Planning Consultants and Punch Consulting Engineers on 28th February 2024.
- 12.10.249. Issues raised within the submission relate to potential impacts on the hotel building and impacts on operations during the construction and operational phases, in particular related to noise and potential building damage, and includes the submission of a technical report by Punch Consulting Engineers.
- 12.10.250. The oral hearing submission included an assessment of groundborne noise and vibration at the hotel site (OH102), prepared by Arup, and included further discussion of potential impacts on the building and hotel operations during construction and operation.
- 12.10.251. No specific objection is made in either submission to the proposed acquisition of substratum land.

- 12.10.252. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.253. Other issues raised in the submission are addressed elsewhere in this report.
- 12.10.254. ***Esprit Investments Ltd (S88)***
- 12.10.255. The observer owns property at Townsend Street, Shaw Street and Pearse Street. Lands at Townsend Street, 32-33 and 35-37 Pearse Street and lands east of Spring Garden Lane, Dublin 2 are subject to substratum land acquisition. The lands are identified on drawing No. ML-P 306 O-A.
- 12.10.256. The submission raises concerns in relation to noise and associated disruption and potential building damage during construction. The observer also appeared at the oral hearing (Ref. OH97) reiterated concerns regarding the potential for building damage during construction. No specific objection is made in either submission to the proposed acquisition of lands
- 12.10.257. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.258. Other issues raised in the submission are addressed elsewhere in this report.
- 12.10.259. ***Grace Bible Fellowship (S106)***
- 12.10.260. The observer is the owner of lands at 28a-29 Pearse Street, Dublin 2, which is subject to substratum land acquisition. The lands are identified on drawing No. ML-P 306 O-A.
- 12.10.261. The submission expresses concern regarding potential building damage during construction and seeks indemnification in the event of such damage arising. No specific objection is made in the submission to the proposed acquisition of lands and I note that the observer did not appear at the oral hearing.

- 12.10.262. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.263. Other issues raised in the submission are addressed elsewhere in this report.
- 12.10.264. ***HSE National Drug Treatment Centre (S118)***
- 12.10.265. The HSE National Drug Treatment Centre is located at 30-31 Pearse Street and is subject to proposed substratum land acquisition. The lands are identified on drawing No. ML-P 306 O-A.
- 12.10.266. The HSE submission raises concerns regarding the impact of development on services, including potential building damage during construction and also regarding groundborne noise and vibration during both construction and operation. No specific objection is made in the submission to the proposed acquisition of lands and I note that the observer did not appear at the oral hearing.
- 12.10.267. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.268. Other issues raised in the submission are addressed elsewhere in this report.
- 12.10.269. ***Áine Wellard (S4)***
- 12.10.270. Ms Wellard is a long-time tenant of a Dublin City Council home, at 25 Townsend Street, which TII proposes to acquire and demolish in order to facilitate the construction of the proposed Tara Station. The property is identified on drawing No. ML-P 306 O-A. She is also a user of the Markievicz Leisure Centre, which is similarly proposed for acquisition and demolition as part of the development.
- 12.10.271. Ms Wellard is visually impaired and in both her written submission and her oral hearing submission on 20th March 2024, she outlined the local services that she is dependent on to support her quality of life and she also outlined adaptation works that she had undertaken to her home, at her own expense. Other issues raised

include difficulties in accessing information in a timely and suitable format; lack of evidence that demolition of the Townsend Street apartments is unavoidable; uncertainty regarding the provision of an alternative leisure centre; and the manner of engagement by both TII and DCC.

12.10.272. In its Response to Written Submissions document, TII acknowledged the observer's concerns and outlined that they will work with DCC in relation to the provision of both alternative housing and an alternative leisure centre, including funding the alternative leisure centre. Indeed, 'condition' No. 2 of the agreement between TII and DCC (Ref. OH76) contains a commitment that TII will continue to liaise with DCC on all aspects of the relocation of the residents of Luke Street and Townsend Street (specifically 23 and 34 Luke Street and 25-32 Townsend Street).

12.10.273. They also point out that they have met with Ms Wellard on a number of occasions, to discuss her specific concerns. Regarding the selection of the proposed Tara Station site, they state that it provides good interchange opportunities and that public transport integration is necessary to realise the full benefits of capital investments in public transport infrastructure.

12.10.274. While I am satisfied that the acquisition of this property is necessary for the construction of the Tara Station, I acknowledge the profound impact this acquisition will have for the observer. DCC have committed to rehousing their tenants, but given Ms Wellard's personal circumstances, it would clearly be difficult to procure an equivalent dwelling. Ultimately, however, I am satisfied that the acquisition is justified by the exigencies of the common good and by the assurances that alternative accommodation will be provided.

12.10.275. ***Aidan Cyril Forde (S3)***

12.10.276. A written submission was received from Magahy Broderick Associates on behalf of Mr Forde regarding Trinity Point, a six storey over basement office building located at 10-11 South Leinster Street, Dublin 2. The property is affected by substratum land acquisition, as identified on drawing No. ML-P 306 D-C.

12.10.277. The submission primarily related to the potential impacts on the foundation piles of the building due to the proximity of the proposed tunnel.

- 12.10.278. A letter was subsequently received from A.C. Forde & Co. LLP Solicitors, dated 31st January 2024, stating that Mr Forde had died on 21st January 2023 and that the property had been sold to the OPW. No further written or oral submissions were made on behalf of the late Mr Forde.
- 12.10.279. I note that one of the OPW's submissions (S213), related to this property, among others. It consequently formed part of the agreement between the applicant and the OPW, which was submitted at the oral hearing (Ref. OH73).
- 12.10.280. Having regard to the situation outlined above and having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.281. ***KW Real Estate ICAV (S165)***
- 12.10.282. The observer is the owner of the Shelbourne Hotel, 27-34 St. Stephen's Green North and 12 Kildare Street. This site is subject to proposed substratum land acquisition, as shown on drawing No. ML-P 306 C-D.
- 12.10.283. The submission comments on issues considered to be of relevance to the hotel during construction, including noise and vibration, architectural heritage, traffic and air quality and dust. No specific objection is made in the submission to the proposed acquisition of substratum lands and I note that the observer did not appear at the oral hearing.
- 12.10.284. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.285. Other issues raised in the submission are addressed elsewhere in this report.
- 12.10.286. ***Earlsfort Basin Ltd (S80)***

- 12.10.287. The observer is the owner of 15-18 Earlsfort Terrace, Dublin 2. This site is subject to proposed substratum land acquisition, as shown on drawing No. ML-P 306 E-O.
- 12.10.288. The submission includes a Technical Report by Punch Consulting Engineers that presents a number of questions to TII regarding engineering aspects of the project and which seeks clarification of the detailed design. It also seeks to ensure that business operations at the site are not disrupted by construction, with particular reference to noise. No specific objection is made in the submission to the proposed acquisition of lands and I note that the observer did not appear at the oral hearing.
- 12.10.289. A submission was also received from Core Capital (S53), who are stated to act on behalf of the owners of 15-18 Earlsfort Terrace. No further written or oral submissions were made by Core Capital and they do not identify the owners they are acting on behalf of. I note, in any case, that the Railway Order Schedules identify Earlsfort Basin as the building owner.
- 12.10.290. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.291. Other issues raised in the submission are addressed elsewhere in this report.
- 12.10.292. ***Hibernia Real Estate Group Ltd (S116)***
- 12.10.293. The observer is the owner of 1 Earlsfort, Block B, Earlsfort Terrace, Dublin 2. The site is subject to proposed substratum land acquisition, as identified on drawing No. ML-P 306 D-E.
- 12.10.294. The submission notes the potential interaction between the route alignment and the building's structure and fabric and also advises that they are in the process of preparing an application for redevelopment of the building. No specific objection is made in the submission to the proposed acquisition of lands and I note that the observer did not appear at the oral hearing.
- 12.10.295. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition

related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.296. ***Hines Real Estate Ireland Limited (S117)***

12.10.297. A submission was received from Waterman Moylan on behalf of Hines Real Estate Ireland Limited, in relation to AerCap House, formerly 65-68 St Stephen's Green, Dublin 2. The property is affected by proposed substratum land acquisition, which is identified on Plan No. ML-P 306 D-E. I note that the submission states that Hines are the owners of the building (the Railway Order schedules identify the owners and occupiers as Ireland Property Investment Fund ICAV, AerCap Ireland Limited and Northern Trust Fiduciary Services (Ireland) Limited) and it raises issues in respect of building damage, clearance between the building and MetroLink infrastructure, noise and vibration and acquisition of substratum land.

12.10.298. Submissions were subsequently made on behalf of the observer at the oral hearing by Eamon Galligan SC, Richard Osborne (Waterman Moylan) and Colman Billings (Billing Design Associates façade consultants) on 4th March 2024 and 21st March 2024, where the issues of building damage and clearance between the building and MetroLink infrastructure were discussed at length.

12.10.299. In response to such submissions, TII amended the proposed tunnel alignment on 6th March 2024, whereby it was proposed to lower the tunnel by a further 5m in the section between St. Stephen's Green and Charlemont (at chainage 18+940). The amended alignment is shown on drawing Nos. ML1-JAI-RTA-ROUT_XX-DR-Y-01027 (Ref. OH185) and ML1-JAI-RTA-ROUT_XX-DR-Y-02027 (Ref. OH180) and according to the document 'Addendum to the EIAR - Downward Tunnel Realignment: St Stephen's Green Station to Charlemont Station' (Ref. OH193) it will ensure there is no direct impact on buildings in this area, including AerCap House.

12.10.300. Regarding the acquisition of substratum land, in its Response to Submissions document, TII outlined that acquisition is required in order to enable the construction of the MetroLink tunnel and to protect it from future development. The response also pointed out that the tunnel is designed to support appropriate future imposed loads and that TII will comment on relevant future applications, advising of any necessary engineering constraints that are required.

- 12.10.301. As TII pointed out in the written response to the Hines submission, acquisition of substratum land is required in order to facilitate construction of the MetroLink tunnel system and in this instance the route alignment runs directly underneath AerCap house. Having established that the proposed development is necessary and that the alignment chosen is acceptable I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.302. I have addressed the issue of impacts on future development potential in preceding sections and I have outlined that I consider it reasonable that TII would seek to limit over-site development, given the complexities and interactions that would arise.
- 12.10.303. Other issues raised within the Hines submissions are addressed elsewhere in my report.
- 12.10.304. ***Irish Life Assurance PLC (S129)***
- 12.10.305. This submission, prepared by Mason Hayes & Curran LLP and Waterman Moylan Engineering Consultants, relates to the Cadenza Building, 19-20 Earlsfort Terrace and 65A Adelaide Road, Dublin 2. The property is affected by proposed substratum land acquisition, as identified on Plan No. ML-P 306 E-O. Issues raised within the submission relate to building damage, clearance between the building and MetroLink infrastructure, noise and vibration and acquisition of substratum land.
- 12.10.306. Submissions were subsequently made on behalf of the observer at the oral hearing, on 4th March 2024 and 21st March 2024, by Conor Sheehan BL, Richard Osborne (Waterman Moylan), Colman Billings (Billing Design Associates façade consultants), Conor O'Donnell (AGL Consulting Geotechnical Engineers) and Stephen Kearney (Allegro Acoustics), where the issues of building damage and clearance between the building and MetroLink infrastructure were discussed at length.
- 12.10.307. The proposed tunnel depth amendment discussed in the previous section, between St. Stephen's Green and Charlemont, is also intended to ensure there is no direct impact on the Cadenza Building.

- 12.10.308. Regarding the acquisition of substratum land, in its Response to Submissions document, TII outlined that acquisition will enable the construction of the MetroLink tunnel and will protect it from future development. The response also points out that the tunnel is designed to support appropriate future imposed loads and that TII will comment on relevant future applications, advising of any necessary engineering constraints that are required.
- 12.10.309. As TII pointed out in the written response to Irish Life's submission, acquisition of substratum land is required in order to facilitate construction of the MetroLink tunnel system and in this instance the route alignment runs directly underneath the Cadenza building. Having established that the proposed development is necessary and that the alignment chosen is acceptable, I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project. I note that in the Final Schedule of Additional Environmental Commitments (Ref. OH376), following lengthy discussion on the issue, TII commits that the tunnel alignment will not move vertically upwards or horizontally west at the Cadenza Building.
- 12.10.310. I have addressed the issue of impacts on future development potential in preceding sections and I have outlined that I consider it reasonable that TII would seek to limit over-site development, given the complexities and interactions that would arise.
- 12.10.311. Other issues raised within the Irish Life submissions are addressed elsewhere in my report.
- 12.10.312. ***Irish Life Assurance PLC (S131, S132)***
- 12.10.313. Irish Life made additional submissions regarding 70 St. Stephen's Green and Earlsfort Terrace Block C. These properties are affected by proposed substratum land acquisition, as identified on Plan No. ML-P 306 E-O.
- 12.10.314. In both submissions they express concern regarding potential building damage during construction and groundborne noise during both construction and operation. They also object to proposed substratum land acquisition, on the basis that it would impede future development potential. I would bring to the Board's attention that whilst Irish Life attended the oral hearing on a number of occasions, no further submissions were made regarding these properties.

- 12.10.315. In its response to submissions document, TII state that the tunnels are designed to accommodate appropriate overhead development and that it will engage such projects as they emerge.
- 12.10.316. The LoD for the tunnel extends below the corner of 70 St. Stephen's Green and encroaches further beneath the Earlsfort Centre, with the tunnel alignment running below the front corner of this building. I have previously discussed the level of planning policy support for MetroLink and the substantial benefits that will accrue from the provision of a high-quality, high-frequency public transport service. I am satisfied that the extent of land acquisition in this location is warranted and necessary for the delivery of the project. With regard to the LoD, I have previously outlined that I consider the concept of the LoD to be acceptable, in view of the complexities and complications that may arise during detailed design and construction.
- 12.10.317. Other issues raised in the submission are addressed elsewhere in this Report.
- 12.10.318. ***Earl Court Management Company DAC (S78)***
- 12.10.319. The observer represents the owners of apartments at Earl Court, Adelaide Road. Lands beneath these apartments are subject to proposed substratum land acquisition and are shown on drawing No. ML-P 306 E-O.
- 12.10.320. The submission expresses concern regarding potential building damage during construction and groundborne noise during construction and operation. It also objects to proposed substratum land acquisition on the grounds that it will impede the potential to develop the site in the future.
- 12.10.321. In its response to submissions document, TII state that acquisition is required to enable the construction of the MetroLink tunnel.
- 12.10.322. The tunnel alignment runs below the corner of the observer's building and with the limit of deviation extending further under the building. I have previously discussed the level of planning policy support for MetroLink and the substantial benefits that will accrue from the provision of a high-quality, high-frequency public transport service. I am satisfied that the extent of land acquisition in this location is warranted and necessary for the delivery of the project. With regard to the LoD, I have previously outlined that I consider the concept of the LoD to be acceptable, in

view of the complexities and complications that may arise during detailed design and construction.

12.10.323. Other issues raised in the submission are addressed elsewhere in this Report.

12.10.324. ***Declan Ryan (S57)***

12.10.325. The observer is resident at 9 Harcourt Terrace, which is subject to proposed substratum land acquisition, as identified on Plan No. ML-P 306 E-O.

12.10.326. The issues raised in the submission generally relate to potential impacts on the observers' property during construction and are addressed elsewhere in this report. No specific objection is made to the proposed acquisition of substratum land and I note that the observer did not appear at the oral hearing.

12.10.327. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.328. ***Emma Kelly (S85), Leonard Kinsella (S167), Patricia Whyte (S250), Will Phelan (S314)***

12.10.329. These four observers are the owners of Nos. 1 – 4 Harcourt Terrace, Dublin 2, with four separate but almost identical written submissions, made on their behalf by Sudway & Company Ltd. The properties are affected by proposed substratum land acquisition and are identified on Plan No. ML-P 306 E-O.

12.10.330. Niall Sudway, acting on behalf of the observers, appeared briefly at Module 1 of the oral hearing on 4th March 2024. He stated that discussions were ongoing with TII and that he may hand in a document. Mr Sudway indicated that he was going to submit documentation to the Board at that time, but Mr McGrath for TII intervened to note that this comprised bilateral communications between the parties and asked to discuss with Mr Sudway separately. Subsequently, an email was received from Mr Sudway on 20th March 2024, in advance of his scheduled Module 2 appearance, stating that "my clients have instructed me to advise the Bord that they will not be making any further submissions in this module. They will be, similarly to Module 1, relying on the written responses received from TII in relation to their queries."

- 12.10.331. It is not entirely clear from Mr Sudway's oral hearing appearance and subsequent email whether his clients' concerns have been fully addressed to their satisfaction or whether they wish to rely on their written submissions. As they are not included in the final 'Schedule of Third Party Agreements' submitted by the applicant on 27th March 2024 (Ref. OH381), I propose to address the issues arising from the submissions.
- 12.10.332. The submissions query the 'Draft' nature of the Railway Order and contend that there should be no draft involved at this juncture and that both the Board and the landowner should know what is in the Order, without equivocation. It is contended that the Schedules are not attached to the draft Order. It is contended that there is a lack of clarity regarding the substratum acquisition and the depth of the tunnel. The submission also contends that acquisition of the observers' lands would be a breach of their constitutional rights.
- 12.10.333. With reference to the 'draft' nature of the Railway Order, this appears to be a misunderstanding of the process by Mr. Sudway, since the 'draft' Railway Order will only become a Railway Order if and when the Board, as the decision-making body, approve it with or without modifications or other requirements.
- 12.10.334. With reference to the claimed failure to provide the Railway Order Schedules, in the Response to Submissions document TII state that notification letters were issued to each of the observers, including relevant extracts from the Book of Reference; relevant extracts of plans/drawings indicating the extent of the lands or land rights affected; the general arrangement and a long section showing the indicative depth of the tunnel. Such documentation is, in my opinion, adequate to inform the observers of the proposed development and the direct implications for their property.
- 12.10.335. With reference to the claims of lack of clarity regarding the substratum acquisition and the depth of the tunnel, having considered the application documents, in particular the Railway Order drawings, I am satisfied that these aspects of the development have been adequately described within the application.
- 12.10.336. With regard to the constitutional rights of the observers, I have already concluded that the proposed compulsory acquisition satisfies the relevant criteria established through case law.

- 12.10.337. The submissions also raise the issue of the assumed nil value of land 10m or more below the surface, which I have addressed under the heading of ‘compensation’ above, and the use of ‘Limits of Deviation’, which is also addressed above.
- 12.10.338. Other matters raised in the submissions, such as vibration related property damage, architectural heritage, soils and geology, and hydrology are addressed elsewhere in this report.
- 12.10.339. ***Niall Parsons (S203, S204, 1FS35), Geraldine Ann Cusack and Geraldine O’Connell Cusack (S100), Conor and Lorraine Power (S51, 1FS13), Denis McLoughlin and Teresa Reid (S60, 1FS40), Helena Kelly (S114), Leo and Anne Crehan (S166, 1FS29), John Conway and Orlaith McCarthy (S149, 1FS28), John A. Ryan (S144), John and Josianne Bullows (S145) and Muiris O’Dwyer (S197)***
- 12.10.340. Each of the observers is resident at Dartmouth Square West. Lands to the rear of their properties are affected by proposed permanent, temporary and substratum land acquisition, as identified on Plan No. ML-P 307 O-A (Ref. OH323).
- 12.10.341. Each submission raises multiple concerns regarding the impact of construction of the proposed Charlemont Station on their property, during both the construction and operational phases. Whilst not all submissions reference the proposed CPO, a number raise concerns regarding the impact of CPO on access rights to the rear laneway and also the impact of CPO on amenity and property values.
- 12.10.342. In its Response to Submissions document, when responding to these submissions TII pointed out that access to the laneway will be maintained, except for a 33m section to the rear of Nos. 11-15, which will be occupied by the contractor for 6 months. In its response to S100, TII stated that there is no requirement for permanent CPO at this laneway. Although there is no direct reference to temporary land take at 11 Dartmouth Square West (property owned by Leo and Anne Crehan), TII’s submission response states that ‘there was an error in the temporary land take drawings submitted as part of the application. TII have written to the parties to confirm that it will be rectified and will provide the correct drawing at oral hearing.’
- 12.10.343. Having considered the updated drawing No. ML-P 307 O-A, I note that permanent CPO of part of the laneway is required (to the rear of Nos. 11-15

Dartmouth Square West), in order to allow for construction of the Charlemont Station box, and the requirement for permanent acquisition is also identified in the Second Schedule of the Draft Railway Order submitted with the application (Land Which May Be Acquired). So the response to S100 appears to be inaccurate.

12.10.344. Having said this, as I outlined above the extent of permanent acquisition identified on drawing No. ML-P 307 O-A relates to the station box extent, and I consider it is reasonable and prudent that TII would wish to maintain ownership of the land under which the station box is located. Access to the rear lane will be maintained for the majority of properties at Dartmouth Square West and, whilst I acknowledge that there may be some short-term disruption for residents at 11-15 Dartmouth Square West, I consider this is outweighed by the substantial long-term benefits that will arise from the construction of a metro station in this location.

12.10.345. Regarding the issue of an error on the property drawing as it relates to 11 Dartmouth Square West, I am unclear what this relates to and the issue was not raised by either party at the oral hearing. The updated drawing No. ML-P 307 O-A identifies that the rear-most section of 11 Dartmouth Square West is subject to substratum acquisition and with no required permanent or temporary acquisition.

12.10.346. I am satisfied that the proposed land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.347. ***Rita Marie Harvey (S267)***

12.10.348. The observer is the owner and occupier of 7 Cambridge Terrace, Dublin 6, which is affected by proposed substratum acquisition, as shown on drawing No. ML-P 307 O-A.

12.10.349. The submission makes multiple points regarding the proposed Charlemont Station and also questions TII's assessment of environmental impacts. No specific objection is made to the proposed acquisition of substratum land. I further note that the observer did not appear at the oral hearing.

12.10.350. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am

satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.351. Other issues raised in the submission are addressed elsewhere in this Report.

12.10.352. ***John Loughrey (S151)***

12.10.353. The observer is resident at 9 Cambridge Terrace, Dublin 6. The property is affected by proposed substratum acquisition, as seen on drawing No. ML-P 307 O-A.

12.10.354. The submission expresses concern regarding project costs, station locations, construction and operational impacts. No specific objection is made to the proposed acquisition of substratum land. I further note that the observer did not appear at the oral hearing.

12.10.355. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.356. Other issues raised in the submission are addressed elsewhere in this Report.

12.10.357. ***John Neary and Kathleen White (S153)***

12.10.358. The observers are owners of properties at 35 Dartmouth Road and 11 Cambridge Terrace, Dublin 6. The property is affected by proposed substratum acquisition, as seen on drawing No. ML-P 307 O-A.

12.10.359. The submission expresses concern regarding the impact of construction of their home, including with reference to noise and vibration, light, traffic and influx of station users. They also question station locations and project costs. With reference to CPO, the submission states that 35 Dartmouth Road is not identified in the Book of Reference, that there has been no communication from TII about the property including in relation to building damage, compensation and relocation, etc. I note that the observer did not appear at the oral hearing

12.10.360. In its Response to Submissions document, TII state that 35 Dartmouth Road, which is within the rear garden of 11 Cambridge Terrace, was under construction at the time of the application and that 11 Cambridge Terrace was referenced. The

response further points out that notices were served on the owner of 11 Cambridge Terrace, who has confirmed they are one and the same with 35 Dartmouth Road.

12.10.361. Whilst the matter of whether notice should or should not have been served on the owner of 35 Dartmouth Road is unclear, I am nevertheless satisfied that the observers were notified of the proposed CPO, as 35 Dartmouth Road lies within the rear garden of 11 Cambridge Terrace. I would also point out that, procedurally, TII updated the Railway Order Schedules part of the Further Information Response, where both 11 Cambridge Terrace and 35 Dartmouth Road are identified as affected by proposed substratum land acquisition.

12.10.362. Both properties fall within the LoD associated with the Charlemont Station evacuation tunnel and I have previously outlined that I consider the concept of the LoD to be acceptable, in view of the complexities and complications that may arise during detailed design and construction. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.363. Other issues raised in the submission are addressed elsewhere in this Report.

12.10.364. ***Suzi and G.I. Taylor (S286 and 1FS39)***

12.10.365. Suzi Taylor is the owner of 32 Dartmouth Road and is affected by proposed substratum land acquisition, as shown on drawing No. ML-P 307 O-A. The written submission expresses generalised support for the MetroLink project but expresses a number of concerns regarding the impact of construction on her home and surrounding community. The submission did not express a specific objection to the proposed acquisition of substratum land.

12.10.366. At the oral hearing the observer handed a written submission to the Inspectors which was read into the record on 26th March 2024 (Ref. OH335). Again, this submission did not express a specific objection to the proposed acquisition of substratum land.

- 12.10.367. Ms Taylor made a further submission, following closure of the oral hearing, but again did not express a specific objection to the proposed acquisition of substratum land.
- 12.10.368. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.369. I note that in response to Ms Taylor's further submission, TII stated that they and the property owner "have reached an agreement in principle which TII understands addresses all of the concerns which the property owner has with respect to the MetroLink Project. TII will continue to engage with the property owner to formalise this commercial agreement". I would highlight to the Board that no details of the agreement have been submitted to the Board, and Ms Taylor has not withdrawn her objection. Therefore, the matters raised in her submissions have been addressed elsewhere in my report.
- 12.10.370. ***Edward Kelly and Joyce MacRedmond (S81)***
- 12.10.371. The observers are resident at 6 Cambridge Terrace, which is subject to proposed substratum land acquisition, as identified on Plan No. ML-P 307 O-A.
- 12.10.372. The issues raised in the submission generally relate to the choice of Charlemont as the project terminus and are addressed elsewhere in this report. No specific objection is made to the proposed acquisition of substratum land and I note that the observer did not appear at the oral hearing.
- 12.10.373. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.374. ***The Foley Family (S293)***

- 12.10.375. The observer is owner occupier of houses at 1 and 7 Orchard Lane, Ranelagh, Dublin 6 (known as The Mews and Ferney). The property is affected by proposed substratum acquisition, as seen on drawing No. ML-P 307 A-O.
- 12.10.376. The submission expresses concern regarding the impact of construction on the observer's family homes. No specific objection is made to the proposed acquisition of substratum land. I further note that the observer did not appear at the oral hearing.
- 12.10.377. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.378. Other issues raised in the submission are addressed elsewhere in this Report.
- 12.10.379. ***Union Investment Real Estate GmbH (S305, 1FS42) and Grand Parade Property Trading Company DAC (S108)***
- 12.10.380. Both Union Investment Real Estate GmbH (UIRE) and Grand Parade Property Trading Company DAC made submissions regarding 2 Grand Parade and appeared at the oral hearing on 5th March 2024 and 25th March 2024. UIRE also made a further submission, as part of further public consultation following closure of the oral hearing. 2 Grand Parade is affected by permanent, temporary and substratum land acquisition, as identified on drawing No. ML-P 307 O-A.
- 12.10.381. The written submissions (both of which include an identical submission prepared by John Spain Associates Planning Consultants) offer support for MetroLink but raise a number of issues regarding impacts on 2 Grand Parade and, in particular, request that TII give further consideration to the extent of land acquisition identified on the Railway Order drawing, which includes elements of the recently extended commercial office building known as the Carroll's Building. The submission makes the point that the old Carroll's Building is the only part of the 2 Grand Parade site that is not subject to acquisition by TII. The submission accepts that this may be a mapping error but nevertheless requests that the issue is clarified prior to the granting of the Railway Order.

- 12.10.382. The issue was addressed by TII, in the Response to Submissions document, where they acknowledged a discrepancy on the application drawings and was also discussed at the oral hearing on 25th March 2024. TII submitted drawing No. ML-P 307 O-A, which identifies reduced temporary and substratum land acquisition requirements at 2 Grand Parade and Eamonn Galligan SC, on behalf of UIRE, stated that this drawing appeared to substantially address their concerns
- 12.10.383. UIRE also made a further submission after the oral hearing, stating that drawing No. ML-P 307 O-A improves on the property drawing originally submitted with the application and that they look forward to engaging further with TII in relation to remaining land acquisition matters.
- 12.10.384. In its response to the further submission, TII requested that the Board confirms the CPO in the form applied for in the RO on the basis of the progress that has been made between the parties regarding land take.
- 12.10.385. Whilst I note from the written and oral hearing submissions that substantial progress has been made on the issue of land take at 2 Grand Parade, UIRE and CPPTCD have not withdrawn their submissions and I therefore propose to address their concerns.
- 12.10.386. The originally submitted property drawings identified a substantial quantum of lands for temporary acquisition in particular and I acknowledge the point made by both UIRE and CPPTCD that this includes part of the now-completed extension at 2 Grand Parade. I see no clear reason for such substantial temporary acquisition, where TII does not propose building demolition at the site, and I note that TII acknowledged it as a discrepancy on the application drawings. Drawing No. ML-P 307 O-A submitted to the oral hearing identifies a substantial reduction in the extent of required temporary land acquisition, with a minor reduction in required substratum acquisition. I am satisfied that the proposed land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.
- 12.10.387. Other issues raised in the UIRE and GPPTCD submissions are addressed elsewhere in my report.
- 12.10.388. General Area / Multiple Areas
- 12.10.389. ***Córas Iompair Éireann (S52) and Iarnród Éireann (S121)***

- 12.10.390. Both submissions offer support for the proposed MetroLink development but reference the provisions of Section 130 of the Transport Act 1944 (“the 1944 Act”), which precludes the compulsory acquisition of land required for the purposes of transport services without the consent of the Minister for Transport.
- 12.10.391. The submission from Iarnród Éireann (IÉ) states that they are supportive of MetroLink. The submission notes that while land required for the purposes of transport services may be included in a CPO application, Section 130 of the Transport Act 1944 (“the 1944 Act”) precludes the compulsory acquisition of such land without the consent of the Minister for Transport.
- 12.10.392. The other issues raised by IÉ are generally planning related and focus on the need for agreement with TII on construction and operational matters at the interchanges at Glasnevin and Tara Street. They also state that property ownership and access will need to be agreed.
- 12.10.393. The submission from Córas Iompair Éireann (CIÉ) expresses support for the IÉ submission and also references the need for comprehensive agreement with TII on construction and operational matters.
- 12.10.394. Neither CIÉ nor IÉ made a submission at the oral hearing.
- 12.10.395. I would bring to the Board’s attention that a number of CIE/IÉ properties are affected by either permanent or temporary CPO, as part of the development. This includes a number of small land plots that are in the vicinity of the proposed Glasnevin and Tara Stations and the headquarters of Dublin Bus at 59/60 O’Connell Street. Acquisition of substratum lands is also proposed in a number of locations.
- 12.10.396. I note that section 130 of the 1944 Act does not prevent the compulsory acquisition of land held by transport undertakers. It only requires that the consent of the Minister for Transport be obtained. I am satisfied that this is a matter for the Minister to consider separate to the Railway Order application process and that it does not have any bearing on the Board’s ability to make a determination on this case.
- 12.10.397. Neither CIE/IÉ has objected to the proposed acquisition of lands as part of the MetroLink project. In the case of Glasnevin and Tara stations, there is a high degree of interaction between the MetroLink route alignment and heavy rail lines, including

associated infrastructure, and the headquarters of Dublin Bus is located on the same city block as the proposed O'Connell Street station.

12.10.398. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the acquisition of lands in the ownership of CIE/IÉ along the route alignment are necessary and appropriate to deliver the proposed MetroLink project.

12.10.399. ***An Post (S7)***

12.10.400. A submission was made on behalf of An Post by RMLA Ltd. in relation to various An Post facilities that are stated to be near the MetroLink alignment, which includes the GPO at Lower O'Connell Street, which is subject to substratum land acquisition.

12.10.401. The submission expresses support for the MetroLink proposal and no specific objection is made to the proposed acquisition of substratum land. I further note that An Post did not appear at the oral hearing.

12.10.402. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration. I am satisfied that the substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.403. ***Office of Public Works (S213 – S240)***

12.10.404. As addressed elsewhere in this report, the OPW made a considerable number of individual written submissions in relation to various State properties along the proposed route alignment. An agreement between TII and the OPW was subsequently presented to the oral hearing on 26th February 2024 (Ref. OH73). Subject to that agreement, which I have recommended be included in the Thirteenth Schedule of the Railway Order, the only outstanding unagreed OPW submission is in relation to St Stephen's Green (S239).

12.10.405. The impacts of the proposed development on St Stephen's Green, particularly with regard to architectural and archaeological heritage and landscape and visual impacts are addressed elsewhere in this report. Regarding compulsory acquisition,

the OPW submission relating to St. Stephen's Green states that it reserves the right to develop the lands, above and below ground, including extant permissions for development, and that this should not be impeded by MetroLink.

12.10.406. In its Response to Submissions document, TII state that the issue of over-site development is not relevant to St. Stephen's Green as over-site development will not be permitted over the proposed station.

12.10.407. The route alignment runs alongside the eastern boundary of the park and this area of the park is affected by both substratum and permanent acquisition, as can be seen from drawing No. ML-P 306 C-D. The extent of encroachment into St. Stephen's Green is tightly confined to the eastern boundary, in an area currently populated by mature trees and vegetation and which TII proposes to replant and restore, following the completion of construction. I consider it very unlikely that any restrictions imposed by TII in respect of over-site development will affect OPW's works programme within St. Stephen's Green. I also note, in this respect, that the OPW submission does not identify any specific project that would be impacted by MetroLink.

12.10.408. Having established that the proposed development satisfies the criteria for compulsory acquisition of land, I am satisfied that the proposed permanent and substratum land acquisition at this location is necessary and appropriate to deliver the proposed MetroLink project.

12.10.409. I would bring to the Board's attention that in its submission to the oral hearing on 26th March 2024 (Ref. OH325), the OPW requested that the following wording be included in the Railway Order:

"The powers of compulsory acquisition conferred by this order do not extend to State land within the meaning of the State Property Act 1954."

12.10.410. TII did not object to the request, and it was incorporated into the updated Draft Railway Order submitted to the oral hearing on 26th March 2024 (Ref. OH342).

12.10.411. ***Uisce Éireann (S133)***

12.10.412. Uisce Eireann (UÉ) made a submission on the application and TII also provided a letter from its Chief Executive Officer to the oral hearing on 27th February 2024 (Ref. OH89). The written submission identifies issues with aspects of the

application that may impact on water infrastructure and which require the submission of further information. However, the submission also states that interactions between MetroLink and UÉ assets can be facilitated subject to detailed design being agreed, a comprehensive legal agreement being executed in advance of any works, together with other valid agreements including easements for private lands and transfer of ownership.

12.10.413. The letter provided to the oral hearing states that there has been positive engagement with TII in relation to the MetroLink project and that UÉ is confident agreement can be reached on all issues that arise from the written submission.

12.10.414. I note that in its Response to Submissions document, TII state that they began submitting detailed designs for specific MetroLink assets to UÉ and that it is seeking to work collaboratively with UÉ to agree solutions. They also commit to engagement on issues pertaining to other UE projects, in particular CPO requirements. With particular reference to potential CPO implications, TII stated that land permanently acquired as part of MetroLink will be transferred to UÉ following the completion of works, subject to situations where MetroLink operational requirements require otherwise and in such circumstances TII commits to finding a workable solution that ensures UÉ will have required access rights.

12.10.415. From the information before me, I am satisfied that the proposed development's CPO requirements will not jeopardise the delivery of UÉ infrastructure. Thus, and having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this submission that warrant further consideration.

12.11. Other Issues

12.11.1. Format of Railway Order Schedules

12.11.2. A number of the submitted Schedules are blank, namely the Seventh Schedule ('Structures to which brackets, cables, wires or other fixtures may be attached') and the Eighth Schedule ('Land upon which pole(s) may be erected'). The titles of these Schedules and article 12 of the Draft Railway Order, to which they relate, would appear to be more relevant to a Luas surface light rail development rather than a

metro. The applicant's legal representatives appeared to be uncertain regarding the reason for the inclusion of blank schedules when I queried this at the oral hearing. They stated that the format of railway order schedules was not prescribed in legislation and, having reviewed the relevant legislation, I would agree. It appears to me that the titles of the Schedules simply follows the format of previous Luas Railway Orders, notwithstanding that not all of the Schedules are applicable in this instance.

12.11.3. If approving the Railway Order, the Board could, therefore, direct the omission of the two blank Schedules and the associated article 12 of the RO. However, this would necessitate the renumbering of the remaining Schedules and would require changes to the Railway Order to ensure consistent referencing. Ultimately, I do not consider that the inclusion of blank Schedules creates any particular planning issue or ambiguity with regard to land/rights acquisition and therefore I recommend that they be left in place.

12.11.4. PRM Parking Space at Grand Canal

12.11.5. A persons with reduced mobility (PRM) vehicular setdown/drop-off facility is proposed at Charlemont, on the north side of Grand Parade. The drop-off facility is identified on the original structures drawing submitted with the application but was not identified on the original property drawings and was not identified in the CPO Schedules. The applicant also accepts that it was not assessed as part of the EIAR.

12.11.6. On 19th February 2024 TII submitted an assessment of the proposed drop-off to the oral hearing, entitled 'Charlemont Drop-Off' (Ref. OH21), which states that its provision arises from requests made at user group meetings and that it will provide improved connectivity between transport modes, particularly for PRM. It was also identified in the updated drawings pack provided on 25th March 2024 (Ref. OH323) as requiring permanent and temporary land acquisition and the CPO requirements are identified in the updated Railway Order Schedule 2 that was provided as part of the Further Information submission.

12.11.7. The land in question is identified as owned by Waterways Ireland and DCC and neither of these public bodies has expressed any concern or objection to the construction of this structure. I note that a copy of an email from Waterways Ireland to TII was submitted at the oral hearing by TII on 5th March 2024 (Ref. OH166),

stating that "...I can confirm that Waterways Ireland is aware of the proposed accessibility drop-off enhancement at Charlemont, which has been outlined by TII, and that we will work with TII in relation to same."

12.11.8. The drop-off structure serves an important accessibility function, in providing and improving access to the station, and I am satisfied that the required land take is proportionate to the purpose for which it is to be acquired. Thus, having regard to the situation outlined above and having established that the proposed development satisfies the criteria for compulsory acquisition of land, I do not consider that any further land acquisition related issues arise from this objection that warrant further consideration.

12.11.9. Planning and environmental issues regarding the PRM drop-off space are addressed elsewhere in this report.

12.12. Conclusion

12.12.1. I am satisfied that: the process and procedures undertaken by TII have been fair and reasonable, that TII has demonstrated the need for the lands and that all the lands being acquired are both necessary and suitable to facilitate the provision of the MetroLink project between Swords and Charlemont, via Dublin Airport and the City Centre.

12.12.2. Having regard to the constitutional and Convention protection afforded to property rights, I consider the acquisition of lands as set out in the Schedules to the Railway Order and on the deposited maps, as follows, as updated at the oral hearing and in response to the request for further information, pursues and is rationally connected to, a legitimate objective in the public interest, namely the MetroLink project:

- Lands described in the Second Schedule of the Railway Order are lands to be permanently acquired.
- Lands described in the Third Schedule of the Railway Order are substratum lands to be permanently acquired.
- Lands described in the Fourth Schedule of the Railway Order are lands to be temporarily acquired.

- Lands described in the Fifth Schedule of the Railway Order are rights of way and other easements that may be acquired.
- Lands described in the Sixth Schedule of the Railway Order are basements (under a public road) which may be acquired.
- Lands described in the Ninth Schedule of the Railway Order are public rights of way that may be extinguished.
- Lands described in the Tenth Schedule of the Railway Order private rights that may be extinguished.
- Lands described in the Eleventh and Twelfth Schedules of the Railway Order are roads that may be constructed and/or altered.

12.12.3. I am also satisfied that the acquiring authority has demonstrated that the means chosen to achieve that objective impair the property rights of affected landowners as little as possible; in this respect, I have considered alternative means of achieving the objective referred to in submissions to the Board, and am satisfied that the acquiring authority has established that none of the alternatives are such as to render the means chosen and the CPO made by the acquiring authority unreasonable or disproportionate.

12.12.4. The effects of the CPO on the rights of affected landowners are proportionate to the objective being pursued. I am further satisfied that the proposed: permanent and temporary acquisition of lands, substratum lands, basements, rights of way/easements; the extinguishment of public rights of way and private rights; the alteration and construction of roads; would be consistent with the policies and objectives of the Fingal County Development Plan 2023-2029 and the Dublin City Development Plan 2022-2028, both of which expressly provide for and support the development of the MetroLink project. Accordingly, I am satisfied that that the confirmation of the draft Railway Order is clearly justified by the exigencies of the common good.

12.12.5. If the Board decides to grant the Railway Order I recommend that it should attach the updated Railway Order Schedules, as provided in the response to the further information request, to its decision.

13.0 Appropriate Assessment

13.1. Introduction

13.1.1. The requirements of Article 6(3) of the EU Habitats Directive as related to Appropriate Assessment of a project under part XAB, sections 177U and 177V of the Planning and Development Act 2000 (as amended) are considered fully in this section⁷⁸. The areas addressed in this section are as follows:

- Screening the need for Appropriate Assessment.
- Appropriate Assessment of implications of the proposed development on the integrity of those European sites where likely significant effects are identified or could not be excluded.

13.2. Appropriate Assessment Screening Report, Natura Impact Statement and Appropriate Assessment Update Report

13.2.1. The application is supported by an Appropriate Assessment Screening Report, Natura Impact Statement, Appropriate Assessment Update Report (submitted at the oral hearing, Ref. OH202) and a Post Oral Hearing AA Update report, each prepared by Scott Cawley Ltd.

13.2.2. The Appropriate Assessment Screening Report considers potential significant impacts arising from the proposed development on Baldoyle Bay SAC, Malahide Estuary SAC, North Dublin Bay SAC, South Dublin Bay SAC, Wicklow Mountains SAC, Baldoyle Bay SPA, Dalkey Islands SPA, Howth Head Coast SPA, Ireland's Eye SPA, Lambay Island SPA, Malahide Estuary SPA, North Bull Island SPA, Rockabill SPA, Rogerstown Estuary SPA, Skerries Islands SPA, South Dublin Bay and River Tolka Estuary SPA, and The Murrough SPA. It is stated to have included desktop assessment, stakeholder consultations and a series of field surveys, including ecological surveys, hydrological surveys and monitoring and air quality assessment.

⁷⁸ Section 177U(8) states that "in this section *"consent for proposed development"* means, as appropriate [...] approval for development under section 43 of the Act of 2001" (i.e. the Transport (Railway Infrastructure) Act 2001).

- 13.2.3. The Natura Impact Statement considers significant impacts arising from the proposed development on each of the above-mentioned sites and is stated to have also included desktop assessment, field surveys and stakeholder consultations.
- 13.2.4. The Appropriate Assessment Update Report contains additional information that relates to both the Screening Report and Natura Impact Statement and includes baseline survey updates, European site updates and an in-combination assessment update.
- 13.2.5. The Post Oral Hearing AA Update report responds to concerns raised relative to Per- & Poly-fluoroalkylated Substances (PFAS) and in-combination assessment and also provides updates in relation to a number of European sites.
- 13.2.6. For the avoidance of any doubt the following matters have been taken into account in carrying out the appropriate assessment:
- The Appropriate Assessment Screening Report and Natura Impact Statement (NIS) prepared by the Applicant.
 - The Appropriate Assessment Update Report provided by the applicant at the oral hearing.
 - The Post Oral Hearing AA Update report prepared by the Applicant.
 - Written submissions and observations made to the Board by prescribed bodies and observers, in relation to the proposed development.
 - Oral submissions related to Appropriate Assessment made during the oral hearing.

13.3. Submissions by Prescribed Bodies and Observers

- 13.3.1. A number of submissions in respect of the application included comments/concerns regarding Appropriate Assessment. Concerns were also raised by participants at the oral hearing, as discussed in subsequent sections.
- 13.3.2. The Department of Housing, Local Government and Heritage (the Department) submissions (S63, 1FS17) include detailed advice and commentary in respect of Appropriate Assessment and the NIS. The submissions state that the Department accepts the evaluation of possible detrimental effects arising from the proposed

development and, also, the applicant's conclusion that, provided mitigation measures are implemented in full, the construction and operational phases will not significantly affect the integrity of a European site nor result in any significant adverse effects on flora and fauna beyond effects at a local level.

- 13.3.3. Dublin City Council's submission (S71) includes a report by the Parks, Biodiversity and Landscape Services Department that includes comments on issues pertaining to biodiversity. Regarding otter, it expresses the view that inadequate consideration has been given to cumulative impacts on otter, in view of potential effects arising from the Luas Finglas and Royal Canal Greenway projects. The report also requests that Japanese knotweed surveys should be undertaken by a suitable qualified ecologist and also conduct any required eradication programme.

13.4. **Adequacy of Information Provided by the Applicant**

- 13.4.1. Having reviewed the application documents, additional submissions and third-party and prescribed body observations received, I am satisfied that there is adequate information in relation to the proposed development and European sites to allow for a complete examination and identification of any potential significant effects of the development, alone, or in combination with other plans and projects on European sites.

13.5. **Screening for Appropriate Assessment**

- 13.5.1. The proposed Metrolink development is not directly connected with or necessary for the management of any European site and is, therefore, subject to the provisions of Article 6(3).
- 13.5.2. The Appropriate Assessment Screening Report (hereafter called the Screening Report) identifies **source-pathway-receptor connectivity to only 17 No. European sites** within a zone of influence, each off the Dublin and Wicklow coast, and concludes that the potential for significant effects cannot be ruled out, in view of their conservation objectives, and that Appropriate Assessment and associated Natura Impact Statement are required.
- 13.5.3. The Appropriate Assessment Update Report submitted at the oral hearing (Ref. OH202) concluded that the potential for significant effects could not be ruled out for **4**

No. additional sites, the North-west Irish Sea SPA and Seas off Wexford SPA, two newly designated European sites since the application was submitted, together with Saltee Islands SPA and Wicklow Head SPA. As with originally considered European sites, the assessment concludes that the potential for significant effects cannot be ruled out, in view of their conservation objectives, and that Appropriate Assessment is required.

- 13.5.4. The Post Oral Hearing AA Update report concluded that the potential for significant effects could not be ruled out for **3 No. additional sites**: Codling Fault Zone SAC, Lambay Island SAC and Rockabill to Dalkey Island SAC, and that Appropriate Assessment is required. For Codling Fault Zone SAC and Lambay Island SAC the assessment states that Harbour porpoise has recently been added as a QI species and, together with Rockabill to Dalkey Island SAC, these sites require consideration in light of new information regarding the risk of PFAS contamination to downstream marine environment.
- 13.5.5. I note that in determining the potential for significant effects arising from the proposed development, the Screening Report took account of the potential for ex-situ effects for foraging birds and mammals such as Otter. I further note that the screening assessments adopted very precautionary approaches in a number of instances, in respect of SCI associated with European sites in the wider area, including sites at some remove from the proposed development (examples include Wicklow Head SPA, which is c.45km from the nearest point of the MetroLink alignment, and the Seas off Wexford SPA and Saltee Islands SPA, which are both in excess of 85km from the nearest point). The Screening Report, Update Report and Post Oral Hearing AA Update assessments are summarised in Table 13.1 overleaf.

Table 13.1: Potential Impact Factors and European Sites	
Potential Impact Factors	European sites within the Zone of Influence
Habitat loss and/or fragmentation:	No There are no European sites at risk of habitat loss impacts associated with the Proposed Scheme
Mortality risk to SCI bird species:	No Proposed structures are low-rise in relation to surrounding landscape and do not contain a high proportion of glazing.
Disturbance/displacement of SCI:	No The site is a minimum 490m distance to any European site that includes SCI that may be affected by disturbance. Regarding ex-situ effects, the proposed development is set in an urban context, where there are already high levels of daily activity ongoing, including construction works and heavy vehicle movements. Species present in the vicinity of the project alignment are likely to be habituated to high levels of disturbance associated with human activity.
Habitat degradation caused by pollution/contamination of receiving waterbodies:	Yes The project alignment crosses a number of watercourses, each of which ultimately drains into the Irish Sea. A pollution event of sufficient magnitude during either the construction or operational phases has the potential to negatively affect the water quality of downstream waterbodies, potentially affecting: Baldoyle Bay SAC, Baldoyle Bay SPA, Dalkey Islands SPA, Howth Head Coast SPA, Ireland's Eye SPA, Lambay Island SPA, Malahide Estuary SAC, Malahide Estuary SPA, North Bull Island SPA, North

	Dublin Bay SAC, Rockabill SPA, Rogerstown Estuary SPA, Skerries Islands SPA, South Dublin Bay and River Tolka Estuary SPA, South Dublin Bay SAC, Wicklow Mountains SAC, The Murrough SPA, North-west Irish SPA, Seas off Wexford SPA, Saltee Islands SPA, Wicklow Head SPA, Lambay Island SPA, Codling Fault Zone SAC and Rockabill to Dalkey Island SAC.
Habitat degradation caused by changes to the existing hydrological regime of watercourses:	No The hydrological regime of watercourses crossed or culverted by the proposed development will not be altered significantly and will not undermine the conservation objectives of any SCI bird species of any European sites as a result of changes to the existing hydrological regime of watercourses.
Habitat degradation caused by foul water discharge-related hydrological impacts:	No Foul water discharges from the project equate to a very small percentage of overall discharge volumes and will not affect overall water quality status within Dublin Bay
Habitat degradation as a result of changes to the Hydrogeological Regime:	No There are no groundwater dependent terrestrial ecosystems or European sites within the Zone of Influence of drawdown effects of the project
Habitat degradation caused by introduction/spreading of non-native invasive species:	Yes There are non-native invasive species present within or adjacent to the proposed alignment and, therefore, a risk associated with the proposed development to downstream European sites arising from the spread / introduction of non-native invasive species. Note the Screening Assessment does not specify the European sites likely to be affected by this issue.
Habitat degradation caused by air quality impacts:	No There are no European sites at risk of air quality effects associated with the Proposed Scheme.

13.5.6. Screening Determination

13.5.7. Having regard to the information presented in the AA Screening Report, submissions, the nature, size and location of the proposed development and its likely direct, indirect and cumulative effects, the source pathway receptor principle and sensitivities of the ecological receptors, I concur with the applicant's screening determination that there is potential for significant effects on the following European sites:

- Baldoyle Bay SAC; Baldoyle Bay SPA; Dalkey Islands SPA; Howth Head Coast SPA; Ireland's Eye SPA; Lambay Island SPA; Malahide Estuary SAC; Malahide Estuary SPA; North Bull Island SPA; North Dublin Bay SAC; Rockabill SPA; Rogerstown Estuary SPA; Skerries Islands SPA; South Dublin Bay and River Tolka Estuary SPA; South Dublin Bay SAC; The Murrough SPA; the North-west Irish Sea SPA; Lambay Island SPA; Codling Fault Zone SAC; and Rockabill to Dalkey Island SAC.

13.5.8. Given the number of hydrological connections between the proposed development and Dublin Bay, it is reasonable to conclude that there is potential for significant effects to arise from (a) Habitat degradation caused by pollution/contamination of receiving waterbodies and (b) Habitat degradation caused by introduction/spreading non-native invasive species. As screening is considered at pre-assessment stage, further analysis is required to determine the significance of such impacts and if appropriate, where any potential impacts are identified on the qualifying interests associated with Natura 2000 sites, to apply any mitigation measures to exclude adverse effects. In view of the high degree of interconnection between sites in this area, taking a precautionary approach, I consider it reasonable that each of the above-mentioned European sites are brought forward for inclusion in the Appropriate Assessment.

13.5.9. Regarding the Wicklow Mountains SAC, which was scoped in by the Screening Report on the basis of potential significant effects on QI otter, I am satisfied that there is no likelihood of significant effects on this QI. The Royal Canal is in excess of 15km from the Wicklow Mountains SAC boundary and, in view of available species information from NPWS⁷⁹, I consider it is very unlikely that otters present in the area

⁷⁹ https://www.npws.ie/sites/default/files/publications/pdf/Otter_leaflet.pdf

are commuting over such a large foraging area. Further, having analysed the Wicklow Mountains SAC Conservation Objectives document, I note that recorded otter commuting areas are associated with waterbodies that flow away from Dublin City. As such, I am satisfied that likely significant effects can be excluded at this stage in view of the conservation objectives of Otter for this SAC (to maintain favourable conservation condition).

- 13.5.10. Regarding the Seas off Wexford SPA, Saltee Islands SPA and Wicklow Head SPA, whilst I accept that in view of the large foraging ranges of some SCI bird species there may be some usage of marine habitat in proximity of the proposed development, this is likely to be at an individual level and any degradation of marine habitat within the Zol of the proposed development is not likely to have a significant population-level effect on these SCI. I also agree with the screening assessment that it would require a pollution event of considerable scale to have any detectable effect on water quality in the Irish Sea and I consider the risk of such an event is very low. As such, I am satisfied that in view of the conservation objectives for these sites, the potential for significant effects on Wicklow Head SPA, Seas off Wexford SPA and Saltee Islands SPA can be excluded at this stage.

13.6. Stage 2 Appropriate Assessment

- 13.6.1. The following is a summary of the scientific assessment of the implications of the project on the site integrity of the European sites using the best scientific knowledge in the field. All aspects of the project which could result in significant effects on qualifying interest features of the European Sites are assessed and mitigation measures designed to avoid or reduce any adverse effects are considered and assessed.

- 13.6.2. I have relied on the following guidance:

- DoEHLG (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, National Parks and Wildlife Service. Dublin
- EC (2018) Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC

- EC (2021) Assessment of plans and projects in relation to Natura 2000 sites. Methodological guidance on Article 6(3) and 6(4) of the Habitats Directive 92/43/EC.

13.6.3. Relevant European Sites

13.6.4. The relevant European sites for Appropriate Assessment (Stage 2 AA) are:

- Baldoyle Bay SAC; Baldoyle Bay SPA; Dalkey Islands SPA; Howth Head Coast SPA; Ireland's Eye SPA; Lambay Island SPA; Malahide Estuary SAC; Malahide Estuary SPA; North Bull Island SPA; North Dublin Bay SAC; Rockabill SPA; Rogerstown Estuary SPA; Skerries Islands SPA; South Dublin Bay and River Tolka Estuary SPA; South Dublin Bay SAC; The Murrough SPA; the North-west Irish Sea SPA; Lambay Island SPA; Codling Fault Zone SAC; and Rockabill to Dalkey Island SAC.

13.6.5. This appropriate assessment will consider whether or not the project would adversely affect the integrity of this European site, either individually or in combination with other plans and projects in view of the site's conservation objectives.

13.6.6. A description of the sites and their Conservation Objectives and Qualifying Interests/Special Conservation Interests are set out in Section 7 of the NIS and additional descriptions are provided within the Appropriate Assessment Update Report (Ref. OH202) and Post Oral Hearing AA Update report. I would bring to the Board's attention that, in late 2024, following submission of the application, site-specific objectives were published for Dalkey Islands SPA, Howth Head Coast SPA, Ireland's Eye SPA, Lambay Island SPA, Skerries Island SPA and The Murrough SPA and these are addressed within the Post Oral Hearing AA Update report.

13.6.7. The following tables summarise the NIS site-by-site assessment of potential significant effects and proposed mitigation and also present a summary of my assessment. In summary, identified impacts relate to habitat degradation arising from (a) reduce water quality or (b) introduction or spread of non-native invasive species a common suite of mitigation proposals in outlined (this is set out in Table 13.2 below). I expand on specific issues in subsequent sections.

Table 13.2: AA Summary Matrix for Baldoyle Bay SAC (Site Code 000199)

SCI/QI	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation measures
Mudflats and sandflats not covered by seawater at low tide	To maintain favourable conservation condition in relation to habitat area and community distribution	A contamination / pollution event during construction or operational phases, alone or in combination, has the potential to affect downstream water quality in any of the waterbodies the alignment crosses and by extension within Dublin Bay, where the European site is either located or hydrologically connected to. Reduced water quality has the potential to affect coastal, estuarine and intertidal environment and natural conditions that support the conservation objectives of SCI/QI. 3 No. terrestrial invasive species identified during surveys (Giant Hogweed, Indian Balsam and Japanese Knotweed) could be spread / introduced to terrestrial	Mitigation proposals to protect surface water quality are set out in Section 7.4.2 of the NIS. They include: temporary attenuation and treatment; water quality monitoring / testing / sampling; the provision of boundary treatments / barriers (e.g. silt fencing, mobile and inflatable barriers, etc); exclusion zones; designated stockpile areas including segregation of contaminated soil; bunded storage / refuelling areas; designated on-site concrete batching locations; foul water storage / drainage in accordance with UÉ requirements; usage of cofferdams/sheet piling for works adjacent to the Broadmeadow and Ward Rivers and for works near flood zones; usage of diaphragm walls or secant piles to provide water-tight station box excavation areas; usage of grouting and other techniques to minimise potential settlement during tunnelling / excavation works; dewatering works and ground water recharge, as necessary; incorporation of geophysical tools within the cutter head; usage of oil/petrol interceptors; discharge of all wastewater from the tunnel alignment and foul waters to the public network; ongoing maintenance of swales / wetland ponds / infiltration basins; and
Salicornia and other annuals colonising mud and sand	To maintain favourable conservation condition in relation to habitat area/distribution; physical structure; and vegetation structure / composition		
Atlantic salt meadows	To maintain favourable conservation condition in relation to habitat area/distribution; physical structure; and vegetation structure / composition		
Mediterranean salt meadows	To maintain favourable conservation condition in relation to habitat area/distribution; physical structure; and vegetation structure / composition		

		habitats within downstream European sites, impacting species composition, diversity, abundance and habitat integrity, potentially undermining the conservation objectives of these sites.	incorporation of measures to segregate fire contaminated water. The applicant also proposes to develop the following management plans: • Construction Environmental Management Plan, • Water Management Plan, • Sediment Erosion and Pollution Control Plan • Incident Response Plan • Construction water discharge method statements The document MetroLink PFAS Management Strategy for Dublin Airport also contains mitigation proposals related to the potential presence of PFAS at Dublin Airport. This includes: • Worst case assumption that all excavated material (approx. 304,000m³) at the Airport has the potential to contain detectable PFAS • Excavations will be isolated, with surface water runoff collected for reuse or disposal • Excavated material will be tested in-situ or ex-situ for PFAS content. • Excavated material that contains PFAS or material requiring ex-situ testing will be isolated and will be banded and stored at Dardistown for up to 28 days, thereafter

			diverted for re-use in Ireland or to a treatment facility abroad. • Diversion works and changes in flow will be monitored for PFAS levels • Suitable barriers will be installed to limit PFAS migration downstream. Mitigation proposals to prevent introduction / spread of invasive species are set out in Section 7.4.3 of the NIS. They include: management in accordance with specified guidance; implementation of a Species Management Plan, which will include pre-construction surveys, specified measures during construction and species-specific control measures.

Overall conclusion: Integrity Test

The applicant determined that following implementation of design and mitigation measures, none of the potential direct or indirect impacts associated with the proposed Project will affect the conservation objectives of any of the qualifying interest habitats of Baldoyle Bay SAC.

Having considered the information provided, I am satisfied that adverse effects can be excluded for Baldoyle Bay SAC. The potential for significant effects arising from a contamination or pollution event can be effectively prevented by mitigation measures ensuring the protection of receiving waterbodies including the Sluice River and Mayne River, which flow into the SAC at Portmarnock. In this regard I note that existing run-off rates will be maintained and I agree that appropriate treatment will ensure runoff quality. The spread of invasive species can also be controlled via mitigation measures, pre-construction surveys will be carried out in order to map the precise locations of invasive species, with such locations demarcated during site establishment works and adherence to specified construction practices will protect against spreading / introduction of invasive species into Baldoyle Bay SAC.

The proposed development would not delay or prevent the attainment of the Conservation objectives of the Baldoyle Bay SAC.

Table 13.3: AA Summary Matrix for Malahide Estuary SAC (Site Code 000205)

SCI/QI	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation measures
Mudflats and sandflats not covered by seawater at low tide	To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide	As above	As above
Salicornia and other annuals colonising mud and sand	To maintain the favourable conservation condition of Salicornia and other annuals colonising mud and sand		
Atlantic salt meadows	To restore the favourable conservation condition of Atlantic salt meadows		
Mediterranean salt meadows	To maintain the favourable conservation condition of Mediterranean salt meadows		
Shifting dunes along the shoreline with <i>Ammophila arenaria</i>	To restore the favourable conservation condition of Shifting dunes along the shoreline with <i>Ammophila arenaria</i>		

Fixed coastal dunes with herbaceous vegetation	To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation		

Overall conclusion: Integrity Test

The applicant determined that following implementation of design and mitigation measures, none of the potential direct or indirect impacts associated with the proposed Project will affect the conservation objectives of any of the qualifying interest habitats of Malahide Estuary SAC.

Having considered the information provided, I am satisfied that adverse effects can be excluded for Malahide Estuary SAC. The potential for significant effects arising from a contamination or pollution event can be effectively prevented by mitigation measures ensuring the protection of receiving waterbodies including the Broadmeadow River and Ward River, which flow into the SAC to the east of Swords. In this regard I note that existing run-off rates will be maintained and I agree that appropriate treatment will ensure runoff quality. The spread of invasive species can also be controlled via mitigation measures, pre-construction surveys will be carried out in order to map the precise locations of invasive species, with such locations demarcated during site establishment works and adherence to specified construction practices will protect against spreading / introduction of invasive species into Malahide Estuary SAC.

The proposed development would not delay or prevent the attainment of the Conservation objectives of Malahide Estuary SAC.

Table 13.4: AA Summary Matrix for North Dublin Bay SAC (Site Code 000206)

SCI/QI	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation measures
Mudflats and sandflats not covered by seawater at low tide	To maintain favourable conservation condition in relation to habitat area; community extent; community structure; and community distribution	As above	As above
Annual vegetation of drift lines	To restore favourable conservation condition in relation to habitat area/distribution; physical structure; and vegetation structure / composition		
Salicornia and other annuals colonising mud and sand	To restore favourable conservation condition in relation to habitat area/distribution; physical structure; and vegetation structure / composition		
Atlantic salt meadows	To maintain favourable conservation condition in relation to habitat area/distribution; physical structure; and vegetation structure / composition		
Mediterranean salt meadows	To maintain favourable conservation condition in relation to habitat area/distribution; physical structure; and vegetation structure / composition		

Embryonic shifting dunes	To restore favourable conservation condition in relation to habitat area/distribution; physical structure; and vegetation structure / composition		
Shifting dunes along the shoreline with <i>Ammophila arenaria</i>	To restore favourable conservation condition in relation to habitat area/distribution; physical structure; and vegetation structure / composition		
Fixed coastal dunes with herbaceous vegetation	To restore favourable conservation condition in relation to habitat area/distribution; physical structure; and vegetation structure / composition		
Humid dune slacks	To restore favourable conservation condition in relation to habitat area/distribution; physical structure; and vegetation structure / composition		
Petalwort	To maintain favourable conservation condition in relation to population distribution / size; suitable habitat area; hydrological conditions; and vegetation structure		
Overall conclusion: Integrity Test The applicant determined that following implementation of design and mitigation measures, none of the potential direct or indirect impacts associated with the proposed Project will affect the conservation objectives of any of the qualifying interest habitats of North Dublin Bay SAC.			

Having considered the information provided, I am satisfied that adverse effects can be excluded for North Dublin Bay SAC. The potential for significant effects arising from a contamination or pollution event can be effectively prevented by mitigation measures ensuring the protection of receiving waterbodies including the Santry River, which flows into the SAC at Raheny. In this regard I note that existing run-off rates will be maintained and I agree that appropriate treatment will ensure runoff quality. The spread of invasive species can also be controlled via mitigation measures, pre-construction surveys will be carried out in order to map the precise locations of invasive species, with such locations demarcated during site establishment works and adherence to specified construction practices will protect against spreading / introduction of invasive species into North Dublin Bay SAC.

The proposed development would not delay or prevent the attainment of the Conservation objectives of North Dublin Bay SAC.

Table 13.5: AA Summary Matrix for South Dublin Bay SAC (Site Code 000210)

SCI/QI	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation measures
Mudflats and sandflats not covered by seawater at low tide	To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide	As above	As above
Annual vegetation of drift lines	The NPWS published Conservation Objectives document for this site does not contain any site-specific Conservation objectives for this QI, or any targets and attributes. The NIS identifies the following conservation objectives:		
Salicornia and other annuals colonising mud and sand			
Embryonic shifting dunes			
Overall conclusion: Integrity Test			
The applicant determined that following implementation of design and mitigation measures, none of the potential direct or indirect impacts associated with the proposed Project will affect the conservation objectives of any of the qualifying interest habitats of South Dublin Bay SAC.			
Having considered the information provided, I am satisfied that adverse effects can be excluded for South Dublin Bay SAC. The potential for significant effects arising from a contamination or pollution event can be effectively prevented by mitigation measures ensuring the protection of receiving waterbodies including the River Liffey, Tolka River which flow into Dublin Bay at Ringsend. In this regard I note that existing run-off rates will be maintained and I agree that appropriate treatment will ensure runoff quality. The spread of invasive species can also be			

controlled via mitigation measures, pre-construction surveys will be carried out in order to map the precise locations of invasive species, with such locations demarcated during site establishment works and adherence to specified construction practices will protect against spreading / introduction of invasive species into South Dublin Bay SAC.

The proposed development would not delay or prevent the attainment of the Conservation objectives of South Dublin Bay SAC.

Table 13.6: AA Summary Matrices for Baldoyle Bay SPA (Site Code 004016), Dalkey Islands SPA (Site Code 004172), Howth Head Coast SPA (Site Code 004113), Ireland's Eye SPA (Site Code 004117), Lambay Island SPA (Site Code 004069), Malahide Estuary SPA (Site Code 004025), North Bull Island SPA (Site Code 004006), Rockabill SPA (Site Code 004014), Rogerstown Estuary SPA (Site Code 004015), Skerries Islands SPA (Site Code 004122), South Dublin Bay and River Tolka Estuary SPA (Site Code 004024) and The Murrough SPA (Site Code 004186)

Conservation Objective: Maintain or restore favourable conservation condition of the relevant species

Baldoyle Bay SPA (Site Code 004016) SCI: Light-bellied Brent Goose, Shelduck, Ringed Plover, Golden Plover, Grey Plover, Bar-tailed Godwit, <u>Wetland</u> and waterbirds		
Conservation Objectives Targets and Attributes (summary)	Potential Adverse effects	Mitigation Measures
Long term population trend stable or increasing	A contamination / pollution event during construction or operational phases, alone or in combination, has the potential to affect downstream water quality including within hydrologically connected sites. Reduced water quality has the potential to affect coastal, <u>estuarine</u> and intertidal environment and natural conditions that support SCI and may affect habitat usage. The introduction / spread of invasive species may result in habitat degradation, in particular coastal habitats not permanently / regularly inundated by seawater and may affect habitat usage.	As above
No significant decrease in the range, <u>timing</u> or intensity of use of areas		
Habitat: The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 263ha, other than that occurring from natural patterns of variation		

Dalkey Islands SPA (Site Code 004172) SCI: Roseate Tern, Common Tern, Arctic Tern		
Conservation Objectives Targets and Attributes (Summary)	Potential Adverse effects	Mitigation Measures
Long term population trend stable or increasing	As above	As above
Sufficient availability of roosting resources and foraging habitat		
Disturbance does not significantly affect roost sites or post-breeding and passage population		
Barriers to impact access to the SPA or other important ex-situ sites		

Howth Head Coast SPA (Site Code 004113) SCI: Kittiwake		
Conservation Objectives Targets and Attributes (Summary)	Potential Adverse effects	Mitigation Measures
Long term population is stable or increasing	As above	As above
Sufficient availability of nesting sites and foraging habitat		
Disturbance occurs at a level that does not significantly affect breeding birds		
Barriers do not impact access to the SPA or other important ex-situ sites		

Ireland's Eye SPA (Site Code 004117)		
SCI: Cormorant, Herring Gull, Kittiwake, Guillemot, Razorbill		
Conservation Objectives Targets and Attributes (Summary)	Potential Adverse effects	Mitigation Measures
Long term population is stable or increasing	As above	As above
Sufficient availability of nesting sites and foraging habitat		
Disturbance occurs at a level that does not significantly affect breeding birds		
Barriers do not impact access to the SPA or other important ex-situ sites		

Lambay Island SPA (Site Code 004069)		
SCI: Fulmar, Cormorant, Shag, Greylag Goose, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Razorbill, Puffin		
Conservation Objectives Targets and Attributes (Summary)	Potential Adverse effects	Mitigation Measures
Long term population is stable or increasing	As above	As above
Sufficient availability of suitable roosting/nesting and foraging habitat		
Disturbance occurs at a level that does not significantly impact achievement of population targets		
Barriers do not impact access to the SPA or other important ex-situ sites		
Sufficient availability of usable ex-situ habitat		

Malahide Estuary SPA (Site Code 004025)		
SCI: Great Crested Grebe, Light-bellied Brent Goose, Shelduck, Pintail, Goldeneye, Red-breasted Merganser, Oystercatcher, Golden Plover, Grey Plover, Knot, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Redshank, <u>Wetland</u> and waterbirds		
Conservation Objectives Targets and Attributes (summary)	Potential Adverse effects	Mitigation Measures
Long term population trend stable or increasing	As above	As above
No significant decrease in the range, <u>timing</u> or intensity of use of areas		
Habitat: The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 765 hectares, other than that occurring from natural patterns of variation		

North Bull Island SPA (Site Code 004006)		
SCI: Light-bellied Brent Goose, Shelduck, Teal, Pintail, Shoveler, Oystercatcher, Golden Plover, Grey Plover, Knot, Sanderling, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Redshank, Turnstone, Black-headed Gull, <u>Wetland</u> and waterbirds		
Conservation Objectives Targets and Attributes (summary)	Potential Adverse effects	Mitigation Measures
Long term population trend stable or increasing	As above	As above
No significant decrease in the range, <u>timing</u> or intensity of use of areas		
Habitat: The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 1,713 hectares, other than that occurring from natural patterns of variation. See map 3		

Rockabill SPA (Site Code 004014) SCI: Purple Sandpiper, Roseate Tern, Common Tern, Arctic Tern		
Conservation Objectives Targets and Attributes (summary)	Potential Adverse effects	Mitigation Measures
Long term population trend stable or increasing	As above	As above
No significant decrease in the range, timing or intensity of use of areas		
No significant decline in roosting or breeding colonies.		
No significant increase in connectivity barriers		
Human activities should occur at levels that do not adversely affect breeding or roosting sites.		

Rogerstown Estuary SPA (Site Code 004015) SCI: Greylag Goose, Light-bellied Brent Goose, Shelduck, Shoveler, Oystercatcher, Ringed Plover, Grey Plover, Knot, Dunlin, Black-tailed Godwit, Redshank, Wetland and waterbirds		
Conservation Objectives Targets and Attributes (summary)	Potential Adverse effects	Mitigation Measures
Long term population trend stable or increasing	As above	As above
No significant decrease in the range, timing or intensity of use of areas		
Habitat: The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 646 hectares, other than that occurring from natural patterns of variation		

Skerries Islands SPA (Site Code 004122) SCI: Cormorant, Shag, Light-bellied Brent Goose, Purple Sandpiper, Turnstone, Herring Gull		
Conservation Objectives Targets and Attributes	Potential Adverse effects	Mitigation Measures
Long term population is stable or increasing	As above	As above
Sufficient availability of suitable roosting/nesting and foraging habitat		
Disturbance occurs at a level that does not significantly impact breeding birds or the achievement of population targets		
Barriers do not impact access to the SPA or other important ex-situ sites		
Sufficient availability of usable ex-situ habitat		

South Dublin Bay and River Tolka Estuary SPA (Site Code 004024)

SCI: Light-bellied brent goose, Oystercatcher, Ringed Plover, Grey Plover, Knot, Sanderling, Dunlin, Bar-tailed Godwit, Redshank, Black-headed Gull, Roseate Tern, Common Tern, Arctic Tern, Wetland and waterbirds

*Grey Plover is proposed for removal from the list of SCI's for the site so no site specific conservation objective is included for the species

Conservation Objectives Targets and Attributes (summary)	Potential Adverse effects	Mitigation Measures
Long term population trend stable or increasing	As above	As above
No significant decrease in the range, <u>timing</u> or intensity of use of areas		
No significant decline in roosting or breeding <u>colonies</u>		
No significant increase in connectivity barriers		
Human activities should occur at levels that do not adversely affect breeding or roosting sites.		
Habitat: The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,192 hectares, other than that occurring from natural patterns of variation.		

The Murrough SPA (Site Code 004186) SCI: Red Throated Diver, Greylag Goose, Light-bellied Brent Goose, Wigeon, Teal, Black-headed Gull, Herring Gull, Little Tern, Wetland and Waterbirds		
Conservation Objectives Targets and Attributes (Summary)	Potential Adverse effects	Mitigation Measures
Long term population is stable or increasing	As above	As above
Sufficient availability of suitable roosting/nesting and foraging habitat		
Disturbance occurs at a level that does not significantly impact breeding birds, the achievement of population targets and spatial distribution		
Barriers do not impact access to the SPA or other important ex-situ sites		
Sufficient availability of usable ex-situ habitat		
No significant loss of wetland habitat within the SPA or the quality or functioning of such habitat		

Overall Conclusion: Integrity Test

The applicant determined that following implementation of design and mitigation measures, none of the potential direct or indirect impacts associated with the proposed Project will affect the conservation objectives of any of the species of conservation interest of Malahide Estuary SPA (Site Code 004025), Rogerstown Estuary SPA (Site Code 004015), South Dublin Bay and River Tolka Estuary SPA (Site Code 004024), North Bull Island SPA (Site Code 004006), Baldoyle Bay SPA (Site Code 004016), Ireland's Eye SPA (Site Code 004117), Lambay Island SPA (Site Code 004069), Dalkey Islands SPA (Site Code 004172), Howth Head Coast SPA (Site Code 004113), Skerries Islands SPA (Site Code 004122), Rockabill SPA (Site Code 004014), The Murrough SPA (Site Code 004186) and North-west Irish Sea SPA (Site Code 004236).

Having considered the information provided, I am satisfied that adverse effects can be excluded for each of these SPA sites. The potential for significant effects arising from a contamination or pollution event can be effectively prevented by mitigation measures ensuring the protection of receiving waterbodies that ultimately flow into Dublin Bay and the waters that comprise these sites. In this regard I note that existing run-off rates will be maintained and I agree that appropriate treatment will ensure runoff quality. The spread of invasive species can also be controlled via mitigation measures, pre-construction surveys will be carried out in order to map the precise locations of invasive species, with such locations demarcated during site establishment works and adherence to specified construction practices will protect against spreading / introduction of invasive species into Dublin Bay.

The proposed development would not delay or prevent the attainment of the Conservation objectives of Malahide Estuary SPA (Site Code 004025), Rogerstown Estuary SPA (Site Code 004015), South Dublin Bay and River Tolka Estuary SPA (Site Code 004024), North Bull Island SPA (Site Code 004006), Baldoyle Bay SPA (Site Code 004016), Ireland's Eye SPA (Site Code 004117), Lambay Island SPA (Site Code 004069), Dalkey Islands SPA (Site Code 004172), Howth Head Coast SPA (Site Code 004113), Skerries Islands SPA (Site Code 004122), Rockabill SPA (Site Code 004014), The Murrough SPA (Site Code 004186) and North-west Irish Sea SPA (Site Code 004236).

- 13.6.8. The Appropriate Assessment Update Report and Post Oral Hearing AA Update report do not present tabulated assessments of the North-west Irish Sea SPA, Lambay Island SAC, Codling Fault Zone SAC and Rockabill to Dalkey Island SAC, as has been done for other relevant sites within the NIS. For consistency, I present below a summarised version of the additional assessments in the same tabulated form.

North-west Irish Sea SPA (Site Code 004236)		
SCI: Red-throated Diver, Great Northern Diver, Fulmar, Manx Shearwater, Cormorant, Shag, Common Scoter, Little Gull, Black-headed Gull, Common Gull, Lesser Black-backed Gull, Herring Gull, Great Black-backed Gull, Kittiwake, Roseate Tern, Common Tern, Arctic Tern, Little Tern, Guillemot, Razorbill, Puffin		
Conservation Objectives Targets and Attributes (Summary)	Potential Adverse effects	Mitigation Measures
Population trend is stable or increasing	As above	As above
Suitable availability of nesting and foraging habitat		
Disturbance does not affect population size and distribution targets		
Barriers do not affect access to the SPA or important ex-situ habitat		

Lambay Island SAC (Site Code 000204)			
SCI/QI	Conservation Objectives Targets and Attributes	Potential Adverse effects	Mitigation Measures
Reefs	To maintain favourable conservation condition of the specified QI habitat of SCI species	As above	As above
Vegetated sea cliffs of the Atlantic and Baltic coasts			
Harbour Porpoise			
Grey Seal			
Harbour Seal			

Codling Fault Zone SAC (Site Code 003015)			
SCI/QI	Conservation Objectives Targets and Attributes	Potential Adverse effects	Mitigation Measures
Submarine structures made by leaking gases	Long term population is stable or increasing	As above	As above
	Maintain structural integrity of MDAC features and maintain community complex in a natural condition		
Harbour porpoise	Species range should not be restricted by artificial barriers		
	Human activities should occur at levels that do not affect the Harbour porpoise community		

Rockabill to Dalkey Island SAC (Site Code 003000)			
SCI/QI	Conservation Objectives Targets and Attributes	Potential Adverse effects	Mitigation Measures
Reefs	Permanent area and distribution are stable or increasing	As above	As above
	Intertidal reef community complex and subtidal reef community complex are conserved in a natural condition		
Harbour porpoise	Species range should not be restricted by artificial barriers		
	Human activities should occur at levels that do not affect the Harbour porpoise community		

Overall Conclusion: Integrity Test

The applicant determined that following implementation of design and mitigation measures, none of the potential direct or indirect impacts associated with the proposed Project will affect the conservation objectives of any of the species of conservation interest of North-west Irish Sea SPA (Site Code 004236), Lambay Island (Site Code 000204), Codling Fault Zone SAC (Site Code 003015) and Rockabill to Dalkey Island SAC (Site Code 003000).

Having considered the information provided, I am satisfied that adverse effects can be excluded for each of these SPA and SAC sites. The potential for significant effects arising from a contamination or pollution event can be effectively prevented by mitigation measures ensuring the protection of receiving waterbodies that ultimately flow into Dublin Bay. The spread of invasive species can also be controlled via proposed mitigation measures.

The proposed development would not delay or prevent the attainment of the Conservation objectives of Lambay Island SAC (Site Code 000204), Codling Fault Zone SAC (Site Code 003015) or Rockabill to Dalkey Island SAC (Site Code 003000).

13.6.9. Assessment of Potential Significant Effects

13.6.10. As I have outlined, the potential for adverse effects on the site integrity of the European sites relates to habitat degradation caused by pollution/contamination of receiving waterbodies, or habitat degradation caused by introduction/spread of non-native invasive species. These issues are discussed separately below.

13.6.11. Habitat degradation caused by pollution/contamination of receiving waterbodies

13.6.12. It is important to note at the outset that each of the relevant European sites is located in coastal or estuarine waters and habitat types present in each site are likely to be robust to pollutant or contaminant content within surface waters. However, in saying this, I acknowledge that a pollution event or discharges over a prolonged period may affect the wider ecological functioning of sites, thereby affecting SCI of the various

SPA sites through for example the availability of prey. I have thus undertaken the following assessment on a precautionary basis.

- 13.6.13. The project route crosses a number of watercourses, including the Broadmeadow River, Ward River, Sluice River, Cuckoo Stream, Mayne River, Santry River, Tolka River and River Liffey, together with the Royal and Grand Canals, each of which ultimately flows into the Irish Sea off the east coast and provides a hydrological link to the complex of European sites in this area. The proposed development interfaces with these waterbodies in a number of ways during the construction and operational phases.
- 13.6.14. The applicant identifies that the associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge point and therefore impact the downstream waterbodies, i.e. Broadmeadow Water transitional waterbody, Mayne Estuary transitional waterbody, Tolka Estuary transitional waterbody and Dublin Bay, within which each of the above-outlined European sites are located or hydrologically connected. Such incidents have the potential to affect the hydrological regime, biological functioning and, consequentially, the availability of prey within the aquatic environment and, thus, have the potential to have a significant effect on SCI of the above-mentioned sites. I would advise the Board that I consider the likelihood of such an event having a significant effect on water quality in Dublin Bay is unlikely, in view of the estuarine nature of the waterbody and its overall large scale, so the issue is being considered on a precautionary basis.
- 13.6.15. During construction, in-water works are proposed at the Broadmeadow River, as part of construction of a viaduct; diversion works are proposed at Dardistown (Turnapin Stream) and Northwood (Santry River); 2 No. 3-month long dewatering phases are proposed at the Royal Canal, between locks 5 and 6 (Cross Guns); a number of culverts are required; and a cantilevered drop-off parking bay structure is proposed over the Grand Canal. I would also point out to the Board that there are large construction sites and construction compounds in proximity to open water in a number of locations, as can be seen from Figure 5.1 of the EIAR. Additionally, an issue of potential groundwater contamination at Dublin Airport was also raised following submission of the application.

- 13.6.16. **In-water works at the Broadmeadow River:** In-water works are required to remove a suspended pipe and supporting structure from the Broadmeadow River, as part of the construction of the Broadmeadow River and Ward River viaduct. The issue was discussed and clarified at the oral hearing, in view of observed inconsistencies between the EIAR and NIS, where Section 18.5.3.1.2 of the EIAR states that in-water works are required as part of these works but there are a number of statements elsewhere within the application documents that there is no such requirement (for example Section 4.1 of the NIS).
- 13.6.17. The document 'Note on Removal of Pipe and Instream Supporting Structure at the Broadmeadow River' (Ref. OH213) provided at the oral hearing on 11th March 2024 confirms that in-stream works are required and includes a method statement for the removal of the elements in question. It outlines that such works will be limited to a construction operative working from the river to secure lifting equipment to elements of the structure being removed and cutting the pier from the plinth and that no heavy machinery or construction plant will operate in-stream. The Note also includes mitigation measures that are intended to ensure no suspended solids or pollutants are likely to be discharged into downstream waterbodies.
- 13.6.18. I note the reference to the installation of a 'silt trap' downriver, as the primary means of addressing the potential for sediment dispersal. A silt trap is ordinarily a land-based installation, designed to prevent sediment from entering a watercourse; however, as I have outlined elsewhere in my report, I have interpreted the applicant's proposal as a general description of an in-water installation that will prevent disturbed material for being dispersed downstream. In view of the minor nature of the works, I consider there is a low risk of a pollution event and that the applicant's approach is adequate to mitigate the risk of a significant pollution event. I have recommended elsewhere that a condition be attached to the Railway Order, to require that the proposed in-water installation shall be designed and installed under the supervision of the project Ecological Clerk of Works and shall comply with 'Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters'. I am satisfied that this approach will be sufficient to ensure no significant downstream effects arise.
- 13.6.19. **Diversion of the Turnapin Stream at Dardistown and Santry River at Northwood:** Construction of the Dardistown depot requires diversion of the Turnapin

Stream, a tributary of the Mayne River. Section 2.3.3 of Appendix A5.10, 'Culverts and Watercourses Construction Methodologies', indicates that a boxed culvert and open channel culvert of the stream will be provided. The stream is described by the Dardistown Depot Location Options Report (Appendix A7.6 of the EIAR) as "...more of a field drain than a stream and therefore easier to manage". Regarding the Santry River diversion works, Section 2.3.4 of Appendix A5.10 and Table 18.17 of the EIAR together identify that an existing culvert crossing under the public road will be maintained and that localised channel realignment will be undertaken downstream of the culvert outlet, to straighten the channel and to provide scour protection.

- 13.6.20. Appendix A5.10 of the EIAR, 'Culverts and Watercourses Construction Methodologies', identifies the extent of proposed diversion/culverting works. In the case of the Turnapin Stream, it identifies that the stream will be diverted around the depot site, partly through culverting and partly via an open channel. In the case of the Santry River, it states that minor works are required to straighten the channel immediately downstream of the culvert outlet. The document provides methodologies for the construction of culverts and diversions, including details of construction sequencing. Having considered these sections, I consider the methodologies provide appropriate construction approaches for the proposed works.
- 13.6.21. The Turnapin Stream is a tributary of the Mayne River, which flows into Baldoyle Bay SAC c. 7.5km to the east, and the Santry River flows into the North Dublin Bay SAC/North Bull Island SPA complex c. 7.5km to the east. There is a considerable level of separation between sites, in the context of the scale of both watercourses in the affected locations, and I consider it is unlikely that contaminants/pollutants would be transferred from the construction sites to any European site.
- 13.6.22. **Culverts at the Sluice River and Forrest Little Stream crossings:** Section 2.3.2 of Appendix A5.10 describes the proposed culvert works. Both culverts are located in alignment Section AZ1, to the north of Naul Road, and both require the provision of a temporary diversion and will be culverted under the railway. As is set out in the Hydrology section of my report, there is some contradiction within the application documents regarding the culvert sizes, with different sizes referenced in various sections of the EIAR and its Appendices. The structures drawings and alignment drawings are consistent in showing a culvert length of 50.2m and 64.7m and these drawings are also reflected in the Flood Risk Assessment contained in Appendix

A18.5 of the EIAR. I am satisfied that these drawings accurately reflect the size of the culverts required and my assessment is undertaken on this basis.

- 13.6.23. Both culvert locations are in excess of 7.5km from the Baldoyle Bay SAC/SPA complex, which I consider to be a significant distance in the context of the scale of the culvert works provided. As such, I consider it is unlikely that contaminants / pollutants would be transferred from the construction sites to any European site.
- 13.6.24. For the operational phase, Section 2.3.2 of Appendix A5.10 identifies that the culvert will have a similar width to the natural flow channel, its invert level will be below the natural stream bed in order to permit fish passage and that a gentle slope will be incorporated. Mammal ledges will also be incorporated internally, to allow passage. I am satisfied that the proposed approach provides for ongoing passage of fish upstream and downstream of the culvert.
- 13.6.25. **Dewatering of the Royal Canal:** Dewatering is required on two separate occasions, according to Appendix 5.5 of the EIAR, 'Glasnevin Station Construction Report', to allow for construction of a secant pile retaining wall between a heavy rail platform (the MGWR) of the proposed Glasnevin Station and northern wall of the canal. It was initially proposed that this widening would be facilitated by the installation of sheet piles and backfill in the base of the canal but the applicant clarified at the oral hearing, verbally on 26th February 2024 and in a document entitled 'Updated Appendix A5.5 Figures – Figure 5.15 & Figure 5.25' (Ref. OH118) provided on 29th February 2024 that, following discussions with Waterways Ireland, it is now proposed to install precast L-shaped concrete panels and backfill. The Glasnevin Station Construction Report describes the dewatering process and, of importance, I note that following drainage of the canal a protective layer will be applied to its base, prior to installation of precast panels and backfill.
- 13.6.26. The affected is a considerable distance from any European site (South Dublin Bay and River Tolka Estuary SPA is in excess of 7km from the site and lies within Dublin Bay). As there are no works proposed to the canal, other than application of the protective layer and installation/removal of precast panels and backfill, I am satisfied it is unlikely that contaminant or pollutant content would be transferred from this site to any European site. Indeed, in the unlikely event of any such material being

transferred to a European site, it is very unlikely to be of sufficient quantity to a significant effect on water quality within the site.

13.6.27. Table 20.3 of the EIAR states that during consultations with prescribed bodies, Waterways Ireland informed TII that historic application of creosote to railway sleepers took place at a site near the proposed Glasnevin Station and to the west of Shandon Gardens, resulting in localised contamination and leakage into the canal. This site is a triangular plot of land adjacent to the west end of Shandon Garden, in excess of 600m from the main Glasnevin Station construction site and on the opposite side of the canal and around 80m from nearest point on the Irish Rail line where lowering works are proposed. This is a considerable distance and I am satisfied that there is no likelihood of encountering such contamination during construction. I similarly consider there is no real likelihood of mobilising creosote within the ground and transferring same to the canal waterbody. However, in the very unlikely event that this does arise, as I have outlined above, the affected area is a considerable distance from any European site and I am satisfied that there is possibility of a significant effect on any European site arising.

13.6.28. **Cantilevered parking bay structure at Charlemont:** The cantilevered structure is identified on the original application drawings but was not assessed as part of the EIAR. This was acknowledged by the applicant at the oral hearing. The document 'Charlemont Drop-Off' (Ref. OH21) provided to the oral hearing on 19th February 2024 describes the proposed structure and receiving area. It is a 3.6m wide precast structure and affects an area described by the report as "currently made up of a grassy verge/ embankment and vegetation of varying width, but generally not less than 3m". The report further identifies that the structure "overhangs the navigable canal by approximately 0.3m, but certainly no more than 1m". Section 3 of the report 'Charlemont Drop-Off Biodiversity Report' (Ref. OH324) provided to the oral hearing on 25th March 2024 assesses the potential for significant effects arising from this element of the project and concludes that does not pose any additional risk to any European sites over those already assessed and mitigated in the NIS and does not require any additional mitigation measures to those already set out in the NIS or the updated Schedule of Environmental Commitments.

13.6.29. The location of this structure is c.2.9km from the point at which the Grand Canal and the River Liffey join and is further remote from the European sites within Dublin Bay.

No works are proposed to take place within the canal and, in this context, I am satisfied that there is no real likelihood of contaminant or pollutant content being transferred from this site to any European site. Indeed, in the unlikely event of any such material being transferred to a European site, it is very unlikely to be of sufficient quantity to a significant effect on water quality within the site.

13.6.30. For the operational phase, separate drainage systems are proposed for uncontaminated and contaminated waters. Uncontaminated surface water run-off is proposed to be collected within a drainage system and discharged to surface water bodies (preferably) or to the storm sewer network, following treatment that includes attenuation, outflow limit controls, SuDS features and oil/petrol interceptors. Proposed surface waterbody discharge points are identified on Figure 18.5 of the EIAR. Contaminated waters from a fire or accident will be contained within the system, via an automated control system, and will be either discharged to a sewer or pumped to a tanker for appropriate disposal.

13.6.31. **Contamination at Dublin Airport:** A particular issue that arose at the oral hearing, which appears to have been unknown at the time of submission of the application, relates to the presence of PFAS at Dublin Airport. PFAS (otherwise known as ‘forever chemicals’) are a large group of man-made chemicals that are highly resistant to degradation. Following submissions on the issue at the oral hearing by Sabrina Joyce-Kemper and Wild Ireland Defence CLG and in the further submission by Cormac McKay and Aeravai (1FS14), the applicant was invited to respond to the issues in writing and, in doing so, they advised that PFAS has been identified in soils and groundwater in a number of locations at the Airport and that it has potential ecological effects. The Post Oral Hearing AA Update report identifies that they have the potential to impact on supporting habitats and QI/SCI species.

13.6.32. The applicant’s response includes a PFAS Management Strategy that acknowledges the presence of PFAS close to or within construction sites at the Airport and, whilst it states that construction activity will not interact with the primary known source areas identified at the Airport, it may nevertheless give rise to mobilisation of PFAS that is contained within the soil, bedrock and/or groundwater. Such activity is stated to relate to piling, portal and station excavation and dewatering, tunnelling and crossing or working adjacent to water bodies.

- 13.6.33. The Management Strategy states that the full extent of PFAS contamination is unknown and that, in view of same, a worst case assumption has been applied whereby 100% of excavated material (both soils and water) will be considered to be contaminated and will require management. Excavated material will be tested in-situ and ex-situ, to determine whether it requires treatment/disposal or is uncontaminated. For ex-situ testing, a 44,000m² storage facility is proposed to be provided at Dardistown that will have capacity to segregate and store material for up to 28 days while testing is undertaken. Section 2.1 of the Post Oral Hearing AA Update states that this facility will be constructed and operated to ensure the absence of pathways that would allow soils or runoff to enter the receiving environment. PFAS-contaminated materials will thereafter be exported to Europe for either treatment for reuse or disposal to landfill.
- 13.6.34. I accept that there is some uncertainty as to the extent of PFAS contamination at Dublin Airport and the exact interaction of same with the proposed development. From the information available to me, the extent of the issue has only recently come to light and the applicant's primary reference point is a report published by the Dublin Airport Authority in 2024, which itself followed a two-year period of monitoring. This report identified the presence of PFAS in a number of locations and the applicant acknowledges that the scope of investigation has been limited to specific airport project locations. Consideration must be given to the fact that the site in question is a busy operative Airport, expanding over a vast area of ground, and I accept that undertaking further ground investigations is likely to be complex.
- 13.6.35. I consider there are two aspects of the development to be considered; related to excavated material and water removed from excavations.
- 13.6.36. Regarding excavated material, I consider it appropriate that the applicant assumes a worst-case scenario of 100% of excavated material being contaminated and requiring testing. Section 7.2 of the Management Strategy states that each works compound perimeter, where excavation is taking place or where materials are temporarily stored, will be isolated from the surrounding site with suitable bunding and covered and dedicated plant and equipment will also be used for these activities. In-situ testing will be undertaken where access is available and where it is not available, ex-situ testing will take place at the Dardistown storage facility.

- 13.6.37. Where excavated material requires transfer, it will be transported in sealed and covered trucks and the storage facility will again be bunded and covered. All contaminated material will eventually be transported to Dublin Port for export to an appropriate treatment/disposal facility and such transport will itself be covered.
- 13.6.38. I am satisfied that the applicant's approach will be effective in ensuring that potentially contaminated material can be appropriately handled and stored, pending the outcome of testing, and that there is a very low likelihood of PFAS being discharged from a construction site. I am also satisfied that there will be no likely significant effect on any European site arising from the discharge of PFAS from the Dublin Airport site.
- 13.6.39. The issue of water management is more complex and requires consideration. Whilst there is no direct interaction with a waterbody, excavation of the station, portals and tunnel elements gives rise to a likelihood of encountering groundwater and there is a possibility of groundwater ingress and subsequent drawdown, dependent on the quantum of water required to be removed from excavations. Chapter 19 of the EIAR, Hydrogeology, contains estimates of water discharge levels from station excavations and associated works sites. Table 19.23 predicts that the DANP will give rise to a daily discharge rate of 310l (0.3m³), DASP will give rise to a daily discharge rate of 2510l (2.5m³) and the Airport station site will give rise to a daily discharge rate of 21,400l (21.4m³). These predictions show low levels of water ingress at the portal sites and a larger rate of ingress at the station site. The Chapter 19 assessment further predicts that the station site will have a drawdown zone of influence radius of some 83m, although I note that the station site is over 1km from both the Cuckoo Stream and the Mayne River and is thus not likely to affect the natural process of groundwater recharge of these waterbodies.
- 13.6.40. The rate of groundwater ingress is merely a prediction at this stage, but I accept that this represents the best available information at the current time. The Board's specialist consultants have advised that the exact rate of ingress (and therefore any specific dewatering requirement) can only be confirmed when the station box perimeter is in place and necessary water tightening measures (examples include toe grouting, fissure grouting and curtain/blanket grouting) have been implemented. Therefore, and in the circumstances, in order to ensure there is no risk of drawdown of potentially PFAS-contaminated groundwater and/or no risk of mobilisation of

PFAS within groundwater, I recommend the Board attach a condition requiring that there shall be no dewatering above the above-specified levels at any of the Dublin Airport construction sites, including the DANP and DASP. This approach will allow the applicant to implement site-specific water tightening measures, based on further ground investigations and testing, and at the same protect against unintended mobilisation of groundborne PFAS contaminants. Subject to implementation of this recommended condition, I am satisfied that there will be no significant effect on European site in view of its conservation objectives.

13.6.41. Regarding tunnelling activities, whilst there is a likelihood of encountering groundwater as the TBM progresses under the Airport lands it will operate in EPB mode, to maintain pressure at the cutter face, and will immediately insert the pre-cast concrete segments that will eventually form the operational watertight tunnel. Additionally, tunnel grout will be continuously pumped into the tunnel annulus (the gap between the tunnel segments and the ground) in order to provide a watertight seal. The Management Strategy outlines that this approach is standard in the industry and that there will be no significant water infiltration during tunnelling. The Board's specialist consultants agree that this approach is standard and that it will be effective in limiting water ingress. In this context I am satisfied that interaction with groundwater will be at a low level and that there will be no significant effect on European site in view of its conservation objectives.

13.6.42. Habitat degradation caused by introduction/spread of non-native invasive species

13.6.43. Section 3.5.10 of the Screening Report identifies that 6 No. non-native invasive species were recorded within or in close proximity to the proposed development and that, additionally, there is a desktop record of Indian balsam on the River Tolka, within c. 2km of the development. The section goes on to identify that 3 No. invasive species, Giant hogweed, Indian balsam and Japanese knotweed, could potentially spread or be introduced to terrestrial habitats located within downstream European sites via surface water features and could result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater, thus undermining the Conservation Objectives of these sites. The surveyed locations of these species are presented in Table 15.12 of the EIAR and are also identified on Figure 15.6.

13.6.44. The Screening Report identifies that Giant hogweed is typically found in damp places such as riverbanks and spreads via seed dispersal. Himalayan balsam and Japanese knotweed are both found in a wider variety of habitats including river banks, roadsides, and urban areas such as waste ground and railways, with Himalayan balsam spreading by seed dispersal and Japanese knotweed spreading vegetatively.

13.6.45. **Proposed Mitigation Measures and Monitoring**

13.6.46. A summary of proposed mitigation is outlined in the preceding tables. Full details are contained in Section 7.4 of the NIS and associated management plans that accompany the application. They are again summarised below.

Measures to protect surface water quality and groundwater quality during construction:	Mitigation proposals to protect surface water quality during construction are set out in Section 7.4.2 of the NIS and include: temporary attenuation and treatment; water quality monitoring / testing / sampling; the provision of boundary treatments / barriers (e.g. silt fencing, mobile and inflatable barriers, etc); exclusion zones; designated stockpile areas including segregation of contaminated soil; bunded storage / refuelling areas; designated on-site concrete batching locations; foul water storage / drainage in accordance with UÉ requirements; usage of cofferdams/sheet piling for works adjacent to the Broadmeadow and Ward Rivers and for works near flood zones; usage of diaphragm walls or secant piles to provide water-tight station box excavation areas; usage of grouting and other techniques to minimise potential settlement during tunnelling / excavation works; dewatering works and ground water recharge, as necessary; incorporation of geophysical tools within the cutter head. The document MetroLink PFAS Management Strategy for Dublin Airport also contains mitigation proposals related to the potential presence of PFAS at Dublin Airport. This includes: • Worst case assumption that all excavated material (approx. 304,000m³) at the Airport has the potential to contain detectable PFAS

	• Excavations will be isolated, with surface water runoff collected for reuse or disposal • Excavated material will be tested in-situ or ex-situ for PFAS content. • Excavated material that contains PFAS or material requiring ex-situ testing will be isolated and will be banded and stored at Dardistown for up to 28 days, thereafter diverted for re-use in Ireland or to a treatment facility abroad. • Diversion works and changes in flow will be monitored for PFAS levels • Suitable barriers will be installed to limit PFAS migration downstream. The applicant also proposes to develop the following management plans: • Construction Environmental Management Plan, • Water Management Plan, • Sediment Erosion and Pollution Control Plan • Incident Response Plan • Construction water discharge method statements
Measures to protect surface water quality during operation:	Mitigation proposals to protect surface water quality during construction are set out in Section 7.4 of the NIS (the section is incorrectly identified as 1.1.4) and include: usage of oil/petrol interceptors; discharge of all wastewater from the tunnel alignment and foul waters to the public network; ongoing maintenance of swales / wetland ponds / infiltration basins; and incorporation of measures to segregate fire contaminated water.
Measures to eradicate/control the spread of non-native invasive species:	Mitigation proposals to prevent introduction / spread of invasive species are set out in Section 7.4.3 of the NIS. They include: management in accordance with specified guidance; implementation of a Species Management Plan, which will include pre-construction surveys, specified measures during construction and species-specific control measures.

13.6.47. In general, I am satisfied that the proposed measures are implementable and will be effective in their stated aims. I would also highlight to the Board that an Ecologist will be employed to oversee the proposed works.

13.6.48. With reference to the potential for habitat degradation caused by pollution/contamination of receiving waterbodies, I have given consideration to Inland Fisheries Ireland document 'Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters' (2016), in the context of the proposed measures and I am satisfied that the applicant's mitigation strategy is consistent with its advice and requirements. It advises that direct discharge to waters should not be made where there is potential for cement or residues in discharges and that pH levels in the range of 6.0-9.0 or alteration of existing conditions by +/- 0.5pH units should be observed. It further advises that temporary interceptor facilities should be installed where site works involve discharge to rivers and streams and, in relation to silt traps/fences, it advises that a buffer zone should remain between the silt trap and receiving watercourse, with a specified level of 25mg/l suspended solid content not be exceeded.

13.6.49. The applicant has not provided detailed drawings or method statements that indicate compliance with this IFI guidance. Adopting a precautionary approach, I consider the following condition should be attached to the Board's Order should they decide to grant the Railway Order:

- Mitigation measures contained within the NIS that are intended to protect against the potential for discharge of surface waters from construction sites shall accord with advice contained with Inland Fisheries Ireland guidance document Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (2016). Additional drawings and/or construction method statements outlining compliance with these Guidelines shall be submitted to Fingal County Council and Dublin City Council, as appropriate, for agreement.

13.6.50. With reference to proposed in-stream works at the Broadmeadow River and diversion/culvert works at the Turnapin Stream and Santry River, I consider it reasonable that the applicant should undertake water quality monitoring in the pre-

and post-in-stream works phases, to ensure there is no pollutant content in the water downstream of the project prior to removal of silt traps. This can be controlled by condition.

13.6.51. Subject to compliance with the above, I am satisfied that the proposed development is unlikely to give rise to habitat degradation within a European site, caused by pollution/contamination of receiving waterbodies.

13.6.52. **In-Combination Effects**

13.6.53. In-combination effects are considered at Section 8 of the NIS, Section 6 of the Appropriate Assessment Update Report and Section 4 of the Post Oral Hearing AA Update. Together, these assessments consider the potential for in-combination effects with other plans and projects with the potential to impact on each of the European sites listed above via the same impact factors, i.e. habitat degradation caused by pollution/contamination of receiving waterbodies and habitat degradation caused by introduction/spread of non-native invasive species. Plans and projects considered by the applicant include national, regional and local-level plans and existing or proposed projects that could potentially affect the ecological environment within the Zol of the proposed Project. The plans and projects considered are listed in Table 15 of the NIS, Section 6 of the Update Report and Section 4 of the Post Oral Hearing AA Update and each plan or project is assessed individually in Table 17 of the NIS, Section 6.4 and Appendix VII of the Update Report and Section 4.3 and Appendices 1 and 2 of the Post Oral Hearing AA Update.

13.6.54. At this point I would advise the Board that concerns have been raised within prescribed body and observer submissions regarding potential in-combination effects.

13.6.55. The Dublin City Council Biodiversity section submission raises the issue of cumulative impacts on otter within the Royal Canal, in view of potential effects arising from the Luas Finglas and Royal Canal Greenway projects together with the proposed development.

13.6.56. The oral hearing submission by Sabrina Joyce-Kemper and Wild Ireland Defence CLG also raises concerns regarding the NIS in-combination assessment. The submission queries whether adequate consideration has been given to the multitude of in-combination projects that are deemed to have no impact in isolation, and

whether they might, in totality, give rise to significant effects (reference is made to Sweetman v An Bord Pleanála C-258/11 and the term ‘death by 1000 cuts’); the adequacy/content of the in-combination assessment presented within the NIS.

13.6.57. The in-combination assessment presents an extensive examination of the plans and projects that have the potential to interact with the proposed development. It concludes that there is no potential for adverse effects on the integrity of any European sites to arise as a consequence of the proposed development, in combination with any other plans or projects as, in view of the application of proposed mitigation measures, no adverse effects on European site integrity will arise from the implementation of the proposed Project.

13.6.58. The proposed development is of an urban nature and is set in an urban context, where there is already a high degree of development and, in particular an extensive surface water drainage network in place. QI Habitats within downstream European sites are also located in estuarine/coastal waters and are thus robust to pollutant/contaminant content within surface waters. Considering the range of mitigation measures included in the Proposed Scheme to avoid significant impacts, which includes system design and mitigation measures that I consider to be standard for a project of this nature and scale, the environmental protection policies included within the relevant land use plans, and considering that in isolation the proposed development will not adversely affect the integrity of any European sites, I am satisfied that the proposed development will not act in combination with other plans and/or projects, to have a significant effect on downstream water quality such as would give rise to significant effect(s) on the integrity of any European sites. In saying this, I would again highlight to the Board that I have recommended additional mitigation, in the form of a condition that requires compliance with IFI guidance in respect of works in and adjacent to water, which will have the effect of providing a high level of protection to receiving waters and a high level of treatment prior to discharge of surface waters from a construction site.

13.6.59. In respect of the potential for introducing or spreading invasive species to a European site, I am satisfied that the applicant’s proposed approach is adequate to ensure that the project will not give rise to the introduction or spread of invasive species and there will thus be no in combination effect.

13.6.60. With reference to the submission made by Sabrina Joyce-Kemper and Wild Ireland Defence CLG, I refer to the 'Legal and Procedural Matters' section of this report at Section 9.17 and I further comment as follows:

- Potential in-combination effects with concurrent application Ref. ABP-317831-23 (proposed development of 3 No. 110kV electricity circuits that are required to support MetroLink) and application Ref. ABP-312131-21 (the Greater Dublin Drainage Project) are addressed in Table 17 of the NIS and the assessment determines that no in-combination effects are likely to arise. Further, and as the applicant points out, application Ref. ABP-317831-23 and ABP-312131-21 are themselves supported by project-specific NISs and the Board must satisfy itself that the proposed mitigation measures contained within these applications are sufficient to address the potential for adverse effects on downstream European sites, prior to making any decision to grant permission.
- The NIS submitted with application ABP-317831-23 similarly identifies the potential for effects on downstream European sites arising from (a) discharge of contaminants or pollutants to open water and (b) introduction or spread of invasive species to downstream European sites. Section 3.7 of that NIS outlines proposed mitigation measures, of a similar nature to those proposed as part of the subject application, that are intended to address and avoid such impacts arising. I have previously recommended additional mitigation, in the form of an additional condition, that will have the effect of providing for a high level of treatment of surface waters prior to discharge from any construction site. In view of the above, I do not consider there is a likelihood of significant in-combination effects arising with this concurrent development.
- With regard to PFAS contamination at Dublin Airport, I have previously outlined that a very precautionary approach has been adopted, whereby the applicant proposes to classify 100% of excavated material as contaminated until such time as testing confirms otherwise. I consider this approach is sensible and acceptable in circumstances where the full extent of PFAS contamination at the Airport is unknown and I am satisfied that this will be effective in ensuring there is no unintended mobilisation of PFAS

contaminants and, thereby, no significant effect on any downstream European sites. I agree with the applicant's statement, at Section 4.3 of the Post Oral Hearing AA Update, that this approach will avoid entirely the risk of acting in combination with other Airport projects, with respect to potential effects on receiving waters within a European site. The Board will note that an updated in-combination assessment related to development at Dublin Airport is contained at Appendix IV of the Post Oral Hearing AA Update report.

- The submission also briefly mentions the potential for in-combination effects, arising from bentonite loss to ground during tunnelling. Bentonite is a natural clay material that will be mixed with water in order to form a slurry in order to assist with tunnelling and piling activities. Table 2.1 of Appendix A5.14 of the EIAR, TBM Consumables, states that 10% of deployed bentonite will be lost in the ground and while it is possible that some of the material may find its way into receiving waters, the point at which the tunnel alignment crosses the receiving waterbodies is in excess of 5km from any hydrologically connected European site and I consider it is unlikely that such material is likely to be transferred to a European site. Indeed, in the unlikely event that it is transferred, it is very unlikely to be in such quantities that would have a significant effect on receiving estuarine/coastal waters, whether acting alone or in combination.

13.6.61. **Appropriate Assessment Conclusion: Integrity Test**

13.6.62. In screening the need for Appropriate Assessment, it was determined that the proposal to develop the proposed Metrolink project had the potential to result in significant effects on Baldoye Bay SAC; Baldoye Bay SPA; Dalkey Islands SPA; Howth Head Coast SPA; Ireland's Eye SPA; Lambay Island SPA; Malahide Estuary SAC; Malahide Estuary SPA; North Bull Island SPA; North Dublin Bay SAC; Rockabill SPA; Rogerstown Estuary SPA; Skerries Islands SPA; South Dublin Bay and River Tolka Estuary SPA; South Dublin Bay SAC; The Murrough SPA; and the North-west Irish Sea SPA and that Appropriate Assessment was required, in view of the conservation objectives of those sites.

13.6.63. Following a detailed examination and evaluation of the NIS, Appropriate Assessment Update Report and all associated material submitted with the application as relevant

to the Appropriate Assessment process and taking into account submissions of observers and prescribed bodies, I am satisfied that based on the design of the proposed development, combined with the proposed mitigation measures, adverse effects on the integrity of Baldoye Bay SAC; Baldoye Bay SPA; Dalkey Islands SPA; Howth Head Coast SPA; Ireland's Eye SPA; Lambay Island SPA; Malahide Estuary SAC; Malahide Estuary SPA; North Bull Island SPA; North Dublin Bay SAC; Rockabill SPA; Rogerstown Estuary SPA; Skerries Islands SPA; South Dublin Bay and River Tolka Estuary SPA; South Dublin Bay SAC; The Murrough SPA; and the North-west Irish Sea SPA can be excluded with confidence in view of the conservation objectives of those sites.

13.6.64. My conclusion is based on the following:

- A detailed assessment of all aspects of the proposed development that could result in significant effects or adverse effects on European Sites within a zone of influence of the development site.
- Consideration of the conservation objectives and conservation status of qualifying interest species and habitats.
- A full assessment of risks to SCI bird species and QI habitats and species, for which the European sites are designated.
- Application of mitigation measures designed to avoid adverse effects on site integrity and likely effectiveness of same.
- The proposed development would not undermine the favourable conservation condition of any qualifying interest feature or delay the attainment of favourable conservation condition for any species or habitat qualifying interest for these European sites.

14.0 Recommendation

14.1. I recommend that the Railway Order be granted, subject to conditions, for the reasons and considerations set out below.

15.0 Reasons and Considerations

15.1. In coming to its decision, the Board performed its functions in a manner consistent with section 15(1) of the Climate Action and Low Carbon Act 2015, as amended by section 17 of the Climate Action and Low Carbon Development (Amendment) Act 2021, consistent with the Climate Action Plan 2024, Climate Action Plan 2025, national long term climate action strategy, national adaptation framework and approved sectoral adaptation plans, the furtherance of the national climate objective, and the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.

15.2. In coming to its decision, the Board also had regard to the following:

(a) European, national, regional and local planning, climate, transport and other policy of relevance including, in particular, the following:

- European Policy/Legislation including:
 - Directive 2014/52/EU amending Directive 2011/92/EU (Environmental Impact Assessment Directive);
 - Directive 92/43/EEC (Habitats Directive) and Directive 79/409/EEC as amended by 2009/147/EC (Birds Directive);
 - Directive 2000/60/EC (Water Framework Directive);
 - Ten-T Regulation (EU) 2024/1679;
- National policy and guidance, including:
 - Project Ireland 2040: National Planning Framework, First Revision 2025;
 - National Development Plan Review 2025;
 - National Biodiversity Action Plan 2023-2030;

- Water Action Plan 2024: A River Basin Management Plan for Ireland;
- Ireland's Long-term Strategy on Greenhouse Gas Emissions Reduction 2024;
- Climate Action Plan 2024 and 2025;
- National Adaptation Framework 2024 and Sectoral Adaptation Plan for Transport 2019;
- National Investment Framework for Transport in Ireland;
- National Sustainable Mobility Policy 2022;
- Regional and local policy, including:
 - Regional Spatial and Economic Strategy for the Eastern and Midlands Region 2019-2031;
 - Greater Dublin Area Transport Strategy 2022-2042;
 - Dublin City Development Plan 2022-2028;
 - Fingal County Development Plan 2023-2029;
 - Local Area Plans, Masterplans and other plans, including the Dublin City Climate Action Plan 2024-2029, Fingal Climate Action Plan 2024-2029, Ballymun Local Area Plan 2017, O'Connell Street and Environs Scheme of Special Planning Control 2022, Dublin City Centre Transport Plan 2023, Lissenhall East Local Area Plan 2023, Sustainable Swords Strategy 2022, Dublin Airport Local Area Plan 2020, Swords Masterplans 2019, South Fingal Transport Study 2019, Dublin Airport Central Masterplan 2016, Your Swords: An Emerging City, Strategic Vision 2035.

(b) the nature, scale and extent of the proposed development;

(c) the characteristics of the receiving environment for the alignment corridor, associated works sites and of the general vicinity;

(d) The Draft Railway Order and supporting documents and drawings submitted with the application, including the Environmental Impact Assessment Report,

the Natura Impact Statement, the documentation submitted at and subsequent to the oral hearing, the responses to the submissions made, and the range of mitigation measures and environmental commitments contained therein;

- (e) the submissions on file including those from prescribed bodies, the relevant local authorities, the observers and persons affected by the proposed land acquisition, and the submissions made at and subsequent to the oral hearing;
- (f) the likely consequences for the environment and the proper planning and sustainable development of the area in which it is proposed to carry out the proposed scheme and the likely significant effects of the proposed development on European Sites; and
- (g) the report and recommendation of the Inspector, including the examination, analysis and evaluation undertaken in relation to planning and sustainable development, environmental impact assessment, appropriate assessment, water framework directive assessment and the compulsory acquisition.

Proper Planning and Sustainable Development

It is considered that, subject to compliance with the conditions set out below, the proposed development would accord with European, national, regional and local planning, climate and transport policy and is acceptable in respect of its likely effects on the environment and its likely consequences for the proper planning and sustainable development of the area

Environmental Impact Assessment

The Board completed an Environmental Impact Assessment of the proposed development taking into account:

- (i) the nature, scale and extent of the proposed development;
- (ii) the Environmental Impact Assessment Report and associated documentation submitted in support of the application;

- (iii) the submissions made in the course of the application and at the oral hearing;
and
- (iv) the Inspector's report.

The Board considered that the Environmental Impact Assessment Report, supported by the documentation submitted by the applicant at and subsequent to the oral hearing, adequately considers alternatives to the proposed development and identifies and describes adequately the direct, indirect, secondary and cumulative effects of the proposed development on the environment.

The Board agreed with the examination, set out in the Inspector's report, of the information contained in the Environmental Impact Assessment Report and associated documentation submitted by the applicant and submissions made in the course of the application.

The Board considered, and agreed with the Inspector's reasoned conclusions, that the main significant direct and indirect effects of the proposed development on the environment with the implementation of the proposed mitigation measures are as follows:

- **Population and Human Health:**
 - The construction and operation of MetroLink will provide a high-frequency, high-capacity metro railway between Estuary and Charlemont that will have a long-term positive impact on population and human health in that it will aid in improving sustainable connectivity, support compact growth, reduce transport congestion and emissions, and reduce reliance on private vehicle trips, with consequent reductions in vehicle emissions, thus assisting in the delivery of climate change goals.
 - Significant, permanent adverse impacts in respect of the compulsory acquisition of occupied housing at a number of locations and demolition of the Markiewicz Leisure Centre at Townsend Street, Dublin 2.
 - Significant, temporary adverse impacts on population during construction, arising from airborne and groundborne noise and vibration, dust and traffic disruption. These will be mitigated through compliance with a Construction Environmental Management Plan, a Construction Noise and Vibration

Management Plan, and best practice construction methods. Noise mitigation, including temporary rehousing as necessary, will be offered to eligible owners/occupiers where the construction is predicted to give rise to airborne construction noise level that exceeds specified parameters.

- Significant, temporary adverse impact on population during construction, arising from closure of the south western commuter rail line for a period of 5 months.
- **Biodiversity:**
 - Significant, permanent adverse impacts on biodiversity during construction, arising from loss of Local Importance (Higher Value) habitat, including cumulative impacts arising from the loss of similar habitat as part of other developments, and the permanent loss of suitable Yellowhammer breeding habitat.
- **Land, Soils, Water, Air and Climate:**
 - Land Take and Agronomy: Significant, very significant and profound adverse impacts on a number of property owners affected by compulsory acquisition, which will not be mitigated other than through the payment of compensation and a commitment from TII in respect of engagement and assistance.
 - Soils and Geology: The potential for significant adverse impacts on soils and geology can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on soils and geology.
 - Water: The potential for significant adverse impacts on water can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on water.

- Air and Climate: The potential for significant adverse impacts on air and climate can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on air and climate.
- Airborne Noise and Vibration: In view of the nature and scale of construction works required to build MetroLink and, taken together with the urban and developed neighbourhoods through which it routes, there is a high level of noise that is unavoidable, at certain locations and at points of the construction programme. There is a likelihood of significant residual adverse noise impacts in each of Area AZ1, AZ2, AZ3 and AZ4 at various stages of construction. The applicant proposes the erection of enhanced site hoardings at multiple construction site locations, which will attenuate noise to a certain degree, and in locations where noise levels remain above specified thresholds for extended periods, there will be access to additional mitigation under a Noise Mitigation Policy.
- Groundborne Noise and Vibration: Due to the nature of tunnelling with a Tunnel Boring Machine, unavoidable temporary adverse significant groundborne noise impacts are likely on all receptors within 65-75m of the tunnel centreline in areas where TBM tunnelling will take place (i.e. areas AZ2 and AZ4). I note that any one receptor is likely to experience these impacts for c. 2 weeks. Temporary adverse significant residual groundborne noise impacts are also likely for some receptors during mechanical excavation of station boxes at Glasnevin, Mater, Tara and Charlemont Stations and I am satisfied that these impacts cannot be avoided or mitigated due to the nature of groundborne noise, the extent and depth of the required excavations and the proximity to receptors, all of which are necessary to deliver a metro system within an urban environment.
- Electromagnetism and Stray Current: The potential for significant adverse impacts can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, the proposed mitigation measures and

through suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on sensitive receptors.

- **Material Assets, Cultural Heritage and the Landscape**

- Material Assets: In view of the primarily subterranean nature of the project, that requires very substantial excavation as part of tunnelling and station construction, the generation of large amounts of spoil that requires disposal is unavoidable. TII's approach to mitigating impacts on landfill capacity accords with the circular economy model, by seeking to minimise the amount of material requiring disposal in this manner by seeking to have classified as a by-product (which can be reused) or by disposing of material to a soil recovery facility. Notwithstanding this, there is a likelihood of a significant adverse impact on national landfill capacity during construction, where the amount of excavated material requiring disposal to landfill is predicted to reduce overall national landfill capacity by 1-5%.
- Traffic and Transportation:
 - During the construction phase, I consider that there will be a range of short-term significant residual negative impacts in assessment zone areas AZ1, AZ2 and AZ3 due primarily to the very substantial number of HGV movements associated with the proposed development and the temporary traffic management measures associated with the construction of the alignment and stations and movement of construction vehicles. There will also be short-term significant negative impacts on the western and south western commuter rail lines, due to the need for temporary closure to facilitate track lowering at Glasnevin Station.
 - In the operational phase, I consider that there will be a range of long-term positive impacts, including significant and profound impacts, due to improvements to public transport and the potential for greater interchange opportunities. This will include significant positive cumulative impacts with other transport projects such as BusConnects and DART+. I consider that there is potential for residual negative impacts on pedestrian comfort levels at certain stations, which will require monitoring in the operational

phase and engagement with local authorities to determine if street furniture placement and pavement width can be maximised.

○ Heritage:

- Profound adverse impacts on Four Masters Park, its enclosing railings, gates and plinth walls and the Four Masters Cross and Healing Hands Sculpture that lie within the park during the construction phase, arising from the scale of clearance and excavation works proposed and the required presence of construction elements within the park for prolonged periods. Following the completion of construction, the Park will be restored to a slightly different alignment and with a reduced area and with enclosing items reinstated (following restoration) and with the Four Masters Cross and Healing Hands sculpture relocated toward the centre of the Park.
- Profound adverse impact on the setting and character of the Protected Structure Santry Lodge's gate lodges, gateway and front boundary wall, which are part of the Protected Structure listing and which are to be demolished during construction. There will also be a very significant impact on Santry Lodge itself, arising from demolition of its gate lodges, gateway and front boundary wall. TII proposes to relocate the entrance arrangement, including stone walls, on a new alignment and further proposes to agree details of this relocation, together with wider landscaping, with Fingal County Council prior to the commencement of works in the vicinity of Santry Lodge.
- Very significant adverse impact on the setting and character of the Protected Structure and National Monument at St. Stephen's Green, including enclosing items and surrounding bollards and traditional street lamp-posts, during construction, arising from the scale of clearance and excavation works proposed and the required presence of construction elements within the park for prolonged periods. Following the completion of construction, TII proposes to restore the Green, including restoration of enclosing itself and relocation of the Wolfe Tone Sculpture and Famine Memorial. The restored Green will contain station elements and the restoration landscaping strategy will have a limited effect in addressing the

overall impact of construction for a period of at least a number of years. The impact for the operational phase will therefore remain at the level of very significant.

- Very significant adverse impact on architectural heritage at O'Connell Street Upper, arising from proposed demolition works between Nos. 43-58 O'Connell Street Upper that includes demolition within the curtilage of a Protected Structure. Construction of O'Connell Street Station may take place in one of two scenarios (in tandem with or without oversite development) and in circumstances where station construction takes place ahead of oversite development, TII proposes to prop and retain all of the O'Connell Street facades.
- Very significant adverse impact on the setting and character of the Protected Structure Carroll's Building at 2 Grand Parade, Dublin 6 during the operational phase, arising from the construction of a stairwell and passenger lift to the front of the building. I accept that these structures are required in their proposed locations, in order to provide for connectivity between the Luas Green Line and MetroLink at Charlemont.
- Significant adverse impact on Lissenhall Bridge, a Protected Structure and National Monument, during operation, arising from the construction of an elevated viaduct over the Broadmeadow River.
- Significant adverse impacts on Hedigans Public House (also known as the Brian Boru pub) at Prospect Road, Glasnevin, Dublin 9, and the Cross Guns Railway Tunnel, both of which will be demolished during construction. Regarding the Brian Boru pub, following multiple submissions on the loss of this community asset, TII proposes to engage with the pub owners to integrate or reference an element of the pub into the design of the proposed Glasnevin Station.
- Significant adverse impact on Our Lady of Victories Church, Ballymun Road, Dublin 9 during construction, arising from the scale of excavation works proposed and the required presence of construction elements within the church forecourt for prolonged periods. Following the completion of construction, TII proposes to reinstate and landscape the church forecourt.

- Landscape:
 - Significant adverse landscape and visual impacts at various locations in alignment areas AZ1, AZ3 and in AZ4 at Collins Avenue Station; Albert College Park Intervention Shaft; Mater Station; O'Connell Street Station and St. Stephen's Green Station for both construction and operational phases. Griffith Park Station and Glasnevin Station during the construction phase, related to the extent of clearance, demolition and (in some cases) demolition works required and the presence of large items of plant and machinery on construction sites for prolonged periods.
 - Significant cumulative adverse landscape and visual impacts during construction, associated with the BusConnects Swords to Dublin City Centre and Ballymun/Finglas to Dublin City Centre Bus Corridor Schemes, the R132 Connectivity Project and at Glasnevin, O'Connell Street and Tara, associated with largescale developments in close proximity to the stations sites.
 - Significant cumulative positive landscape and visual impacts in the operational phase in Area AZ1 associated with completion of both MetroLink and the R132 Connectivity Project, and in Area AZ4 at O'Connell Street associated with the oversite Dublin Central GP Limited development.

The Board completed an environmental impact assessment in relation to the proposed development and concluded that, subject to the implementation of the mitigation measures set out in the Environmental Impact Assessment Report, and subject to compliance with the conditions set out below, the effects on the environment of the proposed development, by itself and in combination with other development in the vicinity, would be acceptable. In doing so, the Board adopted the report and conclusions of the Inspector.

Appropriate Assessment - Stage 1

The Board considered the Appropriate Assessment Screening Report, Natura Impact Statement, Appropriate Assessment Update Report and Post Oral Hearing AA

Update and all the other relevant submissions and carried out both an Appropriate Assessment screening exercise and an Appropriate Assessment in relation to the potential effects of the proposed development on designated European Sites. The Board agreed with and adopted the screening assessment and conclusion carried out in the Inspector's report that the relevant European sites in respect of which the proposed development has the potential to have a significant effect are: Baldoyle Bay SAC; Baldoyle Bay SPA; Dalkey Islands SPA; Howth Head Coast SPA; Ireland's Eye SPA; Lambay Island SPA; Malahide Estuary SAC; Malahide Estuary SPA; North Bull Island SPA; North Dublin Bay SAC; Rockabill SPA; Rogerstown Estuary SPA; Skerries Islands SPA; South Dublin Bay and River Tolka Estuary SPA; South Dublin Bay SAC; The Murrough SPA; the North-west Irish Sea SPA; Lambay Island SPA; Codling Fault Zone SAC; and Rockabill to Dalkey Island SAC.

Appropriate Assessment – Stage 2

The Board considered the Natura Impact Statement, Appropriate Assessment Update Report and Post Oral Hearing AA Update and associated documentation submitted with the application, the mitigation measures contained therein, the information submitted by the applicant at and subsequent to the oral hearing, the submissions on file, and the Inspector's assessment. The Board completed an Appropriate Assessment of the implications of the proposed development for each of the abovementioned sites, in view of each site's Conservation Objectives. The Board considered that the information before it was adequate to allow the carrying out of an Appropriate Assessment. In completing the Appropriate Assessment, the Board considered, in particular, the following:

- (i) the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,
- (ii) the mitigation measures which are included as part of the current proposal, and
- (iii) the conservation objectives for the European Sites.

In completing the Appropriate Assessment, the Board accepted and adopted the Appropriate Assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the aforementioned European Sites, having regard to the sites' Conservation Objectives.

In overall conclusion, the Board was satisfied that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Sites, in view of the sites' Conservation Objectives.

16.0 Conditions

1.	The proposed scheme shall be carried out and completed in accordance with the plans and particulars lodged with the application, as updated and modified by the following: (a) Schedule of Errata, submitted at the oral hearing on 27th March 2024; (b) Schedule of Updates, submitted at the oral hearing on 27th March 2024; (c) PFAS Management Strategy for Dublin Airport, submitted to the Board on 31st January 2025; except as may otherwise be required in order to comply with the following conditions. Reason: In the interest of clarity.
2.	The following modifications are made to the Railway Order: (a) The text of the Railway Order shall be updated to reflect the revised and updated version submitted to the Board at the oral hearing on 26th March 2024. (b) Schedules 2 - 10 (i.e. the Book of Reference) to the Railway Order shall be updated to reflect the Schedules submitted to the Board on 12th June 2024. (c) The following agreements reached by Transport Infrastructure Ireland shall be included in the Thirteenth Schedule of the Railway Order: (i) Agreement with Dublin City Council, submitted at the oral hearing on 26th February 2024. (ii) Agreement with Fingal County Council, submitted at the oral hearing on 4th March 2024. (iii) Agreement with the Office of Public Works, submitted at the oral hearing on 26th February 2024. (iv) Agreement with DAA, submitted at the oral hearing on 26th February 2024.

	(d) The conditions hereby attached to the grant of the Railway Order shall be included in the Fourteenth Schedule of the Railway Order. (e) The Fifteenth Schedule shall be omitted. (f) The Board's reasoned conclusion on Environmental Impact Assessment, hereby attached to the grant of the Railway Order, shall be included in the Sixteenth Schedule of the Railway Order. Reason: In the interests of clarity and the proper planning and sustainable of the area.
3.	All of the mitigation measures, environmental commitments and monitoring measures identified in the following documents shall be implemented in full as part of the proposed scheme: (a) The Environmental Impact Assessment Report; (b) The Natura Impact Statement; (c) The Schedule of Additional Environmental Commitments, submitted at the oral hearing on 27th March 2024; except as may otherwise be required in order to comply with the following conditions. A consolidated Schedule of Mitigation and Monitoring Measures, derived from parts (a) to (c) of this condition, shall be prepared and submitted to Dublin City Council, Fingal County Council, the Minister for Transport and made available on a publicly accessible website, prior to the commencement of construction. Reason: In the interest of clarity and the protection of the environment during the construction and operational phases of the development.
4.	Station designs shall be amended as follows: (a) All stations: (i) Where skylights are proposed, they shall have a maximum height of 1.5m above ground level.

	(ii) No signage or advertising, other than MetroLink related operational signage, shall be affixed to the glazed facades of the station entrances. (iii) Details of the final design and positioning of the hostile vehicle management bollards at each station shall be submitted for the written agreement of Dublin City Council and Fingal County Council, as relevant. The bollards at St. Stephen's Green Station shall be of matching stone material and appearance to existing bollards that surround the perimeter of the park. (b) Mater Station: (i) The design of the station entrance canopy shall be revised to incorporate reduced metal banding and a commensurate increase in glazing. (ii) The design of the combined passenger/Dublin Fire Brigade lift structure to the south-west of the station entrance and the Dublin Fire Brigade lift structure to the west of St. Joseph's Church shall be revised to comprise glazed lift shafts. (iii) The proposed skylights shall be omitted. (c) O'Connell Street Station: (i) The O'Connell Street station entrance shall be as shown in the document 'O'Connell Street Station' and the updated drawings submitted at the oral hearing on 19th March 2024 and 25th March 2024, respectively. (ii) In the event that the commercial development, known as Dublin Central, which was permitted by the Board under ABP-318316-23 does not proceed, the Moore Lane station entrance shall be as shown in the document 'O'Connell Street Station' submitted at the oral hearing on 19th March 2024, and shall incorporate a brick treatment to the entrance and planting in front of the site hoarding

	along Moore Lane. This shall be maintained by TII until such time as the surrounding lands are developed. (d) Charlemont Station: The pedestrian stairs and lift to the front of the Carroll's Building shall be revised such that it is set away from and does not overhang the entrance canopy to the existing building. Reason: In the interests of visual amenity and the preservation of features of heritage interest.
5.	Prior to the commencement of development, a finalised Construction Environmental Management Plan (CEMP), including a Scheme Traffic Management Plan (STMP), shall be prepared in consultation with Dublin City Council and Fingal County Council. The CEMP shall incorporate all mitigation measures as set out in the Environmental Impact Assessment Report, the Natura Impact Statement and the conditions set out herein and shall include details of compliance and details and schedules of monitoring supervision and reporting to the planning authorities. In finalising the CEMP and the STMP the applicant shall liaise with National Parks and Wildlife Service, Inland Fisheries Ireland, the National Transport Authority, CIÉ and its constituent companies. The CEMP and STMP shall be updated on a regular basis during the construction phase in consultation with the abovementioned bodies and the Project Construction Traffic Forum. Reason: To protect amenities, public health and safety.
6.	Dust monitoring locations shall be agreed with the local authorities and shall include a dust monitoring location as close to the junction of Moore Street and O'Rahilly Parade as feasible. Reason: In the interest of the amenity of the area.
7.	The measures outlined in the document 'St. Stephen's Green Park Draft Schedule of Railway Order Conditions', submitted by TII at the oral hearing on 26th February 2024, shall be implemented in full except as may otherwise be required in order to comply with the conditions attached to this Railway Order.

	Reason: In the interests of visual amenity and the preservation of features of heritage interest.
8.	A construction method statement shall be submitted to Dublin City Council, which outlines proposals for: (a) the protection of street trees on O'Connell Street during station construction; (b) the removal of scaffolding along O'Connell Street following internal propping of retained facades; and (c) the removal of construction hoardings on O'Connell Street following the completion of MetroLink construction. Reason: In the interests of visual amenity and the preservation of features of heritage interest.
9.	The proposed construction site hoardings shall comply with the following requirements: (a) Site hoardings at the following locations, where they are 4m or greater in height and directly address adjacent housing, shall incorporate a transparent material for the upper 2m: Glasnevin, Mater and Charlemont. (b) The developer shall prepare and submit a scheme of painted and/or artwork finishes for construction site hoardings, which shall include the incorporation of locally relevant art, for the written agreement of Fingal County Council or Dublin City Council, as appropriate. The approved scheme shall thereafter be implemented at each site within 6 months after erection of site hoardings and shall be maintained for the duration of the construction phase. (c) Where construction site hoardings obstruct visibility of businesses, provision shall be made for temporary signage attached to the hoardings for those businesses. Reason: In the interests of residential and visual amenity.
10.	(a) Proposed tree planting at Albert College Park shall include mature planting, in accordance with a scheme to be submitted for the written

	agreement of Dublin City Council prior to commencement of construction at Albert College Park. (b) For the avoidance of doubt, no felling of street trees at St. Mobhi Road shall take place. Reason: In the interest of visual amenity.
11.	Prior to commencement of construction works at Balheary Park, the developer shall make available an alternative training facility for Fingallians GAA, which shall be maintained in such use until the existing facility at Balheary Park is reinstated. Reason: In the interest of orderly development.
12.	Prior to the removal of car parking spaces at The Court apartments, Dalcassian Downs, Glasnevin, the developer shall make available an equal number of alternative parking spaces for affected residents, which shall be maintained until such time as new parking spaces are provided following the completion of construction of Glasnevin Station. Reason: In the interest of residential amenity.
13.	(a) Prior to the commencement of development, the developer shall submit proposals for the written agreement of Fingal County Council for the reconstruction of removed sections of the Balheary Demesne boundary wall along the newly created demesne boundary. (b) Prior to the commencement of any construction in the vicinity of Balheary Bridge, a construction hoarding shall be erected a minimum of 10m away from the bridge. All construction plant and machinery shall thereafter be kept outside of this exclusion zone. Reason: In order to preserve features of heritage importance.
14.	Drainage arrangements, including the attenuation and disposal of surface water, shall comply with the requirements of the planning authorities for such works in respect of both the construction and operation phases of the proposed development.

	Reason: In the interest of environmental protection and public health.
15.	Prior to the commencement of development the developer shall enter into Connection Agreements with Uisce Éireann to provide for service connections to the public water supply and/or wastewater collection network for both the construction and operational phases. Reason: In the interest of public health and to ensure adequate water/wastewater facilities.
16.	All construction phase water requiring disposal shall be disposed to the public sewer under agreement and not to any surface water body. Reason: In the interest of clarity and protection of the environment.
17.	(a) Mitigation measures contained within the NIS that are intended to protect against the potential for discharge of surface waters from construction sites shall accord with advice contained with Inland Fisheries Ireland (IFI) guidance document 'Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters' (2016). Additional drawings and/or construction method statements outlining compliance with the IFI Guidelines shall be submitted to Fingal County Council and Dublin City Council, as appropriate, for agreement. (b) The proposed in-water installation at the Broadmeadow River, required as part of viaduct construction, shall be designed and installed under the supervision of the project Ecological Clerk of Works and shall comply with the abovementioned IFI Guidelines. (c) The developer shall undertake water quality monitoring at the Broadmeadow River and at all culvert and watercourse diversion sites before and after completion of works, to confirm that there is no pollutant/contaminant in the water prior to removal of installations that are in place to protect receiving water quality. (d) The applicant shall submit a Sediment Erosion and Pollution Control Plan to Fingal County Council and Dublin City Council for their written agreement, prior to the commencement of construction.

	Reason: In the interest of environmental protection and in order to protect water quality within receiving surface waters.
18.	(a) The Expert Panel (EP) described in the document 'Ground Movement Monitoring Information Paper', submitted at the oral hearing on 19th February 2024, shall be engaged prior to procurement of the Independent Monitoring Engineer (IME) and the main civil works contractor. The EP shall verify the scope of the IME and the contract requirements for building damage risk assessments. (b) The EP shall have a verifying and 'sign off' role rather than the advisory role stated by TII in the document referenced in part (a) above. (c) The developer shall procure the Main Civil Works and implement the work to respect the commitments made in the document 'Working Draft / Process for the oversight and implementation of Phase 3 assessments' submitted at the oral hearing on 6th March 2024 and the Schedule of Additional Environmental Commitments submitted at the oral hearing on 27th March 2024. (d) The contractor shall prepare a Plan for the Advancement of the Tunnel (PAT) for each section of tunnel in accordance with the methods described in 'Mechanized Tunnelling in Urban Areas Design methodology and construction control' by Guglielmetti et al and each PAT shall be reviewed and signed off by the IME and EP. (e) The contractor shall ensure that appropriate software and hardware are included in the Tunnel Boring Machine (TBM) specifications to allow the developer and the IME to have access to real time data from the tunnelling operations and to ensure that it is integrated with other monitoring, such as settlement and displacement, in real time. (f) The developer shall carry out baseline monitoring for at least one year prior to commencement of piling or diaphragm wall construction to establish baseline movement of representative, heritage and 'special' buildings and all buildings anticipated to require a Phase 3 Building Damage Assessment.

	(g) The developer shall put in place Interferometric Synthetic Aperture Radar (InSAR) monitoring of the alignment commencing at the start of the baseline monitoring period, continuing through construction and up to the completion of the close-out monitoring period. The InSAR data shall cover a zone approximately 100m either side of the tunnel centre line. (h) The ventilation and evacuation tunnels at Dublin Airport shall be constructed by means of a closed-face TBM. Reason: In the interests of environmental protection and to safeguard the amenity of property in the vicinity.
19.	(a) The developer shall put in place suitable measures to ensure that building damage does not exceed Category 1, as defined in Table 4-4 of the Building Damage Report contained in Appendix A5.17 of the EIAR. (b) The Expert Panel shall review and sign off on Phase 3 assessments and the measures to be undertaken for sensitive locations of the alignment. These shall include: (i) The area around Charlemont Station. (ii) Sensitive buildings, such as those with deep basements or settlement sensitive facades (including AerCap House, the Cadenza Building and the 2 Grand Parade development at Charlemont Station). (iii) Buildings adjacent to tunnel break-in / break-out zones from the station boxes. (iv) Protected Structures and other 'special' buildings, as defined in the Phase 1 and Phase 2 Building Assessments. (c) Prior to the commencement of construction, the developer shall undertake a further review of both the Fingal County Council and Dublin City Council Records of Protected Structures. Any additional Protected Structures with the potential zone of influence that had not previously been identified as requiring building damage assessment shall be subject to Phase 3 assessment.

	Reason: In the interest of the protection of architectural heritage and to mitigate the risk of building damage during construction.
20.	(a) Blasting shall not be carried out for the Sprayed Concrete Lined (SCL) works, including Albert College Park Intervention Shaft and tunnels, SCL pumping sumps, and SCL works at Dublin Airport, in addition to the commitment to not use blasting for the Charlemont Intervention Tunnel. (b) Blasting shall not be carried out for the construction of the following deep stations: Charlemont Station, St. Stephens Green Station, Tara Station, O'Connell Street Station and Mater Station. (c) At other locations, the developer shall ensure that the effects from blasting do not extend beyond the zone covered by the Property Owners Protection Scheme. (d) The Expert Panel shall review the scope of the additional detailed design geotechnical investigations and the adequacy of the interpretation of them at sensitive locations. This shall include the locations where SCL works are to be carried out and where buildings that require a Phase 3 Building Damage Assessment are located. Reason: In the interest of the protection of architectural heritage and to mitigate the risk of building damage during construction.
21.	(a) The developer shall take such measures for controlling groundwater dewatering from the deep station construction as are necessary to ensure that no groundwater lowering shall occur outside the station boxes as stated in the document 'Dewatering Assessment in Station Boxes and SCL Tunnels (Version 2)' submitted at the oral hearing on 6th March 2024. This requirement shall be applied to all deep stations. (b) The developer shall take such measures for controlling the groundwater dewatering from the Sprayed Concrete Lining works (e.g. Charlemont Intervention Tunnel, Albert College Park Intervention Shaft and tunnels and area AZ4 pumping sumps) as are necessary to ensure that no groundwater lowering occurs, as stated in the document referenced in part (a) of this condition.

	(c) The definition of "no groundwater lowering" shall be that no groundwater lowering occurs outside the normal seasonal variation of groundwater levels as determined by at least 1 year of pre-excavation monitoring. (d) The Expert Panel shall review and approve the groundwater control measures to be adopted by the contractor prior to implementation. (e) The Expert Panel shall follow the execution and monitoring of the groundwater control works and shall have the power to instruct the developer to carry out any additional measures that the Expert Panel consider necessary to ensure that no groundwater lowering occurs outside the station boxes and SCL works. (f) The developer shall implement groundwater control measures to limit the abstraction at Dublin Airport Station and associated tunnels, caverns and shafts to a maximum of 32m³/day and shall implement the measures set out in the PFAS Management Strategy for Dublin Airport, submitted to the Board on the 31st January 2025. Reason: In the interests of environmental protection and to safeguard the amenity of property in the vicinity.
22.	(a) The document 'Outline Guidance Note for Developers' submitted at the oral hearing on 27th March 2024 shall be updated to clearly identify the level at which the allowable 75kN/m² load is applied and it shall be 'signed off' by the Expert Panel, included in the design and build tender, submitted to Dublin City Council and Fingal County Council and made available on a publicly accessible website. (b) Suitable provisions shall be included in the design to ensure that the tunnel has suitable robustness to cope with the anticipated loading from adjacent developments and not unduly constrain future development. (c) Prior to the coming into operation of the MetroLink, the developer shall publish on the project website and submit to Dublin City Council and Fingal County Council, an updated Guidance Note for Developers which will identify exclusion and protection zones around stations and tunnels in

	accordance with the document referenced in part (a) of this condition, but which shall omit the Limits of Deviation. (d) The updated Guidance Note for Developers shall incorporate pre-approved guidance criteria for minor works that have no reasonable likelihood of impacting on MetroLink infrastructure (e.g. domestic extensions, boundary walls, shallow excavations). Reason: In the interests of proper planning and sustainable development.
23.	The construction working hours shall be as set out in the document 'Update to Chapter 5 MetroLink Construction Phase: Working Hours', submitted at the oral hearing on 29th February 2024, with the following exception: (a) The Sprayed Concrete Lining works for the Intervention Tunnels at Charlemont, Albert College Park and the pumping sumps in area AZ4 shall be undertaken on a 24 hours per day, 5.5 day per week basis, with no weekend working later than 13:00 on Saturdays with no work on Sundays and public holidays. The Stakeholder Communication Plan shall include measures for the advance communication of working hours, including the need for night-time working activities as and when they arise, to residents and businesses in the vicinity of each works site. Reason: To safeguard the amenity of property in the vicinity.
24.	(a) The 'Airborne Noise & Groundborne Noise Mitigation Policy' contained in Appendix A14.6 of the EIAR shall be amended to remove reference to a maximum 4 week period for temporary rehousing. The duration of rehousing shall be tied to the duration of the activity or activities that are the cause of the relevant noise trigger values for rehousing being exceeded. (b) For noise control from fixed installations, in addition to the measures proposed by TII in the document 'Noise Control from Fixed Installations for MetroLink', submitted at the oral hearing on 5th March 2024, specific thresholds for the frequencies between 10 and 160Hz shall be set in

	accordance with the NANR34 assessment referred to in the British Standard BS4142. (c) The baseline noise surveys shall be re-run prior to the commencement of construction and the results shall be used in updated noise assessments and in the updating and further development of the CEMP and the Construction Noise and Vibration Management Plans (CNVMPs). (d) Noise modelling shall be carried out in to provide 3D 'Predicted Noise Maps' which shall be used for the preparation of the CNVMPs and as a basis shall use the specific noise emissions for the plant to be used and their location on site. (e) The 3D noise modelling shall be used to communicate the noise impact from upcoming activities to affected receptors and shall be published by the developer through a suitable web portal. (f) The results of airborne and groundborne noise and vibration monitoring shall be published on a daily basis by the developer on a suitable web portal. (g) The actual groundborne vibration propagation and the coupling between the tunnel and ground and ground/buildings shall be determined by placing a seismic vibrator in the completed tunnel prior to trackbed construction. This shall be carried out at a number of representative locations along the alignment, such as in the vicinity of Trinity College Dublin, Mater Hospital and representative heritage buildings in area AZ4. The measurements shall use a range of relevant frequencies and the response at ground surface and selected buildings measured. This approach shall be used to calibrate the models used for the predictions of groundborne noise and vibrations and shall be used to confirm that the selected trackbed solution will provide the required result in terms of groundborne vibrations during the operational phase. It shall be carried out in similar manner to the approach described by Talic et al in 'Prediction of ground-borne vibrations from Copenhagen Metro', published in the proceedings of BNAM 2021 for the Copenhagen Cityringen project.

	(h) The reduction of the operational phase groundborne noise limit, as proposed by TII in the document 'Additional Groundborne Noise Commitment' submitted at the oral hearing on 5th March 2024, which commits to a maximum groundborne noise levels in any lawfully occupied residential dwellings, measured near the centre of any noise-sensitive room, of 35 dBL_{Amax,S} shall also apply to selected heritage buildings and commercial office buildings and the developer shall agree with the Expert Panel which buildings this will be applicable to. (i) Noise and vibrations monitoring shall be carried out by the IME and overseen by the Expert Panel. (j) Trigger Action Plans (TAPs) shall be developed for those buildings that are sensitive to noise and vibration during passage of the TBM that do not currently have a commitment for a TAP to be produced or for noise and vibration monitoring to be carried out during the passage of the TBM. The developer shall agree with the Expert Panel which buildings this is applicable to, but is shall include the Cadenza Building and AerCap House. (k) The bentonite recycling plants at the Northwood Portal site, Collins Avenue, Mater, St. Stephen's Green and Charlemont Station sites shall be contained within acoustic structures, details of which shall be submitted to Dublin City Council for agreement prior to the commencement of development. Reason: In order to protect the amenities of property in the vicinity.
25.	The developer shall engage a suitably qualified archaeologist to monitor (licensed under the National Monuments Acts) all site clearance works, topsoil stripping, groundworks, dredging and/or the implementation of agreed preservation in-situ measures associated with the development. The use of appropriate machinery to ensure the preservation and recording of any surviving archaeological remains shall be necessary. Should archaeological remains be identified during the course of archaeological monitoring, all works shall cease in the area of archaeological interest pending a decision of the planning authority, in consultation with the National Monuments Service,

	regarding appropriate mitigation. The developer shall facilitate the archaeologist in recording any remains identified. Any further archaeological mitigation requirements specified by the planning authority, following consultation with the National Monuments Service, shall be complied with by the developer. Following the completion of all archaeological work on site and any necessary post-excavation specialist analysis, the planning authority and the National Monuments Service shall be furnished with a final archaeological report describing the results of the monitoring and any subsequent required archaeological investigative work/excavation required. All resulting and associated archaeological costs shall be borne by the developer. Reason: To ensure the continued preservation of places, caves, sites, features or other objects of archaeological interest.
26.	The existing elevated footbridges over the R132 regional road shall not be demolished until such time as the permitted R132 Connectivity Project (ABP-310145-21) is complete and alternative at-grade signalised pedestrian crossing points have been provided. Reason: In the interests of road and pedestrian safety.
27.	Prior to the installation of the temporary bridge over the Royal Canal, the developer shall undertake a road safety audit. All recommendations from the road safety audit shall be incorporated into the final design prior to installation. Reason: In the interest of road and pedestrian safety.
28.	The developer shall undertake the construction of Charlemont Station in a manner that ensures that Dartmouth Road shall be re-opened to local access traffic as soon as is feasible and the duration of the full closure of Dartmouth Road to local access traffic shall not exceed 30 months. Reason: In order to protect the amenities of property in the vicinity.
29.	(a) Demand management measures shall be put in place for the operation of the Estuary Park & Ride Facility to ensure its strategic function is protected and to discourage or prohibit long-term car parking. Details of

	the demand management measures shall be submitted to Fingal County Council for agreement prior to the coming into operation of the car park. (b) A survey of cycle parking usage and demand in the opening year and 5 years after the opening year shall be undertaken and submitted to Dublin City Council, Fingal County Council and the National Transport Authority. As part of this study, a review of bicycle theft at MetroLink stations shall be undertaken to determine if further secure cycle parking or other security measures are required. Reason: In the interest of sustainable transport.

I confirm that this report represents my professional planning assessment, judgement and opinion on the matter assigned to me and that no person has influenced or sought to influence, directly or indirectly, the exercise of my professional judgement in an improper or inappropriate way.

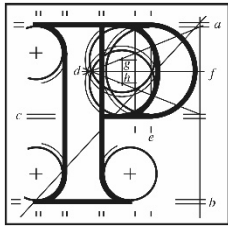
Niall Haverty
Senior Planning Inspector

5th August 2025

Appendix 1: MetroLink Technical Review, prepared by Tyréns Group AB

(Included separately)

Appendix 2: Submission Lists and Summaries



- **Appendix 2A** provides an alphabetical list of all submissions and identifies the area to which the submission relates. In the interests of consistency and clarity this utilises the same areas/categories as the applicant in their response to the submissions.
- **Appendix 2B** provides a summary of each written submission on an area-by-area basis.
- **Appendix 2C** provides an alphabetical list of all further submissions made following the publication of notices inviting submissions in relation to the documentation submitted at the oral hearing and the response to the request for further information (updated Book of Reference).
- **Appendix 2D** provides a summary of each further submission listed in Appendix 2C.
- **Appendix 2E** provides an alphabetical list of all further submissions made following the circulation of the applicant's response submission to Wild Ireland Defence CLG's oral hearing submission
- **Appendix 2F** provides a summary of each further submission listed in Appendix 2E.

Notes:

As addressed in Section 4.3 of the report, a number of submissions were withdrawn either during or following the oral hearing. The withdrawn submissions are identified in the following lists to avoid confusion.

In addition to the withdrawal of submissions, a number of letters, emails and oral statements were received during the course of the oral hearing from various observers, stating that the issues raised in their written submissions had been

addressed and that they supported the project. Those observers are also identified in the following lists.

In the interests of clarity and to assist the Board in its determinations, all submissions are provided with a unique reference number. The numbering system is as follows ('XX' being the number of each submission):

- **SXX:** Written submissions made following lodgement of the application.
- **1FSXX:** Further submissions made following the publication of notices inviting submissions in relation to the documentation submitted at the oral hearing and the response to the request for further information.
- **2FSXX:** Further submissions made following the circulation of the applicant's response submission to Wild Ireland Defence CLG's oral hearing submission.

Key:

Area/ Category	Sub-Area / Sub- Category	Description
AZ1 Northern Section	AZ1(a)	Estuary Station (including Park & Ride facility) to Seatown Station to northern end of Swords Central Station.
	AZ1(b)	Swords Central Station to Fosterstown Station to Dublin Airport North Portal (DANP).
AZ2 Airport Section	AZ2	ESB Networks connection and new substations, Dublin Airport North Portal (DANP), tunnel running beneath Dublin Airport lands, Dublin Airport Station, Dublin Airport South Portal (DASP) and associated intervention and ventilation tunnels.
AZ3 Dardistown Section	AZ3	South of Dublin Airport South Portal (DASP) to the Northwood Portal, including Dardistown Station, Dardistown Depot, ESB Networks connection and substations, M50 viaduct crossing, Northwood Station and the TBM launch site at Northwood.
AZ4 City Section	AZ4 (a)	Northwood Portal to Ballymun Station, Ballymun Station and running tunnel to Collins Avenue Station.
	AZ4 (b)	Collins Avenue Station and running tunnel to Griffith Park Station, including Albert College Park Intervention Shaft.
	AZ4 (c)	Griffith Park Station and running tunnel to Glasnevin Station.
	AZ4 (d)	Glasnevin Station and running tunnel to Mater Station.
	AZ4 (e)	Mater Station and running tunnel to O'Connell Street Station.
	AZ4 (f)	O'Connell Street Station and running tunnel to Tara Station.
	AZ4 (g)	Tara Station and running tunnel to St. Stephen's Green Station.
	AZ4 (h)	St. Stephen's Green Station and running tunnel to Charlemont Station.
	AZ4 (i)	Charlemont Station and tunnel turnback south of the Station.
General or Multi-Area	MULT AZ's	Submissions that extend over more than one of the four Assessment Zones. MULT AZ4 Submissions that span more than one AZ4 sub-area.
	GEN	General overview or non-geographic specific submissions.

	Prescribed Body
	Elected Representative

Appendix 2A: Alphabetical List of Submissions

Ref. No.	Name	Location	Area/ Category
S1	Albert College Residents Association (ACRA) and Ballymun Road North Residents	Collins Ave-Griffith Park	AZ4 (b)
S2	ACRA Association of Combined Residence [sic] Associations	General	GEN
S3	Aidan Cyril Forde	Tara-SSG	AZ4 (g)
S4	Aine Wellard	Tara	AZ4 (g)
S5	Alstead Securities Limited	Tara	AZ4 (g)
S6	Amanda Hughes	Mater	AZ4 (e)
S7	An Post	Multiple	MULT AZ4
S8	An Taisce	Tara	AZ4 (g)
S9	Andrew Conlon and Maeve Fitzpatrick	Mater	AZ4 (e)
S10	Andrew Whelan	Multiple	MULT AZ's
S11	Anne Behan and John Kearns	Seatown-Swords	AZ1(a)
S12	Anne Confrey	Griffith Park-Glasnevin	AZ4 (c)
S13	Anne G Meehan	Griffith Park-Glasnevin	AZ4 (c)
S14	Ashley Estate Residents	Seatown-Swords	AZ1(a)
S15	Barry and Aileen Dempsey	Charlemont	AZ4 (i)
S16	Barry Murphy	Charlemont	AZ4 (i)
S17	Bart and Patricia Broderick	Tara	AZ4 (g)
S18	Ben and Tatiana Hurley	Charlemont	AZ4 (i)
S19	Berkeley Road Services and Traders Association	Mater	AZ4 (e)
S20	Bernard Seymour	SSG	AZ4 (h)
S21	Bindford Limited	Glasnevin	AZ4 (d)
S22	BORG Developments and JOM Investments	Northwood	AZ3
S23	Bovale Developments ULC	Estuary	AZ1(a)
S24	Bovale ULC and Balheary Properties ULC	Estuary	AZ1(a)
S25	Breda Scully	Mater	AZ4 (e)
S26	Brendan Flanagan	Mater	AZ4 (e)
S27	Brendan Heneghan	Charlemont	AZ4 (i)
S28	Brendan Howley	Collins Ave-Griffith Park	AZ4 (b)
S29	Brian McGrath	O'Connell St.	AZ4 (f)
S30	Brigid Purcell (People Before Profit representative)	Tara	AZ4 (g)
S31	Butterfield District Residents Association	Charlemont	AZ4 (i)
S32	Cairn Homes Properties Limited	Estuary-Seatown	AZ1(a)
S33	Caitriona and Ciaran Byrne	Seatown	AZ1(a)
S34	Caitriona Shaffrey	Charlemont	AZ4 (i)

S35	Carmen Neary	Charlemont	AZ4 (i)
S36	Caroline Eyre O'Connor	Charlemont	AZ4 (i)
S37	Caroline Regan and family	Charlemont	AZ4 (i)
S38	Cathal Duffy	Tara	AZ4 (g)
S39	Catherine Foley and Keith Madden	Griffith Park-Glasnevin	AZ4 (c)
S40	Charlemont and Dartmouth Community (Dartmouth Road)	Charlemont	AZ4 (i)
S41	Charlemont and Dartmouth Community (Dartmouth Square West)	Charlemont	AZ4 (i)
S42	Charlemont and Dartmouth Community (General Area)	Charlemont	AZ4 (i)
S43	~~Ciaran Black & Leon McCarthy~~ WITHDRAWN		
S44	Ciaran Cuffe MEP	Multiple	MULT AZ's
S45	Claire Dunne	Glasnevin	AZ4 (d)
S46	CLG Na Fianna CO Cormac O Donnchu	Multiple	MULT AZ's
S47	Colin Torpay	SSG	AZ4 (h)
S48	College and Wainsfort Residents Association	SSG-Charlemont	AZ4 (h)
S49	Colm and Caitriona Warfield	Charlemont	AZ4 (i)
S50	Commission for Railway Regulation	Multiple	MULT AZ's
S51	Conor and Lorraine Power	Charlemont	AZ4 (i)
S52	Coras Iompair Eireann	Multiple	MULT AZ4
S53	Core Capital	SSG-Charlemont	AZ4 (h)
S54	Cormac McKay and Aeravai	Multiple	GEN
S55	Dan Coulcher and Paula Fyans	General	GEN
S56	DECC Geological Survey Ireland	Multiple	GEN
S57	Declan Ryan	SSG-Charlemont	AZ4 (h)
S58	Deirdre Byrne and Family	Seatown-Swords	AZ1(a)
S59	Deirdre Vaughan	Griffith Park-Glasnevin	AZ4 (c)
S60	Denis McLoughlin and Teresa Reid	Charlemont	AZ4 (i)
S61	Dermot and Doris Healy	Tara	AZ4 (g)
S62	~~Desmond and Kathleen Rice~~ WITHDRAWN		
S63	Development Applications Unit (Department of Housing, Local Government and Heritage)	Multiple	MULT AZ's
S64	Devonmill Limited	Swords-Fosterstown	AZ1(b)
S65	Diarmuid Burke	Charlemont	AZ4 (i)
S66	District 7 Community Alliance	Mater	AZ4 (e)
S67	Donal O'Brolcain	General	GEN
S68	Dublin Airport	Dublin Airport	AZ2
S69	Dublin Central GP Limited	O'Connell St.	AZ4 (f)
S70	Dublin Chamber	Multiple	MULT AZ4
S71	Dublin City Council	Multiple	MULT AZ's
S72	Dublin Commuter Coalition	General	GEN

S73	Dublin Cycling Campaign	Multiple	MULT AZ's
S74	Duncan Smith TD	Multiple	MULT AZ's
S75	Dympna Rooney	Griffith Park-Glasnevin	AZ4 (c)
S76	Eamonn Smyth	Mater	AZ4 (e)
S77	Eanna Coffey	Tara	AZ4 (g)
S78	Earl Court Management Company DAC	SSG-Charlemont	AZ4 (h)
S79	Earldev Properties Unlimited Company	SSG-Charlemont	AZ4 (h)
S80	Earlsfort Basin Limited	SSG-Charlemont	AZ4 (h)
S81	Edward Kelly and Joyce MacRedmond	Charlemont	AZ4 (i)
S82	EirGrid	Multiple	MULT AZ's
S83	Elisabeth Vandenberghe	Charlemont	AZ4 (i)
S84	Emir McDonagh	Charlemont	AZ4 (i)
S85	Emma Kelly	SSG-Charlemont	AZ4 (h)
S86	Erica and Bryan Dalton	Charlemont	AZ4 (i)
S87	ESB Telecoms Limited	Collins Ave	AZ4 (a)
S88	Espirit Investments Limited	Tara-SSG	AZ4 (g)
S89	Estuary Court Residents Association 2	Seatown-Swords	AZ1(a)
S90	Estuary Court Residents Association	Seatown-Swords	AZ1(a)
S91	Eveleen Coyle	Charlemont	AZ4 (i)
S92	Failte Ireland	General	GEN
S93	Farrier Technology Limited	Glasnevin	AZ4 (d)
S94	Father Paul Churchill and others (St. Joseph's Church)	Mater	AZ4 (e)
S95	Fingallians GAA Club	Estuary-Seatown	AZ1(a)
S96	Fiona O'Kelly	Glasnevin	AZ4 (d)
S97	Frances Maguire	Collins Ave	AZ4 (b)
S98	Frank McDonald	General	GEN
S99	GADRA	Multiple	MULT AZ4
S100	Geraldine Ann Cusack and Geraldine O'Connell Cusack	Charlemont	AZ4 (i)
S101	Gerard F Brouder	Multiple	GEN
S102	Gerard Gannon Properties	Swords	AZ1(b)
S103	Gerhard and Rosemary Mayrhuber	Tara	AZ4 (g)
S104	Glasnevin Village Residents Association	Glasnevin	AZ4 (d)
S105	Godfrey Gillett	Charlemont	AZ4 (i)
S106	Grace Bible Fellowship	Tara-SSG	AZ4 (g)
S107	Grace Maguire	Charlemont	AZ4 (i)
S108	Grand Parade Property Trading Company DAC	Charlemont	AZ4 (i)
S109	Greybitch Limited	Tara	AZ4 (g)
S110	Hammerson ICAV	Swords	AZ1(b)
S111	Hampstead Residents CLG	Collins Ave-Griffith Park	AZ4 (b)

S112	Hedigans Limited (Michael and Peter Hedigan) WITHDRAWN		
S113	Helen and Luke Sherlock	Tara	AZ4 (g)
S114	Helena Kelly	Charlemont	AZ4 (i)
S115	Hertz Europe Service Centre Limited	Seatown-Swords	AZ1(a)
S116	Hibernia Real Estate Group Limited	SSG-Charlemont	AZ4 (h)
S117	Hines Real Estate Ireland Limited	SSG	AZ4 (h)
S118	HSE National Drug Treatment Centre	Tara-SSG	AZ4 (g)
S119	Hugo Byrne CO John Byrne	Dardistown-Northwood	AZ3
S120	Ian and Eva Sutherland	Charlemont	AZ4 (i)
S121	Iarnród Éireann	Multiple	MULT AZ4
S122	Institutional Investment Partners GmbH	O'Connell St.	AZ4 (f)
S123	Iona and District Residents Association 2	Glasnevin	AZ4 (d)
S124	Iona and District Residents Association	Repeated submission (superseded by S123)	
S125	IPUT plc and Irish Life Assurance plc	Fosterstown	AZ1(b)
S126	Irene Sorohan	Charlemont	AZ4 (i)
S127	Irish Airline Pilots Association	Dublin Airport	AZ2
S128	Irish Georgian Society	General	GEN
S129	Irish Life Assurance plc. (19-20 Earlsfort Terrace and 65A Adelaide Road)	SSG-Charlemont	AZ4 (h)
S130	Irish Life Assurance plc. (4 Earlsfort Terrace)	SSG-Charlemont	AZ4 (h)
S131	Irish Life Assurance plc. (70 St Stephens Green)	SSG	AZ4 (h)
S132	Irish Life Assurance plc. (Earlsfort Terrace Block C)	SSG-Charlemont	AZ4 (h)
S133	Irish Water (now Uisce Éireann)	Multiple	MULT AZ's
S134	Ivana Bacik TD	Multiple	GEN
S135	J Murphy (Developments) Limited	Fosterstown	AZ1(b)
S136	James Geoghegan Cllr	Charlemont	AZ4 (i)
S137	James Wickham	General	MULT AZ4
S138	Jamie Maher and Others	Charlemont	AZ4 (i)
S139	Jennie McGee and Ian Kelly	Glasnevin	AZ4 (d)
S140	Jerdip Properties Unlimited Company	SSG-Charlemont	AZ4 (h)
S141	Jian Cheng and Family	Collins Ave-Griffith Park	AZ4 (b)
S142	Jim O'Callaghan TD	Charlemont	AZ4 (i)
S143	Johann Harty	Glasnevin	AZ4 (d)
S144	John A Ryan	Charlemont	AZ4 (i)
S145	John and Josianne Bullows 2 (Letter+ land registry records, deeds, vesting certs & photos)	Charlemont	AZ4 (i)
S146	John and Josianne Bullows (same letter as above)	Charlemont	AZ4 (i)
S147	John and Majella Darcy	Tara	AZ4 (g)
S148	John Bernard Reid	Multiple	GEN

S149	John Conway and Orlaith McCarthy	Charlemont	AZ4 (i)
S150	John Lawlor	General	GEN
S151	John Loughrey	Charlemont	AZ4 (i)
S152	John McGreevy	Fosterstown	AZ1(b)
S153	John Neary and Kathleen White	Charlemont	AZ4 (i)
S154	Jonathan Healy	Mater	AZ4 (e)
S155	Juliana and Joe Boland and Family	Swords	AZ1(b)
S156	Justin Marden	Multiple	MULT AZ's
S157	Karen Colgan	Charlemont	AZ4 (i)
S158	Karl Egan	Tara	AZ4 (g)
S159	Kathleen McDonagh	Charlemont	AZ4 (i)
S160	Kathleen Shields	Tara	AZ4 (g)
S161	Kevin Maughan	Charlemont	AZ4 (i)
S162	Kieran Smyth and Margaret McDonnell and Others	Collins Ave-Griffith Park	AZ4 (b)
S163	Knocklyon Network CLG	SSG-Charlemont	AZ4 (h)
S164	Kohlin Lourenco	Charlemont	AZ4 (i)
S165	KW Real Estate ICAV	SSG	AZ4 (h)
S166	Leo and Anne Crehan	Charlemont	AZ4 (i)
S167	Leonard Kinsella	SSG-Charlemont	AZ4 (h)
S168	Lesley Hewson	Glasnevin	AZ4 (c)
S169	LIDL Ireland GmbH	Northwood	AZ3
S170	LOKRA Lower Kimmage Road Residents Association	SSG-Charlemont	AZ4 (h)
S171	Lorraine Rooney	Glasnevin	AZ4 (c)
S172	Louisa Gannon	Charlemont	AZ4 (i)
S173	Louise Boughton and Glenn Sharpe	Collins Ave-Griffith Park	AZ4 (b)
S174	M.E. Hanahoe Solicitors on behalf of the estate of John Quinn (deceased)	Glasnevin	AZ4 (d)
S175	Management Company Board on behalf of The Court	Glasnevin	AZ4 (d)
S176	Margaret Morrissey	Glasnevin	AZ4 (d)
S177	Maria Elena Garcia Valasco	Tara	AZ4 (g)
S178	Maria O'Connor	Tara	AZ4 (g)
S179	Marie Balfe	Tara	AZ4 (g)
S180	Marie McMahon	Glasnevin	AZ4 (d)
S181	Marie Sherlock Senator	Multiple	MULT AZ4
S182	Mark Campbell and Aimee O'Farrell	Glasnevin	AZ4 (d)
S183	Mark O'Connell	Glasnevin	AZ4 (d)
S184	Martin Sheridan	Tara	AZ4 (g)
S185	Mary Fitzpatrick Senator	Multiple	MULT AZ's
S186	Mater Misericordiae and the Childrens University Hospitals	Mater	AZ4 (e)
S187	Mater Misericordiae University Hospital	Mater	

S188	Maureen O'Scanail WITHDRAWN		
S189	Metro South West Group	SSG-Charlemont	AZ4 (h)
S190	Michael A Doyle and Carmel Smith Doyle WITHDRAWN		
S191	Michael B. Barry	SSG-Charlemont	AZ4 (h)
S192	Michael McDowell Senator	Charlemont	AZ4 (i)
S193	Michael Quinn	Glasnevin	AZ4 (d)
S194	Millenium Theatre Company WITHDRAWN		
S195	Monica Deering	Tara	AZ4 (g)
S196	Mouna Unlimited Company WITHDRAWN		
S197	Muiris O'Dwyer	SSG-Charlemont	AZ4 (h)
S198	National Disability Authority	General	GEN
S199	National Transport Authority	General	GEN
S200	Neasa Hourigan TD	General	GEN
S201	Newcourt Retirement Fund Managers Ltd Trustees of Majella Darcy PRSA	Tara	AZ4 (g)
S202	Niall Lynch	SSG-Charlemont	AZ4 (h)
S203	Niall Parsons 2	Charlemont	AZ4 (i)
S204	Niall Parsons	Charlemont	AZ4 (i)
S205	Nicholas Mansergh	Multiple	GEN
S206	Nicola Brait and Greta Tumiatto	Tara	AZ4 (g)
S207	Nicola O'Doherty	Charlemont	AZ4 (i)
S208	Nigel Clerkin	General	GEN
S209	Nigel Mallen	Glasnevin	AZ4 (d)
S210	Nuala Kelly	Tara	AZ4 (g)
S211	October Investments Limited WITHDRAWN		
S212	Olan O'Brien	Mater	AZ4 (e)
S213	OPW (1 Georges Quay and others)	Multiple	MULT AZ4
S214	OPW (13-14 Burgh Quay Offices)	Multiple	MULT AZ4
S215	OPW (14-17 Moore Street - 8-9 Moore Lane)	Multiple	MULT AZ4
S216	OPW (16 Parnell Square)	Multiple	MULT AZ4
S217	OPW (22-25 Clare Street)	Multiple	MULT AZ4
S218	OPW (44-45 O'Connell Street)	Multiple	MULT AZ4
S219	OPW (52 St Stephens Green)	Multiple	MULT AZ4
S220	OPW (9-15 O'Connell Street)	Multiple	MULT AZ4
S221	OPW (Apartments 1-8 Clare Court)	Multiple	MULT AZ4
S222	OPW (Ballymun Garda District Headquarters and INTREO Office)	Multiple	MULT AZ4
S223	OPW (Department of Enterprise, Trade and others)	Multiple	MULT AZ4
S224	OPW (Department of Finance)	Multiple	MULT AZ4
S225	OPW (Department of Justice 50-51 St Stephens Green)	Multiple	MULT AZ4
S226	OPW (Garden of Remembrance)	Multiple	MULT AZ4

S227	OPW (Government Buildings Block)	Multiple	MULT AZ4
S228	OPW (Headquarters of the Department of Agriculture, Food and the Marine)	Multiple	MULT AZ4
S229	OPW (Iveagh House - Department of Foreign Affairs)	Multiple	MULT AZ4
S230	OPW (Leinster House Complex)	Multiple	MULT AZ4
S231	OPW (Mobhi Road Complex)	Multiple	MULT AZ4
S232	OPW (National Concert Hall Complex)	Multiple	MULT AZ4
S233	OPW (National Gallery of Ireland)	Multiple	MULT AZ4
S234	OPW (National History Museum)	Multiple	MULT AZ4
S235	OPW (National Library of Ireland)	Multiple	MULT AZ4
S236	OPW (National Museum of Ireland)	Multiple	MULT AZ4
S237	OPW (St Stephens Green Buildings)	Multiple	MULT AZ4
S238	OPW (St Stephens Green House)	Multiple	MULT AZ4
S239	OPW (St Stephens Green Park)	Multiple	MULT AZ4
S240	OPW (The General Post Office)	Multiple	MULT AZ4
S241	Orwell Park (Templeogue) Residents Association	SSG-Charlemont	AZ4 (h)
S242	~~O'Scanailh Veterinary Hospital~~ WITHDRAWN		
S243	Our Ladies of Victories Church	Collins Ave	AZ4 (b)
S244	~~Our Lady of Victories Boys' School~~ WITHDRAWN		
S245	~~Our Lady of Victories Girls' National School~~ WITHDRAWN		
S246	~~Our Lady of Victories Infant School~~ WITHDRAWN		
S247	Owners of 9, 10 and 11 Nelson Street	Mater	AZ4 (e)
S248	Pat and Barbara McCormack	Glasnevin	AZ4 (d)
S249	Patricia Roe Cllr	Collins Ave-Griffith Park	AZ4 (b)
S250	Patricia Whyte	SSG-Charlemont	AZ4 (h)
S251	Paul and Brian Connell	Glasnevin	AZ4 (d)
S252	Paul Cusack on behalf of residents of 153 Ballymun Road	Ballymun-Collins Ave	AZ4 (a)
S253	Paul Hughes	Mater	AZ4 (e)
S254	Paul McAuliffe TD	Ballymun-Collins Ave	AZ4 (a)
S255	Peter and Breda Gregory	Glasnevin	AZ4 (d)
S256	Peter Schneider Energy Consultants	General	GEN
S257	Peter Twamley	Multiple	GEN
S258	Phibsboro Village Tidy Towns (PVTT)	Glasnevin	AZ4 (d)
S259	Proinsias Mac Fhlannchadha	Charlemont	AZ4 (i)
S260	Prospect Architectural Conservation Area	Glasnevin	AZ4 (c)
S261	Rail Users Ireland (Thomas J Stamp)	Multiple	MULT AZ's
S262	Rathgar Residents Association	General	GEN
S263	Recorders Residents Association	SSG-Charlemont	AZ4 (h)
S264	Rethink MetroLink	Charlemont	AZ4 (i)

S265	RGRE Burlington Limited and RGRE Harcourt Terrace Limited	SSG-Charlemont	AZ4 (h)
S266	Richard Guiney	General	GEN
S267	Rita Marie Harvey	Charlemont	AZ4 (i)
S268	Rohan Holdings Limited (Part I & Part II)	Seatown-Swords	AZ1(a)
S269	Roisin Shortall TD	Collins Ave-Griffith Park	AZ4 (b)
S270	Royal Canal Clean-Up Group	Glasnevin	AZ4 (d)
S271	Ruadhan MacEoin	Multiple	GEN
S272	Sadhbh O'Neill	Multiple	GEN
S273	Sainfoin Property Company Limited	Dardistown	AZ3
S274	Santry Forum	Multiple	MULT AZ's
S275	Sarah Meredith	Glasnevin	AZ4 (d)
S276	Save Markievicz Pool & Gym Campaign (John Dean)	Tara	AZ4 (g)
S277	Seatown Villas Residents	Seatown	AZ1(a)
S278	Shandon Mill Owners Management Company CLG	Glasnevin	AZ4 (d)
S279	Shandon Residents Association	Glasnevin	AZ4 (d)
S280	Shira Mehlman	Glasnevin	AZ4 (d)
S281	Sinead Quilty	Swords	AZ1(a)
S282	Smokin Bones LTD	Swords	AZ1(b)
S283	Smyths Toys Superstores	Swords	AZ1(b)
S284	St. Annes Resident's Association	SSG	AZ4 (h)
S285	Susan Cosgrove	Tara	AZ4 (g)
S286	Suzi Taylor and G.I Taylor	Charlemont	AZ4 (i)
S287	Tanat Limited	Tara	AZ4 (g)
S288	Tanrat Limited TA Starbucks	Swords	AZ1(b)
S289	Terenure West Residents Association	General	GEN
S290	Tesco Ireland	Multiple	MULT AZ's
S291	The Abbey Theatre (Amharclann na Mainistreach)	O'Connell St.-Tara	AZ4 (f)
S292	The CMCCG Action Group (Sabine Klinger)	Tara	AZ4 (g)
S293	The Foley Family	Charlemont	AZ4 (i)
S294	The Owner of Apartment 27 College Gate	Tara	AZ4 (g)
S295	The Residents of Albert College Lawn	Collins Ave-Griffith Park	AZ4 (b)
S296	The Rotunda Hospital	Mater-O'Connell St.	AZ4 (e)
S297	Thomas Harty	Glasnevin	AZ4 (d)
S298	Thomas Herlihy	General	GEN
S299	TII (Edel McCormack)	Not a submission. Proof of postage of notification letters to landowners/occupiers	
S300	Tom Harrington	Charlemont	AZ4 (i)
S301	Tony Graham	General	GEN
S302	Townsend Apartment Management Company Limited	Tara	AZ4 (g)

S303	Trinity College Dublin	Tara-SSG	AZ4 (g)
S304	Troys Butchers	O'Connell St.	AZ4 (f)
S305	Union Investment Real Estate GmbH	Charlemont	AZ4 (i)
S306	University College Dublin (UCD)	Charlemont	AZ4 (i)
S307	Upper Leeson Street Area Residents Association	Charlemont	AZ4 (i)
S308	Veronica Jane O'Mara	Tara	AZ4 (g)
S309	Vincent Harrison and others 2	Glasnevin	AZ4 (d)
S310	Vincent Harrison and others	Glasnevin	AZ4 (d)
S311	Voice of Vision Impairment	General	GEN
S312	Waterways Ireland	Glasnevin	AZ4 (d)
S313	Westward Group Ltd	Mater-O'Connell St.	AZ4 (e)
S314	Will Phelan	SSG-Charlemont	AZ4 (h)
S315	Woodies DIY co Grafton Group PLC	Seatown	AZ1(a)
S316	WORK Residents Association (Michael Griffin)	SSG-Charlemont	AZ4 (h)
S317	Wynn's Hotel	O'Connell St.-Tara	AZ4 (f)
S318	Yu Miao Yang YMY Ltd	Mater	AZ4 (e)
S319	Yvonne Allen	Charlemont	AZ4 (i)
S320	Yvonne Collins Cllr	SSG-Charlemont	AZ4 (h)
S321	Fingal County Council	Multiple	MULT AZ's

Appendix 2B: Summary of Submissions by Area

AZ1 Northern Section (Estuary to Dublin Airport North Portal)			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S11	Anne Behan and John Kearns	Support proposed development. Object to opening up access points between the R132 and Seatown Villas via the proposed linear park due to additional pedestrian and vehicular traffic it will introduce to the quiet residential area. Potential for anti-social behaviour on linear park. Connection through estate and across R132 is not required. Section of exposed Metro alignment at Seatown Villas should be cut-and-cover instead of retained cut, given this is a residential area and to allow green area to be reinstated.	No
S14	Ashley Estate Residents	Support submissions made by Estuary Court and Seatown Villas as same matters of concern arise. Impact on open spaces. Track should be re-routed or estate returned to 'as is' position. Estate has been in existence for 40 years and provides secure haven for children to play without fear of them accidentally gaining access to the R132. It is maintained and upkept by residents. Proposed linear park is not necessary and residents concerns were expressed to TII. Impact on look and feel of estate and loss of sense of security. Additional walkways and planting arrangement reduces usable green area. Increased breaks in wall along R132 and encroachment into estate boundaries. Concerns regarding type of wall proposed, low wall with railing or solid wall. Safety concerns regarding loss of footbridge over R132 and replacement with toucan crossing. Safety concerns for children running onto R132. Willing to accept construction phase disruption but TII has ignored concerns raised. Impact on the estate is not necessary to complete the Metro project. Returning the green area to an 'as is' condition can be achieved while providing access between the metro stations proposed. Concerns regarding the POPS scheme and lack of detail and duration of scheme. Details of construction phase preventative/remedial measures are vague. Groundwater and flooding concerns due to introduction of an artificial barrier.	No

		<u>Submission accompanied by:</u> - Letters of support from individual residents reiterating the issues raised. - Signed petition.	
S23	Bovale Developments ULC	Submission relates to 'Barrysparks Lands'. Supports MetroLink in principle. Draft Statement of Common Grounds has been prepared with TII and it is hoped that a final agreement will be put in place shortly to allow for the redevelopment of the retained lands in advance of, or in tandem with, the MetroLink project.	Yes
S24	Bovale ULC and Balheary Properties ULC	Submission relates to 'Lissenhall Lands' adjacent to the Terminus and P&R. With the temporary and permanent land acquisition, little if any development could take place on the retained lands until after MetroLink is built. Development should take place in advance or in tandem with Metro construction to maximise patronage of the Metro. Lands are within the boundary for the Swords LAP to be prepared under the new CDP. Timeframe for Metro construction means that it could be the mid to late 2030s before any development of the lands adjacent to the Lissenhall Metro Station can occur without modification to the proposed scheme. Modifications to the scheme would allow for the integrated development of the retained lands with the proposed Metro scheme. These include access via the Swords Western Distributor Road off the R132 to the retained lands, improved linkages between the retained lands and the Lissenhall station and omission of two areas of land included in the CPO which do not appear to be required. Observer is concerned that MSCP would not provide an appropriate frontage to the retained lands. Observer is in discussions with TII regarding the proposed modifications.	Yes
S32	Cairn Homes Properties Limited	Cairn own lands in Swords along the Glen Ellen Road, c. 1km from the proposed Estuary P&R station. They welcome the development and the associated infrastructure upgrades, including pedestrian and cycle connectivity. Delivery of MetroLink should not be tied to the delivery of any other development in the city such as through phasing requirements for either Metro or individual developments.	No
S33	Caitriona and Ciaran Byrne	Supports MetroLink in principle but concerned about lack of privacy to their property, anti-social behaviour and noise and vibration. Public open space at Seatown will not be overlooked, resulting in a lack of passive surveillance and anti-social behaviour and reduction in privacy for adjacent houses, contrary to the residential zoning and vision. Boundary treatments and any screening are unclear.	No

		Lack of sufficient information on noise. Noise monitoring at location AT50 was only done during day-time, with no baseline information for night-time noise. EIAR states that residual noise at some locations may cause disturbance or sleep interference requiring further noise insulation or temporary rehousing. Those residents must be identified at this stage of the planning process and it is not acceptable to leave assessment and mitigation measures to be detailed after an EIA has been carried out. The EIAR states that the CEMP will encompass Noise and Vibration Management Plan and it is unacceptable that this be done post-consent. Further information should be sought in relation to the above.	
S58	Deirdre Byrne and Family	Objects to proposed linear park design for the Ashley Estate due to overlooking, loss of privacy, loss of view, loss of security, road safety hazards, loitering and increased noise. Ashley Estate is currently screened from the R132. Introducing the linear park with openings onto the R132 will detract from the private green space and create the problems the community are trying to avoid. Supports MetroLink, subject to green spaces being reinstated to its current state, with mature trees.	No
S64	Devonmill Limited	Submission relates to the Travelodge Hotel and associated lands at Pinnock Hill, Swords. Welcome proposed development but seek to ensure that the operation of the hotel is safeguarded. Site is accessed off the R125, from the R132 via the Pinnock Hill Roundabout. Permission granted for extension to hotel in 2018, but not yet implemented. Pinnock Hill roundabout to be replaced by signalised junction as part of Bus Connects. It is proposed to acquire part of the car park, resulting in the loss of 24 spaces. Greenfield lands to the east of the hotel are to be temporarily acquired for a construction and logistics compound, c. 15m from the hotel. Roundabout closure and realignment will take a period of 18 months, with controlled access to the hotel during that time. Concerns regarding construction phase disturbance, traffic congestion, noise, dust etc. and loss of car parking. Proximity to construction works will have a detrimental impact on the guest experience and may seriously affect the hotel's trading performance and reputation. Construction works should be managed to reduce impacts and maintain visibility of hotel from key approaches. Loss of parking will have a detrimental effect. Alternative or interim parking solution should be provided. Plans indicate reinstated parking even though land is highlighted for permanent acquisition. Clarity sought on this matter.	No

		Potential difficulties in implementing their permission to extend the hotel. Impact on Smokin' Bones restaurant. Potential for delays and uncertainties arising from the Railway Order. Board should ensure that applicant has funding to design the scheme and acquire the lands. Applicant should be required to proceed in a timely fashion. <u>Submission accompanied by:</u> - Transport and traffic related observations, Transport Insights.	
S89	Estuary Court Residents Association	Loss of open spaces, mature trees and disruption. TII has not given observer any conclusive reason why the MetroLink cannot be realigned onto the R132. R132 Connectivity Project provides an opportunity to do this. Houses have small back gardens so green spaces are heavily used. Estimated duration of construction and acquisition of green spaces is 5/6 years for the top green and 4/5 years for the bottom green. This could be half of a child's life and will have a significant impact on them. TII consultation with residents had indicated 2 years and 6-12 months, respectively, for the use of the green spaces. Loss of visual amenity due to removal of mature trees. Gaps in proposed wall onto R132 make it ineffective for security and child safety. Construction disruption on houses due to noise, vibration, dust, piling, slurry wash off, traffic restrictions, vermin and visual impact. Previous opposition to an elevated MetroLink on the R132 median was due to the support structures. A cut and cover alignment would be feasible, with traffic management similar to the Port Tunnel. Any utilities could be diverted. Rationale for chosen design in this area is flawed. R132 Connectivity project should be combined with the MetroLink proposal. Change in nature of R132 from dual carriageway to urban street would allow for reduced road width with Metro on the other side.	No
S90	Estuary Court Residents Association 2	Do not oppose MetroLink project, but it does not need to come through the estate. Existing 2m high boundary wall along R132 provides security and noise barrier while also aesthetically enhancing the estate. Greens in estate are well used by children and are safe and secure. Not fair or reasonable to take away their green areas for 5/6 years. Alternative options are available, such as Woodies car park, Fingal Co. Co. car park. TII will not give back what currently exists, they propose redeveloping it into a linear park along the R132, with paths and planting through the limited green space, which would be unsuitable for ball games.	No

		Proposed replacement boundary wall has four access gaps with security risk for houses and children playing. Residents want no access points in it. Wall is referred to as 'wall type H' but no details are provided in the drawings. General arrangement drawings specify for the existing wall to be replaced. There is a negative side to permeability, linked to higher crime rates, burglaries and anti-social behaviour. Shortest walking routes between MetroLink stop, Swords village and other estates is not via Estuary Court. No advantage to go through the estate. Proposed linear park is a material change of use of the land and is not mentioned in the Draft Railway Order or in the schedule of work description. Linear park is not needed for the construction of MetroLink and they question if it is outside the scope of the project. Major concerns about property damage. There site was low-lying and built up with builder's rubble. There is a stream running underground through the site and several houses had to be underpinned due to subsidence. Cracking is visible in numerous walls in the estate. Concern regarding vibration from piling and rock breaking leading to subsidence and structural damage or leaks to central heating pipes. POPS Scheme should be extended to all properties in the estate. Concerns regarding noise, air pollution, dirt, vermin, traffic, safety, contractor parking, loss of visual amenity. Independent consultant should be provided to monitor and report on noise, vibration etc. with the power to stop works if necessary. Noise predicted in excess of WHO guidelines. Impact on groundwater and flood risk. Landscaping should be replaced with mature trees and a maintenance plan put in place. Discussion required with TII and Fingal Co. Co. regarding the risk that the estate will be used as a park and ride facility. <u>Submission accompanied by:</u> - Signed petition.	
S95	Fingallians GAA Club	Supports proposed development in principle. Concerned about impact on their playing pitches. Both pitches will be unavailable for up to 12 months. Pitch 1 has to be realigned and Pitch 2 will be developed as an all-weather pitch of reduced size which will not be suitable to host matches.	No

		Proposed all-weather pitch should be increased to a full-size pitch as there is sufficient space. Removal of footbridge over R132 will bring increased risk to club members, including juveniles etc. who access the site on a daily basis.	
S102	Gerard Gannon Properties	Observer has made two SHD applications for over 1,000 residential units in the Swords area at Oldtown (ABP-313302-22) and Mooretown (ABP-313362-22). (Inspector's Note: Both applications were subsequently granted). Demographics for Swords indicates likely steady population growth, particularly to the west of the town. Observer requires clarity that the construction and delivery of MetroLink does not impact on their ongoing projects and is willing to engage with TII on this matter. Public transport in Swords has not kept pace with population growth and observer welcomes MetroLink.	No
S110	Hammerson ICAV	Co-owner of Swords Pavilions Shopping Centre and sole owner of the 'Pavilions Development Lands', Malahide Road, Swords. Observer is pursuing the feasibility of a new masterplan scheme for 786 No. residential units and commercial development on lands within and adjacent to the proposed CPO lands. The entirety of the lands proposed to be acquired are required to make the planned development scheme viable. Long-term sterilisation of land is not acceptable. Shopping Centre given no direct consideration in respect of potential impacts. It requires uninterrupted access, no disruption or inconvenience to customers. CPO will severely adversely affect the Shopping Centre. Noise, dust, health and safety concerns. The c. 2,000 space car park handles 2.85 million cars p.a. and vehicular access is via the R106 Malahide Road and the R132 left-in, left—out access road. 80% of traffic to the shopping centre access via the R132. Existing level of access must be protected. Combined effect of permitted R132 Connectivity project and proposed MetroLink project on traffic. EIAR under-estimates significance of land take impacts. Anomaly in mapping for land acquisition. Undeveloped lands to the east of the R132 at Barrysparks or at Lissenhall could be acquired instead of observer's lands. Ongoing and detailed consultation on traffic management will be critical for the Pavilions operations. Removal of R132 footbridge in advance of R132 Connectivity Project would impact on access to the Pavilions. Existing and potential development at the Pavilions is not addressed in the cumulative assessment.	Yes
S115	Hertz Europe Service Centre Limited	Proposed permanent acquisition of surplus lands, particularly at the bicycle hub building and at the attenuation area.	No

		Proposed temporary acquisition is excessive and will have extreme consequences for the operations at the premises: - Fire exits will be blocked. Premises would not be operational as it would not be compliant with fire regulations and H&S regulations. - Access to cooling units for computer systems, power supply services and storage areas must be maintained. - Alternative temporary area to the south east side of the Hertz owned lands could be utilised. - Excessive temporary acquisition of car parking area. - Power and data services are located in area to be permanently acquired. No information on how these will be relocated into the building. No definitive time frame for MetroLink, resulting in blight on the property. Noise impacts on telephone service section in the premises. Vibration and dust impacts on IT services. Adequate drainage and surface water control details not provided. Impact on access to the property. Site security concerns. Concerns over controls on contractor given design and build nature of project.	
S125	IPUT plc and Irish Life Assurance plc	Observers are joint owners of Airside Retail Park, Swords. Support the delivery of MetroLink but have concerns. Demolition of Unit 1 (Smyths Toys and Starbucks) and temporary and permanent loss of car parking will impact on the operation of the Retail Park. Proposed area of permanent acquisition is excessive: - Area ML1T-A8 is not required permanently and should be omitted. - Areas ML1T-A6 and ML1T-A7 are not required permanently and should be a temporary acquisition. Proposed rights of way/wayleaves should only be for TII and MetroLink passengers, not third parties. Clarity sought on rights of way and level of usage and alignment. Concern regarding closure of main access to Airside Retail Park off the R132 for a period of 21 months and the limited temporary junction proposed. Severe disruption to Retail Park. Revised temporary access arrangements should be put in place to maintain access at all times from the R132. Temporary and permanent signage arrangements for the Retail Park should be included in the Railway Order. Further information required on fencing proposals.	Yes

		Demolition of Unit 1 will expose the dividing wall with the next unit, which will be highly visible from the R132. High quality façade treatment will be required and should be conditioned. <u>Submission accompanied by:</u> - Technical Note on Access, Roughan & O'Donovan Engineers.	
S135	J Murphy (Developments) Limited	Owner of lands at Fosterstown North, Swords, to the west of the proposed Fosterstown Station, on the opposite side of the R132. SHD application was lodged for these lands for 645 No. residential units and ancillary development (ABP-313331-22) and a decision is awaited. Observer supports MetroLink proposal and SHD development does not impact on the delivery of the metro. SHD application includes a plaza opposite the Metro station and a signalised crossing across the R132. The MetroLink proposal includes a pedestrian crossing and bus stop slightly north of that proposed in the SHD application. The two developments are compatible, and the final details of the crossing could be agreed with the NTA, TII and FCC by way of condition attached to the Railway Order. The SHD application includes a temporary junction onto the R132, pending delivery of the new Fosterstown Link Road. The temporary junction will not impact on the MetroLink or BusConnects proposals. Inspector's Note: Permission was refused in April 2024.	No
S152	John McGreevy	Requests that a parcel of land extending to 1750 sq m, situated to the north east of the proposed Fosterstown Station be omitted from the proposed acquisition. The land is proposed to be acquired for the purposes of accommodating a relocated telecommunications mast and observer is concerned that the extent of acquisition is excessive.	No
S155	Juliana and Joe Boland and Family	Family's lives have been put on hold since 2008 due to metro proposals. Potentially losing family business as well as family home. Difficulties in identifying alternative property as TII advised that financial settlement could not occur in advance of the Railway Order being obtained and the business plan signed off on. Basis of calculating CPO value is unfair.	No
S188	Maureen O'Scanail	WITHDRAWN	
S211	October Investments Limited	WITHDRAWN	
S242	O'Scanail Veterinary Hospital	WITHDRAWN	

S268	Rohan Holdings Limited	Submission relates to undeveloped lands at North Dublin Corporate Park split into two parcels of 4 acres in total, with existing access onto and frontage onto the R132. Lands have been sterilised for the last 15 years due to delays in metro proposals. Lands are now identified for temporary acquisition for construction compounds, thus further sterilising them until MetroLink is delivered. No timescales are provided for this. This sterilisation would be contrary to the ME zoning objective. The lands would be suitable for delivering urgently needed housing, including potentially significant social housing. A feasibility assessment indicates that two blocks with 120 units in each block could be provided. Given uncertain timeframe for MetroLink, it would be unreasonable to safeguard the site for temporary construction compounds given the need for housing. Lands should be omitted from the land take.	No
S277	Seatown Villas Residents	Serious concerns shared with Ashley Estate and Estuary Court residents about proposed linear park and penetrations through estates to the R132. Proposed pedestrian routes do not provide shorter journeys to the station from any direction with the exception of Seatown Villas residents. Connection to R132 will result in child safety issues, anti-social behaviour, loss of identity as a 'rat-run' and parking of Metro passengers in the estate. Green area in the estate will be used for construction for 6+ years, followed by reinstatement. This is a long time for children to be without amenities. Construction hours are 72 hours per week, with substantial noise, dust, air pollution and danger from heavy machinery. Numerous alternative locations in the area for a construction compound instead of in a residential estate. Locating the route to the side of the R132 rather than the central median results in increased noise, vibration, health and safety and dust issues for residents as well as more tree felling. Concern that open cut will result in negative noise and light pollution impacts, noting hours of operation and frequency of movements. Drainage concerns regarding barrier effect of cut and cover proposal. Traffic management plan sought. Vermin control planning condition sought. Concern regarding removal of footbridges on R132, as they are used by children including those with special needs to access schools. Preferred alternative options: - Bored tunnel, as it would reduce impacts and requirement for construction compounds, tree felling, disruption etc.	No

		- Realignment under median of R132 and cut and cover tunnel, as it would reduce impacts on housing estates and vegetation.	
S281	Sinead Quilty	Removing the existing boundary wall to create new pathways from Estuary Court onto the R132 does not fulfil any access gaps or requirements. It creates an unsafe zone for children, giving direct access onto a dual carriageway from the estate's only green area. Reinstating the wall without additional entrances would remove this liability and enhance the life of residents of Estuary Court.	No
S282	Smokin Bones LTD	Observer runs a restaurant business from the Travelodge Hotel site in Swords. Supportive of MetroLink but concerns regarding construction phase. Car parking is vital to business and loss of parking will have huge knock-on effects. Roundabout and road closure will cut off direct access to the business. Diversions will lead to extra stress and a loss of business. Impact of noise and dust on restaurant customers. Negative impact on visibility of signage during construction.	No
S283	Smyths Toys Superstores	It is proposed to demolish the store to accommodate Fosterstown Station. Loss of the store would have a particular impact given the significant population growth of Swords, especially of the young population. Under the new Development Plan, any alternative site for the store must be located on the edge of the core retail area within the town of Swords as the core retail area is not suitable for a store of this type. Fosterstown Station materially contravenes the Development Plan as the land is zoned 'RW' to provide for retail warehousing. The proposed development does the opposite by demolishing a retail warehouse without suggesting an alternative site. Under the Draft Development Plan and Draft Fosterstown Master Plan, the Fosterstown Station is located to the north of the subject site and outside the RW zoned area. The decision to move it south is not explained in the application. It will not be feasible to find an alternative location which is as convenient for customers and strategic for the company. Stores are currently strategically placed around the M50. Market research indicates no suitable vacant locations within the catchment area. No provision is made in the Railway Order for a replacement or relocation of the existing store.	No
S288	Tanrat Limited TA Starbucks	Observer operates a coffee shop within the Smyths Toys Superstore in Airside by way of a sublet. Any alternative site for the entire subject store to be demolished must be located on the edge of the core retail area within the town of Swords due to the Fingal Retail Hierarchy.	No

		Fosterstown Station materially contravenes the Development Plan as the land is zoned 'RW' to provide for retail warehousing. The proposed development does the opposite by demolishing a retail warehouse without suggesting an alternative site. Under the Draft Development Plan and Draft Fosterstown Master Plan, the Fosterstown Station is located to the north of the subject site and outside the RW zoned area. The decision to move it south is not explained in the application. No provision is made for a replacement or relocated store. This should be part of the analysis of the Railway Order.	
S315	Woodies DIY co Grafton Group PLC	Woodies DIY site at Seatown Roundabout in Swords will be affected by temporary and permanent acquisition. A tunnelled Metro line under the central median of the R132 would be a more cost effective solution rather than tunnelling under valuable zoned lands. The previous Metro North used the central reservation. Alignment cannot be decided upon until a cost-benefit analysis is undertaken. Uncertain timeframe for construction and uncertain when it will commence and end. No information on the 'notice to treat' CPO period. Proposals for future use of permanently acquired CPO lands have not been articulated. Unacceptable impact on viability of Woodies retail unit due to: - Duration of closure and impacts on access and loss of footbridge. - Loss of car parking spaces and 50% of garden centre for at least 2 years. - Works are unreasonably close to the retail unit (2.4m minimum). - Noise, vibration and dust impacts over an extended period. 54 month duration of works at the 'Woodies Satellite Site'. Unclear why it is so lengthy. Use of existing store access as a shared access for construction vehicles raises safety concerns. No information on construction vehicle numbers or control of the entrance. No information on options considered for the compound. No assessment of impacts of restricted traffic flows and diversions on the store. Loss of c. 70 car parking spaces (42% of total) for up to 4.5 years. Some replacement parking is indicated on lands following removal of footbridge but no firm commitment to ensure Woodies will have access to these lands. There would still be a loss of 56 spaces. Unofficial park and ride may occur given proximity to Seatown Station. Permanent acquisition of 50% of garden centre will affect the entire garden centre. Relocation will further affect parking spaces. Impact on customer experience.	No

		Unclear why three areas of Woodies land are subject to permanent CPO. <u>Submission accompanied by:</u> - Copy of previous consultation phase submission to TII.	

AZ2 Airport Section			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S68	daa	MetroLink welcomed but key areas require further consideration, engagement and agreement. Condition required for MetroLink to adhere to all relevant security measures as detailed by daa. Airport station should be designed with elevated pedestrian walkway to ensure no impact on safe and efficient operation of internal roads, given number and frequency of crossings. Further assessment of pedestrian and vehicular traffic needed. Station structure should not compromise future overhead development and should be designed to support multi-storey development. Consultation and approval required from daa and IAA regarding cranes, construction plant, lighting, Runway End Safety Area and electromagnetic field safety. Co-operation needed with daa during construction, including with regard to traffic, vibration, tunnel depth, dewatering and security. All construction plans should be agreed with daa. daa are aware of possible soil and groundwater contamination to north of proposed station. Pumping may pull contaminated groundwater towards the site. Airport station should adhere to Dublin Airport Architectural Design Framework. Objective DA21 of Dev. Plan seeks to ensure high standard of design for development within Airport. daa requests clarifications and agreement regarding design and input into station design and operation.	Yes
S127	Irish Airline Pilots Association (IALPA)	Long term Western Airfield campus development has been overlooked (Objective PT6). Future proofed connection to Western Campus required. Station and platforms may not meet future demand of up to 50 million passengers per annum. MetroLink should not restrict Terminal expansion or Automated People Mover linking to satellite pier on the Western Campus. Park and ride should be provided at Dardistown. Enabling works should be carried out to provide a subterranean APM station box between T1 and T2 to safeguard a critical future APM.	No

AZ3 Dardistown Section (Dublin Airport South Portal to Northwood)			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S22	BORG Developments and JOM Investments	Uncertainty regarding purpose and duration of temporary land acquisition. Impact on development potential of lands and on timely delivery of employment/residential development. Impact of proposed roundabout on access from the north of Gulliver's Retail Park and Northwood Avenue.	Yes
S119	Hugo Byrne c/o John Byrne	Submission relates to lands at St Anne's, Ballymun and is affected by CPO. Lands are zoned Mero Economic Corridor under the Fingal Development Plan. Given timeline for Metro delivery, observer wishes to bring retained lands forward for development in advance of or in tandem with the proposed MetroLink project. Area of acquisition is excessive and includes areas of unnecessary permanent acquisition. Seeking a change to access arrangements to the lands and to the area of permanent land take. Engaged in discussions with TII and hope to put agreement in place. Board is asked to consider the proposed modifications and to include as part of any approval. <u>Submission accompanied by:</u> - Map indicating proposed modification to access and land take.	Yes
S169	LIDL Ireland GmbH	Submission relates to lands at Northwood, Ballymun Road. Does not object to the project but wishes to highlight potential opportunities that should be considered. Permission granted for mixed-use development with retail, office and 48 apartments. Since expired. Significant and adverse impact on development potential of site. Area above the station will be sterilised with development allowed only beyond the boundaries of the station. Missed opportunity. Station should be constructed to allow for development over the station. Over-station development used in many cities. Draft Railway Order is silent on this but this could be rectified within the scope of the RO process, as the key aspects are technical rather than policy based. Maximise valuable urban lands for high density development beside high capacity public transport systems rather than sterilising land. London study found retrofitting over-station development to be complex, disruptive, and expensive. It should be designed in at this stage. Conflicting/contrasting statements in the Planning Report with regard to over-station development in the Fingal and Dublin City areas.	No

		Proposed layout would create difficulties with developing a discount food store due to access issues created by the permanent land acquisition. The Board should seek to enable a larger area of the site to be utilised for future development. Station access requirements are unclear. Consultation sought with regard to cut-and-cover construction methodologies, loadings, and impacts for future development. Clarification sought on condition in which temporary land take areas will be returned, including boundaries, service connections, site level, drainage and contamination. <u>Submissions accompanied by:</u> - Transport Insights Report.	
S196	Mouna Unlimited Company	WITHDRAWN	
S273	Sainfoin Property Company Limited	Impact on development potential of lands. Masterplan developed for site by Foster + Partners indicates that 5m sq ft of development can be achieved. Alternatives to Dardistown for depot. Previous rationale for depot from Metro North case does not apply, as Metro West is no longer proposed. No need for joint depot. Estuary is a better location for the depot on engineering and cost grounds. Fragmentation of landholding and potential severance of access from the Naul Road. Uncertainty regarding timeframe and duration of temporary land acquisition. Area is excessive and sterilises the entire landholding until Metro is complete. Observer proposed alternative location within the landholding for the depot to TII, to be provided without cost. Alternative option was discounted due to size and Airport Public Safety Zones. Size can be increased and safety zones are due to be reviewed. Multi-criteria assessment of sites failed to consider residual site developability and destruction in land value. While alternative site is preferred, observer proposes following amendments: 1. Development access provided so lands are not landlocked. 2. Change to temporary land acquisition area. 3. Tracks connecting depot to Dardistown station are cut and cover to allow landscaping over or amended to minimise fragmentation. <u>Submission accompanied by:</u> 1. Foster + Partners Masterplan.	Yes

		2. Tobin Consulting Engineers depot site assessment report. 3. Correspondence with TII. 4. Dardistown Depot Rail Analysis. 5. McGreevy Property Consultants Comparative analysis	

AZ4 (a): Northwood to Collins Avenue Station			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S87	ESB Telecoms Limited	Own an operational telecommunications base station at ESBs Ballymun 38kV substation earmarked for temporary acquisition. Support proposed development. Integrity of the grid and the electricity supply to the telecoms site must be maintained. The Ballymun site provides services to the 3 main mobile and broadband operators and is an integral part of their networks. The location of the site is vital in order to provide a continuous robust service and coverage in the locality. ESBT require unhindered and unrestricted access to the base station at any time. Safety, security and access concerns about use of wider substation lands unless issues are effectively controlled. ESBT could not support making the telecoms land available, even on a temporary basis, due to the difficulties in finding an alternative location and the importance of the telecom site.	No
S252	Paul Cusack	Resident of Ballymun Road. Welcomes proposed development but scope for refinement. Collins Avenue Station should be relocated to Albert College Park to address issues due to proximity to Our Lady of Victories Church and the schools. Loss of parking spaces for school drop-off, noise, vibration, air quality impacts. Traffic impacts of rolling road closures. This section of Ballymun Road is heavily utilised and is one of the busiest arterial routes to the city centre. Child safety concerns during construction. Existing traffic issues with school drop-offs will be exacerbated. Impacts of utility diversion works. Disruption caused by station excavation and construction. Impact on residents of Assisted Living accommodation at Albert College Court. Impact on OLV church access and attendance. 900 signature petition against the station location. Impact on residential amenity of Ballymun Road residents. Structural damage concerns due to drilling, rock breaking and blasting. Contrast between TII response to earlier opposition to Griffith Park Station location on Na Fianna grounds and the Collins Avenue Station. Appeal for fairness, parity and equality. Previous Metro North proposal considered a station at the north west corner of Albert College Park.	No

		Underground station in Albert College Park of similar design to Griffith Park Station would be preferable and would be closer to DCU.	
S254	Paul McAuliffe TD	Supportive of proposed development but some concerns. Running consultation for BusConnects and MetroLink at the same time was unfair. Proposed station at Ballymun must take into account proposals from DCC for the site. Lack of information on intervention shaft at Albert College Park and its impacts. Impact on schools and Our Lady of Victories Church and nearby residents. Traffic impact on R108, one of the busiest arterial routes to the city centre. Should the station be built at the church site, a condition of the RO should be that the parking for the school is built next to Ballymun Library and that Albert College estate walkway for schools is not provided. Collins Avenue Station should be moved to Albert College Park. This would mean less disruption for residents, traffic on the Ballymun, schools and OLV church. This is backed up by the environmental assessment report. Lack of clarity around the works for MetroLink and the works for Bus Connects, both of which involve significant disruption to the Ballymun Road area. Independent expert advice should be available to residents during construction phase. The EIA refers to the contractor providing community relations and information. There should be a TII/NTA point of contact. Glasnevin village is over 1km from the proposed Glasnevin station. Glasnevin is a large area and Cross Guns or Prospect station would be more appropriate. A Future link with the Luas to Finglas would add to the connectivity of the city. The distance between the proposed Luas stop at Charlestown and the Northwood MetroLink stop is minimal.	No

AZ4 (b): Collins Avenue Station to Griffith Park Station (Incl. Albert College Park Intervention Shaft)			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S1	Albert College Residents Association and Ballymun Road North Residents	Welcome MetroLink but the Collins Avenue Station at Our Lady of Victories (OLV) Church is the wrong location. Lack of engagement and justification for station location. This section of the Ballymun Road is one of the busiest arterial routes to the city centre and is the wrong location for 10 years of heavy construction. Proximity of schools, assisted living complexes and housing. Utility diversion works are significant construction projects in advance of station construction commencing. Rolling closures of sections of road will result in serious challenges, congestion and safety concerns for parents and children. Traffic impacts of spoil removal due to the size of excavation. Severe access restrictions for Albert College Estate and Ballymun Road residents. Immediate concerns: - Positioning of the Collins Ave. Station. More disruptive, expensive and dangerous than Metro North proposal. - Highly sensitive receptors: Elderly, special needs and primary school children. - Unconvinced by need for large station with associated architecture. Preference for low key station. - Restricted access for Albert College residents. - Use of OLV Church grounds for school drops and impact on residents. - Grave concerns about traffic management. - Scepticism about bus interchange being relevant. - No joined up thinking with BusConnects. Vote of residents in Albert College Estate found 90% in favour of Station in Albert College Park rather than OLV Church. Residents have difficulty leaving estate due to high traffic on Collins Ave. and Ballymun Road. Should the station not move, TII is asked to examine alternative options for a temporary 'residents-only' exit onto the Ballymun Road and ABP is asked to include this as a condition. Impact on safe access to OLV Schools. Loss of parking spaces will pose a significant risk to safety. Construction workers will be competing for available parking spaces. TII suggestion that parents park in Albert College Estate will add to negative impact on estate residents.	No

		The only practical alternative parking area is on the land beside Ballymun Library. If the church site is used for the Station, then this parking should be required by way of condition. Dust and air quality impacts on schools of construction and traffic fumes. Noise and vibration impact on schools. Impact on elderly residents of Albert College Court Assisted Living Accommodation due to noise, dust and vibration caused by excavation for station diaphragm walls in close proximity to housing complex. Additional impacts due to loss of parking and proximity of site exit point utilised by HGVs to housing units. Major stress and anxiety for elderly residents. They would have to be relocated and may never get the chance to return to their homes. 900 signatures received against plan to locate Station at OLV Church. Potential for structural damage to church. Access difficulties to church and on funerals, weddings, communion etc. and loss of car parking. This will result in irreversible decline in church attendance. Impact on residents of Upper Ballymun Road due to noise, vibration, dust, traffic impacts, structural problems etc. Many residents will have to be rehoused given the enormity of the disturbance. Property Protection Scheme required with detailed condition surveys and compensation. Flooding concerns due to River Wad located underground to the rear of houses being unable to take the runoff following heavy rain. Concern regarding high water table and depth of excavation resulting in a change in water flow direction and undermining of house foundations or settlement. Surface and groundwater monitoring plan required for real time for both construction and operational phases. Antisocial behaviour and disturbance during the operational phase. Impact on commuter traffic on Ballymun Road. BusConnects proposes reducing northbound road from 2 lanes plus bus lane to 1 lane plus a bus lane. Station should be relocated to the western periphery of Albert College Park along Ballymun Road at chainage 12+640 to 12+760, with a similar design to Griffith Park Station to minimise permanent land take. This would be 1km north of Griffith Park Station and an intervention shaft in the park would not be required. Relocated station would avoid impact on OLV schools, provide excellent access to DCU, minimise impact on Albert College estate residents, reduce traffic impacts. It would remove the station plaza and antisocial behaviour and an intervention shaft could be provided on free land beside Ballymun Library. Treatment of Collins Ave. Station compared to previous Griffith Park Station design is compared and contrasted. They appeal for fairness, parity and equality.	

		Locating the intervention shaft at Ballymun Library would reduce impact on park and on residents. Board is asked to make it a condition of the RO that the Station and intervention shaft be relocated as outlined in the submission. <u>Submission accompanied by:</u> - Extracts from Jacobs IDOM Environmental Assessment Report on options for Collins Avenue. - Correspondence between RINA (independent expert) and TII.	
S28	Brendan Howley	Resident of St Mobhi Road. Objects to Metro passing under his home as from experience of living in London it causes vibration and rumbling in homes. Impact on property value.	No
S97	Frances Maguire	Objects to location of Collins Avenue Station at Our Lady of Victories Church. Impact on church and schools. Traffic impacts, health and safety impacts, quality of life impacts, educational impacts. Temporary use of old parochial house by a creche should not be factored into consideration of alternative site. Impacts on mass, funerals and weddings due to construction works. Impact on credit union, including access issues. Impact on nearby houses and accommodation for senior citizens/vulnerable people. Station should be relocated to Albert College Park. Most of the users will be students from DCU. Traffic impacts on surrounding areas. Impacts on park users would be short in duration, compared to impacts on residents in vicinity of proposed location.	No
S111	Hampstead Residents CLG	Residents of Hampstead Avenue, Glasnevin, Dublin 9, an extremely quiet area with a rural atmosphere facing Albert College Park with a Z2 residential conservation area zoning. Independent engineering advice was provided late in the process and their terms of reference were limited by TII. Request that independent advice be made available to all residents and stakeholders during all phases of the project. Inadequate consultation process and consideration of alternatives. Support ACRA proposal for alternative intervention shaft location. This was not properly considered/assessed by TII. A station instead of the shaft would fulfil the safety criteria for the shaft while benefiting the local area and future development areas.	No

		Antisocial behaviour concerns at shaft. Information should be sought on why the alignment changed from twin bore to single bore. Noise and vibration concerns. No baseline noise data in the EIAR for Hampstead Avenue. Further assessment of noise impacts requested and condition requiring works in Albert College Park to be a dark and quiet site at night. Residents must be included in sharing of monitoring reports. Primary mitigation should be operational control (hours and periods) with deliveries during working hours. Calibrated sensors should be put in place to monitor vibration, noise, light, dust etc. Alert system and live data should be made public. Penalty scheme should be put in place to ensure contractors adherence. Funds should be ring fenced for clearing of properties and roads, insulation etc. Operational phase noise, air, vibration monitoring required. Potential for plumes due to warm extracted air meeting cold air. EIAR states that contractor will provide community relations. This is not good enough and TII/NTA should be part of this, with escalation point within TII/NTA provided. A trouble ticket system should be used. Residential monitoring group and community fund should be established. Temporary land take clarification sought. Mature trees within areas should be fully protected and areas to be used for football pitch reinstatement should not be used at any time for temporary construction storage or other uses. Flooding concerns given history of flooding from Albert College Park onto Hampstad avenue. Detailed plans required for how run-off water or disturbed underground water will be managed. Rodent management plan required. In the event of a fire, dangerous and toxic smoke will emanate from grilles in Albert College Park in close proximity to houses. EIAR does not provide details on what mitigation measures will be taken and how fumes will be managed and filtered. How would an emergency be managed? Would local residents be evacuated from their homes? Construction parking concerns. Hard shoulder on Ballymun could be used for fire brigade parking to reduce land take from the park. Slow or non-disclosure of information from TII, NTA and their agents shows indifference to residents.	
S141	Jian Cheng and Family	Residents of Ballymun Road, Dublin 9. Oppose Glasnevin Metro Station and tunnel under their house. Construction impacts on residents, including traffic disruption, noise, vibration, dirt and dust. Impact on school drop-offs to Our Lady of Victories N.S. Major safety hazards for parents, children. Duration of construction, associated road closures and traffic gridlock.	No

		Impact of Albert College Park shaft construction. Observers work from home and have young children. Noise, pollution and vibration will be intolerable. Safety concerns due to tunnelling under their house and safety of children growing up on a construction site. Increased anti-social behaviour when station is built. Metro Station should be redesigned and built within Albert College Park instead of the ventilation shaft.	
S162	Kieran Smyth and Margaret McDonnell and Others	Residents of Ballymun Road, Dublin 9. Support proposed development overall. Albert College Park (ACP) is an essential community resource and should be protected. Based on the requirements, ACP would appear to be the optimal location for the Intervention Shaft (IS), but placement of a MetroLink station within ACP, if it was proposed, would be a disaster for the park and would severely impact its amenity. The size and scale of the IS will negatively impact the park and reduce the area available for walking and sports. An alternative design should reduce its overall footprint as used on the Elizabeth Line in London and Italian underground systems. Parking could be provided on roadside verge and structures reduced and rationalised. Condition required to protect residential amenity during construction in relation to noise, vibration, blasting, communications, hours of construction, traffic management. Flood risk and rodent control. Ensure that Collins Avenue Station construction disruption is kept to a minimum and residential amenity protected. POPS Scheme welcomed. Limit of €45,000 may be too low and streamlined process should be put in place. Amount should increase in line with inflation. Homeowners should be fully compensated for any damage. Limit of one year from the end of the construction phase is too short, as issues such as settlement may not be identified in such a short period. In addition to opting for one of three TII contracted experts, residents should be able to use their own expert and be compensated for this up to a set amount. Dispute resolution process for the POPS scheme should be put in place and a general complaints procedure. Antisocial behaviour concerns. Home insurance uncertainties.	No

S173	Louise Boughton and Glenn Sharpe	Residents of the White House, Ballymun Road, Glasnevin, Dublin 9. Support submissions made by Hampstead Residents CLG, GADRA and Albert College Park Residents Association. House is a protected structure and observers have invested in renovating the structure, including extensive works to repair the early 20th century windows. Tunnel under the property has the potential to damage their windows and the entire structure of the house. No conservation architect has been in contact, despite TII promise. Require assurances that a conservation architect will be made available. Imperative so a photographic record can be made before any works commence. In the event the property is damaged, TII called upon to make good any damage. Observers request that they are included in POPS programme. Concern about proximity of intervention shaft to their house and the impact on the protected structure. <u>Submission accompanied by:</u> - Sales brochure for house. - Newspaper article about house. - Photographic record of window repairs.	No
S243	Our Ladies of Victories Church	Collins Avenue Station would impact greatly on the spirit and life of the church community. Frustration and unease that a place held precious is under threat by the station. Use of the plaza area to the front of the church is a concern and CPO will deprive community of this valuable space that has been used for parish picnics and family days. Generations of parishioners have invested heart and soul in the church and grounds. The first parish priest was buried in the lawn in front of the church and trees on the lawn mark special occasions in the history of the parish. Impossible to cope with the inaccessibility of the two major front entrances for services, particularly for those with special needs or mobility issues. Many of the congregation are elderly and further inconvenience is unhelpful. Difficulties created for large funeral and wedding parties to gather. Church provides a social network for the Syro Malabar migrant community. Disruption will lead to an irretrievable breakup and fragmentation of the parish community. Church has considerable architectural merit and many decorative stained glass windows. Concerns in relation to potential structural damage during construction. Recognise value of project but fear that their very valid concerns will be ignored. Conditions required to alleviate disruption.	No

S244	~~Our Lady of Victories Boys' School~~	WITHDRAWN	
S245	~~Our Lady of Victories Girls' National School~~	WITHDRAWN	
S246	~~Our Lady of Victories Infant School~~	WITHDRAWN	
S249	Cllr Patricia Roe	Proposal for a station in the grounds of OLV Church and the positioning of a ventilation shaft and car park in the Albert College Park is not optimal. A better solution is to put the station in the park, which would have less lasting negative impacts, as per ACRA submission. Ventilation shaft could be located at a vacant site adjacent to Ballymun Library. Works at the church will permanently impact access/egress to Albert College estate, will have a negative impact on residents in the two adjoining Assisted Living Complexes, the church and school. Impact on traffic flows.	No
S269	Roisin Shortall TD	Supports proposed development. Poor consultation and engagement by TII. Residents associations benefitted from involvement of the independent engineering experts RINA. They should be retained during construction and made available to local residents. A resident contact position should be required within TII to address concerns and provide updates during construction. This happened with the Port Tunnel. Having a point of contact is vital. Importance of monitoring and making reports available to residents. Pest control. Water management. Alternative of relocating Collins Avenue Station to Albert College Park as originally planned. Scale of Albert College intervention shaft is larger than it needs to be. Emergency service parking area could be accommodated outside of the park. Sections of park to be temporarily acquired for the relining of the football pitches should only be for the duration of the relining works and not for the construction period for the shaft nor the placement of spoil.	No

S295	The Residents of Albert College Lawn	While supportive of the overall scheme, they have concerns about closure of Albert College Drive onto Ballymun Road, with only one exit onto Collins Avenue and the possible creation of another exit onto Ballymun Road while Albert College Drive is closed. The possible exit would exit by Albert College Lawn and result in felling of a magnificent old beech tree and opening of the cul de sac. Do not object in principle to the proposed station at OLV Church but there is a need to protect every available green space for future generations. Do not want the station to be built in Albert College Park. Object to the possible opening of the cul de sac onto Ballymun Road during the construction phase. This would create a rat run and pose safety hazards for residents, school children etc. DCU traffic turning left into DCU Avenue from Ballymun Road is too close to a possible exit from the Lawn and would create a hazard for accidents. Object to any proposal that an alternative route could be provided by opening Albert College Lawn/Avenue onto the access avenue into DCU for motor traffic. Where will construction workers park their cars?	No

AZ4 (c): Griffith Park Station to Glasnevin Station			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S12	Anne Confrey	Resident of Fairfield Road, Glasnevin, Dublin 9. Potential property damage to house and boundary walls. Potential impacts on utilities. Loss of privacy. Impact on parking and servicing. Increased traffic levels. Overbearing nature of the proposal. Loss and damage of trees, shrubs and plants. Loss of ecological habitats. Impact on wildlife and domestic animals. Access road safety issues. Drainage impacts/flood risk. Odours, noise, dust and dirt pollution. Vibration during construction and operation. Interfering with right to extend/expand property. Devaluation of property. Interferes with right to sell property until construction is complete. Attack on constitutional property rights. Disruption and loss of business in the area. Area is adequately served by public transport.	No
S13	Anne G Meehan	Resident of Prospect Avenue, Glasnevin, Dublin 9. Survey undertaken on house was inadequate and not thorough. Relies on assumptions. Detailed and thorough independent survey sought. POPS scheme is inadequate as it is to be in place for one year. Construction could take 9-10 years and property must be covered by construction firm's insurance. POPS should be extended to 10 years. Implications for property value and home insurance. Noise and vibration impacts. Floating tracks should be used under the ACA. History of voids and property damage in London and Dublin for similar projects. Monitoring of foundations and clay soil settlement required during construction and operation. Haul routes from Glasnevin Station should be changed as they pass through a highly populated residential area. Finglas Road (R135) is a direct route to the M50 without travelling through built-up areas.	No

		24 hour working at Glasnevin Station is opposed due to the high population density in the area. Noise, vibration, dust and health concerns. Vermin must be properly controlled. Green alternatives: reinstate trees to be removed, light pollution concerns, living green roof (as per Dublin Airport Station), redesign ventilation shaft and related buildings to a more Victorian model. Shaft should be softened with vegetation or it is an invitation for graffiti. Impact on Brian Boru Pub. Front façade could be incorporated into the building. Security concerns regarding operation of Glasnevin Station. Community area should be provided in the Station. Queries legal basis for proposed acquisition of land. Lack of information on substratum land acquisition, including exact depth, width and reason why land is required. Compensation required for substratum land acquisition. Lack of communication from TII regarding the acquisition process.	
S39	Catherine Foley and Keith Madden	Residents of St. Theresa's Place, Glasnevin, Dublin 9. Risk of structural damage to house which is 117 years old and has no foundations. Independent expert provided by TII has expressed concerns that not enough work has been done to demonstrate that tunnelling will not cause structural damage, particularly given the type of boulder clay present in the area. Detailed evaluations of the ACA should be undertaken with regard to structural damage, vibration, drilling, blasting, settlement and subsidence. Lack of engagement from TII. Lack of clarity with regard to POPS scheme. Only vague information provided on structural matters. Lack of consideration given to proximity of tunnel to ACA. Tunnel should be rerouted or 30m radius for POPS extended. Steering and monitoring group should be put in place for engagement. ACA should be monitored during construction, not just at beginning and end. POPS scheme is inadequate as it does not demonstrate understanding of different considerations for protected or ACA period properties or increased cost of repair works to period buildings. Only conservation accredited structural engineers should undertake assessments. €45,000 limit for POPS is inadequate. Additional avenues for contesting survey findings should be put in place other than legal proceedings. 30m rule for POPS is preposterous as observers house qualifies while neighbours house in the same terrace does not.	No

		Glasnevin station is out of character with the area and the design should be revised. Duration of construction will have a massive impact on the quality of life of those living on the route.	
S59	Deirdre Vaughan	Resident of Fairfield Road, Glasnevin, Dublin 9. Trespass into subsoil under her property. Concern regarding depth of tunnel. Noise and vibration impacts. Danger of collapse or damage to foundations. Drainage impacts and flood risk. Impact on heritage of property. Area is adequately served by public transport. Devaluation of property.	No
S62	Desmond and Kathleen Rice	WITHDRAWN	
S75	Dympna Rooney	Resident of Botanic Road, Dublin 9. Lack of communication from TII. Lack of detail regarding potential damage to property. Depth of tunnel is not adequate compared to London. Monitoring of foundations required. Houses are over 100 years old with shallow foundations and are at risk of subsidence and rise in water table level. Subsidence due to boulder clay movement and terraced nature of housing could cause cracking, issues with drains, windows, doors etc. Lack of clarity regarding insurance and what would happen where people have to vacate if remedial works required. How quickly would TII address remedial works? Timeframe for tunnelling is unclear? Additional information sought on exact depth and width of tunnel at this location. Monitoring of drains required. Potential for sink holes/effluent escape. Station design is not in keeping with the local architecture. The Brian Boru pub is a local landmark. Station name is generic. No one refers to the area as Glasnevin, as it has been called Hart's Corner since the 1920s. Liaison required on blasting with local homeowners. Steering group needs to be set up for direct connection between project developers and local community. Access to emergency services must be maintained.	No

		Community fund should be set up for the local community. Metro is not needed and is a waste of money. Luas to Airport via Finglas would be sufficient.	
S168	Lesley Hewson	Resident of Prospect Square, Glasnevin, Dublin 9. House was built in 1905 and stands on shallow foundations on boulder clay. Underground waterways known as the Cemetery Drain are located to the front and back of the houses. Uncertain if house will be included in monitoring. Given that damage occurred to Marino houses during Port Tunnel construction, there is a concern that there will difficulties getting damage resolved. Consideration should be given to a very thorough risk assessment for vulnerable properties, not just those above the alignment but also those at risk due to the type of ground, age and structure of property. Enhanced monitoring should be required allow corrections to be made to minimise damage and disturbance. Continued and prolonged monitoring of ground settlement should also be done.	No
S171	Lorraine Rooney	Resident of St Theresa's Place, Glasnevin, Dublin 9. Lack of communications/consultation. Provision of detail in layperson's terms is non-existent. Difficulties in trawling through technical reports online. RINA are only now completing their independent report and this should be looked at. Houses sit on boulder clay and require monitoring. 30m zone for POPS is inadequate. Concerns regarding blasting and risk management. Potential subsidence and issues due to terraced nature of housing. Underground watercourse may be causing existing subsidence which needs to be investigated. Insurance concerns and uncertainties. Speed of any required remedial works. Timeframe for tunnelling and how far vibrations will radiate. Depth of tunnel is not deep compared to London Underground. Impacts on drains and need for monitoring. Glasnevin Station design would detract from area. Brian Boru pub is a landmark in the area. Steering group and community fund should be set up. Potential anti-social behaviour in unmanned train station.	No
S260	Prospect Architectural Conservation Area	Enclave of 115 houses comprising Prospect Square, DeCoursey Square, Prospect Avenue, St Teresa's Place and St Teresa's Road, Glasnevin, Dublin 9. Broadly supportive of MetroLink but significant concerns.	No

		Poor communications, lack of information and engagement. Inadequate time given to RINA, the independent expert, to review the RO documents and consult with stakeholders. One agency should be responsible for delivery of the project. Damage to property due to settlement, noise and vibration. Houses are all over 100 years old. Groundwater and surface water concerns. There are a number of underground waterways, notably the Cemetery Drain, in the area. The depth of these is unknown or how they may be affected by settlement. Not addressed in the Damage Report. Representative buildings selected for assessment of damage. Board asked to expand that assessment process across the full ACA and the extension of the POPS scheme to cover all unfounded properties of the ACA. As the ACA stands on boulder clay, the potential for settlement problems at a later date is a concern. There should be a long term ongoing monitoring programme. Community development committee sought and a project construction traffic forum. Community development fund sought. Glasnevin Station should be redesigned with a more sympathetic design and including civic space for the community. Impact of Mater Station on the Four Masters Park. Stations are oversized. Albert College Park should be rejected for ventilation shaft location. Reduce the land take and provide a MetroLink Station in a convenient location for DCU. Ecological impact on Royal Canal. Appoint an Ecology Officer.	

AZ4 (d): Glasnevin Station to Mater Station			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S21	Bindford Limited	Submission relates to lands at Cross Guns Bridge, Phibsborough, Dublin 7. Temporary CPO of lands includes part of a permitted SHD development (ABP-309345-21) under Judicial Review. A separate Large Scale Residential Development application is being prepared for the site. Draft Statement of Common Ground has been prepared and exchanged between TII and observer. Submission illustrates an indicative layout with reduced temporary land take to allow both development to proceed either independently or in tandem.	Yes

		Further meetings planned with TII to seek a final agreement. Observer reserves their position.	
S45	Claire Dunne	Resident of The Court, Dalcassian Downs, Glasnevin, Dublin 11. Loss of green area and car park of apartment complex. Impact on quality of life. Proximity of construction works to the apartments and significant disruption to residents due to noise and dust. Hoardings will block light, particularly to ground floor apartments. Noise, lack of light and dust will negatively impact the mental health and respiratory health of residents.	No
S93	Farrier Technology Limited	Owner of Prospect House, 2-3 Prospect Road, Glasnevin, Dublin 9, which is proposed to be acquired and demolished to construct Glasnevin Station. Building is an unlisted two storey office building with mock-Georgian façade with car parking to rear. Effect of MetroLink already felt, with permission refused for extension (Reg. Ref. 3526/24). Decision pending on first party appeal (ABP-312150-21). Need for early and clear dialogue and communications with TII. Methodology for assessing impacts on offices is flawed and should consider the availability of alternative premises. Lands are of high value given their location and context. They have potential for future development. Concerns about relocation and identification of alternative site, given multi-let nature of the building. Potential loss of existing long-term tenants. Proposal created uncertainty for observer. Board should ensure that Railway Order puts emphasis on TII to confirm timelines, stages and implementation plans, particularly with regard to land acquisition.	No
S96	Fiona O'Kelly	Resident of Dalcassian Downs, Glasnevin. Residents will be forced to move out for many years as the works will be unbearable. Psychological impacts on residents. Building damage during construction. Loss of secure parking spaces and garden area. Noise and vibration impacts. Loss of light from hoarding and dust/dirt generated during construction. Potential for vermin infestation. Potential for anti-social behaviour at the Station. Impact on wildlife and nature.	No
S104	Glasnevin Village Residents Association	Care needed to minimise the effects on residents of Glasnevin village. Contractors expected to adhere to normal guidelines for construction in urban areas. Station at Albert College Park should be called National Botanic Gardens to reflect proximity to it.	No

S112	Hedigans Limited (Michael and Peter Hedigan)	WITHDRAWN	
S123	Iona and District Residents Association 2	Iona District is the residential area bounded by Whitworth Road, Drumcondra Road Lower, Botanic Avenue and Saint Mobhi Road – Botanic Road – Prospect Road. Welcome proposed development. Traffic is degrading the character of the area. Residents believe that construction will have a substantial detrimental impact on the area. Area needs to be designed for local requirements first to make the district safer to access and move about. Recent road works around Harts Corner led to cut-through traffic in the surrounding area seeking to divert around the works. Concerned over multi-year build for MetroLink and that new traffic flow patterns will be established through residential areas. Pollution impacts due to traffic. Impact of cut through traffic on bicycle lanes. Traffic counts by the resident's association found that 30-40% of vehicles exceed the 30km/hr speed limit. Trucks regularly ignore the 3.5 tonne max. weight restriction in the area and signage is ignored. Issues with narrow footpaths and vehicles parking on them. They seek that a traffic management plan for Iona District be prepared and implemented for MetroLink construction and the longer term, to include traffic calming measures. Traffic modelling results indicate traffic will be worse on some roads, including Whitworth Road and St Anne's Road. It is difficult to see how these roads would experience increased traffic without some spill over of cut-through traffic into the remainder of Iona District.	No
S124	Iona and District Residents Association 1	Duplicate. Superseded by submission S123.	No
S139	Jennie McGee and Ian Kelly	Resident of Botanic Road, Glasnevin, Dublin 9. Welcomes MetroLink Station nearby, Concerns in relation to construction phase, including traffic, vibration from traffic, hours of construction, dust and pollution. Residents monitoring group suggested. Community Fund should be set up, similar to the Children's Hospital fund. Concerns about impacts on house foundations or subsidence during tunnelling.	No

S143	Johann Harty	Residents of St Mobhi Road, Glasnevin, Dublin 9. Support MetroLink but concerns regarding construction phase. Request that TII indemnify them against structural damage or any loss of rental income or against loss of income or disruption to healthcare business adjacent to their house. Presently negotiating with potential purchasers for property and does not want potential building works to compromise the sale.	No
S174	M.E. Hanahoe Solicitors (on behalf of the Estate of John Quinn (Deceased))	Solicitors for the estate of the late owner of an apartment and parking space in Dalcassian Court, Dalcassian Downs, Finglas Road, D11. Apartment will have greatly depreciated in value due to the Railway Order, as potential buyers will not want an apartment with no car parking and no open space during 10 years of construction. Uncertainty regarding the parking situation following construction. Major construction works will transform the local environment from a tranquil backwater to a bustling hub. Loss of landscaped area and car parking required by way of planning permission for the apartments would render the permission null and void. Permanent deficit of 17 parking spaces and open space. Perhaps additional parking could be provided on lands to the rear of the Brian Boru pub. No alternative car parking offered in the application for the construction or operational phases. South walls of blocks A and B have windows and balconies that will virtually touch the hoarding of the temporary land take area. This will have to be brought to the attention of the Health and Safety Authority and it cannot be permitted. Hours of construction are excessive. Residents will undergo a dreadful 10 years of severe disturbance.	No
S175	Management Company Board on Behalf of the Court	Submission on behalf of the 48 apartment owners at The Court, Dalcassian Downs, Dublin 11. Severe impacts on the residential community during the construction phase. Total of €163m spent on Metro North, which is now to be wasted. There are capacity and accessibility issues at Connolly Station and unless there is a large capital investment at that location then Glasnevin Station makes no sense. Do not accept that trip demand is higher at Glasnevin than Drumcondra, given Croke Park, residential development at Clonliffe College, St Patrick's College, All Hallows College. Failure to justify Glasnevin as a station location. Major issues of concern include: Impact on quality of life; parking disruption; health impacts; stress and anxiety; noise and vibration; dust; sleep disturbance; vermin; reduction in property values; potential damage; loss of amenity; loss of shared communal green space; restricted access for emergency vehicles.	No

		Traffic impacts due to construction traffic generation. Impacts on BusConnects proposals. Closure of Midland Great Western Railway line for 21 months will turn people off public transport. Mitigation measures seek to reduce the impact rather than eliminate it. Apartments will be rendered unsaleable during the construction phase. Compensation needs to be adequately addressed. Specific conditions required, as outlined in submission to address construction phase impacts. TII should be required to move hoarding back to alleviate impacts. Bentonite silos and filtration plants should also be moved back. Inadequate parking in the Dalcassian Downs estate to cater for displaced car parking spaces. TII should be required to provide alternative parking. TII should fund counselling and health screening. A scheme for temporary rehousing should be drawn up. Question which organisation will oversee adherence to conditions attached to the Railway Order. DCC has no planning enforcement role. EPA should oversee the compliance issues. TII should not self-administer compliance. Local liaison group should be set up. Community Gain fund should be set up.	
S176	Margaret Morrissey	Resident of The Court, Dalcassian Downs, Glasnevin, Dublin 11. Building 7m hoarding a few meters from main door of block. Tunnelling under block so noise, vibration and possible damage. Access to home. Rodent control. Parking for cars. Duration of construction. There is already planning for Drumcondra which has a higher footfall with Mater Hospital, Croke Park, Teacher Training College and DCU. Why change the route?	No
S180	Marie McMahon	Resident of Botanic Road, Glasnevin, Dublin 9. House is over 100 years old with little or no foundations. Depth of excavation is not deep enough and may cause subsidence and destabilise the house. Windows in house rattle when buses stop outside it, she can only imagine what further vibrations will do. Promises of surveys have been made but no contact from anyone. Historical value of the area has been ignored, especially in the construction of the Glasnevin Station.	No

S182	Dr Mark Campbell and Dr Aimee O'Farrell	Residents of The Court, Dalcassian Downs Dublin 11. Significant public health risks that have not been adequately described in the EIAR. Health risks described in the EIAR are based on studies relating to adults. There have not been adequate studies done on children and infants. Modelling and mitigation measures included in the EIAR cannot be relied upon for this reason. TII have documented 'potential annoyance and disturbance of sleep for residents' but this does not describe the potential risk to infants and shall children or night workers. Risks to children from construction traffic. Impact on quality of life for children. Construction disturbance and noise will hinder their emotional development. Air quality already exceeds WHO guidelines levels. Health effects of elevated pollutants and impacts on air quality and quality of life. There is no evidence that any mitigation measures would be capable of reducing the increased risk to human health. Noise limits should be reduced in evening and night-time by minimum 5-10 decibels. Who will be responsible for measuring noise, validating equipment and monitoring and reporting? Telemetry should be publicly available on a website for public access. Monitoring should be continuous; breaches should have swift and significant penalties. Impact on people working from home.	No
S183	Mark O'Connell	Not convinced of necessity for a rail link to the airport. It is well served by buses and taxis. MetroLink will not represent a turnaround in the area, which has been dragged down by Mountjoy Jail and Phibsboro Shopping Centre. Impact on Mobhi Road and loss of trees. Proposal to demolish the Brian Boru pub is crude. It is a beautiful building, featured in Ulysees. Station could be built to replace Phibsboro Shopping Centre. It would be a shame to demolish the three neo-Georgian houses. Construction of the stations at Cross Guns and Mobhi Road would add to congestion in an area where permission has been granted for large number of housing units. Area would become unviable. Could the Brian Boru be preserved and incorporate into the station or lifted and moved to an adjacent area.	No
S193	Michael Quinn	Resident of Saint Teresa's Place, Glasnevin, Dublin 9. Work that would be involved in creating Glasnevin Station would have a major impact on the infrastructure and fabric of this quiet, low profile and well-established residential area.	No

		Impacts on foundations of this house, subsidence and effect on insurability of this property. Impact of any additional traffic, noise and construction on the locality.	
S209	Nigel Mallen	Resident of Daneswell Road, Glasnevin, Dublin 9. Airborne and groundborne noise impacts during construction and operation. Vibration impacts during construction and operation. Potential for damage to observer's home. Objects to the acquisition of the substratum of land. Impacts due to electromagnetic and stray currents. Potential effects on hydrology and hydrogeology under his home. Topography of area would exacerbate impacts on his home.	No
S248	Pat and Barbara McCormack	Owners of a-1A St Mobhi Road, Glasnevin, Dublin 9. Fully support MetroLink but concerns in relation to potential structural damage during the construction phase. Request that TII indemnify them against any structural damage or loss of rental income.	No
S251	Paul and Brian Connell	Property owner on Phibsborough Road. Concerns regarding structural damage to house during construction. Concerns about high-speed trains running every 3 minutes resulting in noise, vibration and nuisance. Tunnel should be deeper and under garden or road rather than house.	No
S255	Peter and Breda Gregory	Residents of Botanic Road, Glasnevin, Dublin 9. Welcome MetroLink but have a number of concerns. Noise pollution due to 24 hour construction works and construction traffic. Increased traffic on Botanic Road and Harts Corner which is already extremely dangerous for cyclists, pedestrians and motor vehicles. Subsidence of property. Environmental impact of digging and pollution. Suggest reduction in working day hours. Suggest a commitment to surveying Harts Corner and make adjustments to traffic accordingly. Residents monitoring group to work with public liaison officer. Support a community fund.	No
S258	Phibsboro Village Tidy Towns (PVTT)	Large number of overlapping major construction projects proposed at Phibsboro to take place over a period of years. Impacts on biodiversity. Loss of trees at Four Masters Park.	No

		Design of stations does not reference the area's history and heritage. Generic designs with no relationship to the surrounding area. Oral hearing required. Ecological Management Plan required. Liaison committee should be put in place. Community fund should be set up to support biodiversity enhancement. Open architectural competition to design Glasnevin and Mater Stations.	
S270	Royal Canal Clean-Up Group	Volunteer led group which co-ordinates a monthly clean-up of the Royal Canal. Group has a storage container located within the intended work space, alongside the Cabra for Youth's storage container. No major objection to moving the container on a temporary basis, however it would need to be relocated close to Cross Guns Bridge and close to the Canal. MetroLink should bear the costs of such a move. Concerned about impacts on ecology. Board's attention drawn to the Shandon Residents Association submission.	No
S275	Sarah Meredith	Resident of The Court, Dalcassian Downs, Glasnevin, Dublin 9. Stress and mental health impacts of previous plans for demolition and current proposal. Issues with selling up, as comparable property would now be financially out of reach and difficulty getting a mortgage given age. Loss of property, parking, green spaces etc. should be replaced on a like-for-like or better basis. Route should change to previous route through Drumcondra. Financial loss if project proceeds. Royal Canal site could be used for station instead. Apartment complex has many unique features and amenities that she does not wish to be disturbed. Objects to payment of fee.	No
S278	Shandon Mill Owners Management Company CLG	Owners' management company for cul-de-sac development of 51 dwellings, known as Shandon Mill, Phibsborough, Dublin 7. Enabling works for Glasnevin Station require temporary (3-5 years) alternative access/egress route for residents of four Coke Oven Cottages through Shandon Mill, due to closure of Royal Canal Way during the works. Shandon Mill is disregarded in the EIAR and not referenced by name in the Railway Order.	No

		Areas sought to be acquired are sole means of access/egress for residents of Shandon Mill and private common areas, bin store and parking spaces. Applicant cannot expect to be given exclusive temporary possession of these areas. Temporary access will be via a temporary bridge over canal, accessed via a route through the adjacent Cross Guns Bridge SHD site and via part of Shandon Mill site. Construction and safety issues with proposed layout and impact on residential amenity. More direct route would be better for emergency services, deliveries etc. EIAR does not make provision for such works. It refers to access via southern towpath to Prospect Road and states that temporary widening of the towpath may be required. Four alternative options suggested in submission. Board asked to modify the RO to omit temporary acquisition of the lands. If the Board approve the acquisition, it must ensure land use is non-exclusive to allow continued access/egress from Shandon Mill. Suggested conditions included in submission.	
S279	Shandon Residents Association	Broadly welcome MetroLink. Noise, dust, air quality and traffic impacts. Impact on biodiversity on canal, which is a pNHA, including otters, bats and rare snails and plants. Glasnevin is most complicated of all the stations to build. Temporary bridge and diversion route should be revised. Most direct route would be via southern edge of old bakery site. Cumulative impact with Cross Guns development during construction of both. Loss of vegetation and impact on biodiversity. Cumulative impact with Irish Rail works. Continuous communications between all parties is vital. Possibility of rerouting traffic via the temporary bridge over the canal and through the old bakery site to exit directly to Phibsboro Road should be explored. Ecological Management Plan should be put in place. Rodent management. Liaison committee should be set up for entire construction period. Community fund should be set up to fund biodiversity enhancements on Royal Canal. Open architectural competition should be held to design Glasnevin Station. Design does not reference the rich heritage of the area. Green building principles should be used.	No
S280	Shira Mehlman	Resident of Botanic Road, Glasnevin, Dublin 9. Lack of consultation.	No

		Lack of detail in the EIAR regarding mitigation measures to ensure that there is no damage to buildings, infrastructure etc. and a failure to outline what recourse a homeowner may have. Unclear how alternative housing would be provided if remedial works are required, given the current housing shortage. Insurance implications unclear. Lack of information on tunnel depth and dimensions.	
S297	Thomas Harty	Resident of St Mobhi Road, Glasnevin, Dublin 9. Same submission as Johann Harty (submission S143).	No
S309	Vincent Harrison & others 1	Submission on behalf of the residents of the four Coke Oven Cottages, Royal Canal Way. Rely on shared roadway along the north side of the Royal Canal from Prospect Road and need access for service and emergency vehicles. Lack of detail in application on maintaining access. In addition to the Part 8 Greenway application by DCC, the MetroLink will result in an increase in intensity of activity along the shared surface towpath. Cottages and their vehicular access is not clearly shown on the drawings submitted. Glasnevin Station has clear conflicts with the access route for the cottages, with heavy restrictions and 6m high lighting proposed in the centre of the roadway. Lack of detail on noise mitigation and locations of where railway line will be lowered. Essential that access is maintained. Lack of a clear strategy for control and use of the greenway and Glasnevin Station as well as safeguarding residential amenity and access. Metro will increase the level of pedestrians on the tow path access road. Potential for conflicts between different users. Additional information sought regarding length of time temporary bridge will be in place, whether emergency vehicles and large vehicles can reach the cottages, whether swept path analysis was undertaken, whether residents on the south bank of the canal consulted with regard to additional traffic. Proposed lights and bollards would restrict access. Steps from station concourse lead blindly onto the towpath. Construction and operational noise and vibration concerns. Signage required to clarify right of way for cottage. Lack of creosote surveys. There is creosote soil/lining within the vicinity of the canal that may be disturbed but this is not referenced in the application. Surveys required.	No
S310	Vincent Harrison & others 2	Submission on behalf of the residents of the four Coke Oven Cottages, Royal Canal Way. Lack of detail on extent and location of railway tracks to be lowered on western commuter line.	No

		It is noted that 24 hour, 7 day working is proposed at this location for some activities. This is unacceptable to residents due to impact on residential amenities. Lack of clarity on how works will be managed to mitigate negative noise impacts. Noise survey was not undertaken at the façade of the nearest noise sensitive receptor, but to the rear of one of the cottages, and is misleading in terms of the baseline noise environment. Robustness of surveys queried as they were undertaken 3.5 years ago. Current background noise levels are very low. Very significant to profound construction impacts require the highest degree of mitigation. Unreasonable that residents will not know mitigation measures until 6 months before commencement. Night-time work will far exceed the 10dB change for rehousing and other mitigation measures. Living in the cottages will be untenable. Floodlighting will also be required for night works which is unacceptable. Acoustic screens will not adequately address concerns. Vibration concerns regarding impact on structural integrity of properties. Full structural survey required. Suitable condition required for noise and vibration mitigation. No assessment of cumulative operational phase noise impacts and increased number of trains. Acoustic screens required above the boundary wall. Reduction in property values.	
S312	Waterways Ireland	Appropriate short term licensing and longer term property arrangements will be necessary to be put in place for the works at the Royal Canal. Any property disposals will require Departmental and North South Ministerial Council approvals. Royal Canal is an NHA and all proposals must address this. Canal water quality is measured against WFD standards and is to a very high standard so no new stormwater discharges are permitted to it. Protection of flora and fauna, including otters and other protected species. Canal is an important heritage asset with various structures that are protected structures. All proposed changes should take account of this. The canal and towpaths are working assets for navigation by boat and use of the towpaths for pedestrian and cycle corridors. These activities must be adequately accommodated and maintained throughout the works and in the permanent arrangements. Flood risk issues must be suitably managed.	No

AZ4 (e): Mater Station to O'Connell Street Station			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S6	Amanda Hughes	Concerned about design and location of the Mater Stop. Canopy of the station should have less footprint, elevation and visual impact. View of the Mater Hospital will be blocked from Berkeley Road. Ancillary buildings and structures will further block the view. Materials are inappropriate for this location which is architecturally sensitive. Plaza area may invite anti-social behaviour and bollards could be replaced with planters. Station entrance should be relocated to face the side walls of St Joseph's Church, allowing the entrance to be onto Eccles Street. This would allow for trees and relocation of ancillary structures, opening up the vista of the park and the Mater Hospital. Relocating the station entrance further into the park near the church would be safer for pedestrians. The extent and duration of the project will have a profound impact on the businesses and retail outlets on Berkeley Road. TII should invest in reinstating the shops in line with the DCC Shopfront Design Guide. Provision for improvements to public domain should be made. Weekly air and dust monitoring should be done in line with WHO recommended emission standards. Supports should not be limited to owner occupiers. Tenants, workers in the area and small landlords will also be affected. Concerned about subsidence and cracking due to proximity to the station box. Provision should be made for all categories of owners and interests, not just owner/occupiers. Houses in the area have very little foundations. 5 year window for subsidence damage post-construction is too low.	No
S9	Andrew Conlon and Maeve Fitzpatrick	Residents of Berkeley Road, Phibsborough, Dublin 7. Project governance is unclear. Roles and responsibilities of Special Purpose Vehicle, subcontractors, TII, NTA, Dept. of Transport and DCC are not defined. Concern that residents will find themselves referred between the various bodies/companies when issues arise. Lack of consultation raises fears about seriousness with which public engagement is being taken. Comprehensive plan for community liaison required and liaison committee during construction. Construction phase concerns due to proximity to major construction site (3.5m) and health and residential amenity concerns.	No

		Discrepancies in location of western vent in drawings/documentation. It should be relocated to the Metro side of Berkeley Road. Proposed hours of construction are unreasonable given the duration of construction. Outline CEMP indicates that set-up and shut-down is within this period, but EIAR indicates that the hours are exclusive of site preparation time. Clarity required and strict restriction required on types of work at weekends of early mornings/late evenings. Significant noise impacts. Monitoring and mitigation should be publicly available, subject to review by a liaison committee, subject to greater clarity and meaningful provision should be made for rehousing residents, agreed through consultation. Air quality mitigation refers to measures which 'should' mitigate the worse effects, rather than 'will' mitigate them. Air quality monitoring should be publicly available on a website, in line with WHO standards and significant financial breaches should be imposed for breaches. Conditions sought to restrict and limit lighting. Vermin management required. Concerns regarding impacts of construction on house, which is Victorian without deep foundations. Piling works would also impact on house. TII should cover the reasonable costs of securing independent legal and engineering advice regarding impacts on their house. Insurance bond should be lodged, to be drawn upon if remedial work is necessary. This should be separate from any insurance entered into by the contractor. Homeowners need to be reassured that they are completely protected. Potential impact on access to home from Berkeley Road. Unfettered access required at all times. Mater Station is out of character with the ACA and is visually intrusive. Station should be redesigned and relocated. Lack of clarity regarding reinstatement of Four Masters Park and responsibility for park upkeep and security.	
S19	Berkeley Road Services and Traders Association	Impact on viability of businesses and employment of staff. Not prepared to be sacrificial lambs for the greater good. Proposed development will be a major benefit to the area but concerns regarding how it can be achieved with minimal disruptions on their businesses. Impacts on parking, disruption, noise and vibration, access issues, dust, disruption to services. Hoarding will have an anti-business effect.	No

		Clarification sought on construction phase works and likely impacts in a non-technical manner. All possible remedies, including relocation or compensation, need to be available. Mechanism such as an intermediary required to allow communication between the parties. Issues need to be addressed seriously and effectively. (Copies of submission signed by numerous businesses)	
S25	Breda Scully	Resident of St Ignatius Road, Berkeley Road area, Dublin 7. Impact on Berkeley Road, Mater Hospital, St Joseph's Church, Four Masters Park. Access issues. Noise. Impact on local biodiversity in park. Park is important for local residents, most of whom don't have gardens. Cultural vandalism to remove Four Masters Cross and other sculptures. Impacts on businesses on Berkeley Road. Change in character due to Metro station and loss of oases of peace. Luas Finglas should be extended to Airport instead. Long-term pain for no gain at all.	No
S26	Brendan Flanagan	Owns and operates pharmacy on Berkeley Road, Phibsboro, Dublin 7 with 2 apartments above. Potential to be a total nightmare due to possible severe negative impacts during construction and operation. Lack of consultation and communications. Drawings indicate hoardings around pharmacy and abutting the property. Pharmacy will be obscured from view from Eccles Street with Mater Hospital and Mater Private being a significant part of the business. Disruption due to noise, vibration, dust. Loss of business due to traffic diversions and loss of car parking. Proximity of extraction air vent to pharmacy and associated health and safety issues. Pharmacy omitted from analysis of impacts. Serious error that misrepresents his property. Duration of disruption is not clear. Potential impact on business viability. Compensation required for loss of business.	No
S66	District 7 Community Alliance	Represents 200 businesses and 1,500 residents around the proposed Mater Station. Welcome MetroLink but concerns regarding impact on their community. Request establishment of a Mater Station Liaison Committee to address concerns and allow local input into reinstatement, restoration and improvement of the park and public realm.	No

		Design of the station is out of character with the surrounding architecture. Four Masters park should be restored as far as possible. Community fund should be put in place to rejuvenate the area around the station. Lack of clarity regarding proper demarcation of responsibilities between applicant, contractor, City Council etc. Lack of specificity regarding applicant's formal obligations to the local community (e.g. monitoring and reinstatement). Station design, prominence, elevation and construction materials is out of character with surrounding area and not in keeping with Z2 zoning objective. Dev. Plan seeks to protect and enhance important views and view corridors and protect existing landmarks and their prominence. Loss of trees. Existing mature trees should be protected where possible and mature replacement specimens used. Smaller station canopy should be used as in other countries. Station should be redesigned. Omit light wells, relocate access points further south to be less disruptive and undertake a design contest for the canopies. Impact on residential amenity: restricted access, loss of views, noise and air pollution, dust, vibration. Cumulative impact with other large projects in the area. Impact on accessibility of businesses and loss of parking. Development Plan seeks to provide for the needs of people with mobility impairment and to facilitate short-term parking for shopping and business. Unclear if the 34 spaces to be removed will be replaced. Contractor parking concerns. Pedestrian safety concerns. Economic impacts on local businesses. Economic assessment required and consideration of methods to ameliorate any impacts and inclusion in community gain. Air quality impacts. Clean Air Strategy is currently being developed by DECC and EU standards are being revised with lower limits. WHO limit for NO2 is a quarter of the limit monitored by MetroLink. Air quality mitigation refers to things that "should be" rather than "will be" done. Insufficient reassurance for the local community. Air quality monitoring should be in line with WHO recommended standards. Impacts on buildings and foundations due to tunnelling. Clarity sought on monitoring and redress. Damage may occur outside narrow area identified by applicant. Community Gain Fund should be put in place for the local area, to be dispersed by the liaison committee.	

S76	Eamonn Smyth	Significant impacts on the Four Masters park. It is stated that park will be reinstated in so far as possible. This language is meaningless. Triangular corner of park, containing the Four Master Cross, should be retained as the most visually pleasing section of the park. With screening planting and reorientation of the Station entrance, the visual impact would be reduced. Design and finishes of station and other structures is not in keeping with surrounding architecture. Impact on built heritage of surrounding area. Impacts will extend beyond the defined area for surveys. Mater Station Community Liaison Committee should be established. Independent expert should be appointed to advise residents.	No
S94	Father Paul Churchill and others	Parish Priest of St Joseph's Parish, Berkeley Road, Dublin 7. Tunnel passes under St Joseph's Church, Parochial House and the offices of the Dublin Interdiocesan Marriage Tribunal. Access issues during construction. Guarantee sought that closure of the parish buildings will not occur. Church serves local community, people attending the Mater Hospital and family members, international community groups. Concerns about impact on church and its vaults given tunnel depth. Impact on Berkeley Road and restrictions on traffic and access. Drainage concerns. Query need for proposed development given cost. Request that every effort be made to protect the church from damage, that the tunnel take account of the church foundations and age, that any damage be repaired at no cost to the parish and that appropriate access be maintained throughout construction.	No
S154	Jonathan Healy	Supportive of the MetroLink project but has serious concerns about the Mater Station and the impacts on local residents and the Four Masters' Park. Park has historical and architectural importance for the setting of the original Mater Hospital building and is an important landscape feature. The park is zoned Z9 and is located within an ACA and the railings, plinths, gates and some statues are protected structures. Photomontages show a vastly changed area with hard landscaped plaza, station entrance blocking views of the Mater from Berkeley Road and ancillary buildings which are not in keeping with the architectural surroundings. Impacts on visual amenity and architectural heritage. Station should be redesigned, as outlined in the submission, to reduce its visual impact.	No

		Potential use of on-street car parking spaces relied upon by residents by contractors. Park and ride service should be used for construction workers. Concerns about access to properties during construction. Pollution mitigation plan should be put in place to address noise and airborne pollution and dirt. Hours of operation need to be clearly defined and communicated to residents. Project Liaison Officer should be appointed to meet with each resident and business owner regarding day-to-day construction impacts. Greater clarity and consultation required. There is a lack of clarity regarding the responsibilities of the scheme contractor and the proper demarcation of responsibilities between the contractor, TII and DCC. Lack of specificity with regard to the contractor's obligations to the local community in terms of environmental monitoring, traffic management, reinstatement of the park etc. A Mater Station Liaison Group should be established to deal with construction-related issues and provide information to the local community. Community Fund should be established.	
S186	Mater Misericordiae and the Childrens University Hospitals	Mater Misericordiae and the Children's University Hospitals Company Limited by Guarantee is the parent company and owner of the land impacted by the RO application. Mater Misericordiae University Hospital is a subsidiary and the operating entity for the Mater Hospital. Hospital opened in 1861, has 4,250 staff and is one of the country's leading Level 4 hospitals with 722 inpatient beds. Treated 67,000 day patients and 24,940 inpatients in 2021, with 240,000 outpatient attendances and 73,000 presentations to the Emergency Department. Any interference with hospital operations would have significant implications for the hospital, its patients and the State. Wing of hospital most affected is a protected structure and particularly sensitive. Significant amount of sensitive and highly calibrated equipment throughout the hospital. Broadly supportive of MetroLink but concerns about impacts during construction and operation and the extent of permanent land take. It is hoped that continued engagement with TII will enable concerns to be addressed to the satisfaction of the hospital and reflected in the RO. Traffic impacts: - Access must be maintained at all times. - Off-site services provided at various location on Eccles Street. - Closure of Eccles Street in Phase 2 for traffic other than emergency vehicles will have very significant operational difficulties for the hospital.	Yes

		- Duration of works and phasing is a concern given the hospital's plans for development, including a new Major Trauma Centre. - There must be no interference with emergency vehicle's ability to enter and leave the hospital. - It is unclear how traffic will be rerouted. Construction impacts: - Mitigation measures are not clearly identified nor are the mechanisms for ensuring that adverse impacts on the hospital can be avoided. - Psychiatric services are provided in the part of the hospital closest to the Mater Station construction works. Patients potentially the most sensitive to disturbance from construction may be the most likely to be affected. - Lack of clarity regarding noise mitigation and identification of noise levels suitable for the hospital environment. Mitigation may not be effective and noise monitoring and controls are needed. - Concerns regarding vibration impacts on healthcare equipment and effects on calibration. Specific commitments regarding monitoring, calibration and the consequences of exceedances must be included in the RO. It must provide for cessation of activities at a threshold level before any such effect takes place. Operational phase vibration monitoring required. - Standard construction hours will not be appropriate. Consideration should be given to establishing the most appropriate times to use the TBM and blasting. - Impacts of blasting must be carefully considered. - While top-down station construction may mitigate airborne noise, it will not mitigate groundborne noise and vibration. - Air pollution and dust concerns. Risk of aspergillus. It is not feasible to seal windows as old building relies on natural ventilation. Specific dust control and monitoring will be needed and precise commitments needed. - Interventions to building fabric, including windows, may have architectural heritage implications. Detailed condition surveys required. - Potential re-housing of sensitive locations or people is unclear as is its feasibility. Operation of MetroLink: - Concerns about the proposal to acquire permanently the Four Masters Memorial Park. - The park is for the benefit of the hospital's patients and staff and the memorial to the Four Masters was instigated by Sir William Wilde, Oscar Wilde's father. - Little or no recognition of the historical import of the park or that it is within the hospital's ownership and used for symbolic and historical hospital occasions.	

		- Hospital understood that park would be temporarily acquired for construction of the project and returned thereafter. The necessity for a permanent acquisition has not been explained. The basis for the CPO has not been put out. - Hospital continues to review the documents and may raise additional issues.	
S187	Mater Misericordiae University Hospital	Duplicate of submission S186.	Yes
S194	Millenium Theatre Company	WITHDRAWN	
S212	Olan O'Brien	A number of areas need further clarification. Airborne noise; vibration and groundborne noise; influence of works on surface water and groundwater; settlement of ground around tunnels and excavations; temporary and permanent traffic impacts.	No
S247	Owners of 9, 10 and 11 Neeson Street	Three Georgian buildings form an apartment complex of 19 units. Request to be included in the POPS scheme. Part of the apartment complex could be outside the 30m edge of the zone of influence of the tunnel. Extended duration of construction and lengthy hours of construction will affect residents of apartments. Request to be included in noise and vibration modelling, for secondary glazing, for installation of monitors and for vulnerable residents to be considered for rehousing. Overall master plan between TII and DCC should include betterment works and upgrades of 'forgotten' side streets, installation of bins, tree planting and traffic reduction measures. Construction traffic management plans to address rat-running and access. Construction traffic and HGVs should be banned from Nelson Street and Joseph's Parade, with local access one-way traffic on Nelson Street.	No
S253	Paul Hughes	Resident of Berkeley Road. Provision should be made for a community fund. Representatives of local stakeholder should be involved. Lives will be affected by air quality, dust and noise. Profound impact on businesses and retail outlets on Berkeley Road, particularly 10 – 18 Berkeley Road. TII should invest in reinstating the shopfronts. Substantial investment required for improvement to the public domain. Air and dust quality concerns given the duration of the project. It is inappropriate that restrictions are made on eligibility for rehousing and compensation. Tenants and individuals working in the city should not be adversely affected. Concerns regarding impact of station box on foundations of house, cracking and subsidence.	No

		5 year window post-construction for claims is too short. It should be 10 years. Impacts on architectural heritage.	
S296	The Rotunda Hospital	Hospital founded in 1745. Largest maternity hospital in the country and delivered 9,400 babies in 2021. Hospital has major plans for development and has prepared an Outline Development Control Plan. No meaningful engagement with TII or discussion of mitigation measures. Hospital has advised TII that it would welcome constructive engagement to address issues in advance of an oral hearing. Tunnel alignment may impact on the Rotunda's ability to develop its lands to the extent necessary to meet its development needs. Extent of acquisition of substratum lands is unclear. Rotunda has advised TII that ownership maps are incorrect and do not recognise Rotunda's ownership of the Gate Theatre/Pillar Room and Ambassador. Groundborne noise and vibration: - It is not clear what building(s) the applicant assessed at the Rotunda. - Threshold limits are dependent on building categorisation which needs to be clarified. - Construction of the O'Connell Street station is close to the Rotunda and it is not clear to what extent it was assessed for potential impacts on the Rotunda. - Applicant should be requested to extend the 'floating slab track' for the entire Rotunda campus lands and well beyond. Settlement: - It is not clear what buildings have been assessed. Buildings date from the 1700s/1800s and potential movements, particularly differential settlement, have the potential to cause damage across the buildings and on services. - Phase 3 assessment required. Monitoring: - Comprehensive suite of settlement, noise, vibration monitoring equipment required at the Rotunda Campus buildings, including Gate Theatre and Ambassador. - Appropriate triggers on a traffic light basis required, with real time monitoring. Lack of time to review application and impacts and limited consultation. HSE has approved €90m new Critical Care Wing at the hospital, c. 7,500 sq m on the western side of the campus. Requirement for a further 18,000 sq m of development to meet the medium term requirements at the hospital. Much of the area for development is likely to be on the eastern side of the campus within the zone of influence for MetroLink.	Yes

		TII must engage with Rotunda to ensure MetroLink is designed to protect and guarantee future development needs of the hospital. Board is asked to direct TII to engage immediately with the hospital regarding the proposals and mitigation measures. In the absence of any agreed mitigation proposals from TII, the Rotunda cannot support MetroLink in its current form.	
S313	Westward Group Ltd	Owner of 24-27 Frederick Street North, Dublin 1. Full dilapidation survey of all buildings required prior to any work taking place. Movement monitors should be fixed to the property with ongoing vibration monitoring. Property owners should be indemnified against any adverse impact. Entirety of the property including the party wall must be protected and monitored as an entity.	No
S318	Yu Miao Yang YMY Ltd	Property owner at Blessington Street. No indication of monitoring or communications to ensure there is no structural damage. What is the compensation/insurance should damage occur? How will access be affected and what roads will be closed and when? Will the pre-construction survey be shared with owners. Queries regarding what assessment have been undertaken of potential impacts and what permanent structures will be left. What protection measures have been put in place for the terrace of protected Georgian buildings.	No

AZ4 (f): O'Connell Street Station to Tara Station			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S29	Brian McGrath	Queries current Dublin Central planning application, which includes a structural box to accommodate the independent construction of the O'Connell Street MetroLink Station. Why is that application being made at this stage. Heritage protection if Dublin Central plan to proceed with demolition of the protected structures in advance of the main development and the MetroLink development. Potential for historic materials to be lost or disposed of given the timeframe for development. Uncertain timeframe for delivery of MetroLink. With Dublin Central clearly tied to MetroLink, why is a planning application being clearly tied together with a rail proposal whose timeline is so vague and unclear. The proposal to demolish the terrace of buildings within Site 2 of the Dublin Central site is in direct contravention of the protected status of the buildings. The buildings constitute a historic record of O'Connell Street's 18th century origins as well as its subsequent reconstruction post 1916 and 1922. The idea of placing a Station at this site is badly conceived and deserves reconsideration.	No
S69	Dublin Central GP Limited	Submission relates to Dublin Central site, a c. 2.2ha site bounded by O'Connell Street Upper, Henry Street, Moore Street and Parnell Street, Dublin 1. Wholly supportive of MetroLink application and supports O'Connell Street Station design. Extensive pre-planning consultation with TII to ensure both projects complement and facilitate each other while remaining structurally independent. Dublin Central will not be prejudicial to MetroLink and vice versa. Memorandum of Understanding agreed with TII to complete the enabling works that would accommodate the planned future MetroLink O'Connell Street Station under Dublin Central Site 2. In the event that MetroLink does not proceed or is delayed, Dublin Central development is capable of being completed and occupied regardless. Dublin Central consists of several integrated sites, with 3 No. planning applications to date that are the subject of appeals (ABP-312603-22, ABP-312642-22 and ABP-313947-22) and further applications to be made imminently, including for Site 2.	No

S122	Institutional Investment Partners GmbH	Acting for the accounts of PKD AEW Europafonds. Submission relates to 2-4 O'Connell Street Lower, a protected structure occupied by Ulster Bank. Fully support proposed development but concerns about construction works. Tunnel earthworks will be within 30m of property. Property is of historical architectural significance and is highly sensitive to disturbance. Banking vault in basement is prone to adverse issues from vibration. POPS scheme is open to residential properties. It is unclear why commercial property owners are not offered a similar level of monitoring and protection. Buildings of historic value should be afforded a high level of protection. POPS scheme should be extended to commercial properties. Condition should be attached requiring structural surveys, recording, protection and reinstatement of items of architectural heritage, monitoring, and mitigation for vibration and damage.	No
S291	The Abbey Theatre (Amharclann na Mainistreach)	Supportive of proposed development but concerns about lack of detail. Applicant has had no engagement with the Abbey Theatre and has overlooked specific operational requirements of the theatre and failed to safeguard its operation. Abbey Theatre redevelopment included in NDP. Policy CU6 of Development Plan supports Abbey Theatre expansion to Liffey. Luas Red Line currently results in disturbance due to proximity. Seek assurance that MetroLink will not result in any additional disturbance of performance or rehearsal space by noise or vibration. Information sought regarding possible electromagnetic interference with instruments, sound loops, broadcast units etc. Duration of tunnelling may be highly disruptive and require changes to performance or rehearsal programmes. Lack of information regarding impacts on structure and surrounding buildings. Abbey Theatre redevelopment plans are not referenced by applicant. Information regarding potential impact of MetroLink on these plans is sought. Scheme should not be approved without consideration of the impacts it will have on the Abbey Theatre and/or appropriate conditions to mitigate same.	Yes
S304	Troys Butchers	Butcher shop on Moore Street at junction with O'Rahilly Parade, the access route for up to 100 large construction lorries accessing the site compound for enabling works. Impact of traffic volumes on fresh food business and access to the store. Unsafe shopping environment created. Dirt and noise pollution.	No

		Lengthy Luas Cross City construction phases had a devastating impact on the business and led to closure of many businesses on Parnell Street. Access points to city centre were closed off and traffic diversions led to major traffic jams and loss of trade. Business dropped by €5,000 per week during Luas Cross City construction and has not returned to pre-Luas performance levels despite assurances by TII and contractor about long-term positive impacts outweighing short-term impacts. Proceedings pending in the High Court in the hope of retrieving losses. Stresses due to lease being in personal name and substantial investment to restructure business to survive. Customers don't buy fresh food from a noise polluted, traffic congested, dirty construction site environment. Large-scale construction proposals on Hammerson Dublin Central site would further impact on the very few remaining traders on Moore Street. Hammerson, DCC and Dept. of Heritage were involved in compensation process for street traders yet independent store traders are expected to remain viable throughout an inordinate construction phase of 10-15 years. Board asked to put a condition in place to protect their business and constitutional right to earn a living.	
S317	Wynn's Hotel	Wynn's Hotel, Abbey Street, Dublin 1. Potential impact on structural integrity of the building, which is a protected structure, and potential negative impacts on the building and its occupants. Extant permission for 2 additional floors to hotel (Ref. ABP-303179-18; Reg. Ref. 3131/28). Seek confirmation that the Railway Order will not prejudice this. Submitted information is inadequate to enable a proper assessment of likely impacts. Additional information and assessment required. Immediate engagement with TII sought on matters arising. Hotel was damaged during Luas Red Line construction, experienced poor communications, no specific point of contact, and experienced losses, with no compensation. Submission accompanied by: - Engineering commentary prepared by Punch Consulting Engineers, setting out technical issues that they seek responses/clarifications to.	No

AZ4 (g): Tara Station to St Stephen's Green Station			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S3	Aidan Cyril Forde	Owner of property at Trinity Point, 10-11 South Leinster Street, Dublin 2. Six storey over basement office building. Cast in situ secant piles were used around the building and are 8.5 – 9.5m deep. Basement slab level is c. 4m below ground floor level, with underside of car lift pits a further 2m below basement level. Tunnel can deviate up to 5m vertically, which would be 7m from the assumed bottom of the piles. Piles are installed down to bedrock level and concerns that vibration from tunnelling could affect foundations. Detailed schedule of condition and noise and vibration monitoring sought.	No
S4	Aine Wellard	Resident of DCC home on Townsend Street that is proposed for demolition and user of swimming pool in Markievicz Leisure Centre. Resident for 28 years. She is blind and her home and community provide her with a quality of life not easily replicated elsewhere. Has adapted home to her needs at great personal expense. As a visually impaired person, she is dependent on local services which will not necessarily be available in a new environment. This includes a dog walker for her guide dog, Garda community service in Pearse St. Garda Station and veterinary clinic. No evidence provided that demolition of the Townsend Street apartments is unavoidable. Lack of engagement and information from TII and DCC. Lack of provision of information in braille, as requested. Likely alternative location for leisure centre is likely to be somewhere on the outskirts, given the demand for and value of land in the city centre. MetroLink should be refused approval, or Tara Station should be reworked.	No
S5	Alstead Securities Limited	Submission relates to Ashford House, Tara Street, Dublin 2. Building is a 1990s office building on the junction of Tara St. and Poolbeg St. with several tenants and housing up to 500 employees. It is proposed to acquire and demolish the building. MetroLink proposal at Tara Street Station fails to respond to planning policies and fails to capitalise on the benefits which it will bring to the area. It does not recognise the potential for integrated higher density development at this location. Proposal will create a large underused plaza with little amenity value.	Yes

		Development above the MetroLink would retain employment floorspace close to excellent transport links and provide commercial activity which would enliven the plaza. Area indicated for 'proposed future development by others' is mostly contained within their landholding. Area is an irregular parcel of land with severely compromised viability for new development due to shape and configuration. Other MetroLink structures within the development footprint, such as fireman's lift, would severely impact development potential. Planning policy supports intensification of employment uses in areas well served by public transport. Proposed plaza will be overshadowed by neighbouring buildings and will not offer positive public realm. Opportunities for commercial development feeding into the square, such as food and beverage or retail have not been considered. The creation of the plaza is because it is easier for MetroLink to have nothing above the station than to give detailed consideration to the function of the area. Draft concept for the development of a commercial development above the station has been developed by RKD Architects. Technical review by DBFL is submitted and demonstrates how the proposed above station development can be delivered. There are no structural reasons why land above the station needs to be sterilised. Location and arrangement of above ground structures should be reconsidered for future development potential of lands. CPO should be amended so that observer has revisionary rights for development above and adjacent to MetroLink. Concern regarding sterilisation effect of approving the RO and a lag in commencement. Lands would not be capable of any development. This would also create uncertainty for tenants and could lead to loss of tenants and difficulty in attracting new tenants. Board should be satisfied and get sufficient assurances that there is a strong business case for MetroLink. <u>Submission accompanied by:</u> - Technical Review, DBFL Engineers. - Draft Concept, RKD Architects.	
S8	An Taisce	Welcome proposed development as it is a long overdue strategic priority for the improvement and expansion of public transport network in Dublin. Proposal needs to be integrated with a wider transportation initiative for the catchment area to reduce private car use and promote cycle-and-ride to use the MetroLink stations. Remainder of submission relates to Tara Street Station:	No

		Risks for the proposed scheme (Option 0) include the compulsory purchase of the 70 apartments and the eviction of 150 residents in College Gate. This could result in unpredictable delays. Commercial and residential properties affected, loss of community infrastructure, increased construction noise, vibration and dust. Engineering constraints include Fire Brigade emergency routes, road diversions and the proximity of the DART infrastructure. An Taisce recommends that alternative options listed in the Preferred Route Design Development Report (PRDDR) be reviewed by the Board. Option 4 (mined station with retention of the College Gate building) is feasible and similar construction techniques have been used in other jurisdictions. Option 3 (moving the Station southward) was discounted due to traffic disruption, property impacts and utility diversions (incl. 2.4m brick foul sewer). An Option 3A would entail adopting the same construction methodology as Option 4 to mitigate impacts on the utilities and traffic. This should be considered. The Markievicz Sport and Fitness Centre should be replaced elsewhere in the local area as part of the MetroLink project given its importance as a community resource. Further consideration is required regarding the loss of the substantial number of city centre residential units.	
S17	Bart and Patricia Broderick	Owners of apartment at College Gate, Townsend Street, Dublin 2. Project is excessive and increased public transport could be met in other ways that are less costly. Total budget cost is extremely high versus other capital projects. Cost benefit analysis should mean that the project should not proceed in its current form. Better alternative routes are available. Apartment complex has been severely blighted since the route was decided. It was open to the acquiring authority to offer to deal with apartment owners and it should have been open for owners to sell at that stage to the acquiring authority if they so choose. Lives of owners severely impacted and serious concern regarding finding a replacement property given the lack of residential units in the city centre. Early negotiations optional proposal put forward by TII is unsatisfactory and deeply flawed. Lack of clarity with regard to timeframes and funding for MetroLink and duration of approval process. Severe blight will continue and hardship on owners will continue. Oral hearing sought. Principle of equivalence is being severely breached in the case of apartment owners who are investors and not in occupation. This is due to the anomaly of Capital Gains Tax being payable on compensation.	No

S30	Brigid Purcell (People Before Profit representative)	Objects to the demolition of Markievicz Sports and Leisure Centre, which is a vital social outlet and the 70 apartments in College Gate and 8 homes on Townsend Street which would be a significant loss of high quality housing during the State's worst housing crisis. Other aspects of MetroLink were amended following objections, and it is not accepted that TII are unable to amend their plans at Tara Street. Concerned that demolition is considered necessary because it will result in extremely valuable development land for sale by TII post-construction.	No
S38	Cathal Duffy	Owner of apartment at College Gate, Townsend Street, Dublin 2. Same submission as submission S17.	No
S61	Dermot and Doris Healy	Owners of apartment at College Gate, Townsend Street, Dublin 2. Same submission as submission S17.	No
S77	Eanna Coffey	Owner of apartment at College Gate, Townsend Street, Dublin 2. Same submission as submission S17.	No
S88	Espirit Investments Limited	Submission relates to property at Townsend Street and Shaw Street as well as 32-33 and 36-37 Pearse Street, Dublin 2. Extant permission on the Townsend Street/Shaw Street site (Reg. Ref. 4778/29, amended by 2877/21). Construction of the development has commenced, piles have been constructed and their details provided to TII. Serious concerns regarding noise and disruption impacts. A significant residual impact is identified for the neighbouring Dublin Fire Brigade HQ but with no clarity in relation to the duration of the works. Lack of specific assessment for observer's properties. Vertical deviation of 5m may conflict with substructure and lead to increased noise, vibration and building damage. Arup have reviewed the proposed works and request that the RO is structured so as to ensure future buildings are protected in this location. Piles constructed beneath the basement come within the 5m upward deviation applied for. <u>Submission accompanied by:</u> - Technical Note, Arup Consulting Engineers.	No
S103	Gerhard and Rosemary Mayrhuber	Owner of apartment at College Gate, Townsend Street, Dublin 2. RO should not be approved until the Board is satisfied that there is an urgent need for the scheme and that TII has the funding to complete the scheme expeditiously. RO should not be approved until TII has provided drawings to an appropriate scale and observer has had time to consider same.	No

		Observer has been invited to participate in a voluntary Discretionary Scheme by TII. The scheme is vague and does not address concerns about uncertainties caused by granting a RO in the absence of a commencement and completion date and impact on property values. Property arbitrator cannot address negative impact on value due to RO, as he has no jurisdiction to deal with the question of sterilisation caused by the making of the RO. TII completed purchase of numerous properties under the previous Metro North scheme and there is no reason why they cannot continue to make advance purchase.	
S106	Grace Bible Fellowship	Submission relates to 28a and 29 Pearse Street, Dublin 2. Serious concerns regarding the lack of warranties, assurances and guarantees in relation to their property and safeguarding it against damage. It is not acceptable for the acquiring authority to delegate all responsibility to the contractor. A property owner should not have to deal with a contractor that is not acting on their behalf. Any permission granted should be subject to TII satisfying the Board of guarantees and warranties to ensure full indemnification for any costs which may be incurred in the event of damage to property to include relocation costs. Serious concerns in relation to the route selection. An alternative route could be, for example, under the railway line. Edge of tunnel will be directly below the corner of their building. <u>Submission accompanied by:</u> - Correspondence between observer and MetroLink project team.	No
S109	Greyburch Limited	Submission relates to lands on which planning permission has been granted for a hotel (Reg. Ref. 3560/19), including two basement levels. (<u>Inspector's Note:</u> Site is listed in that planning application as Nos. 5, 6, & 7, George's Quay, Nos. 1A, 1A, 1, 3, 5, 7, 9, 11, 13 and 15 Tara Street & No. 11 Poolbeg Street, Dublin 2.) Supportive of MetroLink but seeking clarification on the potential impacts. Observer is seeking clarification in relation to any limitations or impacts that might arise: if the permitted development was under construction at the same time as MetroLink; if development took place during the operational stage of MetroLink; and an understanding as to whether a taller development on the same lands might be impacted in the event of same progressing with MetroLink at construction or operational stage. Further meetings are planned with TII to discuss. Board is asked to seek clarification in relation to limitations.	Yes

S113	Helen and Luke Sherlock	Do not object to MetroLink but do object to the destruction of the Markievicz Leisure Centre. Swimming pool and gym is a key part of their lifestyle and is an important social space for older locals. Madness to demolish 78 homes in a time of housing crisis. Concerned that alternatives to demolition were not properly considered. Financial considerations are being put ahead of the needs of the city centre community.	
S118	HSE National Drug Treatment Centre	Submission relates to 30/31 Pearse Street, Dublin 2, which accommodates the National Drug Treatment Centre (NDTC) and the NDTC Laboratory. HSE is supportive of MetroLink but concerned about the potential risk and impacts on the site and service delivery. Building is a five storey 1970s brick clad concrete frame building. Laboratory is the largest provider of drug screening for drug treatment services. It contains much sensitive equipment, including microscopes and high-performance mass spectrometers. MetroLink tunnel extends diagonally across the north east corner of the building, particularly under the new lift shaft enclosure. EIAR indicates differential settlement of 10-20mm with the potential for damage to the building. Potential settlement due to water table lowering. The building should be classified as a Type D 'sensitive' building with a Phase 3 damage assessment undertaken. Noise and vibration impacts. NDTC building cannot be assessed using the same criteria as 35 Pearse Street due to the very sensitive occupancies. The building should be assessed as an 'especially sensitive receptor'. Proximity to Tara Street Station and blasting concerns. EIAR Table 14.14 states that effects on highly sensitive laboratory equipment could occur at up to 1000m if not mitigated. No specific reference to 30/31 Pearse Street in noise and vibration assessment for construction or operational phases. Consideration should be given to a floating slab anti-vibration system within the tunnel for a distance either side of the building, similar to that proposed under TCD. Monitoring equipment for settlement, noise and vibration should be installed at and within 30/31 Pearse Street for background levels and construction and operational monitoring. Trigger levels should be established based on a traffic light system basis with real-time monitoring. 24 hour emergency contact should be available for stakeholders. RFI requested: - Confirm enabling works requirement. - Prepare Phase 3 building damage and subsidence assessment for the building.	No

		- Clarify dewatering impacts and requirements at Tara Street. - Detailed vibration assessment for building and lab with sensitive equipment. - Assess blasting impact on building and occupants. Conditions suggested to address the above issues. <u>Submission accompanied by:</u> - Technical Note, prepared by O'Connor Sutton Cronin & Associates.	
S147	John and Majella Darcy	Owners of apartment at College Gate, Townsend Street, Dublin 2. Same submission as submission S17.	No
S158	Karl Egan	Owner of apartment at College Gate, Townsend Street, Dublin 2. Same submission as submission S17.	No
S160	Kathleen Shields	Regular user of Markievicz Leisure Centre. Centre is publicly owned and used by people of all ages from all over the city. Pool is extensively used by schools, by older people and by city centre workers. Health and wellness benefits cannot be overstated. No alternative is proposed in the city centre. Area is already environmentally hostile for pedestrians and cyclists and will become even more so. No green infrastructure, pedestrian spaces or traffic calming proposed. Carbon cost of demolishing 20 year old apartments and leisure centre. Loss of community space for residents, workers and visitors to the city. Demolition of housing during a housing emergency. Where are residents to live and how are they to find new homes? MetroLink will sell the land over the Metro line to their benefit. Dublin will become a non-economically viable area with no commercial or cultural attractions, reduced footfall and loss of amenity to remaining residents. Other cities have constructed metros underground without impacting on the buildings above. Lack of consultation. TII were determined from the beginning to demolish this area without considering alternatives.	No
S177	Maria Elena Garcia Valasco	Owner of apartment at College Gate, Townsend Street, Dublin 2. Same submission as submission S17.	No
S178	Maria O'Connor	Submission on behalf of Maria O'Connor (26 Townsend Street), Marie Balfe (31 Townsend Street) and Monica Deering (32 Townsend Street). Homes proposed for demolition. Loss of community due to scale of demolition.	No

		Alternatives options available to station location and for construction methods which would not require demolition. Lack of support from DCC for their tenants. MetroLink has a blatant conflict of interests as the land under her house is extremely valuable and MetroLink has a remit to sell the land post-construction to raise funds. Not opposed to MetroLink, but alternatives available which would not involve demolishing 78 houses and a sports centre.	
S179	Marie Balfe	Same submission as submission S178.	No
S184	Martin Sheridan	Owner of apartment at College Gate, Townsend Street, Dublin 2. Same submission as submission S17.	No
S195	Monica Deering and others	Same submission as submission S178.	No
S201	Newcourt Retirement Fund Managers Ltd Trustees of Majella Darcy PRSA	Owners of apartment at College Gate, Townsend Street, Dublin 2. Duplicate of submission S147.	No
S206	Nicola Brait and Greta Tumiatti	Owners of apartment at College Gate, Townsend Street, Dublin 2. Same submission as submission S17.	No
S210	Nuala Kelly	Loss of the only publicly accessible swimming pool/leisure centre in the city centre. Vitally important facility. If such specific space is required could a bank or business be removed instead? Loss of vital homes in the vicinity of Tara Street is unacceptable in a housing shortage. Counter to modern urban planning vision to create a thriving living city with an appropriate mix of uses. Environmental, social and cultural impact. Underground station construction could be considered. Proposals for George's Dock outdoor swimming pool do not compensate for the loss of all year round indoor facility.	No
S276	Save Markievicz Pool & Gym Campaign (John Dean)	Tara Street Station will have the most negative impact of any of the stations on the MetroLink line, with 78 homes to be destroyed as well as the Markievicz leisure centre, the only large public swimming pool in the city centre. While NTA claims that they will fund and build a new leisure centre in advance of construction, they make no commitment to do this in advance of the demolition of the leisure centre. If MetroLink does not proceed after demolition, they are not obliged to meet their commitment.	No

		Their commitment is dependent on DCC finding a suitable site, which to date it has not. The value of development land in the city centre would mean that the replacement facility would almost certainly be sited far away from its current location and lost to the community. No commitment to replace the 78 homes. Contrary to the objectives of the NPF. While the residents of the DCC duplexes will be rehoused by the Council, they will almost certainly be uprooted from their community and dispersed. Lack of due consideration given to alternative proposals. MetroLink project team assessed 8 options for Tara Street. The report dismissing these is limited in detail and background technical information upon which the analysis could be based. Observer sought information via FOI request, but provided information did not add to their understanding. Lands are extremely valuable and MetroLink will sell the land post-construction to fund the project. Comparison of treatment at Tara Street with that for Ranelagh and Glasnevin areas where changes were made following political opposition. TII will not achieve the funding required as the project proceeds, following demolition of the homes and leisure centre. NDP refers to €3bn investment, while Major Projects Advisory Group raised cost concerns and estimated the upper range of costs at €23bn. There is a financial incentive for MetroLink to pursue a plan at Tara Street that involves demolition. It is not credible that all possible alternative solutions for the Station were fully and properly explored. <u>Submission accompanied by:</u> Signed petition.	
S285	Susan Cosgrove	Owner of apartment at College Gate, Townsend Street, Dublin 2. Same submission as submission S103.	No
S287	Tanat Limited	Submission relates to a site bound by George's Quay to the north, Tara Street to the west and Poolbeg Street to the south (adjacent to Tara Street Train Station). Permission granted on site for 22 No. storey hotel and office building (ABP-302980-18; Reg. Ref. 3794/18). Subsequently amended to add an additional floor (Reg. Ref. 4054/19) and replace permitted hotel use with office use, with restaurant/café/retail at ground floor and fifth floor level (ABP-308481-20; Reg. Ref. 4365/20). Railway Order seeks a vertical deviation of 5m, however the formation level of the basement is at -11.15m and the crown of the tunnel is at -17.4m, leaving a 6.3m gap between the two structures. Potential noise, vibration and building damage impacts due to any deviation in depth. Confirmation sought on any deviation from the current -17.4m level and that the MetroLink will not impede the ability to construct or operate/maintain the basement or building in the future.	No

		Development would entail a reinforced concrete raft foundation supported on the underlying rock, with load spread over the rock strata. Confirmation sought that this is acceptable and that no vent shafts or the like are required on the site, as this would be problematic for future development. Impacts should be carefully managed to minimise effects on the surrounding landholdings. <u>Submission accompanied by:</u> CS Consulting Group engineering commentary and earlier correspondence with TII.	
S292	The CMCCG Action Group (Sabine Klinger)	Support MetroLink in general. Take issue with the loss of city centre housing for 150 residents during the housing crisis and request that the retention of the College Gate/Markievicz building be conditioned as part of any consent. Drastic negative impact on the lives of residents, many of whom are socially deprived families and elderly citizens on low income. Loss of the only publicly owned swimming pool left in Dublin's Inner City. It is an invaluable recreational resource for the community and commuters. Condition should be attached requiring that the leisure centre and replacement apartments should be rebuilt on the site as part of overhead development. Alternative options are available to the demolition of the block, as outlined in the Preferred Route Design Development Report. Option 4 is potentially viable. Disturbance would be tolerable for residents if they were to keep their homes. Engineering issues could be resolved. Alternative option 3.5, merging options 3 and 4 could prevent the need for demolition of the apartments and leisure centre while not impacting on the sewers.	No
S294	The Owner of Apartment 27 College Gate	Owners of apartment at College Gate, Townsend Street, Dublin 2. Duplicate of submission S147.	No
S302	Townsend Apartment Management Company Limited	Owners Management Company for College Gate apartment complex, Townsend Street, Dublin 2. Same submission as submission S17.	No
S303	Trinity College Dublin	TCD supports MetroLink in principle. MetroLink has the potential to constrain core academic and research activities. Concerns re electromagnetic interference and groundborne noise and vibration. Application is deficient regarding identification of and mitigation of significant impacts as they apply to TCD. TII has failed to demonstrate that proposed mitigation will be effective.	Yes

		Requests realignment beneath the TCD campus, together with updated assessments that should be requested through RFI. This is the only approach that provides confidence of avoidance of significant impacts on TCD. In the absence of adequate demonstration that proposed mitigation will be effective, the Board should refuse permission or terminate MetroLink at a point north of TCD. Submission accompanied by: TCD Living Research Excellence Strategy. Record of interactions between Trinity and TII. Overview of predicted impacts. Review of alignment and associated tunnelling matters, CECL Global. MetroLink impacts – Electromagnetic Interference, Arup. MetroLink Impacts – Vibration Assessment, Arup.	
S308	Veronica Jane O'Mara	Owner of apartment at College Gate, Townsend Street, Dublin 2. Same submission as submission S17.	No

AZ4 (h): St Stephen's Green Station to Charlemont Station			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S20	Bernard Seymour	Impacts on St Stephens Green. Troubling that Dublin's best loved park could ever be considered as suitable for a major cut and cover project for the station while an adjacent wide roadway is alongside with capacity for the station. This corner of the Green is an architecturally ingenious park entrance and urban composition. Relocated position of Wolfe Tone structure and stone backdrop is rendered impotent of function and pushed out of the way. Clutter of new shaft elements erodes integrity of what is already a good place. Diminution of an original concept of wholeness and a fragmentation of the concept behind it. More engineering ingenuity required to manage the visible elements above ground. St Stephen's Green East options were dismissed for reasons that are not insurmountable. Capital cost considerations are not appropriate grounds alone for decisions that might impact other less tangible public benefits. Felling of trees for such projects are usually understated. Overhanging branches and roots of retained trees will be impacted. Changes to hydrology can also affect trees. Imbalance in canopy will be a very damaging outcome and an obvious visual and ecological negative that will only recover over generations. Buildings are more regular on the eastern side of the Green and the canopy is a beautiful counterpoint and balance to them, creating a sublime effect that could be lost for generations. A reinstatement is not always a successful replacement for the status quo. Who can set a price on the value of a sewer diversion that would leave the park intact and allow the status quo to prevail.	No
S47	Colin Torpay	Troubling that any part of St Stephen's Green could ever be considered as suitable for a major cut and cover project for the station, while a wide roadway is adjacent with capacity for the station. Proposal does not acknowledge how outstanding the urban purlieus of this corner is. The current park entrance is architecturally ingenious and a dignified set piece with huge trees behind. The proposed relocated position is rendered impotent of function and pushed out of the way. Seven options are considered for the station and dismissed for various reasons that are not insurmountable. Importance of park is not recognised. Impact on trees, including roots of adjacent trees and as a result of impacts on hydrology. The imbalance to the composition of the canopy within the park will be very damaging and take generations to recover.	No

S48	College and Wainsfort Residents Association	Submission relates to the portion of the proposed MetroLink beyond St Stephens Green. They are fully supportive of the project from St Stephen's Green to Estuary. Boar should defer the authorisation of the section beyond St Stephen's Green due to: - Failure to consider an alternative routing, notably towards Rathmines. Rathmines or Portobello would be a far more suitable location for the terminus given BusConnects services. Proper assessment of Metro to South West Dublin required. - Limitations of Charlemont terminus for radial extensions onwards to south city. It would not be consistent with proper planning to permit a station at Charlemont which would compromise future options. - Potential environmental benefits for south city consequential from a pause for exploration of alternative extension route. Metro extension to Tallaght would address road traffic congestion and reduce number of cars on the road. - Poor access to Charlemont from Rathmines Road. There will be 33 buses per hour peak in each direction on Rathmines Road once BusConnects is implemented. A lot of passengers will alight at Portobello Bridge and walk to the MetroLink, likely with luggage. No thought given to facilitating this. Most obvious solution is a terminus closer to Rathmines Road. It would be premature to constrain the available options by allowing MetroLink to proceed beyond St Stephens Green. The external reviewer said that the connection to Ranelagh should feasibly be deferred until there is clarity on the future of the Green Line.	No
S53	Core Capital	Submission relates to 15-18 Earlsfort Terrace, Dublin 2. Four mid-terraced four storey over basement Gothic revival style buildings in office use. Nos. 17 and 18 are protected structures. TII should ensure that no structural damage is caused to foundations or basements or damage to historic brickwork, ornate detailing and fragile finishes. TII should ensure that necessary vertical and/or horizontal clearance is provided between the existing basement and the tunnel. No potential construction noise receptors are identified in the area of the observer's properties. Groundborne noise drawing indicates an additional 50dB directly under the location of the properties which is unacceptable. Settlement drawing indicates a 35mm settlement under the location of the properties which is unacceptable. This could cause damage to foundations, basement, superstructure, façade and internal finishes.	No

		No potential operational noise receivers are identified in the area of the properties. The drawings indicate an additional 35dB directly under the properties which is unacceptable. Request that route is diverted away to either the public road or buildings that will not be damaged by the presence of tunnels.	
S57	Declan Ryan	Resident of Harcourt Terrace, Dublin 2. Building is part of the only formally composed Regency terrace in the city and is a protected structure. Concern about legal implications of substratum land acquisition and impact on property value. Any residential property and where that property is a protected structure should be considered as a highly sensitive receptor. Protected structures are not referenced in Chapter 14 despite potential for vibration impacts. Questions the reasoning for considering TBM impacts as transitory and considered with a lower threshold. Potential impacts identified within 100m of TBM. Duration of boring along the route within 10m of the property is unclear. EIAR states that there are no effective methods to reduce groundborne noise or vibration at source. EIAR identified significant groundborne noise impact but not significant vibration impact. However, this does not have regard to the fact that the property is a protected structure. Cumulative impact of airborne and groundborne noise and vibration. Profound impact on amenity and structural stability. Critical that appropriate mitigation is achieved.	No
S78	Earl Court Management Company DAC	Represent owners of apartments in the block known as Earls Court on Adelaide Road, Dublin 2. TII should ensure that MetroLink does not cause structural damage to the building's foundations which comprise strip and pad foundations founded in boulder clay or to the building at any level. TII should ensure that it does not cause damage to the finishes of the building and provides the necessary vertical or horizontal clearances between the basement and tunnels. Groundborne noise is indicated as an additional 50dB under the building, which is unacceptable. Settlement is indicated as 45mm under the building which is unacceptable. The building is a conventional masonry and concrete building which will find it difficult to absorb such a high level of differential settlement. It is also close to the adjoining Cadenza building which was constructed beside and below their building. This movement cannot be accommodated and could cause damage to foundations, basement, superstructure, facades and internal finishes. Operational phase groundborne noise is indicated as 35dB under the building which is unacceptable. Substratum land acquisition is unacceptable as future development potential will be damaged. Request that route be diverted away from the building.	No

S79	Earldev Properties Unlimited Company	Submission relates to property at 13-14 Earlsfort Terrace, rear of 15-18 Earlsfort Terrace and 17-19 Hatch Street Lower, Dublin 2, known as the Arthur Cox building. Separate submission made by tenants of the building (<u>Inspector's Note</u>: See submission S140). Serious concerns regarding noise and disruption and failure to specifically assess the building. Lack of clarity on duration of works. Depth of substructure and basements have not been taken into account. They extend 13m below ground which will exacerbate the impacts and result in a minimum separation of 350mm from the tunnel due to the proposed vertical deviation. Potential impact on basement structure and waterproofing, secant piled wall and glazing. No consideration for impact of differential settlement on modern glass-clad building, rather than masonry clad 1970s building. Arthur Cox building not identified as a constraint to the vertical deviation of the tunnel at that location. Additional information on the following issues is sought from TII to allow the proposal to be assessed: - Settlement and building damage. - Construction and operational impacts on building and survey form and frequency. - Construction and operational impacts on building occupants due to noise and vibration. - Asset Protection Policy and impact on future development (additional floors or high-rise redevelopment). Conditions recommended, if Railway Order approved. Uncertainty created by previous Metro North scheme and CPO creates difficulties for landowners and is an unfair burden. <u>Submission accompanied by:</u> - Engineering Memorandum, Punch Consulting Engineers, including: - o Geotechnical Engineers Report, AGL Consulting. - o Letter on impacts to basement waterproofing system, Rascor International Ltd. - o Letter from Arup Facades.	Yes
S80	Earlsfort Basin Limited	Submission relates to 15-18 Earlsfort Terrace, Dublin 2, two of which are protected structures. Buildings must remain fully operational during tunnelling works and no interruption or damage will be accepted. Full copy of the detail design and construction package sought. 'Very slight' damage suggested by TII is not acceptable. Noise and vibration cannot affect the company's daily operations. Identity of design firms for the project and technical design checking process sought.	No

		What is the tunnel detail design procurement approach? Client design or contractor design? Clarification sought on engagement with property owner during design, details and frequency of proposed condition surveys and remediation procedures. Concerns regarding vertical settlement and noise. Significant residual noise impact is not acceptable. Clarification of loads used in tunnel design sought and details of the constraints on future development potential and value of the site. Timelines sought for various construction phases and condition surveys. Further engagement sought with TII.	
S85	Emma Kelly	Property owner at Harcourt Terrace, Dublin 2. Part of a set piece Regency terrace developed in the 1830s. Protected structure of significant architectural and historical importance. Documents refer to 'Draft Railway Order'. There should be no draft involved at this juncture, both the Board and the landowner should know what is in the order and there should be no equivocation. Schedules are not attached to the draft Order. Without the schedules and plans it is not possible to properly identify the lands being acquired and the possible effects. NTS refers to 'limits of deviation'. There is no such provision allowed for in law. 1966 Housing Act states that the CPO shall be in a prescribed form and shall describe by reference to a map the land to which it relates. Documentation does not meet legal requirement. No definition of substratum is provided. Is it measured from the top or bottom of the tunnel? Does surface mean the floor of a basement and what consideration has been given to piled foundations or basement car parking? Presume that TII will attempt to rely on PDA which states that the value of land 10m or more below the surface shall be taken as nil, unless it is shown to be of a greater value. It is not credible that such legislation can be introduced and the Board should seek legal clarity from the Courts on this matter. Lack of detailed design drawings means that observer has no indication of where the top of the tunnel will be in relation to basement and foundations. Vibration concerns. Historic nature of Harcourt Terrace doesn't feature in the NTS and does not appear to have been considered. Soils and Geology section of NTS is too vague. There is a granite rock seam running through lands adjacent to Harcourt Terrace which does not appear to have been considered. Underground river Steyne flows below the Terrace and is not considered. Acquisition of lands would be a breach of observer's constitutional rights.	No

S116	Hibernia Real Estate Group Limited	Submission relates to 1 Earlsfort, Block B, Earlsfort Terrace, Dublin 2. MetroLink is indicated as running under part of the building and this may have implications for its existing structure and fabric and the extent to which it can be refurbished or redeveloped. Currently in the process of preparing a planning application for the full redevelopment of the building.	No
S117	Hines Real Estate Ireland Limited	Owner of existing commercial building at 65 – 68 St Stephens Green (Aercap House). TII should ensure that MetroLink does not cause structural damage to the building's foundations which comprise a mixture of CFA piles (extending 12.5m below ground level) and pads founded on rock or to the basement structure which forms the waterproof envelope for the building. TII should ensure that it does not cause damage to the cladding, glazing or fragile finishes of the building and provides the necessary vertical or horizontal clearances between the basement and tunnels. Groundborne noise is indicated as an additional 50dB under the building, which is unacceptable. Settlement is indicated as 20mm under the building which is unacceptable. This will cause damage to foundations, basement, superstructure, facades and internal finishes or ingress of water to the basement. Operational phase groundborne noise is indicated as 30dB under the building which is unacceptable. Substratum land acquisition is unacceptable as future development potential will be damaged. Request that route be diverted away from the building.	No
S129	Irish Life Assurance plc. (19-20 Earlsfort Terrace and 65A Adelaide Road)	Owner of existing commercial building at 19-20 Earlsfort Terrace and 65A Adelaide Road, Dublin 2 (known as Cadenza). TII should ensure that MetroLink does not cause structural damage to the building's foundations which comprise a mixture of CFA piles (extending 16.5m below ground level) and pads founded on rock or to the basement structure which forms the waterproof envelope for the building. TII should ensure that it does not cause damage to the cladding, glazing or fragile finishes of the building and provides the necessary vertical or horizontal clearances between the basement and tunnels. Existing piles and tension anchors appear to clash with the proposed route. These elements form part of the substructure and cannot be ignored. They have not been correctly assessed by MetroLink. Groundborne noise is indicated as an additional 50dB under the building, which is unacceptable. Settlement is indicated as 45mm under the building which is unacceptable. This will cause damage to foundations, basement, superstructure, facades and internal finishes or ingress of water to the basement. Operational phase groundborne noise is indicated as 35dB under the building which is unacceptable. Substratum land acquisition is unacceptable as future development potential will be damaged. Request that route be diverted away from the building.	No

S130	Irish Life Assurance plc. (4 Earlsfort Terrace)	Owner of existing commercial building at 4 Earlsfort Terrace, Dublin 2 (formerly known as Dolman House). TII should ensure that MetroLink does not cause structural damage to the building's foundations or to the basement structure which forms the waterproof envelope for the building. TII should ensure that it does not cause damage to the cladding, glazing or fragile finishes of the building and provides the necessary vertical or horizontal clearances between the basement and tunnels. Groundborne noise is indicated as an additional 45dB under the building, which is unacceptable. Operational phase groundborne noise is indicated as 25dB under the building which is unacceptable. Request that route be diverted away from the building.	No
S131	Irish Life Assurance plc. (70 St Stephens Green)	Owner of existing commercial building at 70 St Stephens Green, Dublin 2 (formerly known as Hainault House). TII should ensure that MetroLink does not cause structural damage to the building's foundations which comprise a mixture of CFA piles (extending 14m below ground level) and pads founded on rock or to the basement structure which forms the waterproof envelope for the building. TII should ensure that it does not cause damage to the cladding, glazing or fragile finishes of the building and provides the necessary vertical or horizontal clearances between the basement and tunnels. Groundborne noise is indicated as an additional 50dB under the building, which is unacceptable. Settlement is indicated as 15mm under the building which is unacceptable. This will cause damage to foundations, basement, superstructure, facades and internal finishes or ingress of water to the basement. Operational phase groundborne noise is indicated as 35dB under the building which is unacceptable. Substratum land acquisition is unacceptable as future development potential will be damaged. Request that route be diverted away from the building.	No
S132	Irish Life Assurance plc. (Earlsfort Terrace Block C)	Owner of existing commercial building at Earlsfort Centre Block C, Earlsfort Terrace, Dublin 2. TII should ensure that MetroLink does not cause structural damage to the building's foundations which comprise a two storey basement founded on rock or to the basement structure which forms the waterproof envelope for the building. TII should ensure that it does not cause damage to the cladding, glazing or fragile finishes of the building and provides the necessary vertical or horizontal clearances between the basement and tunnels. Groundborne noise is indicated as an additional 50dB under the building, which is unacceptable. Settlement is indicated as 40mm under the building which is unacceptable. This will cause damage to foundations, basement, superstructure, facades and internal finishes or ingress of water to the basement. Operational phase groundborne noise is indicated as 35dB under the building which is unacceptable. Substratum land acquisition is unacceptable as future development potential will be damaged. Request that route be diverted away from the building.	No

S140	Jerdip Properties Unlimited Company	Submission relates to the Arthur Cox building, 10 Earlsfort Terrace, Dublin 2. JPUC is owned by the partners of Arthur Cox and are the sole tenants of the building. The submission by Earldev Properties Unlimited Company (<u>Inspector's Note</u>: See submission S79), the building's owner, reference the building as 13 and 14 Earlsfort Terrace. This is in fact the same building. Vital that the building remains fully operational and no interruption to business can be accepted. Noise and vibration is a huge concern. All drawings in the RO application show the old building layout that was demolished in 2014 and does not take account of the actual design and structure of the Arthur Cox building. Concern, as the building has complex and sensitive basement, pile and façade structures which must be carefully considered in the tunnel design. Information sought: - What is the tunnel design procurement approach? Client design or contractor design. - Confirmation that a full copy of the detail design and construction package will be issued by TII in relation to the building. - Details and frequency of proposed condition surveys both in advance of and during the construction works as well as operational phase. - Additional vertical settlement information sought and geophysical surveys. - Additional noise and vibration information sought. Independent noise and vibration assessment should be conditioned by the Board. - Confirmation that tunnel can be constructed at the proposed position and depth, given depth of rock, existing piles and formation level of the double basement. Proximity to pile levels and concerns regarding water ingress due to cracking. - Confirmation of any anticipated negative impacts on the building and its tenants during construction or operation. - Confirmation that the structural integrity of the building will not be affected in any way. Oral hearing sought and engagement with TII.	Yes
S163	Knocklyon Network CLG	Fully supportive of project from Estuary to St Stephens Green. Support Metro South West Group. Board should defer the authorisation of the section beyond St Stephens Green for the following reasons: - Failure to consider alternative routing of the terminus, notably towards Rathmines. - Feasibility study from city centre to Knocklyon. - Limitations of Charlemont as a terminus for radial extensions onwards to south city. - Potential environmental benefits for south west Dublin.	No

		- Poor access to Charlemont from Rathmines Road. - Lack of adequate public service in outer suburbs.	
S165	KW Real Estate ICAV	Submission relates to the Shelbourne Hotel, Nos. 27-34 St Stephens Green North and No. 12 Kildare Street, Dublin 2. Wholly supportive of MetroLink in principle. Main concern is in relation to the impact on the operation of the hotel during the construction phase. Incumbent on TII to ensure that any potential adverse noise, vibration or access impacts are appropriately mitigated through design. Unacceptable for any impacts on the historic architectural quality of the building which is a protected structure in a conservation area. Noise mitigation measures (noise insulation and rehousing) do not differentiate between a residential or a hotel use. Secondary glazing would not be appropriate on the Shelbourne Hotel, given that it is a protected structure. Works would significantly detract from the character of the building and may not be implementable. Temporary rehousing is not feasible for a hotel of such significance. Rehousing guests would have a significant impact on the operation of the hotel. Early engagement required with TII and contractor to ensure operation of the hotel is not unduly impacted by noise and vibration. Significant indirect architectural heritage impact on hotel identified. Incumbent on TII and contractor to ensure that construction phase does not have adverse impacts. This would include orderly management of the construction compound. Early engagement sought with TII and contractor with regard to parking, loading and access and to ensure the operation of the hotel is not impacted by any temporary traffic arrangements. Early engagement with both TII and contractor sought to ensure that operation of hotel is not impacted by dust or air quality arising from the construction phase.	No
S167	Leonard Kinsella	Property owner at Harcourt Terrace, Dublin 2. Same submission as submission S85. Letter was addressed to previous owner. Property is now owned by Lette Accommodation Ltd. and schedule should be amended to reflect this, with correspondence sent to Justin Kinsella, 1 Harcourt Terrace.	No
S170	LOKRA Lower Kimmage Road	Supportive of MetroLink from Estuary to St Stephens Green. Endorses the submission of Metro South West Group. Charlemont is unsuitable for a terminus and major city centre transport hub.	No

	Residents Association	Creates embedded bias for east bound rather than south west bound future extension and compromise's ability to include Portobello, Lower Rathmines and Harold's Cross. If climate action goals are to be achieved, they should get the basic right at the start to allow for a rapid and incremental roll-out of extensions. Future-proofed city centre terminus required. South west Dublin served by nothing but buses until 2042 or beyond. Buses will be inadequate to cater for demand in south west Dublin. An underground metro would significantly improve quality of life. The Board should defer the authorisation of the section of MetroLink beyond St Stephen's Green pending further analysis of hubs and starting points for further possible extensions.	
S189	Metro South West Group	MSWG comprises 40 residents associations in south west Dublin. Supportive of Metro from Estuary to St Stephens Green. Board should defer authorisation of MetroLink beyond St Stephen's Green, other than to create a turning section. The decisions made now will affect the provision of rail infrastructure for south west Dublin for generations to come. Proposal seriously compromises the ability for a southern extension. Proper planning requires a proper evaluation of the options for extension, and it is not consistent with proper planning to permit a station at Charlemont which would compromise the options. Failure to consider an alternative routing, notably towards Rathmines. Extension to Rathmines would yield immediate benefits environmentally for south west Dublin and avoid impact on the Grand Canal. Inadequate plan for the supply of public transport to south west Dublin. A feasibility study needs to be carried out. Many practicalities of linking MetroLink with the Luas Green line at Charlemont have not been addressed. Lack of consultation on changes at Charlemont is a breach of the Aarhus Convention. Alternative terminus location at Portobello or Cathal Brugha Barracks would be preferable from cost, revenue, climate action and future expansion perspective. NTA modelling indicates the need for a metro to Dublin south west. BusConnects capacity is insufficient. NTA's Metro to Knocklyon Feasibility Study was flawed. Future extension from Charlemont Station would bypass the inner suburbs such as Rathmines, Harold's Cross and Portobello. Residents at Charlemont already benefit from the Luas and there is no net benefit to society.	No

		Premature to approve the MetroLink beyond St Stephens Green, with reference to the Jaspers review and lack of clarity in transport strategy and ministerial statements regarding upgrade of the Luas Green line to metro. Connection to Luas at St Stephen's Green could be improved. Experienced railway engineer has informed MSWG that curvature from Tara Street to St Stephen's Green West is achievable and would be comparable to parts of the BART in San Francisco and London Underground. Charlemont is unsuitable for an interchange due to vertical separation requiring multiple manoeuvres and resulting in complexity and safety issues. Interchange with bus network at Charlemont is poor. Most routes also pass via St Stephen's Green. NTA suggest that more Luas trams could be run on the Sandyford to Charlemont stretch rather than between Charlemont and St Stephens Green but no information has been provided on this. Uncertain where trams would turn and potential passenger safety issues on platforms. Climate action benefits of extending MetroLink to south west Dublin and encouraging modal shift to public transport. Lack of adequate consultation on changes at Charlemont Station and decision to terminate the project at that location. Extent and duration of consultation not compliant with Aarhus Convention. If ABP approve MetroLink to go no further than St Stephen's Green, this will give Government options to continue to south west Dublin or to Rathmines as an interim measure. <u>Submission accompanied by:</u> - MSWG report detailing the case for continuing MetroLink to south west Dublin. - Other annexes supporting their argument for the project to serve south west Dublin, including various reports, emails, correspondence, TII presentations, extracts from Council meeting minutes, extracts from Oireachtas Committee transcripts and other supporting documentation. - Copy of Jacobs Metro to Knocklyon Feasibility Study Report.	
S191	Michael B. Barry	MetroLink is an excellent initiative. Terminus should be at St Stephen's Green instead of Charlemont. The route for the continuation of the Metro to the south has not been determined. There is a strong possibility that it will swing south west where there is no rail based public transport. Putting the terminus at Charlemont predetermines the outcomes of phase 2 options study. If the Luas Green Line is allowed to continue and is not subsumed by the Phase 2 Metro, there is logic in choosing St Stephen's Green as the interchange. It would be better to move the Metro Station to the western side St Stephen's Green, nearer the existing Luas stop.	No

S197	Muiris O'Dwyer	Resident of Dartmouth Square, Ranelagh, Dublin 6. Same issues as submission S15.	No
S202	Niall Lynch	Charlemont is a quiet residential area. It is an unsuitable place for the terminus of a Metro. We should be increasing urban green spaces rather than removing them. A large part of St Stephen's Green will be unusable for the duration of the build and it will not be possible to return the green to its current state. Extending the MetroLink further south from the Liffey does not provide proportional extra benefit when compared to the cost. Metro terminus should be in the city centre at Tara Street or O'Connell Street.	No
S241	Orwell Park (Templeogue) Residents Association	Submission concerns only portion south from St Stephen's Green which is based on bad analysis of public transport in south west Dublin. NTA modelling underestimates demand for public transport in south west Dublin. BusConnects proposals are not sufficient. NTA Metro to Knocklyon Feasibility Study 2021 was flawed. It provides no basis for rejecting the proposal that MetroLink should proceed from St Stephen's Green to Portobello/Rathmines, pending continuation to south west Dublin as a Phase 2 project. Charlemont Station would deplete benefits of MetroLink to south west Dublin, would duplicate the Green Line for negligible additional benefits, would represent serious pre-funding of one option for the south side – converting the Green Line to Metro. There is no Government nor civil society approval for converting the Green line to metro. NTA's Draft Transport Strategy refers to an alternative proposal for a Luas line serving UCD. This could use the N11 and would not require closure of the Green Line for an extended period. Terminating at St Stephens Green will leave options open for Government regarding future route.	No
S250	Patricia Whyte	Property owner at Harcourt Terrace, Dublin 2. Same submission as submission S85.	No
S263	Recorders Residents Association	Board should defer authorisation for section of MetroLink beyond St Stephens Green. Charlemont is a poor option with no benefit to south west Dublin. When the decision was reached not to continue to the Luas Green Line, this station should have been deleted. Golden opportunity for the Board to pause the line at St Stephens Green while a fully informed, independent feasibility study is undertaken for a line towards Tallaght. BusConnects cannot meet the transport deficit in south west Dublin.	No

		GDA Review failed to consider alternative routing for MetroLink, simply terminating it at the point where problems could not be surmounted. Rathmines or Portobello are better options for the terminus and better connections to the bus networks.	
S265	RGRE Burlington Limited and RGRE Harcourt Terrace Limited	Submission relates to a site at 6 & 7 Harcourt Terrace, Dublin 2. Concerns in relation to noise and disruption. A significant residual impact is identified for a neighbouring building, 9 Harcourt Terrace. While this is noted as temporary, there is no clarity or estimate provided beyond this in relation to the duration of the works. Intended to redevelop the site in the future to include a lower ground floor and basement and 6+ storeys of development. Redevelopment would entail a reinforced concrete raft slab foundation supported on the underlying rock, with load spread over the rock strata. Confirmation sought that this is acceptable and that no vent shafts or the like are required on the site, as this would be problematic for future development. Impacts should be carefully managed to minimise effects on the surrounding landholdings. <u>Submission accompanied by:</u> CS Consulting Group engineering commentary.	No
S284	St. Annes Resident's Association	Supportive of project from Estuary to St Stephens Green. Failure to consider an alternative location for the terminus in Portobello/Rathmines area. Terminus at Charlemont would present severe limitations for radial extensions to south city. Positive environmental benefits for south city consequential from pause for exploration of alternative extension route. Poor access to Charlemont from Rathmines Road. Unsatisfactory linkage of MetroLink and Luas at Charlemont. Current traffic congestion in St Anne's Residents Association local area requires a major upgrade of public transport.	No
S314	Will Phelan	Property owner at Harcourt Terrace, Dublin 2. Same submission as submission S85.	No
S316	WORK Residents Association (Michael Griffin)	Wellington, Willington, Wilderwood, Osprey, Rushbrook and Kennington Residents Association. Supportive of MetroLink from Estuary to St Stephen's Green. Failure to consider an alternative location for the terminus in Portobello/Rathmines area. Terminus at Charlemont would present severe limitations for radial extensions towards many areas of south city. Poor access to Charlemont from Rathmines/Portobello/Harolds Cross.	No

		Terminus at Charlemont does nothing to relieve the continuation of the environmental damage caused by traffic gridlock and inadequate public transport for large areas of south west Dublin.	
S320	Cllr Yvonne Collins	Fully supports the project from Estuary to St Stephen's Green but does not support the extension to Charlemont and the terminus should be at St Stephen's Green instead. Terminus should be at a city centre location for connections to other transport modes. Charlemont is a residential area with limited potential to extend. Railway Order should authorise building to SSG only and should direct that an independent monitoring group be constituted to carry out feasibility studies for the optimum onward route. Dublin South West needs an upgraded public transport infrastructure. Supports the submission made by the Metro South West Group. More extensive research should be carried out before committing to current proposed course of action.	No

AZ4 (i): Charlemont Station and Tunnel Turnback			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S15	Barry and Aileen Dempsey	Residents of Dartmouth Terrace, Dublin 6. Supportive of MetroLink to connect the city centre to Dublin Airport. Opposed to the siting of the terminus at Charlemont. Charlemont is the incorrect strategic location for a terminus hub and spoke system. St Stephens Green is the most appropriate location as it provides for interchange with bus, LUAS and future DART Underground. Project incorrectly dismisses St Stephens Green West as an appropriate terminal station. No comprehensive study has been completed on the optimal location for a city centre terminus. Wasteful duplication of rail infrastructure. The inclusion of the section between St Stephens Green and Charlemont is strategically weak and duplicates the Luas Green Line service. NTAs cost estimate for this 1km section at €650m represents poor value for money and deprives other areas of Dublin of investment. Station box at Charlemont, as constructed in 2021/2022, does not have the benefit of planning permission and has not been part of the EIA. Processing the current RO application which is reliant on these constructed works is legally unsafe and contravenes the EIA Directive.	No

		Station box will result in only one possible future tie-in with the Luas Green Line to the south, which would result in an option that was previously dismissed as part of the Tie-in Study from 2017. No alternatives were considered as it had been fixed by the overhead Hines Grand Parade development. Implications of the new alignment are very negative as they will inevitably involve top-down construction and demolition of houses. EIA is deficient in relation to the description of development, alternatives, transport assessment, noise and cumulative effects. Noise and disturbance during both construction and operation and loss of amenities for the area. Adverse impact on traffic during both construction and operation. Poor integration with other modes of transport and difficult pedestrian movements in and around the station. Grand Parade is an already heavily congested orbital route. EIA did not properly assess the impact of additional local traffic volumes. Regional model does not take local factors into account. A huge volume of airport users from Dublin South and Greater Dublin will come to Charlemont via car or taxi with luggage and the residential area cannot sustain the significant additional traffic volumes. The traffic study omitted the modelling of this. Adverse impact on property values. Request that: - Section from Tara Street Station to Charlemont Station (and onward intervention tunnel) be omitted. - RO be submitted for a section from Tara St. Station to St Stephen's Green which would provide a terminal hub station integrating with the Luas Green Line, bus routes and future DART Underground.	
S16	Barry Murphy	Resident of Dartmouth Square, Ranelagh, Dublin 6. Same submission as submission S15.	No
S18	Ben and Tatiana Hurley	Residents of Dartmouth Square, Ranelagh, Dublin 6. Generally same submission as submission S15. Impact on public safety and potential delays to emergency vehicles due to congestion and drop-offs.	No
S27	Brendan Heneghan	Integration issues between MetroLink and Luas at Charlemont. Underground connection between O'Connell Street station and Parnell Luas stop should be provided. Stephens Green Luas stop should be moved to Stephens Green North, closer to Metro station.	No
S31	Butterfield District Residents Association	Residents Association in Rathfarnham, Dublin 14. Supportive of MetroLink from Estuary to St Stephens Green.	No

		Request that the terminus be located initially at St Stephens Green for the moment so that further excavation can be deferred to allow other options to be explored. Terminus at Rathmines would be a more suitable option for the future. Lack of bus connectivity at Charlemont, whereas Rathmines will be served by 33 buses per hour on the A spine at peak times. Passenger bound for the Airport will have a considerable walk along the canal. Lack of proper infrastructure in the application to facilitate these commuters. Jasper's Report for NTA states that the connection to Ranelagh could feasibly be deferred until there is clarity on the future of the Green Line. Further options for MetroLink have not been explored fully, including extending the Metro to the south west. BusConnects will not satisfy the future transport needs of the area. NTA feasibility study was flawed. Terminus at Charlemont would preclude any possibility of further development of this option in the future.	
S34	Caitriona Shaffrey	Resident of Dartmouth Square, Ranelagh, Dublin 6. Same issues as submission S65.	No
S35	Carmen Neary	Resident of Dartmouth Square, Ranelagh, Dublin 6. DCC and ABP acted ultra vires and exceeded their powers when giving permission for the construction of the Hines development. They attempted to pre-determine the route of the Metro and the location of the station box when they granted permission for the construction of the roof of a station. Terminus at Charlemont is a mistake. It should terminate at St Stephens Green. No study completed by NTA/TII on the optimal location for a city centre terminus. Outrageous €650m cost to duplicate existing infrastructure. EIAR is inadequate and further studies are essential.	No
S36	Caroline Eyre O'Connor	Resident of Dartmouth Square, Ranelagh, Dublin 6. Strongly supports submission made by Dartmouth Square West.	No
S37	Caroline Regan and family	Residents of Dartmouth Road, Ranelagh, Dublin 6. Significant noise and vibration impacts identified in the EIAR for at least 102 months. Very significant noise and vibration impacts identified due to station piling and south station works below slab. Significant impacts due to TBM, blasting and excavation also. Front of house area will be used as a lorry holding area for HGVs. Mitigation measure of 'potential temporary relocation' is not explained. Duration of relocation is not clear and it is not clear if there is provision for retrofitting the house with sound insulation. Dust impacts. Health concerns.	No

		EIAR may underestimate the impacts (see McCabe Durney Barnes submissions). Very limited assessment of settlement and subsidence has been carried out. House must be surveyed in detail before construction. It is a protected structure. Traffic concerns due to closure of Dartmouth Road throughout enabling works and the need to provide access and parking during construction and operation. Terminus should be in the city centre and located to allow connection to other transport systems. NTA/TII have not undertaken a study that fully considers this. They only studied a limited scenario with a terminus on the eastern side of St Stephens Green. Other sides of the Green would create a natural hub location. Construction of the underground station box at Charlemont has already been substantially completed before the Railway Order was drafted and was unlawful. Constructing the terminus at Charlemont would therefore expose the entire MetroLink project to legal hazard. Board is asked to omit the section from Tara Street Station to Charlemont and to require the submission of a railway order for a section from Tara Street to St Stephens Green that can integrate with Luas Green Link, bus routes and future DART Underground.	
S40	Charlemont and Dartmouth Community (Dartmouth Road)	Submission is made on behalf of the residents of Nos. 26-28 and 32-35 Dartmouth Road. Link between St. Stephens Green and Charlemont cannot be justified in planning terms and undermines business case for the entire project. Section between Tara Street and Charlemont should be omitted and a new application for the section between Tara Street and St Stephen's Green should be submitted. Drawings are misleading and do not illustrate the proper relationship between Dartmouth Road and the station box. The reason for the 0.3km length of tunnel beyond Charlemont is not explained in the documentation. Rationale and justification for evacuation/ventilation tunnel is very limited. Full costs/benefits of alternatives, including an emergency exit at the end of the turnback facility, are not considered. Size of Charlemont station box is excessive and is not justified. IEE suggests that the applicant should make efforts to produce a more compact station design with less of an impact on Dartmouth Road. They also suggest that the Dartmouth Road entrance be reversed to face into the site to reduce impacts. Applicant has not adequately considered alternatives to reduce the impact on the residents of Dartmouth Road and therefore the EIAR is inadequate and incomplete. Construction relies on enabling works undertaken at 2 Grand Parade without planning permission. EIAR states that Dartmouth Road will be partially closed for 12 – 18 months for utility diversions and fully closed for between 24 – 30 months for the main station construction works. However, Appendix 5.2 indicates that the Charlemont Station Compound/Deep Station has a 102 month construction period. Loss of trees on Dartmouth Road.	No

		Planning history of Carrolls Building set out. Judicial Review of Reg. Ref. 2373/17 was taken by residents but resolved out of Court. Alignment of line means that any future tie-in with the Luas Green line to the south would have to pass through existing built areas, including a significant amount of demolition within the Ranelagh area (Mander's Terrace). Line of piled wall to the east is straight and differs significantly from the application drawing. Construction impacts from extreme depth of excavation in proximity to houses, proximity of piling and piling rigs, proximity of tunnel and TBM, design and provision of intervention tunnel, restricted footpath width on Dartmouth Road, excessive hoarding height during construction and size of Station (longest underground box in the project). EIAR assessment of construction noise is inadequate and it appears as though it will be the subject of further assessment post-determination of the Railway Order. This is inappropriate. In the construction phase there is no assessment upon the internal noise levels. Significant to Very significant construction phase noise impacts at Dartmouth Road properties predicted. Unclear where baseline noise monitoring was undertaken for Dartmouth Road. Discrepancy between Table 13.68 and Appendix 13.7. Impacts on residential receptors are profound, not merely very significant, with reference to EIA guidelines. Night-time impacts of construction compound are not assessed. This would also be profound. Mitigation measures are generic and unacceptable. Table 13.90 refers to properties 10-11 Cambridge Square, which is misleading. This mews house at 35 Dartmouth Square was built in the rear garden of No. 11 Cambridge Terrace, not Cambridge Square. Property is not properly referenced in the EIAR. Lack of detail on hoarding and its locations and details of equipment enclosures. Inconceivable that properties next door (32, 33, 34 Dartmouth Road) would not experience the same or very similar residual impacts as No. 35 (referred to as 10-11 Cambridge Square). EIAR assesses groundborne noise and vibration from Dartmouth Square West, however the tunnel does not pass under those houses. Instead it passes under Dartmouth Road houses. EIAR fails to assess very significant potential impacts. Assessment of intervention tunnel impacts not undertaken. Assumed construction methodology is 'drill-and-blast' but impacts are not assessed. Interaction of human health and noise. Condition 15 attached to previous Metro North RO specified airborne noise levels for construction. It will not be possible to achieve these thresholds. Ability to meet Metro North vibration limits also questioned. Board requested to appoint noise and vibration specialist to advise it.	

		Very limited assessment of settlement and subsidence has been undertaken. Information in Appendix A5.17 is unclear and inadequate. Assessment deferred to post-RO which removes owners rights to review the impacts. Settlement concerns from secant piling and TBM tunnelling. Alarming settlement projections of 35-45mm and further settlement likely when TBM tunnels through. Engineering research shows projections of settlement are usually unreliable. Hydrogeological impacts. No detailed specific localised groundwater modelling has been undertaken. Data on which the assessment was undertaken is not related to the site concerned. Night-time working for Sprayed Concrete Lined tunnel support works at Charlemont are of concern. Details of steel-clad building to provide acoustic attenuation are not provided. Excessive duration of construction programme. Impacts will be Medium Term, not Temporary, with reference to EPA EIAR Guidelines. Lack of information on duration of effects is a significant inadequacy in EIAR. RINA (appointed IEE) advise that the length of closure of Dartmouth Road is excessive and that it could be reopened within several weeks/a few months by using methodologies such as top-down construction or temporary over-decking with a steel 'umbrella' or bridge. Closing the road for construction traffic is unreasonable and alternatives are not adequately addressed. Excessive hours of construction will be intolerable level of interference, loss of sleep, disturbance, psychological and health impacts. Proximity of compound to dwellings for 9 years. Severe restrictions to access and removal of on-street parking. A 'developer alternative' for sequencing of construction is provided in Appendix A5.3 which is better, but the status of this alternative is unclear. Commercial development at Two Grand Parade has prejudiced the entire EIA process, as it has not been possible to properly consider alternative compound and station locations. Traffic impact assessment: local assessments of junctions around stations using LinSig modelling was undertaken, with the exception of Charlemont. Assessment reliant on strategic modelling. Significant impacts due to HGV traffic, loading and lorry holding areas, impacts on pedestrian movement, conflict between pedestrians and HGVs. No assessment in relation to emergency fire and ambulance access to Dartmouth Road. RINA advises that 'through flow' construction sites are by no means the norm and that TII should consider accommodating both entry and exit from the site on Grand Parade. Diversion of utilities will have a significant effect on local access.	

		Human health section of EIAR is inadequate. It does not fully review impacts due to night-time working, groundborne noise and vibration and other matters. Chapter 29 (Interactions of Effects) is inadequate. Overtrack ventilation and smoke exhaust gives rise to impacts that have not been properly assessed in terms of noise and air emissions. Ventilation system noise has not been adequately assessed but would be calculated as part of the further design development. Impacts on houses has not been assessed. Annex IV of EIAR Directive requires description of whole project, estimate of emissions and description of alternatives. This was not done for ventilation. Operational noise only considered with regard to train rolling stock. Noise also from PAVA system, ventilation, escalators, roller shutters etc. which is not considered. London and Paris metro projects considered other cumulative noise sources and impacts. As confirmed by RINA, the EIAR does not provide assessments that cover operational noise and light pollution generated by a wide range of sources. EIAR is inadequate and incomplete. New link road will operate as a rat-run to avoid the Ranelagh Road/Grand Parade junction. New Metro street running parallel to the station will become a thoroughfare at least 19 hours per day. Luas closes at 23:00, yet MetroLink will operate until 00:30. No justification to operate the interchange when there is no Luas to interchange to. The inevitable result is that cars will pick up passengers after 23.00. This increase in traffic is not assessed. No local area modelling of the impact upon the road network around Charlemont Station. Assessment fails to have regard to the most up-to-date Bus Connects plans. As with the construction phase, the assessment relies on a strategic assessment that does not take into account local impacts. Very limited drop-off/pick-up facilities or proper interchange for taxi or future bus services. It is likely that there will be a significant demand for such interchange facilities. Significant amount of pedestrian activity in and around the southern station entrance will be detrimental to residential amenities. Only the northern entrance is assessed. RINA advises that the EIAR does not include a local model of the extra vehicular and pedestrian traffic generated from the use of the Dartmouth Road entrance as the drop off and pick up point for Airport passenger journeys. Anti-social behaviour at station and impact on amenities. Overall impact will severely and permanently adversely affect the residential amenities of the residents. The impacts will be so severe as to be in material contravention of the Development Plan's Z2 zoning objective.	

		Significant loss of amenity and diminution in value of retained lands. No. 35 Dartmouth Road has not been identified in the Book of Reference. It appears to be referred to as 11 Cambridge Terrace and owners did not receive the relevant papers. There is an error in the RO. Impact on property values has not been assessed. Devaluation of property and impingement of Constitutional property rights. Some or all residents may have to be temporarily relocated at TII expense. Given duration of construction, this would effectively be a permanent relocation. Costs of submission will be a legitimate cost incurred for CPO purposes. Support the requested amendments in the General submission in relation to the omission of the section between Tara Street and Charlemont and onward tunnel extension and intervention tunnel. <u>Submission accompanied by:</u> - List of residents. - Technical Note from Independent Engineering Expert (RINA) regarding Charlemont Station construction and design issues.	
S41	Charlemont and Dartmouth Community (Dartmouth Square West)	Submission made on behalf of residents of Dartmouth Square West, all of which are Protected Structures and the Square is an ACA. Link between St Stephen's Green and Charlemont cannot be justified in planning terms. Section between Tara Street and Charlemont should be omitted. EIAR indicates that construction compound includes the full width of laneway to the rear of Dartmouth Sq. West. Portion of laneway is earmarked for permanent acquisition. Houses are zoned Z2 (residential conservation area), with lands to rear zoned Z1 (residential) and Z6 (enterprise/employment). Planning history of Carrolls Building set out. Judicial Review of Reg. Ref. 2373/17 was taken by residents but resolved out of Court. A number of parties to the submission were party to a legal agreement between NTA, TII and residents in relation to certain matters. Construction impacts from extreme depth of excavation in proximity to houses, proximity of piling and piling rigs, proximity of tunnel and TBM, loss of laneway during construction. EIAR assessment of construction noise is inadequate and it appears as though it will be the subject of further assessment post-determination of the Railway Order. This is inappropriate. In the construction phase there is no assessment upon the internal noise levels. Very significant construction phase noise impacts on Dartmouth Square West. Concerns regarding capabilities of contractors to engage and communicate with residents on noise disturbance.	No

		Implementation of 'quiet times' for residents would be considered appropriate. Level of piling is not adequately assessed in EIAR. No data to show impact of deep piling vibrations. Impacts on residential receptors are profound, not merely very significant, with reference to EIA guidelines. Night-time impacts of construction compound are not assessed. This would also be profound. Mitigation measures are generic and unacceptable. Monitoring proposed under ANV8 doesn't include continuous real-time monitoring of noise impacts or impacts upon internal noise environments. Monitoring and auditing must be transparent and available to the public. Unclear where on Dartmouth Square West groundborne noise and vibration was assessed. Difficult to judge if mitigation measures are adequate. Interaction of human health and noise. Condition 15 attached to previous Metro North RO specified airborne noise levels for construction. It will not be possible to achieve these thresholds. Ability to meet Metro North vibration limits also questioned. Board requested to appoint noise and vibration specialist to advise it. Very limited assessment of settlement and subsidence has been undertaken. Information in Appendix A5.17 is unclear and inadequate. Assessment deferred to post-RO which removes owners rights to review the impacts. Settlement concerns from secant piling and TBM tunnelling. Alarming settlement projections of 10-30mm and further settlement likely when TBM tunnels through. Engineering research shows projections of settlement are usually unreliable. Hydrogeological impacts. No detailed specific localised groundwater modelling has been undertaken. Data on which the assessment was undertaken is not related to the site concerned. Excessive duration of construction programme. Impacts will be Medium Term, not Temporary, with reference to EPA EIAR Guidelines. Lack of information on duration of effects is a significant inadequacy in EIAR. Excessive hours of construction will be intolerable level of interference, loss of sleep, disturbance, psychological and health impacts. Proximity of compound to dwellings for 9 years. Significant and profound impacts. Diversion of utilities will have a significant effect on local access. Traffic impact assessment: local assessments of junctions around stations using LinSig modelling was undertaken, with the exception of Charlemont. Assessment reliant on strategic modelling. Significant impacts due to HGV traffic, loading and lorry holding areas, impacts on pedestrian movement, conflict between pedestrians and HGVs.	

		Human health section of EIAR is inadequate. It does not fully review impacts due to night-time working, groundborne noise and vibration and other matters. Chapter 29 (Interactions of Effects) is inadequate. Overtrack ventilation and smoke exhaust gives rise to impacts that have not been properly assessed in terms of noise and air emissions. Ventilation system noise has not been adequately assessed but would be calculated as part of the further design development. Impacts on houses has not been assessed. Annex IV of EIAR Directive requires description of whole project, estimate of emissions and description of alternatives. This was not done for ventilation. Operational noise only considered with regard to train rolling stock. Noise also from PAVA system, ventilation, escalators, roller shutters etc. which is not considered. London and Paris metro projects considered other cumulative noise sources and impacts. New link road will operate as a rat-run to avoid the Ranelagh Road/Grand Parade junction. New Metro street running parallel to the station will become a thoroughfare at least 19 hours per day. Luas closes at 23:00, yet MetroLink will operate until 00:30. No justification to operate the interchange when there is no Luas to interchange to. No local area modelling of the impact upon the road network around Charlemont Station. Assessment fails to have regard to the most up-to-date Bus Connects plans. As with the construction phase, the assessment relies on a strategic assessment that does not take into account local impacts. Very limited drop-off/pick-up facilities or proper interchange for taxi or future bus services. It is likely that there will be a significant demand for such interchange facilities. Significant amount of pedestrian activity in and around the station entrance will be detrimental to residential amenities. Anti-social behaviour at station and impact on amenities. Overall impact will severely and permanently adversely affect the residential amenities of the residents. The impacts will be so severe as to be in material contravention of the Development Plan's Z2 zoning objective. Significant loss of amenity and diminution in value of retained lands. Impact on laneway to rear of dwellings due to temporary and permanent acquisition. TII is in breach of agreement entered into with residents and ought to amend the application. Owner of No. 1 Dartmouth Square has not been named in the Book of Reference. However occupier has received the documentation. Impact on property values has not been assessed. Devaluation of property.	

		Some or all residents may have to be temporarily relocated at TII expense. Given duration of construction, this would effectively be a permanent relocation which is unacceptable. Residents do not wish for their homes to be purchased at the market rate. Costs of submission will be a legitimate cost incurred for CPO purposes. Fully support the requested amendments in the General submission in relation to the omission of the section between Tara Street and Charlemont and the making of a separate Railway Order application for a section between Tara Street and St Stephens Green. Requested amendments and conditions: 1. Properly designed drop-off and pick up on Grand Parade. 2. Apply appropriate and binding conditions in relation to noise and vibration limits based upon impacts upon internal noise and not external facades. 3. Restrict construction hours to 07:30 – 18:00 hrs Monday to Friday, 08:00 – 13:00 hrs Saturday, with no working outside of these hours. No night-time working should be permitted. 4. The application should be consistent with the agreed terms between TII and residents. <u>Submission accompanied by:</u> - List of residents.	
S42	Charlemont and Dartmouth Community (General Area)	102 residents of area are supportive of submission, which is 80% of the properties in the vicinity of Charlemont. Supportive of project generally, but section between St Stephens Green and Charlemont is not justified. Detail of the application is inadequate, due to 'design and build' approach. Impossible to assess impacts. Inconsistencies in drawings. Limits of deviation may be very significant on a tight site like Charlemont Station. Detail of the RO application is inadequate and lacking in detail due to 'design and build' procurement method. 'Design' should be undertaken prior to submission of a RO application. RINA advise that only about 30% of the detail will be presented in the RO application and therefore it is impossible for the residents to be able to assess the impact of the proposal. NTA/TII are failing to provide the required level of detail under which a Railway Order could be granted by the Board. Inconsistencies in drawings regarding toad crossings. EIAR indicates that Charlemont Station is dependent upon the structural deck constructed as part of the No.2 Grand Parade development for the station box roof slab. This station box work is unauthorised development. Loss of car parking and vehicular access to Nos. 32-35 Dartmouth Road.	No

		Contradiction in the EIAR regarding duration of construction at this location with very significant impacts upon residents. Project design has not maintained pace with the evolution of policy. Planning history of Metro North, DART Underground, various metro studies and Carrolls Building set out. The western side of the Green should be the starting point, as this is where the Luas station is and where the previously permitted Metro North and Dart Underground would have interconnected. Increasing the distance between stations (i.e. between Metro, DART and Luas) will result in time penalties for interchanging between services, making it less attractive. Policy objectives now require a city centre hub to be created that is capable of facilitating a range of potential southern extensions that may occur in a few decades time. Carrolls Building development application was premature pending the resolution and determination of the MetroLink project and the Board failed to understand the significance of their decision, notwithstanding that it was emphasised at the oral hearing. The decision with an angled station box was contrary to the preferred option 4 (b) of the Tie-In Study 2017. TII boxed all parties into focussing on St. Stephen's Green East as the only station location and failed to consider station options on St. Stephen's Green West where the optimal interchange with the Luas Green Line would occur. A fundamental planning, investment and strategic transportation decision was made in relation to the Metro alignment and city centre station locations. New Metro North Options Alignment Report (March 2018) published after TII had agreed to the station box with the Carrolls Building developer, had Charlemont as a fixed tie-in location and as a result, all route options were required to tie into this point. The Options study was effectively invalidated by the evolution of policy and should have been updated by a new tie-in study and a new city centre terminus study. Despite opposition to initial MetroLink proposal, the NTA has hung onto the mega concept and hence their need to provide the link between St. Stephen's Green and Charlemont as an advance build towards replacement of the Luas Green Line. TII Technical Note dated March 2019 outlines the available Luas Green Line passenger demand projections in the context of the required service capacity on the existing Luas Green Line, south of Charlemont. This technical note is referred to in Appendix A7.9 of the EIAR, however a footnote hyperlink reference has been removed and access to the report is not available. The report concludes "A metro upgrade of the Luas Green Line south of Charlemont would ultimately be required in the long term although the timing of this intervention is dependent on the rate of demand growth". NTA/TII demand capacity forecasting is highly unreliable.	

		JASPERS independent review states that the objective to provide a connection to Charlemont/Ranelagh is no longer considered a priority by the independent review team. It also states that the justification for the connection from St Stephens Green to Charlemont/Ranelagh is based on the perceived difficulty of adding this as a separate project at a later date. It is apparent that the sponsoring authority is attempting to build as much of the MetroLink project as possible and attempting to build a rationale and justification for it. The JASPERS review also states that several technical aspects appear to make the project expensive, including the inclusion of the connection to Ranelagh/Charlemont, the use of relatively short distances between city centre stations, and very high station costs. MetroLink will result in the 700m distance between the Canal and Ranelagh having 2 Metro Stations (Charlemont and a new Ranelagh metro station at Oakley Road) and 2 Luas Stations (the existing Charlemont and Ranelagh stops). This will stitch in high costs for future development and an overdevelopment of rail infrastructure in a very small area. JASPERS also stated that the connection to Ranelagh could feasibly be deferred until there is clarity on the future of the Luas Green Line. The Review of the MetroLink Preliminary Business Case by the Major Projects Advisory Group (MPAG) makes a number of damning findings and recommendations. It states that “the current route duplicates other public transport services and planned transport interventions in the corridor” and that “up to date analysis of the cumulative impacts of major public transport services in the vicinity of Metrolink (existing and planned) is needed in order to confirm the project need and to justify the selection of the most appropriate project design both within the environmental assessment materials and the business case.” The cumulative assessment is not provided in the subject Railway Order Application. The MPAG report states that “the rationale for extending the preferred scheme to Charlemont is noted by JASPERS as ‘strategically weak’ given the additional costs involved and the duplication of the LUAS Green Line which also provide a public transport service to the areas of the city centre in question. To counter this point by JASPERS, NTA/TII make a case for the terminus at Charlemont that better provides for a future connection into a new south side transport scenario, whatever that may look like.” Rather than addressing this issue, NTA/TII would be reinforcing the problem by duplicating more infrastructure south to Ranelagh and creating more drivers of high unit costs. The NDP refers to MetroLink between Swords, Airport and Dublin City Centre. The definition of Dublin City Centre arises from the provisions of the GDA Transport Strategy and is defined as the area bound by the Royal and Grand Canals. The Draft GDA Transport Strategy does not include any extension of Metro to the south post-2042. It is not part of the Strategy to upgrade the Luas Green line to metro standard. The city will be served by Luas, a single Metro line to the Airport and a much expanded DART service.	

		The Board should not be bound by the Draft Strategy's provisions, but should have regard to the light rail network that is emerging. From a policy perspective, the Inner City is the area that falls between Grand and Royal Canals. Charlemont Station does not fall within the City Centre area or the designated Inner City area and may therefore be classified as Outer City. The area around Dartmouth Square is zoned Z2: "to protect and/or improve the amenities of residential conservation areas." Draft Development Plan identifies Key Transport Interchanges, including SSG West. However, the RO application states that Charlemont is the optimal location for interchange with the Green line rather than attempting to make the optimal interchange with the 'Key Interchange' on SSG West. Provisions of the Draft Development Plan do not accurately reflect the proposals in the Draft Transport Strategy. Project has been designed in the context of a disjointed evolution of a policy framework and has been driven, and indeed prejudiced, by private development proposals on the Carrolls Building site. Draft GDA Transport Strategy is confused regarding future of Metro extensions. Policy only covers the Metro North element from Swords/Airport to the City Centre. Modelling projections suggest that further capacity increases to the Luas Green Line to achieve a 30 trams per hour between Sandyford and St. Stephen's Green would accommodate Luas demand to 2039 or 2049, depending on scenario. No part of Metro South should be considered until after this enhancement and it is evident that Metro South is being dropped as reflected in the Draft Strategy. Proposed development will result in a serious loss of residential amenity for occupiers in the surrounding area and this is contrary to the Z2 zoning objective for the area, "to protect and/or improve the amenities of residential conservation areas". Section 6 of the Planning Report accompanying the Rail Order Application includes a material contravention statement which is wholly inadequate as it does not specify which Development Plan the development materially contravenes. This material contravention is not specified in the public notices and the public are not made specifically aware of it. MetroLink Preliminary Business Case outlines the confused evolution of the project. Tie-in connection at-grade with the Luas will involve a top-down construction method with devastating implications including demolition of Manders Terrace and half of Oakley Road. Multi-criteria analysis contained in the Business Case does not consider options starting at St. Stephen's Green and the policy context in the Business Case does not refer to the Draft updated Transport Strategy for the GDA which abandons the Metro South Project.	

		St. Stephen's Green to Charlemont section will cost €650m, with duplication of the Green Line. JASPERS independent review and MPAG Review considered this link to be 'strategically weak'. If current inflation is taken into account, the cost-benefits of the project is likely to be below required thresholds. Omission of this costly section would significantly improve the CBR figures. Final Business Case presented to Government did not address the JASPAR concerns and the dropping of the south side metro element. The Draft Transport Strategy indicates that an enhanced Luas Green Line will have capacity to 2039 and beyond and hence its replacement to Metro is not required. The JASPERS review concludes that the connection to Ranelagh could feasibly be deferred until there is clarity on the future of the Luas Green Line. Draft GDA Transport Strategy drops Metro extension in favour of a Luas based system but is contradictory and confused. Even if a Metro extension were to be considered in the future, the starting point should be St. Stephens Green not Charlemont. Any Metro spoke to the south-west of the city starting from Charlemont would have to cross back under the Luas line, resulting in very significant costs and be of limited value due to duplication of Luas services. Extension to the south west from Charlemont would miss the opportunity to provide a station in the south inner city/Portobello/Rathmines. The 360m tunnel extension to the south prejudices future service to south Rathmines and locks in an alignment without proper consideration the impacts of this on properties and transport options. The value of the Charlemont station is totally predicated on replacing the Luas Green Line and that locks-in future decisions several decades in advance. Charlemont is a residential area, not a city centre location. There is a dense network of Bus Connects, Luas and DART services in and around St. Stephens Green, but there is no network of public transport around the Charlemont Station. This is not the correct location for a city centre terminus. NTA/TII have not properly examined the options for interchange at St. Stephens Green. New Metro North Alignment Options Report 2018 includes a SSG West station but this contradicts the Preliminary Business Case where none of the route options included a station at SSG West. It appears the Government let the RO proceed to planning stage on the basis of inaccurate information. Following decision not to be upgrade the Luas Green Line to Metro, the determination of the termination location should have investigated 3 options: SSG West, SSG East and Charlemont. SSG West becomes a viable option once the self-imposed constraint of forcing a connection to a Luas Green Line tie-in location is removed. A carefully designed St Stephen's Green termination point (West or a more connected version of East or a hybrid) would provide a superior connection to the Luas Green Line and maximise the scope	

		for future southern extension routes. Failure to properly evaluate St Stephen's Green as a terminus option shows that the EIAR is deeply flawed and inadequate. The western side of the Green is the real destination for the vast majority of users, as this is the retail core of the city. This is a very significant inadequacy in the EIAR as it does not assess pedestrian origin/destination patterns. Both Charlemont and SSG East stations leave the majority of passengers where they do not want to go. Using the minimum radii and track curvature used in the actual RO drawings, it is evident that a St. Stephen's Green West station is technically feasible and would provide seamless interchange between DART and Luas with potential for connection to Charlemont in the future. No rationale for the turnback facility south of Charlemont is provided. Its length prejudices future alignments. The Board is asked to commission independent advice in relation to track alignment, station design and safety considerations on the sections south of Tara Street Station. Board's decision for the office development, upon which the angled station box was built, may have prejudiced the potential provision of a station at St. Stephens Green West due to alignment and potentially prejudiced a future tie-in with the Luas line. Appendix A7.9 of the EIAR compares the options of terminating the line at Charlemont or at St. Stephens Green East but the alternative of St. Stephens Green West was not considered. Comparison of walk time for MetroLink to Luas interchange at St Stephens Green East and Charlemont fails to take account of the passenger experience due to sub-optimal need to climb stairs up to the Luas platform with suitcases and bags. Metro passengers looking to access north of the canal will have to alight underground, use escalators to reach ground level and then walk to either Ranelagh Road Bridge or Leeson Street Bridge or climb the stairs to the Luas platform in order to reach the north side of the Canal. No attempt made to ensure an efficient connection between the St Stephen's Green Station and the existing Luas stop by considering alternatives such as a travelator. The applicants comparison of the options of terminating at Charlemont or at St Stephens Green East in Appendix A7.9 is therefore wholly inadequate in that it compares one option that attempted to improve the connection and another where no attempt was made. This is not a robust consideration of alternatives. Preferred alignment and station box option under the Luas Green Line Tie-In Study differs from the application. This has implications to the north and south of Charlemont. To the north the change has influenced the applicant not to consider station options on St Stephens Green West, where the optimal	

		interchange with the Luas would occur. To the south of Charlemont, it rules out the preferred 'in-line' tie-in with the Luas and will require significantly increased demolition of houses. Luas Tie-In Study is now totally irrelevant and the built alignment is not justified or supported by any other analysis provided in the application. This leaves a fatal gap in the application. A city centre terminus study should have been undertaken. The Board is asked to commission an independent study to determine the most appropriate south termination location. No alternative station box design was considered in the EIAR as this had already been designed as part of the permitted office development. EIA screening by DCC and the Board did not consider screening for this element of MetroLink. EIA Directive includes requirement to adequately describe all aspects of the development. Enabling works and station box construction, which have already been undertaken, are not described in the application as forming part of the subject RO and it is therefore incomplete. Constructed station box was not subject to EIA or screened for EI. Given environmental impacts it should have been the subject of a full EIAR. EIA must consider the direct, indirect and cumulative effects of all aspects of the development. On this point alone, the entire application is legally unsafe. One of the principal reasons for Charlemont is to facilitate onward extension. Case law has established that an EIAR must take account, as far as practically possible, of potential later phases (Fitzpatrick & Daly v ABP & Others [2019] IESC 23). Inadequate level of assessment of subsequent phases of the project renders the application incomplete. RO application acknowledges that enabling works including the construction of the station box at Charlemont has already occurred. These works are not permitted under Reg. Ref: 2373/17 and 4755/19. They were not included in the public notices and were incorporated as a result of a RFI which was not advertised. Secant piling and associated slab were nothing to do with the commercial office development for which planning permission was sought. The developer and TII negotiated and designed this critical part of the entire transport network and incorporated it into the planning application for an office development without referring to it in any public notices. Third parties were excluded from a statutory process. A Senior Counsel's opinion is included with the submission. These works are now the subject of a formal enforcement complaint to Dublin City Council. In the March 2019 'Preferred Route' consultation the Luas Green Line tie-in was to be an 'in-line' connection. Since then, NTA/TII reached an agreement with the 2 Grand Parade developer for the station box which was constructed without a Railway Order in 2021-2022. The design and alignment are different to the Preferred Route with no public notice of the proposed changes and no opportunity to comment.	

		Implications of the locked-in alignment are profound for any future Luas tie-in and will result in the demolition of houses on Manders Terrace, Charleston Road and Oakley Road. Implications of the new alignment are not adequately covered in the EIAR. Case law has established that an EIAR must take account of potential later phases. With reference to section 39 of the Transport (Railway Infrastructure) Act 2001, the applicant considers that a future Luas Green Line tie-in is "a likely option for the future" and is aware of the required demolition of houses as a result of such a tie-in, however they did not disclose or refer to these likely significant effects in the EIAR. Construction traffic impact on Grand Parade, which is heavily over congested in AM and PM peaks, are inaccurately assessed. Local access and traffic flow impacts due to closure of Dartmouth Road. EIAR statement that loss of 30 parking spaces will result in a slight negative effect cannot be justified. Contrast with Albert College, where the loss of 42 spaces is deemed to be significant. Lack of mitigation proposals. No detailed modelling of the impact of a pedestrian crossing on Grand Canal. EIAR states it will have a minimal impact on driver delay, but even from observations it is evident that there will be an adverse impact. Significant concerns about pedestrian movements. This is an interchange station with Luas and most of the movement will be focussed on the area in front of Carrolls Building, reliant on substandard stair access. EIAR acknowledges in A9.2 that the pedestrian environment along Grand Parade is deemed to be unsatisfactory. A traffic light on Grand Parade must have a traffic impact. No assessment of the pedestrian movements along Dartmouth Road, which is a significant deficiency. Canal is a barrier for pedestrians. Lack of access to the north side of the Canal will force pedestrians along the narrow pathways on Grand Parade. Provision of a staircase to the Luas station will not mitigate this. No effective provision for drop-off. Taxi, bus and car users are not appropriately catered for. Interchange with other modes is inadequate and will result in ad hoc drop off affecting access, traffic congestion and hazard. Very significant impact upon residential amenities due to the lengthy construction period, noise and vibration impacts, station construction, tunnelling and boring. Noise impacts on properties in the vicinity will all range from moderate to very significant. Hours of construction will have very significant impact upon this residential neighbourhood. Operational phase train noise, noise from PA systems, passengers, taxis and cars. Detailed impact upon amenities addressed in submissions for Dartmouth Square West and Dartmouth Road.	

		TII's engagement with the public and local communities has been wholly unsatisfactory. They have not engaged in a meaningful manner to address concerns and properly mitigate impacts. Engagement delegated to RINA. The full implications of the final and fixed alignment at Charlemont have never been the subject of public consultation and the station box at Charlemont was a predetermined factor. Residents of Manders Terrace, Charleston Road and Oakley Road have never been advised that their houses would be demolished in the event that the future tie-in should happen. It is legally unsafe for the Board to consider the current application. Board is requested to seek legal advice in relation to whether: it can consider application reliant on an element which falls outside the application (i.e. the Charlemont Station Box) and for which permission has not been obtained; the EIAR has properly assessed the enabling works at Charlemont Station; enabling railway works that form an integral part of the MetroLink project shall form part of the RO application; it is in a position to consider any RO application involving retention of enabling works, noting the EIA Directive. Board is requested to appoint its own independent specialist engineering advice to undertake a city centre terminus study and to assess rail alignment, station location and design on the sections south of Tara Street Station and the need for the 350m turnback facility. Requested amendments: - Omit the section from Tara Street Station to Charlemont Station and onward tunnel extension and intervention tunnel. - Require the submission of a RO for a section from Tara Street Station to St. Stephens Green which would provide for a terminal hub station integrated with the Luas Green Line and future DART underground. <u>Submission accompanied by:</u> - List of residents. - Senior Counsel Legal Opinion ('Re: Unlawful Station Box Construction at Proposed Charlemont Stop'). - Implications of locked-in alignment of the Charlemont Station Box.	
S43	~~Ciaran Black and Leon McCarthy~~	WITHDRAWN	
S49	Colm and Caitriona Warfield	Resident of Dartmouth Square, Ranelagh, Dublin 6. Same submission as submission S15.	No
S51	Conor and Lorraine Power	Residents of Dartmouth Square, Ranelagh, Dublin 6. Generally same submission as submission S15.	No

		Subsidence, settlement and structural damage concerns. Noise and vibrations not adequately assessed.	
S60	Denis McLoughlin and Teresa Reid	Residents of Dartmouth Square, Ranelagh, Dublin 6. Application is in breach of the terms of an agreement entered into between TII and the observers. Proposals includes 8.5 years of major and deep construction works c. 14m from the back wall of their home. EIAR is inadequate in addressing the noise and vibration issues. Building work at 2 Grand Parade, which were further removed and at shallower depths, caused vibrations that damaged their property. Material impact on value of their home. Protection of their home was the reason they entered into a legal agreement with TII which this application breaches. Charlemont is a very poor location for the terminus. Poor connection to the Luas (400m walk), one side is Grand Parade which is busy with no parking and on the other is Dartmouth Road a residential area unsuited to heavy traffic flows. It creates a bias towards cannibalising the Luas line in any southern extension, instead of serving other areas. Terminus at St Stephens Green would save €700m, provide better connectivity to Luas and Dublin Bus.	No
S65	Diarmuid Burke	Resident of Dartmouth Square, Ranelagh, Dublin 6. The original study was on the basis of Swords to Sandyford. There has been no major study done on the proposed terminal at Charlemont. Since the initial proposals, there has been substantial increase in housing development to the west of Dublin. It is inconceivable that this new development will not be linked into the new Metro. The proposed development of the Luas Green Line to build the Metro on the south side would be reprehensible. Why would anyone think that to modify the Luas by cutting it off at Charlemont makes any sense. If the Metro were terminated at St Stephens Green, it would give the most potential to link in with major new developments to the west of the city. Plans for redevelopment at O'Connell Street and St Stephens Green Shopping Centre support terminus in city centre. Narrow warren of streets around Charlemont and narrow footpaths on canal make dissipation of large throngs of people problematic. It is not clear how the boundary with the former Carrolls building will be handled and whether it will be secured at evening times.	No

S81	Edward Kelly and Joyce MacRedmond	Residents of Cambridge Terrace, Ranelagh, Dublin 6. Similar issues as submission S15 as well as the following: - Ask TII/NTA to lay out the assumptions underpinning the last part of their Metro plan. Reflect on whether this really is the best option for a centre city terminus and inquire further when they tell you St Stephens Green won't work, as independent engineers state that there is no technical reason why they can't use St Stephen's Green and that it seems like the most obvious place to put it. - Satisfy yourselves that Hines, acting on behalf of NTA, had permission to build the foundations for a Metro station before the RO approval or approval from the Minister and a budget from the Dept. of Transport.	No
S83	Elisabeth Vandenberghe	Resident of Dartmouth Square, Ranelagh, Dublin 6. Same submission as submission S15.	No
S84	Emir McDonagh	Resident of Dartmouth Square, Ranelagh, Dublin 6. Same submission as submission S15.	No
S86	Erica and Bryan Dalton	Residents of Palmerston Road, Rathmines, Dublin 6. Owner of property at Dartmouth Square, Ranelagh, Dublin 6. Same submission as submission S15.	No
S91	Eveleen Coyle	Resident of Oakley Road, Ranelagh, Dublin 6. Same submission as submission S15.	No
S100	Geraldine Ann Cusack and Geraldine O'Connell Cusack	Residents of Dartmouth Square, Ranelagh, Dublin 6. Similar issues to submission S15, as well as the following: - St Stephen's Green to Charlemont link cannot be justified in planning terms and undermines the business case for the entire project. - Terminus at Charlemont should be refused due to construction impacts, operational impacts and conservation area property issues and community impacts. - Construction noise impact assessment is inadequate due to duration of construction and internal noise levels. Impacts on home working over this duration. - Settlement and potential subsidence impacts on protected structures. - Hydrogeological assessment is inadequate as it has not been based upon local bore hole logs. - Construction phase is a medium term effect which has not been properly considered. - Intolerable traffic generation on quiet residential roads. - Human health impacts. - Operational impacts from trains and ventilation on residential amenity.	No

		- Rat running between Ranelagh Road and Grand Parade. - Overall impact will be in material contravention of the Z2 zoning objective. - Permanent acquisition of part of the rear laneway will legally impede rights of access. - Permanent loss of part of the laneway will impact upon the amenity and value of retained land/property. - Devaluation of property. - Owners' costs of engaging in the process should be borne by TII. - Anti-social behaviour.	
S105	Godfrey Gillett	Resident of Dartmouth Square, Ranelagh, Dublin 6. Same submission as submission S15.	No
S107	Grace Maguire	Resident of Dartmouth Square, Ranelagh, Dublin 6. Similar issues to those raised in submission S15 as well as the following: Using Charlemont as a terminus will prejudice the future evolution of the network. TII missed deep sewer under canal and when it was pointed out they changed the plan to make Charlemont the Terminus. Documentation submitted has all the appearance of documents hurriedly put together. Witness the extension of the deadline due to the inadvertent omission of key documents. NTA's record in managing a project of this scale is highly questionable. They failed to note the presence of a major sewer along the Grand Canal and the €25m they spent at Mater Hospital will have to be written off.	No
S108	Grand Parade Property Trading Company DAC	Submission relates to commercial development site at 2 Grand Parade, Ranelagh, Dublin 2. Charlemont Station takes in significant northern portion of permitted development site currently under construction (Reg. Ref. 2373/17; ABP Ref. ABP-300873-18 as amended by Reg. Ref. 4755/19, 3486/20, ABP-309011-20). Permanent and temporary acquisition of lands within the site of the development is proposed. Observer seeks reconsideration of land take extents and substratum acquisition. Supports MetroLink but numerous observations. Apparent mapping errors. Parts of development nearing completion is included in land take. Lack of clarity regarding nature of acquisition (i.e. substratum). Permanent land take should only take in the elements of ground level development (escalators, vents, station building etc.). Temporary land take must exclude building footprint and lands required for maintenance, access and operation. Extent of acquisition differs from previous agreements. Proposed lift and stairway to the west of Carroll's Building would obstruct a designated fire escape route, create risk of fire spread, impact on the protected structure, and give rise to privacy issues within the office	No

		building. Additional information needed for pedestrian traffic flow and capacity. It is not acceptable and should be relocated. Proposed escalator location interferes with access to the development, loss of trees, and impacts on fire escape route. A min. 5.5m carriageway and 2m footpath is required. Further details sought on paving, landscaping and design treatment of vents, lift shafts etc. Impact on brick and stone wall forming part of the curtilage of protected structures adjoining the site. Loss of car parking spaces and impact of cycle parking spaces on fire escape route. Clarifications sought on blasting and mitigation measures. Construction phase noise and vibration impacts. Operational phase noise and vibration impacts. Construction sequencing and phasing concerns and access to building and basement during construction. Ground settlement and potential impacts. Pre-construction survey of all assets required and mitigation measure to ensure reinstatement. Maintenance of services during construction. Strategy for the future replacement of large plant items and station equipment should be submitted. Fire safety concerns and requirement for entailed fire authority engagement. Estate costs should be apportioned to the applicant to cover repair and maintenance of lands over which Metro users will pass. Periodic cleaning required during construction and maintenance of M&E equipment. <u>Submission accompanied by:</u> - Architectural report, Henry J Lyons Architects. - Engineering Technical Note, DBFL Consulting Engineers. - Fire Safety Note, Michael Slattery Associates.	
S114	Helena Kelly	Resident of Dartmouth Square, Ranelagh, Dublin 6. Generally same submission as submission S15. Development would lead to anti-social behaviour. This is relatively quiet residential area but the potential for late night arrivals, taxi pick-ups/drop-offs and anti-social behaviour would disturb residential amenities and alter the nature of the area.	No
S120	Ian and Eva Sutherland	Residents of Leeson Park, Dublin 6. Same submission as submission S15.	No
S126	Irene Sorohan	Resident of Northbrook Road, Dublin 6. Supportive of MetroLink to connect the city centre to Dublin Airport.	No

		Charlemont is the incorrect strategic location for a terminus hub and spoke system. St Stephens Green is the most appropriate location as it provides for interchange with bus, LUAS and future DART Underground. Project incorrectly dismisses St Stephens Green West as an appropriate terminal station. No comprehensive study has been completed on the optimal location for a city centre terminus. Request that: - Section from Tara Street Station to Charlemont Station (and onward intervention tunnel) be omitted. - RO be submitted for a section from Tara St. Station to St Stephen's Green which would provide a terminal hub station integrating with the Luas Green Line, bus routes and future DART Underground.	
S136	Cllr James Geoghegan	Supports submissions made by Metro South West Group, MetroRethink Group and the residents of Dartmouth Road, Dartmouth Square and Cambridge Terrace. No assessment of continuing the MetroLink as far as Tallaght. This merits consideration for future planning of Dublin. Feasibility Study makes clear that the continuation of MetroLink to Southwest Dublin is technically feasible but not necessary until after 2042. In 2019 the now Minister for Transport advertised plans for a Metro South West as well as a Metro to Knocklyon and UCD. He made clear his preferred route was to Harolds Cross, Terenure, Knocklyon, Firhouse and Tallaght. We have to demonstrate the bold ambition that Eamon Ryan TD proposed when in opposition. If the tunnel is bored as far as Manders Terrace, it is difficult to see how MetroLink could be extended to include suburbs such as Portobello, Lower Rathmines and Harolds Cross. The Board should consider which parts of the proposed Railway Order should be granted now to allow construction to proceed as soon as possible and which parts could be either amended or reconsidered. Application should be futureproofed so that a decision today does not limit the possibilities for the Metro into the future.	No
S138	Jamie Maher and Others	Residents of Dartmouth Road, Ranelagh, Dublin 6. Same issues as submission S15.	No
S142	Jim O'Callaghan TD	Supports MetroLink from Estuary to City Centre. Does not support the proposed terminus at Charlemont. The Government decision permitted the construction of MetroLink from Estuary to the City Centre, but Charlemont is not in the City Centre. The terminus should be at St Stephen's Green.	No

		Dublin City will require a metro to the south west of the City in the near future and Charlemont would rule out this later development. Believes that the decision to terminate at Charlemont is in order to predetermine any future expansion of the line so that it runs along the Luas Green Line. This has already been rejected by the Government and TII should not be permitted to tie the hands of any future Government. Many areas of south west Dublin do not have any rail infrastructure. The overall project objective for MetroLink as established by NTA and TII is to provide “a sustainable...and accessible public transport service between Swords, Dublin Airport and <u>Dublin City Centre</u>”. TII is seeking to circumvent this aim and objective by proposing a terminus at Charlemont.	
S144	John A Ryan	Resident of Dartmouth Square, Ranelagh, Dublin 6. Similar issues to those raised in submission S15 as well as the following: - NTA have failed to provide adequate impact studies and those supplied have all the appearance of documents hurriedly put together. - NTA's record in managing a project of this scale is highly questionable. They failed to note the presence of a major sewer along the Grand Canal. The €25m investment at Mater hospital for a station box will have to be written off.	No
S145	John and Josianne Bullows 1	Residents of Dartmouth Square, Ranelagh, Dublin 6. Opposed to the acquisition of land under their property, both in terms of disturbance and vibration which would affect the integrity of their house and be cause of devaluation. TII admitted at a MetroLink meeting that it would be possible to position the Metro under the Carroll's building. This would be a better solution. Positioning the terminus at St Stephen's Green would allow passengers to avail of other forms of transport. Charlemont has no bus stops, coach stops or taxi ranks on the boundary roads. To introduce them would be creating unimaginable chaos. Canal road is congested and blocked in morning and evening. Dartmouth Road would become the point of entry for cars, buses, coaches and taxis with devastating consequences for residents. Logical location for terminus is St Stephen's Green. Added cost of tunnelling to Charlemont cannot be justified as there are no advantages.	No
S146	John and Josianne Bullows 2	Residents of Dartmouth Square, Ranelagh, Dublin 6. Same issues as first submission.	No
S149	John Conway and Orlaith McCarthy	Residents of Dartmouth Square, Ranelagh, Dublin 6. Similar issues to those raised in submission S15 as well as the following:	No

		- Entire Dartmouth Square is designated as an ACA and all of the dwellings are protected structures with a Z2 residential conservation zoning. - City Centre terminus is blatantly inconsistent with the zoning objective. - Intolerable noise, vibration, subsidence during construction and the situation will get worse in the operation pl phase in terms of noise, vibration, subsidence risk and traffic congestion. Structural damage concerns. - Observers are in their late 60s and this project is a life sentence given its duration. Property will be unsellable during this period.	
S151	John Loughrey	Resident of Cambridge Terrace, Dublin 6. Same issues as submission S15.	No
S153	John Neary and Kathleen White	Joint owners of properties at Cambridge Terrace and Dartmouth Road, Ranelagh, Dublin 6. Similar issues to those raised in submission S15 as well as the following: - During the 9 year construction phase, the house at Dartmouth Road will be uninhabitable and access to and enjoyment of house at Cambridge Terrace will be severely compromised. - During the operational phase, the noise, vibration, light, traffic and influx of people using the station will significantly impact on their quality of life and property value. - Support the submissions made by the Charlemont and Dartmouth Community Groups and on behalf of Dartmouth Road residents. - No direct communication from MetroLink about how their property will be affected. Property not included in Book of Referenced and no communication regarding acquisition of substratum land. - Not given any information on noise, access, dust, compensation, subsidence, relocation expenses, security. - No assessment of operational phase noise and air emissions from overtrack ventilation system to be located directly opposite their house. - Inability to access electric car charging point in the courtyard of their house due to proposed pedestrian crossing. - Proposal will turn a Z2 zoned quiet residential area into the forecourt of a busy terminus station. - Loss of mature trees. - If the construction at Charlemont is permitted, require the provision of adequate mitigation measures to protect the owners of residential properties significantly affected. - Require the relocation of the proposed pedestrian crossing directly outside No. 35 Dartmouth Road.	No
S157	Karen Colgan	Resident of Dartmouth Road, Ranelagh, Dublin 6.	No

		Same issues as submission S15.	
S159	Kathleen McDonagh	Resident of Cambridge Terrace, Dartmouth Square, Dublin 6. Same issues as submission S15.	No
S161	Kevin Maughan	Resident of Leeson Park, Dublin 6. Same issues as submission S15 as well as the following: - Halt any current construction at Charlemont until the station box constructed in 2021/2022 by Hines has received the benefit of full planning permission.	No
S164	Kohlin Lourenco	Resident of Dartmouth Terrace, Ranelagh, Dublin 6. Same submission as submission S15.	No
S166	Leo and Anne Crehan	Residents of Dartmouth Square, Ranelagh, Dublin 6. Same issues as submission S15 as well as the following: - Locating part of the Charlemont station box within the curtilage of their property, so close to the Victorian masonry walls of their protected structure should not be regarded as being in accordance with the proper planning and development of the ACA. - Level of noise, vibration and disturbance combined with its duration will render their house uninhabitable. - The application is in breach of agreed terms between TII and the observers. TII agreed a position prior to the application and in those circumstances, it is submitted that they ought to amend the application to comply with the terms of what was previously agreed.	No
S172	Louisa Gannon	Resident of Dartmouth Square, Ranelagh, Dublin 6. Same issues as submission S15.	No
S190	Michael A Doyle and Carmel Smith Doyle	WITHDRAWN	
S192	Senator Michael McDowell	Charlemont is not suitable for interchange. Roads are narrow and drop-offs will cause congestion. Bus routes run through Rathmines, Ranelagh and Terenure and will require walks of at least 10 minutes, creating difficulties for people with disabilities or mobility issues. St Stephen's Green station presents similar issues. Green Line will have to be closed for two years while Charlemont Station is being constructed. Impact on commuters living on the Green Line. Local residents at Tara Street affected by proposed demolition have been left in limbo. Impact on historic Dartmouth Square residential quarter due to deep interchange. Impact on Carlton Cinema and other neoclassical and art deco buildings. MetroLink terminus should be in Dublin South West.	No

		Rethink MetroLink transport strategy submission should be reviewed. Money to be spent on MetroLink could be invested in other areas, such as light rail which would not be as disruptive.	
S203	Niall Parsons 1	Resident of Dartmouth Square. Supportive of MetroLink on the north side but not in agreement with what is proposed on the south side. Justification for Charlemont is weak. MetroLink requires a city centre terminus. Government approval is for metro terminating at a city centre location. Charlemont is not currently served by multiple current modes of transport. Other options for the southern MetroLink terminus should be examined by NTA/TII. They should substantiate with evidence the facts that Charlemont is the 'optimal' location when compared to other potential locations, e.g. St Stephens Green. Should the terminus be at St Stephens Green then the track projection could be to Iveagh Gardens. Alternatively, Iveagh Gardens would be suitable for a terminus with multiple exits and connections to transport services. Charlemont is a cramped residential urban site with limited space, no bus links, no space for setdown or room for taxi ranks. Interchange with Luas is poor and not adequate in size for projected passenger numbers. Charlemont will become "the" single access point for MetroLink for the whole of the southside. This ACA has never been envisaged as a suitable location for a major transport hub in any Development Plan for Dublin City. Impact on protected structures. Operational phase noise, nuisance, light pollution and traffic. Residential amenity impacts. Excessive cost of duplicating a portion of the Luas Green Line.	No
S204	Niall Parsons 2	Owner of No. 1 Dartmouth Square but he is not named in the Book of Reference. He has been issued with and has received documentation issued by TII. Submission reiterates points raised in earlier submission and raises other issues as per other residents of Dartmouth Square.	No
S207	Nicola O'Doherty	Resident of Dartmouth Square, Ranelagh, Dublin 6. Same issues as submission S15.	No
S259	Proinsias Mac Fhlannchadha	Supports MetroLink, with the exception of the Charlemont portion. Any references to Draft transport plans are premature. It is stated that the New Metro North is a modified version of the original Metro North proposal, which ran to St Stephens Green. There is no requirement nor policy for the metro to extend beyond the Green. Any	No

		extension to Charlemont is included in the Metro South/Luas Green Line Capacity Enhancements, both of which have been removed in the Draft Dublin Strategy. Charlemont is a poorly serviced station with poor amenities. JASPERS external technical assessment 2022 noted that the connection to Charlemont is no longer considered a priority by the independent review team. They note that this section makes the project expensive and state that it could feasibly be deferred until there is clarity on the future of the Luas Green Line. Continuing to Charlemont is poor project planning and a waste of money and may jeopardise further expansion plans to the south west.	
S264	Rethink MetroLink	Group whose membership is drawn from the communities along the Luas Green Line, Charlemont to Milltown. Contradiction between the 'second phase project' (upgrade of Luas to metro standard) and the stated strategy of NTA to develop new Luas lines serving UCD and Knocklyon/Rathfarnham to take pressure off the Green line. Board should only approve the project as far as St Stephens Green. Continuing to Charlemont is unnecessary, premature and lacks coherence in the absence of any firm plan for future extension. Charlemont only became "the" major southern hub by default. The original strategy for the 'emerging preferred route' was based on a north-south spine, not a 'hub and spoke' model. No comprehensive study of a hub and spoke model has been carried out. St Stephens Green is the best location for an interim solution terminus due to better connectivity and nature of surrounding land uses. Overwhelming case to extend MetroLink to the south west. NTA is attempting to prejudice and limit the opportunity for future phases of MetroLink to support under-served areas to the south west. JASPERS review concluded that the Charlemont connection was not a priority and could be deferred. Transport solutions should be based on a strategic approach with an integrated plan. No need for Luas Green Line upgrade to metro. Inadequate consultation and lack of engagement with TII and NTA.	No
S267	Rita Marie Harvey	Resident of Cambridge Terrace, Ranelagh, Dublin 6. Same submission as submission S15.	No
S286	Suzi Taylor and G.I Taylor	Residents of Dartmouth Road, Ranelagh, Dublin 6. Terminus at Charlemont is misplaced in a domestic housing community. Continuous light and noise. Huge implications for local community and amenities and the listed Victorian houses.	No

		Terminus should be at Tara Street. No study has been completed on the most suitable location for a city centre terminus. Duplication of Luas Green line and extremely costly and disruptive. Locks in a south direction for a future Metro development. Difficult link between Charlemont Luas and the proposed metro, particularly for those with disabilities, mobility issues and luggage. Congestion on Grand Canal Road. Station box built at Charlemont without the benefit of planning permission. Impacts on residents of Dartmouth Road over 8-10 years of construction, including traffic impacts, noise, vibration, dust and possible damage to Victorian properties. Vital that residential parking be reinstated and access for emergency vehicles be provided. Settlement concerns due to piling works. Excessive hours of construction could be up to 70 hours per week. Barriers at 6.4m high leave upper rooms of 32 – 34 Dartmouth Road exposed to noise, dust and lack of privacy. Impact on Dartmouth Square park. Health issues due to noise and disruption. Impact on property values.	
S293	The Foley Family	Residents of Orchard Lane, Ranelagh, Dublin 6. Family of five living in two houses on Orchard Lane. Disturbance to structures and integral stability. Anxiety for family due to impact of underground works on house which has been designed for old age use. Charlemont is the wrong location for a city centre terminus.	No
S300	Tom Harrington	Resident of Dartmouth Road, Ranelagh, Dublin 6. Selection of Charlemont rather than city centre terminus is a huge cost to the taxpayer and prejudices options for expansion of the network in the future. Why replicate Luas Green Line? The environs of Charlemont are a residential area, not a city centre location. A city centre location has a high number of trips attracted and generated and there is scope for increased densities in the city centre. There is very limited scope in the area around Dartmouth Road/Dartmouth Square. Noise, vibration, disturbance and impact on amenities due to duration of works and construction hours.	No

		No effective provision for drop-off at this important interchange. Interchange with other modes is poor. Taxi, bus and casual private car users are not appropriately catered for. Drop off on Grand Parade will result in traffic congestion and traffic hazard as it cuts across the existing cycle lane. Potential for antisocial behaviour. It is unclear if it will be possible to access or reside in his house during construction.	
S305	Union Investment Real Estate GmbH	Same submission as submission S108 (Grand Parade Property Trading Company DAC)	No
S306	University College Dublin (UCD)	Welcomes the Railway Order application for MetroLink but disappointed that the route will not directly serve the UCD campus at Belfield. As the single largest generator of trips within the GDA, they would strongly request consideration of the future potential to extend the proposed MetroLink to UCD in the longer term. A step change in the delivery of public transport frequency, capacity and connectivity to and from the campus is critical. When the Station at Charlemont is open it will be essential to provide integrated and seamless connections between Charlemont and the Belfield Campus. Note and welcome that connections between UCD and Charlemont will be supported by BusConnects and the GDA Cycle Network. They remain optimistic for the development of future light rail connections between the MetroLink route and UCD. While welcoming the identification of additional Luas lines as identified in the Draft GDA Transport Strategy, including the Green line reconfiguration to provide line from the City Centre to Bray via UCD and Sandyford, they are disappointed that this is not planned for delivery until after 2042. They would welcome continued engagement with NTA and TII and request consideration of the future potential to extend the MetroLink to UCD in the longer term.	No
S307	Upper Leeson Street Area Residents Association	They recognise the convenience of Charlemont Station for residents throughout the area but are also acutely alert to the concerns of many residents in the immediate vicinity and share their concerns that unregulated or poorly regulated surface transport delivering passengers to and from the Metro Station could impact negatively on the quality of life. As the most southerly station, Charlemont faces unique problems. It will represent an attractive kiss-and-ride location and rendezvous location for those arranging taxi and private car collection. Impeded access, abuse of parking spaces, illegal parking and obstruction of cycle lanes can all be predicted. This must not occur.	No

		TII and DCC should be required to agree, implement and enforce a rigorous surface transportation management plan specific to the Charlemont area. This will require on-foot patrolling by authorised enforcement personnel and an adequate budget for enforcement should be part of the plan. It should be a requirement that representatives of the local community are consulted on the development and implementation of the plan.	
S319	Yvonne Allen	Resident of Dartmouth Square, Ranelagh, Dublin 6. Same submission as submission S15.	No

General or Not Specific to One Area			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S2	ACRA Association of Combined Residence Associations	The Newton Transport Plan, developed by ACRA, is a better alternative to MetroLink which can be delivered quicker with less environmental disruption and greater impact on reducing car use. It involves an orbital Luas, two additional Luas lines into the city centre and a G-Link Luas. Additional bus loops would also be provided. Board is asked to refuse permission on the basis that MetroLink is wasteful and does not address climate change in an adequate manner. It does not provide public transport for the GDA but serves a small section in an inefficient manner.	No
S54	Cormac McKay and Aeravai	Excessive cost of proposed development. Metro technology is obsolete, given developments in Autonomous Electric AI controlled vehicles, such as Robotaxis, delivery drones and passenger eVtol aircraft. Autonomous vehicles may cause Dublin Airport passenger numbers to decline in the 2030s and make the project commercially unviable. Alternative proposed of smaller tunnels with autonomous Robotaxis, similar to that built by the Boring Company in Las Vegas. NTA dismissed observer's proposal. Impacts associated with duration of project, construction consequences and health effects of underground rail.	No
S55	Dan Coulcher and Paula Fyans	Supportive of proposed development. Lack of adequate public transport has resulted in strong reliance on car-based commuting.	No

		Luas has been transformative for people living near it. Unthinkable for a capital city as prosperous as Dublin not to have a rapid rail link between the Airport and the city centre.	
S56	DECC Geological Survey Ireland	County Geological Sites: - GPO is a CGS due to use of Irish marbles in interiors. - Glasnevin cemetery is a CGS due to variety of rock types and way they have been uses. - No envisaged impacts on the integrity of the CGSs. Various GSI datasets and data viewers are available and should be utilised. GSI would appreciate a copy of site investigation reports and records of significant new excavations.	No
S67	Donal O'Brolcáin	Proposal will not enhance public transport options within those parts of the Dublin Area in which most journeys take place. It is a standalone non-integrated project. Route does not cater for Drumcondra corridor which has the greatest demand for enhanced public transport. Route was the outcome of a deeply flawed process. Enhancing public transport between the city centre and the Airport can be done by other methods. Peak airport passenger times do not correspond with peak commuting times and MetroLink capacity will not be needed for decades. Observers engaged with NTA and TII over a number of years during strategic transport planning and route option consideration. Drumcondra wasn't properly considered. A North Dublin Luas Loop would provide an integrated and comprehensive public transport option for the city (details provided in submission). Instead of tunnelling under Ballymun Main Street, the 6 lane roadway should be reduced with traffic put underground to improve the streetscape, reduce severance and reduce cost of underground Metro station. Board is asked to refuse the application. <u>Submission accompanied by:</u> - Extensive submissions and correspondence between observer and TII and NTA including various reports.	No
S72	Dublin Commuter Coalition	Strongly support the proposed development. MetroLink needs to be permitted and built as soon as possible. MetroLink should operate on a 24 hour basis, given it connects to 24 hour bus routes and noting Dublin Airport's first wave of departures depart between 06:15 and 07:30.	No

		Additional cycle parking should be provided to meet demand. Accessible cycle parking should be provided at all stations. More secure parking and monitoring should be provided given that theft of bicycles is common in Dublin. Any temporary changes to road layouts during construction should respect the Hierarchy of Road Users rather than seeking to maintain uninterrupted access for private cars. It is important to avoid a repeat of the current accessibility crisis plaguing the DART system, where multiple lifts have been out of service for weeks at a time. Station designs should have redundancy for continued access, with multiple lifts or lifts and ramps depending on station type. At Glasnevin Station, the Irish Rail platforms should be built with escalators. All major stations should have public toilets, not just the main interchange stations.	
S92	Fáilte Ireland	Fully supportive of proposed development. Tourism and transport go hand in hand. International tourists expect a high quality transport system and the vast majority do not hire cars but use public transport and walk. Integration with other transport modes will create an integrated transport network and enable sustainable visitor movement and transit to regional towns and cities. Proposed development will help to decarbonise the transport sector and aid in climate action.	No
S98	Frank McDonald	Absence of joined up thinking – this is a stand-alone project that doesn't make sense on its own terms and would need to be extended southwards in order to do so. Change from Metro North to MetroLink results in demolition of College Gate apartment building, Markievicz Leisure Centre, excavation of east side of St Stephens Green, relatively remote from the Luas stop and Grafton Street, and writing-off of €25m investment in installing a metro station box under the Mater Hospital's new main block. The most strategic public transport project for Dublin is DART Underground, not MetroLink. NTA has engaged Jacobs to examine options for the project by shortening the tunnel. NTA has decided to develop Luas lines to UCD and Knocklyon/Rathfarnham to take pressure off the Luas Green Line and remove the need to upgrade it to a metro south of Charlemont. They are making it up as they go along. Why is the plan to terminate at Charlemont being pursued? This was raised by the Board in pre-application consultation. Abrupt termination will add immensely to the cost. Station at Drumcondra rather than Glasnevin would be better, given proximity to Luas Green Line and distance from Croke Park.	No

		More 'joined up' thinking is required to integrate all public transport modes. North South Ministerial Council agreed in 2020 to commission a study on the possibility of Belfast-Dublin-Cork high-speed rail line. This should be routed through Dublin Airport and it would make little sense to have two tunnelled rail links serving the Airport. Loss of architectural heritage on O'Connell Street. The combined impact of MetroLink and the Hammerson scheme will fundamentally change the character of the street. Profound impact on St Stephens Green. Demolition works at Tara Street would be the most serious negative impact of the MetroLink project due to the loss of 80 homes and the leisure centre. The entire city block bounded by Tara Street, Poolbeg Street, Hawkins Street and Townsend Street has been cleared in recent years for redevelopment and a station box could have been provided on that site, however this was overlooked by TII. The Board must examine the proposal objectively. The abrupt termination at Charlemont is the Achilles heel of MetroLink. The line should be extended to Rathmines, including the site of Cathal Brugha Barracks, and onwards to Harold's Cross, Terenure, Templeogue and terminating in Tallaght. The omission of the Tara Street station and a more direct alignment from O'Connell Street to St Stephen's Green should be considered.	
S101	Gerard F Brouder	Proposed development is too expensive and serves only to get to the Airport with no local links. Board should look at Bordeaux tram system. There are no overhead cables and a number of interchanges. A drawing indicating a possible route is submitted.	No
S128	Irish Georgian Society	The location of MetroLink beneath some of Dublin's most architecturally important and sensitive areas is a cause for concern. It is proposed to appoint a Project Conservation Architect, but it is not indicated what accreditation they will be required to have. IGS recommends that the appointee be a RIAI accredited Grade 1 Conservation Architect and that a Conservation Engineer be also engaged. It is essential that the Conservation Architect has sufficient resources to have ongoing access to an adequate number of conservation professionals. IGS has concerns about the permanent removal of parts of structures of architectural interest. A long-term plan for such items should be put in place and agreed with DCC Conservation Office. A clear agreement for the removal, storage and reinstatement of relevant features to be temporarily removed should be put in place with DCC Conservation Office.	No

S134	Ivana Bacik TD	Supports submission by Duncan Smith TD. MetroLink is a vital addition to the public transport options for Dublin. Luas became overburdened within years of its construction. Avoiding such a situation with MetroLink must be a priority. Constituents concerns at the lack of light rail in South West Dublin and the superiority of St Stephens Green as a terminus for such future expansion are noted and should be taken account of if deemed material.	No
S148	John Bernard Reid	MetroLink is a vital and necessary piece of national infrastructure that is decades overdue. It is unsustainable and incongruous that Dublin does not have a rail link to the Airport. Road space is finite and an underground rail is needed to grow public transport capacity. Situation of the terminus at Charlemont is indispensable to allow for the eventual extension of the line to the South and South West or to UCD. Park and Ride at Estuary station should be approved and increased. The Board is asked to avoid delays such as oral hearings so that the Metro can be built while the political will and funds are available.	No
S150	John Lawlor	A major weakness of the proposal is that it doesn't link with Connolly Station. Connolly is the most important station in the country and the most important to interconnect to. This would eliminate the need for a station at Tara Street. Construction works at Connolly would be less disruptive. Connolly has operational advantages over Tara Street and O'Connell Street stations. Proposed development would be sub-optimal from a planning and transport policy perspective.	No
S198	National Disability Authority	TII should make use of recent guidance on consultation and communications with disabled people. TII should adopt a Universal Design approach for every aspect of the project. NDA welcomes TII engagement with the Luas Disability User Group. User testing is also an important element of engagement. Bollards at stations may represent obstacle to wheelchair users, prams, people with luggage etc. Details on ramped access should be provided as long or steep ramps can lead to further barriers for disabled people. Details on how pedestrian underpasses will be accessible to wheelchair users is sought. A great deal of care and attention should be paid to road crossing locations. Potential for conflict between cyclists and pedestrians due to cycle lane locations and shared spaces. Tactile paving should be provided to aid wayfinding.	No

		Public toilets should be provided and accessible. Changing Places toilets should be provided.	
S199	National Transport Authority	MetroLink is a national transport priority. Proposed development is central to a wide range of national, regional and local policy objectives. Proposed development will deliver a high capacity public transport service to Dublin Airport for the first time. NTA has reviewed the scheme in detail with TII throughout its development, prior to lodgement of the application. Concerns raised in consultation regarding the onward extension on the south side have been addressed by the determination to terminate the scheme at Ranelagh. The proposal would readily accommodate an extension to the south west, the south east or along the Luas Green Line. Proposed development meets a wide range of transport integration objectives. NTA is satisfied that the Railway Order has considered the available alternatives and the views expressed in consultations and represents the appropriate approach to the public transport solution to meet demand. The proposed development will address a persistent legacy deficit in transport infrastructure and in the integration of land use planning and transport planning in Dublin.	No
S200	Neasa Hourigan TD	Supports proposed development. Local Area Liaison Committee should be put in place for community engagement. Defined timelines for temporary acquisition of local green spaces required. Replacement trees should be mature. Construction traffic and parking.	No
S205	Nicholas Mansergh	Examination of alternatives is flawed. Alternatives to Metro should have been optimised in the AECOM study. Board should ask for further information on a limited number of specified options considered in the AECOM report and expected cost-benefit ratios for comparison with MetroLink.	No
S208	Nigel Clerkin	Missed opportunity to extend the Metro to Tallaght, via Rathmines, Rathgar, Terenure and Templeogue. This would meet the transport demands of a growing population of commuters and take a large volume of motor vehicle traffic off the road system.	No
S256	Peter Schneider Energy Consultants	MetroLink will contribute very little to the goals of the NDP and contradict the goal of balanced regional development. It will improve connectivity only for a small area and will not be economically feasible to extend. It will not be possible to integrate it with Luas, DART or long-distance rail.	No

		As it does not connect to either of the main Dublin train stations nor to Bus Aras, connectivity with the wider Dublin area and the rest of the country will be poor. Heavy rail connection to the Airport would serve connectivity much better at a fraction of the cost. Enormous costs for rather small improvements and will lead to the cancellation or delay of projects with a better cost-benefit ratio.	
S257	Peter Twamley	Contradiction between the confirmed formal abandonment of the future conversion of the Luas Green Line and the current MetroLink proposal. Proposed route south of O'Connell Street fails to integrate with the Luas and rail systems in a sensible manner. Earliest design to join up and obliterate the Luas Green Line at Ranelagh remains in place and unchanged, despite the many objections. No alternative options were ever put out to public consultation. Feasibility study for south west Dublin Metro was flawed. No interconnection provided with DART Underground. Unnecessary diversion from O'Connell Street to Tara Street, rail and Luas is already connected via the Red Line. Impact on College Gate apartments and community facilities. St Stephens Green Station is on the wrong side of the Green from Green Line Luas and DART Underground interchange. Major environmental damage to Dartmouth Square residential quarter. Lost opportunities of connecting to south west Dublin and to Tallaght. No connection to Portobello, Rathmines, Harolds Cross or the Cathal Brugha Barracks site, the largest potential development site in the south city centre. Lost opportunity to ameliorate some BucConnects impacts, to protect the service life of the Luas Green Line by reducing passenger demand and reducing traffic on the N81. Financial impacts of proposed design options and alignment.	No
S262	Rathgar Residents Association	Missed opportunity to improve the transport needs of Dublin South West. Extending the metro to Rathfarnham/Knocklyon, serving Templeogue, Terenure, Rathgar, Harold's Cross and Rathmines would be a much superior option, allowing for a greater population catchment. This would take a large volume of motor vehicles traffic out of the road system, would reduce pressure on village and communities inside the M50 and allow for safer commuting for cyclists and pedestrians.	No

S266	Richard Guiney (Dublin Town)	Dublin Town supports the proposed development. Proposed development will assist in reducing transport emissions, increase public transport capacity and facilitate increased residential development. Interaction with other forms of public transport and active travel is noted. Significant bicycle parking should be provided. Speedy delivery of project is sought. Luas Cross City had greater potential for disruption than the proposed Metro. Cooperation between TII, contractors, DCC and the business community will provide a framework to enable the city to continue to function during the construction phase. The aligned development with the Hammerson Dublin Central development is welcomed by Dublin Town as it will minimise disruption to O'Connell Street. Dublin Town disappointed by short-sighted decision not to extend MetroLink to Sandyford. Extension should be planned for now. Metro South West also required and Luas Finglas should extend to Ballymun to connect to MetroLink.	No
S271	Ruadhan MacEoin	A dissertation undertaken by the observer in 2017 found that the rail plans for Dublin are based on maps in which the 5km line between Broombridge and Docklands was omitted, which could provide a pathway for airport trains, negating the need for the Metro to tunnel south of Cross Guns Bridge. An alternative to MetroLink would be two Luas lines linking Dublin Airport and Swords to the city centre, to address capacity issues of a single Luas line. A further alternative would be linking Dublin Airport to Charlemont via the Port Tunnel by Bus Rapid Transit. Any of the three options of linking Dublin Airport to the city centre by DART, Luas or BRT are likely to be more effective, require less work and capital and be delivered sooner. The Board is put in a difficulty by the current proposal as MetroLink has been conceived without proper inclusion of existing railways. The granting of consent is not justifiable. <u>Submission accompanied by:</u> - A copy of the observer's dissertation for the MSc in Urban Design at UCD dated 2017.	No
S272	Sadhbh O'Neill	Supports proposed development from climate action perspective. Extending the line from Charlemont to UCD should be considered.	No
S289	Terenure West Residents Association	Represent 600 houses in western Terenure. Needs of the area and the greater south west city will only be met by a metro into the south west city, including a stop in Terenure.	No

		Buses won't cater for the public transport needs of the area. Bad planning to have the south city terminus at Charlemont. It would prejudice future extension to the south west. The A spine of BusConnects will serve Terenure but does not intersect with the Metro on the south side. Each spine should connect to the metro at some point convenient to the city centre. Poor pedestrian infrastructure linking Rathmines Road to Charlemont. Lower Rathmines Road will have more than a bus per minute under BusConnects plans. Less than satisfactory connection between Metro and Luas at Charlemont.	
S298	Thomas Herlihy	MetroLink will encourage air travel and be bad for the environment due to CO² emissions. CO² emissions due to excavations, spoil dumping, manufacture of parts and trains, and structural works. Cost is very optimistic and is likely to be exceeded.	No
S301	Tony Graham	Stations should have more covered bicycle parking and designated hire bicycle parking. Public toilets should be provided at all stations. More station entrances should be provided. Underground or under cover access to the Airport station should be provided. Provision should be made for future underground connections to adjacent buildings.	No
S311	Voice of Vision Impairment	Meaningful consultation with disabled persons organisations was inadequate. Textual descriptions of drawings were requested but not provided. Shared spaces for pedestrians and cyclists are dangerous to visually impaired people. Concerns regards proposed use of toucan crossings and raised table crossings. No differential surfacing or sloping used to allow visually impaired people to locate a MetroLink station. No segregation of cyclists on plazas at stations. Concern regarding need for consistent help button locations at stations and non-intuitive wayfinding. No details given of Metro doors. Risk of people getting caught in the door if they are not on time. No information on delay times at stops and whether this can be extended, given that Metro is driverless.	No

Extend over Multiple Assessment Zones			
Ref. No.	Observer	Main Issues	Subsequent Agreement with TII?
S7	An Post	Welcomes proposed development. A number of An Post facilities are near the MetroLink route at Swords Business Park, Dublin Airport, North Circular Road, Rutland Place and the GPO. Any impact on An Post deliveries and access during construction phase could have a serious impact on ability to meet the postal needs of the public and agreed service agreements with the State. In the operational phase, An Post wishes to ensure that the level of traffic, including HGVs is safely accommodated. Substratum land acquisition below the GPO is proposed. The GPO is one of the most important architectural landmarks on O'Connell Street and any potential disturbance must be fully assessed in terms of the archaeological and architectural heritage significance of the building and from a user operation perspective.	No
S10	Andrew Whelan	TII has hamstrung the next generation of designers with the inappropriate selection of Charlemont at the southern terminus and insufficient airport stakeholder engagement to determine future capacity requirements at Dublin Airport. A Luas terminus spur to the St Stephens Green East Station, incorporating a tun-back should be the designated southern MetroLink terminus. The existing original Luas Green Line turn-back opposite the Shelbourne Hotel could be upgraded to a spur to provide minimal connectivity distance to MetroLink for passengers with luggage. Charlemont is not a suitable MetroLink terminus. TII rationale for Charlemont and consideration of alternatives is flawed. Lift and stair provision at Charlemont Luas stop is inadequate for volume of passengers transferring to/from MetroLink. Passengers will change to Luas Green Line at other locations given level changes and access arrangements at Charlemont and lack of capacity on southbound Luas's at that location. Terminus at St Stephens Green gives better future catchment/alignment options for south city suburbs. Line curvature restrictions at Charlemont may necessitate bypassing central Rathmines. Why are TII adamant about Charlemont? Is it because of investment in enabling works in advance of the Railway Order application or face-saving for executives?	No

		Application treats Dublin Airport as a normal in-line station but every passenger will have luggage in tow. This is the most critical station with respect to platform space. Airport cap on numbers is likely to be significantly increased. 65m platforms may not suffice for peak aircraft wave returns to the Airport. What is the theoretical safety limit for passengers entering the station? 1,000 maximum carrying capacity of MetroLink carriages or the equivalent 500 passengers with suitcases. DAA Airfield Masterplan and FCC LAP plan to extend the Airport into the Western Campus. As airport volumes increase to 55mmpa, when does TII see the 65m platforms becoming a constraint? How will passengers access the Western Campus terminal? A link spur would ensure that any future Western Campus Terminal can be linked up. MetroLink should be futureproofed.	
S44	Ciaran Cuffe MEP	Welcomes proposed development. Good quality infrastructure required for pedestrian, cyclist and disabled people. Integration with other public transport modes should be maximised. Vehicular infrastructure should encourage car sharing, park and ride, kiss and ride. Airspace above stations should be utilised for development. Low carbon concrete should be specified. Utility cabinets should be considered from the outset and integrated into the design and excessive signage avoided. Lighting should be sensitively designed to avoid lightspill and decrease in brightness if no people are present. Metro services should be provided on a 24 hour basis.	No
S46	CLG Na Fianna c/o Cormac Ó Donnchú	Na Fianna is the largest participatory sports and cultural community in North Dublin. A number of sites are directly and indirectly affected – St Mobhi Road and Collinstown Lane directly; and Albert College Park and St Vincents CBS indirectly. Supportive of proposed development. Many of strategic concerns have been addressed through dialogue with TII. Concerns remain in relation to the construction phase: - Works at St Mobhi Road site will severely impact local residents and sporting and educational institutions. Condition should be attached to stipulate that the full traffic and health and safety plans for this site are prepared in conjunction with stakeholders, to include representatives of educational, sporting and residents groups.	No

		- A process for monitoring and dealing with issues arising should be agreed prior to construction. In the event of recurring breaches, a process for independent adjudication should be put in place. - Seek clarification that works at St Mobhi Road do not disrupt the use of public facilities used by Na Fianna in Albert College Park. At Collinstown Lane, seek to ensure that all enabling works are conducted in a manner to minimise impacts on community activities.	
S50	Commission for Railway Regulation	Notification of the Board's decision is required to TII. Observations or issues raised by TII should be addressed. The party undertaking the work should consult with TII regarding road-rail interfaces on access routes which may have increased flow or abnormal loads during construction phase and upon completion.	No
S52	Córas Iompair Éireann	While land required for the purposes of transport services may be included in a CPO application, section 130 of the Transport Act 1944 precludes the compulsory acquisition of such land without the consent of the Minister for Transport. MetroLink would have significant impacts on Iarnród Éireann and Dublin Bus operations. Both companies and CIÉ are agreeable to work with TII with a view to facilitating access whilst ensuring that impacts are within acceptable levels. <u>Glasnevin Station</u>: CIÉ supports IÉ submission. <u>Dublin Bus HQ (59-60 O'Connell St. Upper/Henry Place, Dublin 1)</u>: Permanent acquisition of a significant portion of the facility is proposed. The building is a protected structure. CIÉ and Dublin Bus have had extensive engagement with TII and will work with them with a view to providing access. <u>Curzon House (35 Lower Abbey St., Dublin 1)</u>: Building is a protected structure dating from 1825, was destroyed in 1916 (other than the front façade) and rebuilt c. 1920. Substratum land acquisition is proposed and CIÉ requires that appropriate mitigation measures for noise, vibration and ground movement be applied. <u>2-16 Tara Street/Poolbeg Street/Luke Street, Dublin 2</u>: Substratum acquisition proposed of land on which CIÉ has entered into an agreement for lease with Tanat Limited for commercial development. Portions of IÉ track support structures also proposed to be acquired. CIÉ supports IÉ submission on this matter. <u>Lands at Library View Villas, Dublin 7</u>: CIÉ is not in occupation of these substratum lands and is agreeable to the proposed compulsory acquisition of any legal interest it may have in same.	No

		<u>Luas Green Line Embankment at Dartmouth Road/Northbrook Avenue, Dublin 6:</u> CIÉ is not in occupation of these lands and is agreeable to the proposed compulsory acquisition of any legal interest it may have in same.	
S63	Development Applications Unit (Dept. of Housing, Local Government and Heritage)	St Stephen's Green has a special statutory status as a public park under the Saint Stephen's Green (Dublin) Act 1877. Ownership of the Green is vested in the Minister for Housing, Local Government and Heritage, with day-to-day operation of the Green vested in the Minister for Finance and discharged by the OPW. Section 15 of the 1877 Act provides that the Green shall be used as a public park and not for any other purpose. This section is dis-applied by section 116 of the Dublin Transport Authority Act 2008 in respect of railway works carried out pursuant to a railway order. The Green is also a National Monument and a protected structure. Construction will impact on the amenity and function of the Green and the applicant needs to ensure that the effect of this impact will not be long-term and can be fully and quickly mitigated. The alternatives considered for the Station at this location potentially offer much greater capacity to preserve and maintain the amenity and function of the Green. <u>Archaeology & National Monuments</u> Dept. is broadly in agreement with the findings of the EIAR in relation to Archaeology and Cultural Heritage but has issues of concern in relation to three National Monuments: 1. Lissenhall Bridge: Minimum separation distance from the bridge for hoarding should be specified or agreed with the Dept. in advance. 2. 14-17 Moore Street and 8-9 Moore Street, Dublin 1: Potential for indirect and cumulative impacts with Dublin Central development need to be further addressed. 3. St Stephen's Green: Careful consideration should be given to alternative station locations and/or construction methodologies. The choice of the proposed station option has prioritised construction requirements above a sufficiently weighted assessment of the long-term impacts on the Green. <u>Architectural Heritage</u> Dept. is concerned that the significance of the historic city and suburbs would be undervalued where a narrow focus is placed on the proposed route and where individual sites and historic places are not fully evaluated. Concern that arch. heritage has not been adequately considered in its widest context. Effect on protected structures, character of settings have not been fully identified or appraised.	No

		Subterranean station boxes are of significant concern due to impact on cultural heritage. Top-down construction is problematic and will have significant impact on the heritage sites they adjoin, in particular at Mater, O'Connell Street, St Stephen's Green and Charlemont. Cumulative scale of the impacts is of particular concern. Overall impact has not been fully documented nor has adequate provision been made for conservation and re-making post-construction. Dept. would welcome further consideration of the design strategy, particularly the cut and cover approach for stations. Tunnelling favoured where possible. Dept. would also welcome consideration by the Board of all the technical aspects of the project on architectural heritage, including basements, cellars and prominent cultural sites. Dept. welcomes the appointment of a Project Conservation Architect. Site-specific recommendations: - Santry Lodge: Engineer-led design proposal potentially undermines significance of the historical demesne and its cultural heritage importance. Dept. would welcome further consideration of the proposal. - Lissenhall Bridge: Insufficient information is available to ascertain the overall impact to this structure and to understand its overall condition and structural capacity. - Glasnevin: Impact on historic railway and canal infrastructure. Dept. would welcome careful consideration and detailed survey. Re-making of former bridge is welcome however it is recommended that it be put back on a permanent basis. Interventions should be heritage-led and high quality. - O'Connell Street: The EIAR states that the station can go ahead regardless of the planning outcome for the Dublin Central application. This suggests that removal of extensive historic streetscape may be avoidable. Interventions should be heritage-led and high quality. - Mater: Temporary dismantling of park fabric is ultimately destructive and results in loss of cultural significance, authenticity and integrity. Dept. does not support top-down cut and cover approach for station construction. Significant and immediate impact on the adjoining historic fabric. Impact on St Joseph's Church. - St Stephens Green: Dept. would welcome further consideration of the station design strategy to avoid cut and cover and top down approaches. Consideration should be given to option to locate station external to the Green enclosure. Interventions should be heritage-led and high quality.	

		- Charlemont: Significant impact on setting and arch. character of Dartmouth Square (ACA and protected structures). Detailed conservation proposals required and interventions should be heritage led and of high quality. Detailed design to be agreed with Dept. and LA Arch. Conservation Officer. <u>Nature Conservation</u> Dept. accepts the evaluation of possible detrimental effects on biodiversity and accepts the conclusion that, subject to mitigation measures, there will be no significant effect on the integrity of European Sites nor significant adverse effects on flora and fauna beyond effects at a local level. The Dept. agrees with the conclusions of the NIS. Loss of trees and habitats noted. Trees in St Stephens Green are not of high nature conservation value but are significant from a landscape perspective and are of local biodiversity value for breeding birds and possibly bats. Loss of Yellowhammer and Meadow Pipit as a result of MetroLink could not be considered significant. Replacement tree and hedgerow planting will compensate to a considerable extent for the loss of bird nesting and foraging habitat. Removal of woody vegetation during bird nesting season should be avoided. Erection of 30 No. 2F Schwegler Bat Boxes is recommended and the review of the lighting plans for the scheme by a bat specialist. Additional provision for otter movement on Royal Canal required and consideration of cumulative impact with other projects. Biodiversity conditions recommended. <u>Submission accompanied by:</u> - Appendix setting out historical context of O'Connell Street, St Stephen's Green, Dartmouth Square and the former Carroll's building.	
S70	Dublin Chamber	Support proposed development. MetroLink is vital for the continued growth of the Dublin region. It is not acceptable that key infrastructure routes through the city centre core be disrupted for a protracted period and increased public transport and public realm improvements during this phase would be welcomed. Business community want to know what body will ultimately be responsible for traffic during construction phase. Free flow of pedestrians should not be impeded excessively by the works. The city, and particularly hospitality, is still recovering from Covid.	No

		Excessive dust, noise and vibration must not affect health and safety of pedestrians.	
S71	Dublin City Council	The area to the north of the DCC administrative boundary, between St Margaret's Road and the M50 forms a crucial contextual zone for the Ballymun LAP. DCC is a key landowner of these lands, within FCC's administrative area. Relevant planning history set out. Project is supported by national, regional and local policy, including various policies and objectives of the Dublin City Development Plan 2022-2028 as set out in the submission and the Ballymun LAP. Stations and associated development fall within the boundaries of Strategic Development Regeneration Areas SDRAs 2 (Ballymun), 6 (Docklands) and 10 (North East Inner City). MetroLink is a key infrastructure project which will support the regional growth strategy for the region and Dublin MASP area. While the scheme is supported, it is important that the proposal adequately addresses conservation impacts along the route as well as the potential to improve green infrastructure and pedestrian and cycle connectivity and permeability. 'Train station' is not a defined use under the Dev. Plan use classes. It can be considered a sui generis use or a 'public service installation'. Overall, the proposed above-ground structures are considered compatible and consistent with the objectives of the Plan, including zoning objectives. The exception is Glasnevin, where the potential absence of over-site development is of concern, should it not be 'designed in' to accord with the Z3 zoning objective "to provide for mixed neighbourhood facilities". Condition recommended to allow the station box to be designed so as not to impede comprehensive redevelopment of the site for a neighbourhood centre, and policies to increase density as part of Transport Oriented Development. Project will generally not have a significant impact on public amenity with the exception of St Stephens Green, Albert College Park and Griffith Park. Impacts on these parks are considered necessary and unavoidable and in the long-term public interest. Parks and Conservation Divisions concerns regarding St Stephen's Green station are noted but City Council considers that the MetroLink entrance in the park is well-located and well-designed. Proposed development will not impact negatively on the character and amenity of the Green and will enhance the amenity value of the park and encourage greater public use. Demolition of residential properties at Tara Street Station is regrettable however on balance the metro station is a considerable benefit to the entire city.	Yes

		DCC are liaising with TII regarding the development of a replacement sports facility to replace Markievicz centre. DCC is satisfied that there would not be any excessive or undue impact on the amenities of the area. There will be a degree of disruption but there is unlikely to be an adverse impact on existing amenities. Above ground structures are designed as clean, simple contemporary structures. Condition should be attached to ensure they are durable, vandal resistant and have minimal embodied environmental impact. Various Depts. and Divisions have submitted reports which can be summarised as follows: - <u>Planning and Property Development Dept:</u> Comments on the integration of Ballymun Metro Station on redevelopment proposals. - <u>City Valuers:</u> Conditions recommended. - <u>Housing and Community Dept:</u> Conditions recommended. - <u>Archaeology:</u> Concur with the EIAR assessment and support the proposed mitigation measures. Conditions recommended. - <u>Conservation Section:</u> Concerns regarding architectural heritage, historic paving, loss of trees, design aspects. Impacts on Four Masters Park and St Stephens Green. - <u>Environment & Transportation:</u> Traffic dept. has engaged with TII and no major issues of concern are outstanding. Various traffic related items and issues noted regarding traffic management, parking, bicycle parking, pedestrian crossings etc. Environment Dept. seeks that SuDS be integrated, that there be no impact on drainage infrastructure or deterioration of surface/groundwater. Need to comply with Water Framework Directive. - <u>Air Quality & Noise Control Unit:</u> Conditions recommended. - <u>Public Lighting Division:</u> Conditions recommended. - <u>City Architects:</u> No fundamental objection but specific suggestions for each station in relation to materials palette, universal design, accessible parking, public realm and pedestrian movement. Conditions recommended. - <u>Parks, Biodiversity & Landscape Services:</u> Loss of mature trees and provision of replacement planting. Additional biodiversity requirements. Cumulative impact on otters due to Luas extension and Royal canal Greenway. Japanese Knotweed eradication programme required. Provide planting in advance of construction. - <u>Culture, Recreation & Economic Services Dept.:</u> Liaised with TII in relation to replacement sports and leisure facility. Possible location identified and feasibility work ongoing.	

		- <u>Dublin Fire Brigade</u>: Support project and have liaised with TII. DFB have been presented with the fire safety strategy for the design and further analysis is being undertaken by TII to address DFB queries. - <u>Telecoms Unit</u>: Request that ducting be provided along the route. DCC welcomes the step change in public transport provision that this project will bring and the integration with Luas and heavy rail. While the construction phase will bring considerable challenges for the city, DCC believe it can be managed and that the project is in the interests of the entire city. Project will promote modal shift from the private car to more sustainable forms contributing to a more sustainable city. DCC is satisfied that the application is consistent with and supported by the Development Plan and the proper planning and sustainable development of the area. Detailed recommended conditions provided in submission.	
S73	Dublin Cycling Campaign	Support proposed development but two modifications sought. TII have listened to Dublin Cycling Campaign feedback and have changed designs or provided mitigation measures. Increased cycle parking provision sought at Northwood, Ballymun, Collins Avenue, Glasnevin and Tara Street. Figure 4.9 of EIAR indicates under provision at many stations. Under provision at O'Connell Street, Stephens Green and Charlemont is understandable given the space constraints at those stations. Rationale for under provision given in Appendix A4.1 is not supported by the research paper it refers to. There is ample space at Ballymun and Northwood for additional cycle parking. At Tara Street, the areas designated for 'future development by others' could be used for cycle parking or included within new development. Two tier cycle parking should be considered at all locations to increase density of parking. Concern regarding HGV construction traffic and risk to vulnerable road users. 35% of fatalities involve HGVs even though they are less than 5% of traffic on streets where people cycle. Mitigation measures for HGV traffic are not sufficient. CrossRail in the UK required sensors, underrun guards and other measures. Turning HGVs are the main risk to cyclists. Direct-vision vehicles, with lower cabs and significantly reduced blind spots should be utilised. TII should be required to use the latest standards for mitigating HGV risks by copying working standards from other European construction projects.	No

S74	Duncan Smith TD	Supports proposed development. Swords is rapidly growing and is crippled by poor road infrastructure and delays impacting on the bus service. Further housing development will exacerbate this. MetroLink is the best option to address traffic in Swords and on the M1 corridor. Improved paths and cycle lanes needed to improve access to MetroLink stations.	No
S82	EirGrid	EirGrid has been involved with the project from a power system planning perspective prior to the submission of the Railway Order Application. EirGrid has identified significant additional capacity needs in the electricity infrastructure in the Dublin City and North County Dublin areas to cater for new residential and commercial development, electrification of heat and transport, and new renewable generation development, including offshore wind and solar. EirGrid has identified a number of major strategic electricity infrastructure projects that will need to be undertaken in the GDA by 2030. It is inevitable that there will be a degree of impact on the transmission grid as a result of the proposed MetroLink project. EirGrid seeks to ensure that these impacts are addressed and mitigated. TII has engaged with EirGrid in order to ensure that transport and transmission development occurs in a manner that avoids impacting on the other. The issues of concern to EirGrid are of a technical or engineering nature and are most appropriately addressed and resolved post-consent, ahead of the detailed design process. EirGrid would welcome suitable robust conditions by the Board, in the event the Railway Order is authorised.	No
S99	GADRA (Griffith Avenue and District Residents Association)	Represents 1,000 homes and welcomes MetroLink. No fees should be required for making submissions. Independent expert should have been appointed at earlier stage to advise local residents. Issues with the reporting process and obtaining information from TII. Independent expert advice should be provided during construction phase and should be a condition of the RO. Real time information on construction, environmental info, deviations etc. should be provided. Residents Monitoring Group and community fund should be established. Lack of meaningful engagement with TII. Risk of project starting and then stopping, leaving open excavations etc.	No

		Rationale for changing from twin bore to single bore is unclear. The change would appear to be linked with the decision to remove the launch site and station from Na Fianna grounds. Moving the TBM launch site from Na Fianna did not necessitate moving the station also. The Board should seek further information on this. Object to the Albert College Park intervention shaft and the Collins Avenue station location. Park should not be used as a car park or maintenance facility. GADRA is unable to find any other Metro system with such a facility in a public park. Impact on nocturnal wildlife at the park. No night-time working should be allowed. Collins Avenue Station could be moved to Albert College Park, as per Metro North location, with intervention shaft in Ballymun Library car park. Shaft is contrary to Z9 zoning. A station could be provided instead, which would benefit the public and comply with zoning. GADRA supports arguments made by ACRA and Ballymun Residents Association to TII regarding the modelling exercise and the selection of the church site rather than Albert College Park. EIAR fails to address alternatives to avoiding the shaft by positioning a station in the park. TII report on environmental assessment of the options was provided to GADRA post-lodgement of RO and was not submitted to the Board. Query weighting used and basis for making decision on options. Failure to provide information on intervention shaft is contrary to Aarhus Convention obligations and DPER requirements. Intervention shaft and compound were designed without Dublin Fire Brigade input. Size is excessive. Fire service appliances could use lay-by area on the Ballymun Road. Consultation on shaft was disingenuous and focused on design rather than need. Human health concerns due to blasting and drilling for shaft. Baseline noise monitoring at this location omitted. Pre-cast roof should be used during shaft construction to mitigate impacts and no works at night-time. Poor design of shaft structure. Object to additional emergency exit onto Hampstead Avenue. It can be accommodated on Ballymun Road. Construction working hours are excessive. It should be a dark site at night. Hydrogeology and groundwater concerns due to depth of excavations and high water table. Construction traffic impacts and haul route concerns.	

		Impacts on schools and child safety. Air quality and aspergillus concerns. Proximity of Griffith Park Station to River Tolka in an area which has previously flooded. Plaza area at station is excessively large. Project Construction Traffic Forum must have clear terms of reference with binding authority. Role of independent experts needs to be included. Unacceptable that contractor will be responsible for informing stakeholders of works. NTA should retain this responsibility. Construction worker parking and housing concerns. Requested limits of deviation are excessive and not justified. Concerns regarding Glasnevin Station, both design and scale of works.	
S121	Iarnród Éireann	Iarnród Éireann are supportive of MetroLink. It sits beside DART+ and BusConnects as the three key public transport elements of the NDP, NPF and the Greater Dublin Area Transport Strategy. The three projects are complementary. While land required for the purposes of transport services may be included in a CPO application, section 130 of the Transport Act 1944 precludes the compulsory acquisition of such land without the consent of the Minister for Transport. Current indications are that MetroLink will commence construction after DART+ West works are completed and DART+ Southwest is started and/or completed. IE has identified a number of issues that will require consultation and agreement between TII and IE and these issues should be fully resolved prior to commencement of construction: <u>Glasnevin Station:</u> - Prolonged closure of the MGWR and GSWR lines proposed by TII at Glasnevin of 21 and 5 months, respectively, will cause significant disruption to passenger, freight and maintenance services. - Closure periods are excessive and shorter closures should be feasible. Closures should be timed for periods of lower passenger and freight usage (e.g. summer). - As MetroLink will commence after completion of DART+ works at Glasnevin, the network will be electrified at Glasnevin and both electric and diesel trains will need to be accommodated, as will access to the Maynooth depot. - Station design and access principles will need to be mutually agreed and validated. Safety Assurance Process requirements must be adhered to.	No

		- Operations and management of interface areas will need to be mutually agreed for the operational phase. - Property ownership and access will need to be agreed. <u>Tara Street Station:</u> - TII required to minimise impacts on IÉ services and infrastructure. - Details construction proposals to address impacts on the operational viaduct and other support structures and customer access/egress to Tara Street Station during construction need to be approved by IÉ. - Any interchange connection proposed between MetroLink and DART/Commuter rail services will require further discussion and agreement. - Operations and management of interface areas will need to be mutually agreed for the operational phase. - Property ownership and access will need to be agreed. Above issues will need to be clearly captured, agreed and executed in an appropriate agreement.	
S133	Irish Water (now Uisce Éireann)	Significant number of interactions between MetroLink and IW existing and planned infrastructure and it is imperative that their infrastructure be protected and future proofed. TII must commit to protecting locations for future key IW infrastructure including necessary culverts and crossing points and agree wayleaves, rights of way etc. IW has not received detailed designs from TII for each of the specific interactions. Many of the interactions could be agreed between IW and TII in advance of any works, however further information is required on certain aspects, particularly with regard to the Greater Dublin Drainage Project. List of known diversions of IW watermains and sewers provided but may not be exhaustive. TII must agree designs of diversions with IW. Protection measures may be required for 268 watermain locations and 80 sewer locations. Further detailed analysis to be carried out by TII at detailed design stage. Locations and designs must be agreed with IW and legal agreement required. Proposed new wastewater pumping station in the vicinity of the Estuary roundabout on the R132 and R125 roads in Swords can be accommodated, subject to agreement on detailed design, specifications, legal agreement and transfer of lands to IW. IW must be liaised with prior to any road upgrades, widening or realignment. Service diversions may be required.	Yes

		Culverts of sleeves must be provided for any future IW pipes crossing the MetroLink infrastructure. TII to agree locations with IW. IW will seek to maintain wayleave rights over pipeline routes where TII require the acquisition of land. IW would like to see a reduction in stormwater runoff from all existing roads, hardstandings and paved areas. No additional surface water to be discharged to existing foul/combined sewers. MetroLink should promote blue and green infrastructure and SUDs measures. IW does not recommend dewatering to foul sewers including the North Fringe Sewer and/or the Swords Wastewater Treatment Plant foul network. Potential impact on 3 No. abstraction points in the vicinity of Dublin Airport Metro Station. These are not in the ownership of IW or connected to the IW network. There should be no impact on drinking water sources. The following IW projects must be considered: Swords WWTP, Rosie Hackett Bridge siphon project where there is construction risk of two major projects occurring in the same area, and Fosterstown wastewater sewer upgrade where IW works are planned to occur in 2023. Connection agreement required for any new connections. Subject to legal agreements and technical agreements, MetroLink proposals could be facilitated. With regard to Greater Dublin Drainage (GDD) project, IW note: significant overlap between MetroLink and IW planning and CPO boundaries at Dardistown; proposed embankment had previously been agreed as an overbridge; GDD project is incorrectly represented on drawings and not referenced in planning report; greater detail on construction interactions between GDD and MetroLink sought. IW has served Notices to Treat for GDD following confirmation of the CPO by the Board. MetroLink interfaces with the GDD project at Ch.9+600m at Dardistown, where GDD consists of a 1800mm gravity section of orbital sewer. Construction is likely to coincide between the two projects and IW has constructability and coordination concerns. GDD sewer is shown on MetroLink drawings as existing, but has not been built yet. Details and levels shown on drawing are inconsistent with information provided by IW. TII and IW had agreed that MetroLink would pass over the GDD pipeline via a viaduct, but the application proposes an embankment which will create difficulties. A viaduct would result in less conflict and greater construction certainty. Further information is required from TII on these issues.	

S137	James Wickham	Supports construction of MetroLink as soon as possible, however it is a second-best project resulting from the political failure to recognise the necessity for substantial and sustained rail investment in the GDA. Changes from previous Metro North proposal at St Stephens Green and Tara Street Station appear to derive from the assumption that DART Underground will never be built, necessitating interchange with suburban rail. The claimed interconnection with Luas at St Stephens Green stretches the meaning of the word, as passengers will have to walk the length of the green in the open air. One reason for opposition to the upgrading of the Green Line was the complete failure to consider the extent of community segregation that it would entail. An extension to the south west would make it more logical for there to be a genuine interconnection with the Luas on the west side of St Stephen's Green. MetroLink is only marginally part of any broader transport network. By contrast, the DART Interconnector was the centrepiece of a proposed transport network for Dublin as a whole. A mid-term review of Transport 21 in 2010 suggested that DART underground and Luas Cross-City should be prioritised over Metro North in terms of value for money, equity and the impact on the city as a whole. Meeting Ireland's climate change targets for transport requires sustained investment in rail in the GDA. Further delays exacerbate the problem and increase the need for such expenditure down the line.	No
S156	Justin Marden	Scheme needs more development and upgrades to meet its full potential. Board should request that the Ministers of Tourism, Culture, Arts, Gaeltacht, Sports and Media and Environment, Climate and Communications and Public Procurement conduct an internal independent multi-criteria assessment of alternatives for various aspects of the station designs, and other matters as outlined in the submission.	No
S181	Senator Marie Sherlock	Supports proposed development. Construction of the three stations planned for Dublin 9 and 7 will have enormous impacts on traffic flows. Traffic management plans must be published and consultation with the local communities in advance of construction. Concern regarding the ability of Cross Guns Bridge to take such high volumes of plant and machinery. Local residents at Griffith Park station need a clear picture of the traffic management system. Concerns about construction traffic and parking in the area of the Mater Station.	No

		24 hour help/liaison line required for the whole duration of the construction period. Vermin control required. Noise protection details required for residents in Shandon and Dalcassian areas together with those living along Berkeley Road. Property Owner Protection Scheme is overly restrictive. Ecological protection and damage mitigation on the Royal Canal. Trees removed should be replaced appropriately. Eco friendly, sustainable design option for Glasnevin Station should be used.	
S185	Senator Mary Fitzpatrick	Supports proposed development of a metro. Station designs are unimaginative, cheap and unworthy of Dublin's heritage. They should be redesigned to reflect and speak to the history of the area and reflect local architectural character. The proposal to demolish Hedigans' Brian Boru pub and remove or tamper with the railings at Dalcassian must be rejected. A new architectural proposal must be developed for the station. Applicant must justify change from twin bore to single bore. Metro stop should be provided at Albert College Park instead of the intervention shaft. Applicant must detail measures to mitigate structural and settlement damage within 1km of the route and independent monitoring for noise, vibration and structural issues required during and for 20 years post-construction. Independent experts should be provided to provide residents with real time information and independent expert advice. Traffic management plan must be agreed with residents, DCC and NTA. Permanent community liaison office must be established for the duration of the project. Measures to address anti-social behaviour must be put in place. Metro should operate 24 hours per day, 7 days per week. Park and ride facilities should be provided at stations beyond the M50 to discourage private cars from entering the city.	No
S213	OPW (1 Georges Quay and others)	All OPW submissions are accompanied by a common cover letter (including a number of appendices), which provides high-level commentary for consideration by the Board. Submission welcomes MetroLink and engagement by the applicant is welcomed, but there are outstanding issues to be addressed. - OPW is legally required to maintain St. Stephen's Green as an ornamental park or pleasure ground. The Railway Order should ensure MetroLink falls into a category under s.116 of the Dublin Transport Act 2008.	Yes

		- Ministerial consent is required, under the National Monuments Act 1930, for partial demolition of a National Monument and should be controlled by condition. - The Board is requested to attach a condition requiring the applicant to consult with OPW and agree method statements ahead of construction commencement. - Stage 4 and 5 ground movement assessments would be welcomed as part of the application. - Tunnel alignment discrepancies on contour drawings should be addressed. - An opportunity to present at an Oral Hearing is requested, given the National significance of affected OPW buildings. - The Board is requested to make the Railway Order conditional on a legal agreement being put in place between the applicant and OPW - A detailed flood risk assessment is required. - A number of suggested conditions are provided. Each OPW submission addresses building type; future developments; security; vibration, noise, electromagnetic radiation and interference; and potential impacts to National Monuments. <u>1 George's Quay and Others</u> Submission concerns 1 George's Quay; Corn Exchange, Burgh Quay; 13-15 Hatch Street Lower; Trinity Point, 10-11 Leinster Street; Earlsfort Development Centre, Earlsfort Terrace; and INTREO Office & Parkrite parking, Parnell Street/King's Inn Street & Loftus Lane. 1 George's Quay: Building complex of multiple heights, with 4-storey over basement height along the frontage. Renovated in 2017 and renamed 1GQ. OPW is a lessee of part of the building. Building frontage is located within a Conservation Area and Zone of Archaeological Interest. The presence of weathered and unweathered limestone adjacent to the site will present a significant challenge to ground movement mitigation using tunnel management. Blasting as part of the Tara Station box is unlikely to affect the building. The ground movement impact on the building is not specified and OPW seeks to ensure the building has its own assessment. Significant construction ground borne noise impacts are predicted (50dBA L_{Amax}), with no effective mitigation	

		available and therefore the impact will be managed by detailed consultation with building owners. No significant ground borne noise impacts are predicted. Railway operations will not impact the building fabric or structure. Corn Exchange: 4-storey over basement building. Listed as a Protected Structure and located within a Conservation Area. OPW is a lessee of part of the building. Future development of the site should be discounted. Blasting during excavation of the O'Connell Street and Tara Street stations is unlikely to affect the building. The trough width parameter for the building used by the applicant is very narrow and a value of 0.4 would be more conservative. The ground movement impact on the building is not specified and OPW seeks to ensure the building has its own assessment. Construction ground borne noise levels of 44 dBA L_{Amax} are predicted, with no effective mitigation available and therefore the impact will be managed by detailed consultation with building owners. 13/15 Hatch Street: 4-storey building, adjacent to a series of Protected Structure Georgian houses that date to the 18th and 19th Centuries. Excavation of the St. Stephen's Green and Charlemont station boxes is unlikely to affect the building. Building is shown to be outside the zone of influence of the building damage assessment report. OPW expects a stage 3 ground movement assessment will be undertaken for the building, in consultation with OPW. Additionally, international best practice requires that stage 4 and 5 assessments of ground movement are undertaken. OPW will facilitate and observe pre-construction defect surveys. Following excavation, close out reports for property monitoring will be required. Noise and vibration impacts are not identified for the building. Noise and vibration during railway operations are proposed to be mitigated. Trinity Point: Modern, 6-storey over basement building. OPW is a lessee of part of the building.	

		Excavation of the Tara and St. Stephen's Green stations are unlikely to affect the building. Building is within the 1mm contour zone of influence of the building damage assessment report. OPW expects to be consulted on a Stage 3 building damage assessment for the building. Additionally, international best practice requires that stage 4 and 5 assessments of ground movement are undertaken. OPW will facilitate and observe pre-construction defect surveys. Following excavation, close out reports for property monitoring will be required. Significant construction ground borne noise impacts are predicted (48dBA L_{Amax}), with no effective mitigation available and therefore the impact will be managed by detailed consultation with building owners. No significant ground borne noise impacts are predicted. Noise and vibration during railway operations are proposed to be mitigated. There is likely to be some restriction on sub-grade development as the building sits partly atop the alignment. Earlsfort Development Centre: Campus style development of several blocks of offices, of which OPW is a lessee of Block C. Block C is a 5 to 7-storey over basement building. Located within a Conservation Area. Permission granted under DCC Ref. 4951/22 (current appeal Ref. ABP-315358-22) for conservation and refurbishment works and new 4-storey over basement extension. Excavation of the St. Stephen's Green and Charlemont station boxes is unlikely to affect the building. 50% of the building is within the 1mm contour zone of influence of the building damage assessment report. The building should be considered a 'special building' and progressed to Stage 3 assessment. OPW expects to be consulted on a Stage 3 building damage assessment for the building. Additionally, international best practice requires that stage 4 and 5 assessments of ground movement are undertaken. OPW will facilitate and observe pre-construction defect surveys. Following excavation, close out reports for property monitoring will be required. The EIAR does not identify ground borne noise and vibration impacts for the building, but estimating based on similarly positioned buildings indicates that significant construction ground borne noise impacts are likely (49dBA L_{Amax}), with no effective mitigation available and therefore the impact will be managed by detailed consultation with building owners. No significant ground borne noise impacts are predicted. Noise and vibration during railway operations are proposed to be mitigated. There is likely to be some restriction on sub-grade development as the building is close to the alignment.	

		Intreo Office & Parkrite Parking: OPW is a lessee of the building. A section of the site falls within a Zone of Archaeological Interest. The tunnel alignment does not pass close to the building. Blasting as part of excavation works is unlikely to affect the building. The trough width parameter for the building used by the applicant is very narrow and a value of 0.4 would be more conservative, but this is unlikely to change the impact of ground movement on the building. The site is outside of the zone of influence and is not predicted to be subject to any settlement. Significant ground borne noise and vibration are not anticipated for the building. Railway operations will not impact the building fabric or structure. Submissions: OPW reserves the right to redevelop each site, above and below ground. MetroLink should not interfere with extant planning permissions pertaining to each site. The Board is asked to ensure that TII has fully assessed the project with regard to planning policy. Alignment drawing and contour drawing should show different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and during operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Day to day operations of the buildings cannot be interrupted by disruption to utilities and full access to buildings should be maintained.	

		Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Studies should be undertaken for buildings predicted to experience significant ground borne noise impacts, to determine the impact. Assessment of the impacts of blasting on 1 George's Quay, Corn Exchange and INTREO Office & Parkrite Parking are requested. An assessment of potential ground water lowering on 1 George's Quay and INTREO Office & Parking, associated with construction of the O'Connell Street and Tara Stations, is requested. A ground water monitoring scheme should be implemented, together with contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. An assessment of impact on Parkrite car parking at Loftus Lane is requested. Floating track slab is requested to be installed between Chainage 17+980 and 19+000, Chainage 17+980 and 18+400 and Chainage 17+980 and 18+900. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy and this may impact on each property should any intermediate shafts be required. <u>Submission accompanied by:</u> - Appendix 1: List of planning legislation & policy. - Appendix 2: Ground Movement Assessment.	
S214	OPW (13-14 Burgh Quay Offices)	4-storey over basement building. It is a Protected Structure and is partly located within a Conservation Area. The Board is asked to ensure that TII has fully assessed the project with regard to planning policy. Sub-terranean development could take place at the site.	Yes

		Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Blasting as part of the excavation of Tara Station is unlikely to affect the building. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and during operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Day to day operations of the buildings cannot be interrupted by disruption to utilities and full access to buildings should be maintained. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. The trough width parameter used for the building is very narrow and a value of 0.4 would be more conservative. The building lies within the 1mm contour line zone of influence and will be subject to up to 40mm settlement. Ground movement impact in not specified and OPW requests that an assessment is undertaken. Noise from the tunnel boring machine is predicted to be 50 dBA $L_{Amax,s}$, exceeding the acceptable threshold for up to 2 weeks. Vibration from the TBM is predicted to be less than the threshold. A study should be undertaken, to determine the exact impact. Assessment of the impact of blasting on the building is requested. Station excavation/construction in proximity is likely to generate dust, affecting the building. A ground water lowering assessment, which includes limits, is requested.	

		Vibration during railway operation will not impact the building fabric or structure. MetroLink may hinder future redevelopment of the site. OPW reserves the right to redevelop each site, above and below ground. MetroLink should not interfere with extant planning permissions or the right to develop further. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy - Appendix 2: Ground Movement Assessment	
S215	OPW (14-17 Moore Street - 8-9 Moore Lane)	Nos. 14 – 17 Moore Street are terraced 3 storey houses on the eastern side of Moore Street. They are Protected Structures and were the location where the 1916 leaders decided to surrender. They are subject to a Preservation Order made under the National Monuments Act, which also includes the rear yards of Nos. 15 and 16 Moore Street and Nos. 8 – 9 Moore Lane. Buildings were refaced in the late 19th century but are likely 18th century buildings. Essential works to safeguard the National Monument were completed in 2017 under High Court Order. Cellar structure is fragile and requires remedial works. 50% of underpinning to Nos. 14 – 17 was undertaken in 2017. Completion of underpinning and other structural repair works are required to stabilise the structures and facilitate public use. Uninterrupted access is necessary at all times from Moore St. and Moore Lane. The conservation works to these properties are a National Heritage Strategic Investment Priority under the National Development Plan. There is a proposal by DHLGH to develop the site as a cultural centre. This is supported by the Development Plan and objectives BHA30 and CU09. Site boundary for O'Connell Street Station abuts Nos. 8-9 Moore Lane and should be reviewed and agreed in advance of construction. Planning history of Dublin Central site set out. Board is asked to ensure that TII has fully assessed the project with regard to planning policy.	Yes

		OPW reserves the right to future development of the property above and below ground. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. Ministerial consent would be required where there is potential demolition of a national monument. An EIAR for such demolition may be required. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and 6 weeks post-operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Day-to-day operations of the property cannot be interrupted by disruptions to any utilities. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Construction of the station box will be undertaken by the developer of Dublin Central and therefore the OPW requires that the developer is a party to any agreements with TII related to construction and impacts on this property. OPW require Stage 2 and 3 assessments of ground movement are carried out, by engineers with proven competence with regard to historic buildings. Mitigation, monitoring and surveying to be agreed with OPW and close-out reports sought following decommissioning of monitoring. OPW requests that specific study is carried out for this property to determine whether groundborne noise and vibration will have any impact. Specific assessment of blasting impacts on the property is requested. Dust from station construction is unlikely to affect the buildings.	

		Assessment and limits on groundwater dewatering is sought. Operational noise and vibration will not impact on the building. OPW reserves the right to redevelop the site above and below ground. OPW is seeking: - Stage 2 and 3 assessments of property to ensure that it is undamaged. - To ensure no damage to facades and architectural detailing with pre and post-construction surveys, trials and monitoring. - To ensure that any future development follows the Moore Street and Environs LAP and Moore Street Battlefield Site Plan. - To ensure the appropriate conservation and structural appraisals are conducted as part of the detailed design assessment. - Precedents to be applied to the risk assessments utilising best industry practice. - MetroLink Site boundary abuts the National Monument and should be reviewed and agreed in advance of construction with OPW and DCC. Access via Moore Lane to be maintained. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation and policy. - Appendix 2: Ground movement assessment.	
S216	OPW (16 Parnell Square)	Property is a 5 storey over basement office development accommodating a number of State bodies. It is the northernmost plot along the east side of Parnell Square. Property is a modern office building that retains features of the previous Georgian building in terms of height, window proportions etc. It is a Protected Structure and within an ACA. The side elevation along Gardiner Row has a contemporary glass façade. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration.	Yes

		OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. Blasting at Mater Station is unlikely to affect the property. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and 6 weeks post-operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Day-to-day operations of the property cannot be interrupted by disruptions to any utilities. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. OPW require Stage 2 and 3 assessments of ground movement are carried out. Mitigation, monitoring and surveying to be agreed with OPW and close-out reports sought following decommissioning of monitoring. OPW requests that specific study is carried out for this property to determine whether groundborne noise and vibration will have any impact. Specific assessment of blasting impacts on the property is requested. Dust from station construction is likely to affect the buildings. Assessment and limits on groundwater dewatering is sought. Construction traffic issues. Operational noise and vibration will not impact on the building. OPW reserves the right to redevelop the site above and below ground. OPW is seeking: - To ensure no disruption to the public access of the building and its uses.	

		- To ensure no damage to the building with pre and post-construction surveys, trials and monitoring. - To ensure specific vibration limits will be applied and a monitoring regime is implemented. - To include adverse impacts of Mater and O'Connell Street Stations within the risk assessment studies and provide for mitigation measures as construction of these stations will generate additional lorry movements. - Precedents to be applied to the risk assessments utilising best industry practice. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation and policy. - Appendix 2: Ground movement assessment.	
S217	OPW (22-25 Clare Street)	Part-4, part-5 storey over basement neo-Georgian building. Not a protected structure, but located within ACA. Tunnel alignment does not pass directly beneath the building. OPW reserves the right to redevelop the site, above and below ground, and plans are being considered for it. Proposed alignment does not restrict future development of the site. The Board is asked to ensure that TII has fully assessed the project with regard to planning policy. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. Excavation of Tara Street/St. Stephen's Green stations unlikely to affect the building. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and during operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings.	Yes

		Day-to-day operations of the property cannot be interrupted by disruptions to any utilities. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Building lies outside the 1mm zone of influence contour. Stage 3 ground movement assessment is requested for the building, with OPW consulted on its scope. Stage 4 and 5 ground movement assessments are not mentioned by the draft Railway Order, but are industry best practice. OPW requires to review proposals for mitigation and monitoring, which should include deep level monitoring, ground level monitoring and building and surface monitoring. Close out reports following completion of excavation should be provided to OPW, which should include mitigation implemented, repairs undertaken, time history graphs showing ground movements. Pre-condition defect surveys will be facilitated and observed. Building is not predicted to be affected by groundborne noise and vibration, blasting works or construction phase dust. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track should be installed between chainage 17+980 and 18+400, to mitigate noise and vibration to acceptable levels under all Government buildings, museums and this building. Any requirement for intermediate intervention/evacuation shafts between Tara Station and St. Stephen's Green may affect the building. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy - Appendix 2: Ground Movement Assessment	

S218	OPW (44-45 O'Connell Street)	No. 44 O'Connell Street is a Protected Structure, No. 45 is not. Both are listed in the NIAH. Buildings are 4 storey art-deco style 1920s commercial buildings with rear office extensions. The buildings are not currently in use. They are within the boundary of the Dublin Central redevelopment scheme. They are directly over the proposed O'Connell Street Station. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. Planning history of Dublin Central and Clerys sites set out. Discrepancy between EIAR and drawings regarding whether these buildings will be demolished apart from their facades. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. If acquisition of the properties does not proceed then OPW seek to ensure that future development and use of the buildings is protected. Buildings are located at the boundary where the tunnelling machine enters the station, a critical point in the tunnelling and the means and methods adopted will affect magnitude of ground movement. It will be extremely difficult to create a watertight perimeter to the station box with secant piles/diaphragm walls installation behind the facades. OPW require that Dublin Central developer be a party to any agreements with TII regarding construction of the station box and assessment of implications for these properties with regard to ground movement, vibration and foundations. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and during operational stage.	Yes

		Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. It is important that MetroLink not interfere with extant planning permissions pertaining to the property and the right to develop these in advance, in tandem or post-operation of MetroLink. OPW is seeking: - To note that agreement with the OPW will be required prior to any works being carried out. - To ensure no damage to the façade of the building with pre and post-construction surveys, trials and monitoring. - To ensure the appropriate conservation and structural appraisals are conducted. - Precedents to be applied to the risk assessments utilising best industry practice. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation and policy. - Appendix 2: Ground movement assessment.	
S219	OPW (52 St Stephens Green)	Five bay, 4-storey over basement former townhouse, built in 1771. 2-storey linking building and 5-storey office building to the rear, built in the 1970s. Front part of building is a protected structure and is listed on the NIAH. Uninterrupted access to the building is required at all times Board is asked to ensure that TII has fully assessed the project with regard to planning policy. OPW reserves the right to redevelop the site, above and below ground, without impact by MetroLink. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy	Yes

		- Appendix 2: Ground Movement Assessment	
S220	OPW (9-15 O'Connell Street)	9-15 O'Connell Street is a 1920s art deco commercial and office building fronting onto O'Connell Street and Cathedral Street. Buildings are granite masonry with masonry and steel balconies and modern extensions to rear. Nos. 11-13 is known as Hammam Buildings, while Burger King occupies the ground floor of Nos. 9-10. Significant State services are provided from the upper floors. Significant infrastructure operated by Eir is located on the ground floor and basement level. Buildings are within the O'Connell Street ACA and are included in the NIAH but are not Protected Structures. Building sensitivities include early 20th century iron/steel frames with stone facing. Bronze fixtures and features, early glass. Building systems and materials may be brittle and may not respond well to movement. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. Planning history of Dublin Central and Clerys sites set out. Discrepancy between EIAR and drawings regarding whether these buildings will be demolished apart from their facades. Alignment drawing and contour drawing should show different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. Blasting at O'Connell Street Station may affect the property. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and at least 6 weeks post operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings.	Yes

		Day-to-day operations of the property cannot be interrupted by disruptions to any utilities. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. OPW require Stage 2 and 3 assessments of ground movement are carried out. Mitigation, monitoring and surveying to be agreed with OPW and close-out reports sought following decommissioning of monitoring. OPW requests that specific study is carried out for this property to determine whether groundborne noise and vibration will have any impact. Specific assessment of blasting impacts on the property is requested. Dust from station construction is likely to affect the property. Assessment and limits on groundwater dewatering is sought. Construction traffic issues. Operational noise and vibration will not impact on the property. OPW reserves the right to redevelop the site above and below ground. OPW is seeking: - To ensure minimum disruption to the working access of the building and its uses and functions. - To ensure no damage to the building and its detailing, with pre and post-construction surveys, trials and monitoring. - Disruptions to traffic to be avoided. - Precedents to be applied to the risk assessments utilising best industry practice. - To ensure future development of the property is not impacted. - To mitigate noise and vibration to the acceptable levels by installing floating track slab at this section of the alignment. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213).	

		- Appendix 1: List of planning legislation and policy. - Appendix 2: Ground movement assessment.	
S221	OPW (Apartments 1-8 Clare Court)	4-storey building containing 8 apartments. Bought in 2007 for the purposes of expansion of the National Gallery and forms part of Phase 4 of the Ireland Master Development Plan 2017-2023. It is important that MetroLink does not impede the development potential of the site, above or below ground and access to the site is important at all times. OPW reserves the right to development of the site, above and below ground. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Excavation of the Tara Street and St. Stephen's Green stations are unlikely to affect the building. Dust issues are also unlikely to arise. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and for minimum 6 weeks of the initial operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Day to day operations cannot be disrupted by disruptions to any utilities. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Building lies outside of the 1mm contour zone of influence for building damage assessment.	Yes

		A stage 3 building damage assessment should be undertaken for the building, in consultation with OPW. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. On completion of excavation, OPW expects to be provided with a monitoring close out report for the building. Ground borne noise and vibration associated with tunnelling are not predicted to affect the building. A groundwater monitoring scheme should be implemented, to confirm that tunnelling will not affect groundwater. Haulage routes/patterns need to be managed to minimise impact in the vicinity. OPW requests that floating track slab is installed between chainage 17+980 and 18+400, to mitigate noise and vibration under Govt. buildings, museums and the National Concert Hall. Vibration during railway operations will not affect the building fabric or structure. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy and this may impact on Clare Court and the National Gallery should any intermediate shafts be required. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy - Appendix 2: Ground Movement Assessment	
S222	OPW (Ballymun Garda District Headquarters and INTREO Office)	3-4 storey over basement building on Ballymun Main Street built in late 2000s. Full access to the building for pedestrians and vehicles will need to be maintained during construction, with the Garda Station open on a 24 hour basis. OPW reserves the right to make further commentary should the alignment be changed. Board is asked to ensure that TII has fully assessed the project with regard to planning policy.	Yes

		Building has no significant historical context however there is always the possibility that subterranean development could take place. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. Excavation of Ballymun Station is unlikely to affect this building. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and during operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Day-to-day operations of the property cannot be interrupted by disruptions to any utilities. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. No ground movement on this property is expected. OPW requests that specific study is carried out for this property to determine whether groundborne noise and vibration will have any impact. Specific assessment of blasting impacts on the property is requested. Dust is unlikely to affect the property. Assessment and limits on groundwater dewatering is sought. Operational noise and vibration will not impact on the building. MetroLink will not hinder future redevelopment of the site. OPW reserves the right to redevelop the site above and below ground.	

		OPW is seeking: - To note that is an important building, that access and service cannot be interrupted. - To ensure no damage to the building with pre and post-construction surveys, trials and monitoring. - To ensure vibration limits and monitoring is implemented. - To include adverse impacts within the risk assessment studies. - Precedents to be applied to the risk assessments utilising best industry practice. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation and policy. - Appendix 2: Ground movement assessment.	
S223	OPW (Department of Enterprise, Trade and others)	Submission relates to Department of Enterprise, Trade and Employment & the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media 6-storey over basement building. It is a Protected Structure and is located in a Conservation Area. OPW reserves the right to develop the property, above and below ground. This should not be impeded by MetroLink. Future sub-grade development likely to be impeded as the building sits partly atop the alignment Uninterrupted access is necessary at all times. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place.	Yes

		There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Excavation of the Tara Street and St. Stephen's Green stations unlikely to affect the building. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and for minimum 6 weeks of the initial operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Building is beyond the 1mm zone of influence of the Building Damage Assessment Report OPW expects to be consulted on a 3 building damage assessment for the building. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. OPW requests construction vibration limits to be applied to the building and to ensure a monitoring regime is implemented Pre and post-construction building surveys of the building are required. Blasting during construction and dust arisings will not affect the building. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 18+400. Vibration during railway operation will not affect the building. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy and this may impact the building should any intermediate shafts be required.	

		<u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy - Appendix 2: Ground Movement Assessment	
S224	OPW (Department of Finance)	6-storey over basement extension to Department of Finance wing of Government Buildings, built c.2008. Linked to the c.1912 Billets to the rear, which is designated as a Protected Structure. Also located in a Conservation Area. Many materials and building systems of the Billets may be brittle or inflexible. OPW reserves the right to develop the property, above and below ground. This should not be impeded by MetroLink. Uninterrupted access is necessary at all times. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Excavation of the Tara Street and St. Stephen's Green stations is unlikely to affect the building but some vibration may be measured. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and throughout the operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings.	Yes

		Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Building is beyond the 1mm zone of influence of the Building Damage Assessment Report OPW expects to be consulted on a 3 building damage assessment for the building. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. No ground borne noise and vibration impacts are identified for the building and blasting works or dust arisings are also unlikely to have an effect. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 18+400. Vibration during railway operation will not affect the building. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy. OPW requests a condition requiring prior consultation and agreement regarding shafts or infrastructure in the vicinity of this or other named State properties. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy - Appendix 2: Ground Movement Assessment	
S225	OPW (Department of Justice 50-51 St Stephens Green)	No. 50 is an attached 3-bay, 4-storey over basement building built in 1771. No. 51 is a 5-bay, 3-storey over basement building built c.1760. Both buildings are designated as Protected Structures. Buildings have numerous elements that are sensitive to movement. Uninterrupted access is necessary at all times.	Yes

		Board is asked to ensure that TII has fully assessed the project with regard to planning policy. OPW reserves the right to develop the property, above and below ground. This should not be impeded by MetroLink. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and for minimum 6 weeks of the initial operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Building sits within the 1mm contour zone of influence of the building damage assessment report. OPW expects to be consulted on a 3 building damage assessment for the building. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. Significant utilities diversions are likely to be required on St. Stephen's Green Road. Specific ground borne vibration limits should be applied to the building and a monitoring regime implemented. Pre and post-construction building surveys are requested.	

		Ground vibrations from excavation of the St. Stephen's Green station may register up to 2.7mm/s.. Dust from the St. Stephen's Green construction site may affect the building. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 18+400. Vibration during railway operation will not affect the building. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy - Appendix 2: Ground Movement Assessment	
S226	OPW (Garden of Remembrance)	History and design of Garden of Remembrance is outlined in submission. It is a Protected Structure, is included in the NIAH and is within a Conservation Area. It is a site of the highest political and historical importance. All visiting Heads of State attend a ceremony at the gardens on their arrival to the country, after their greeting at Áras an Úachtaráin by the President. Sensitivities include the tanking (waterproofing) and mosaic of the pond. The very high value bronze sculpture is at a remove from the proposed tunnel. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place.	Yes

		Blasting at Mater and O'Connell Street Stations is unlikely to affect the Garden. Condition sought regarding continuous monitoring of the Gardens, 3 months in advance of construction and throughout the operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Day-to-day operations of the property cannot be interrupted by disruptions to any utilities. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. OPW require Stage 2 and 3 assessments of ground movement are carried out. Mitigation, monitoring and surveying to be agreed with OPW and close-out reports sought following decommissioning of monitoring. OPW requests that specific study is carried out for this property to determine whether groundborne noise and vibration will have any impact. Dust from station construction is unlikely to affect the Garden. Assessment and limits on groundwater dewatering is sought. Construction traffic issues. Operational noise and vibration will not impact on the Garden OPW reserves the right to redevelop the site above and below ground. OPW is seeking: - That ABP note the historic significance of the property and its importance for use in conjunction with Government business, visiting World leaders and National Commemorations. Full unhindered access to the property is required. - To ensure no disruption to the public access of the Garden and its uses. - To ensure inclusion of the Garden with a Stage 3 detailed design process, in particular regarding ground movement and groundborne noise and vibration. - To ensure no adverse impact of the traffic diversions on the accessibility of the Garden.	

		- To ensure no interference of the MetroLink development with the extant permissions pertaining to the Garden. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation and policy. - Appendix 2: Ground movement assessment.	
S227	OPW (Government Buildings Block)	3-storey quadrangle building block over raised basement, built early 1900s and designated as a Protected Structure and listed on the NIAH. Also located within a Conservation Area. Submission describes in detail and the architectural and cultural significance of the building. Uninterrupted access to the building is required at all times. A noise and vibration assessment is required for the building, prior to construction, in view of the important role and function of the building. No ventilation or evacuation can be permitted in the vicinity of the building. There are concerns regarding the risk of acts of terrorism. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. OPW reserves the right to develop the property, particularly at multiple basement levels. This should not be impeded by MetroLink. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Excavation of the Tara and St. Stephen's Green Stations are unlikely to affect the building.	Yes

		Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and for minimum 6 weeks of the initial operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Building is outside the 1mm contour zone of influence of the building damage assessment report. OPW expects to be consulted on a 3 building damage assessment for the building. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. No ground borne noise and vibration impacts are identified for the building and blasting works or dust arisings are also unlikely to have an effect. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 18+400. Vibration during railway operation will not affect the building. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy. Any requirement for intermediate shafts will require consultation with relevant security agencies in advance of a decision to place such shafts on the complex. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy - Appendix 2: Ground Movement Assessment	

S228	OPW (Headquarters of the Department of Agriculture, Food and the Marine)	8-storey over-basement building completed in 1974. Located in a Conservation Area. Submissions provides detailed discussion of its architectural and historical context. OPW reserves the right to develop the property, particularly at multiple basement levels. This should not be impeded by MetroLink. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. Future development of the building would be expected to extend to multiple basement levels. Uninterrupted access to the building is required at all times. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Excavation of the Tara and St. Stephen's Green Stations are unlikely to affect the building. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and for minimum 6 weeks of the initial operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Approx. 2/3 of the building is within the 1mm zone of influence of the building damage assessment report.	Yes

		OPW expects to be consulted on a 3 building damage assessment for the building. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. Specific ground borne vibration limits should be applied to the building and a monitoring regime implemented. Pre and post-construction building surveys are required. Building is unlikely to be affected by blasting works or dust from construction sites. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 18+400. Vibration during railway operation will not affect the building. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy. Any requirement for intermediate shafts may impact the building. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy - Appendix 2: Ground Movement Assessment	
S229	OPW (Iveagh House - Department of Foreign Affairs)	3-storey building built in 1736 and designated as a Protected Structure. An additional Protected Structure is situated to the rear of the house. Submissions describes in detail the architectural and cultural setting and significance of the building. OPW reserves the right to develop the property, particularly at multiple basement levels. This should not be impeded by MetroLink. The alignment passes 80m east of the building, but directly under the Real Tennis Court protected structure.	Yes

		Board is asked to ensure that TII has fully assessed the project with regard to planning policy. OPW reserves the right to develop the property, above and below ground. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Excavation of the St. Stephen's Green and Charlemont Stations are unlikely to affect the building or Real Tennis Court. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and for minimum 6 weeks of the initial operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Building is outside the 1mm contour zone of influence of the building damage assessment report. OPW expects to be consulted on a 3 building damage assessment for the building and Real Tennis Court. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. No ground borne noise and vibration impacts are identified for the building and blasting works or dust arisings are also unlikely to have an effect. Pre and post-construction building surveys of the building and Real Tennis Court are required.	

		Specific tunnelling vibration limits for the Real Tennis Court are requested, together with a monitoring regime. Building and Real Tennis Court are unlikely to be affected by blasting works or dust from construction sites. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 19+000. Vibration during railway operation will not affect the building. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy. Any requirement for intermediate shafts may impact the building and Real Tennis Court. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy - Appendix 2: Ground Movement Assessment	
S230	OPW (Leinster House Complex)	Site contains a number of buildings, with Leinster House at its centre. LH is a 3-storey over basement building, built 1745-1748. Submission provides detailed descriptions of each building, including its cultural significance. OPW reserves the right to develop the building above and below ground and this should not be impeded by MetroLink. All buildings are contained within a Zone 8 Georgian Conservation Area and most are designated as Protected Structures and/or are listed on the NIAH. Listing include railings, gates to Kildare Street and Merrion Square, memorials and statues. Unrestricted access is vital. Every day operations of the Parliament are expected to be maintained at all times, which includes televising, broadcasting and recording.	Yes

		A noise and vibration assessment is required prior to construction, following by continuous monitoring. No ventilation and/or evacuation can be permitted in the vicinity of the site. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. No new constraints should be introduced, which would limit future development potential and the security and operations of the building. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. Schedule 3 of the Draft Railway Order lists substratum land that may be required and identifies a number of property owners but, does not identify the Houses of the Oireachtas Commission as an occupier of Leinster House. Continuous access to Leinster House is required, in view of its important functions and day to day activities cannot be disrupted by disruptions to utilities. The alignment passes directly beneath the building. Excavation of Tara Street and St. Stephen's Green stations is unlikely to affect the building. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and for minimum 6 weeks of the initial operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures.	

		1/3 of Leinster House lies within the 1mm contour zone of influence of the building damage assessment report. OPW expects to be consulted on a 3 building damage assessment for the building and Real Tennis Court. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. OPW requests the specific construction vibration limits are applied to Leinster House and a monitoring regime implemented. Pre and post-construction building damage surveys are required for the building. Blasting during excavation and dust from construction sites are unlikely to affect the building. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 19+000. Vibration during railway operation will not affect the building. OPW requests that permanent noise and vibration monitoring equipment is installed in appropriate locations, e.g. broadcast studios at Leinster House. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy. Any requirement for intermediate shafts may impact the building particularly in relation to security. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy - Appendix 2: Ground Movement Assessment	
S231	OPW (Mobhi Road Complex)	Complex is an assembly of buildings, playing pitches and sports fields, accommodating Whitehall College of Further Education (formerly Coláiste Caoimhín), Scoil Chaitríona, Scoil Mobhi and CLG	Yes

		Na Fianna. Coláiste Caoimhín is partly occupied by Gaelscoil Aine and 'Experience Gaelic Games', a tourist attraction, is located within the complex. The 1908 Marlborough Hall (Whitehall CoFE) is a Protected Structure and included on the NIAH. Entrance gates that it is proposed to relocate are not listed. It is not clear how the verge of mature trees along Mobhi Road are to be retained and protected, given that they are zoned Z9 'to preserve, provide and improve recreational amenity and open space and green network'. A detailed assessment of adverse impacts on the complex and mitigation measures is required. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. OPW reserves the right to future development of all properties in the complex, noting the demand for educational facilities in the area. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and 6 weeks post-operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Day-to-day operations of the property cannot be interrupted by disruptions to any utilities. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. OPW require Stage 2 and 3 assessments of ground movement for Coláiste Caoimhín. Close-out reports sought following decommissioning of monitoring.	

		OPW requests that specific study is carried out for this property to determine whether groundborne noise and vibration will have any impact. Specific assessment of blasting impacts on the property is requested. Dust from station construction is likely to affect the buildings. Assessment and limits on groundwater dewatering is sought. TII and contractors will need to manage impacts due to truck movements from station site. Operational noise and vibration will not impact on the building. MetroLink is likely to result in restrictions on future development at the site. OPW reserves the right to redevelop the site above and below ground. OPW is seeking: - To ensure no disruption to safe access, particularly for children. - To ensure assessing the adverse traffic impacts on vehicular access during construction or due to additional lorry movements. - To ensure no damage to the buildings with pre and post-construction surveys, trials and monitoring. - To ensure assessment and limits to dewatering are applied. - To ensure detailed assessment of blasting is undertaken. - To ensure liaison to prevent future interferences with development of the site. - To ensure assessment of impacts on verge of mature trees along Mobhi Road. - Precedents to be applied to the risk assessments utilising best industry practice. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation and policy. - Appendix 2: Ground movement assessment.	
S232	OPW (National Concert Hall Complex)	Site includes National Concert Hall and Iveagh Gardens. Construction of built elements dates back to 1863, NCH and Iveagh Gardens are designated as a Protected Structure and is located in a	Yes

		Conservation Area. Submission provides a detailed description of the building's architectural and cultural significance. NCH is a 37-bay, 2-storey with attic over basement building. Redevelopment of NCH is part of Project Ireland 2040 and includes a Masterplan, key features of which are discussed by the submission. Day to day operations cannot be interrupted by disruption to any utilities. DCC Application Reg. Ref. 4951/22 (ABP Ref. ABP-313358-22) submitted after submission of MetroLink application, for NCH, which includes a 4-storey extension at the boundary of the Iveagh Gardens. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. OPW reserves the right to develop the building above and below ground and this should not be impeded by MetroLink. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. Proposed alignment passes very close to NCH and in particular the proposed site of the National Children's Science Centre. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Excavation of St. Stephen's Green and Charlemont stations unlikely to affect the building. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and for minimum 6 weeks of the initial operational stage.	

		Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. 10% of NCH and 30% of the planned National Children's Science Centre are within the 1mm contour zone of influence for the building damage assessment report. The building damage assessment report wrongly identifies the depth of NCH as 0m. Depth of foundations should be clarified. OPW expects to be consulted on a 3 building damage assessment for the building and Real Tennis Court. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. OPW requests the specific construction vibration limits are applied to the complex and a monitoring regime implemented. Pre and post-construction building damage surveys are required for the complex. Blasting during excavation and dust from construction sites are unlikely to affect the building. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 18+900. Vibration during railway operation will not affect the building. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy. Any requirement for intermediate shafts may impact the building. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213).	

		- Appendix 1: List of planning legislation & policy - Appendix 2: Ground Movement Assessment	
S233	OPW (National Gallery of Ireland)	3-storey over basement building, built in 1854. Building also encompasses 5 Clare Street, a 4-bay, 4-storey over basement former Georgian townhouse, and 88-90 Merrion Sq West, a unified 4-storey terrace. Site contains multiple designated Protected Structures. Submission provides detailed description of the building's architectural and cultural significance. Day to day activities cannot be interrupted by disruption to utilities. Construction activities may cause vibrations to the extent as to risk damage to art works. Vibration monitoring is requested, from 6 months pre-construction to 1 year post-completion. Recommended vibration tolerance bands are suggested as follows: acceptable tolerance level is 0.8mm/s, upper permitted tolerance level of 1.0mm/s, outer tolerance level of 1.4mm/s where all works should cease. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. OPW reserves the right to develop the building above and below ground and this should not be impeded by MetroLink. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. Excavation of Tara and St. Stephen's Green stations is unlikely to affect the building. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and for minimum 6 weeks of the initial operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings.	Yes

		Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Careful consideration should be given to issues of noise and vibration, etc that may affect the working environment. Building lies outside the 1mm contour zone of influence of the building damage assessment report. OPW expects to be consulted on a 3 building damage assessment for the building and Real Tennis Court. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. Pre and post-construction building surveys are required. Building is unlikely to be affected by blasting works or dust from construction sites. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 18+400. Vibration during railway operation will not affect the building. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy. Any requirement for intermediate shafts may impact the building. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: Vibration comments by Dr Bill Wei dated March 2007. - Appendix 2: National Gallery of Ireland Historic Wings Vibration Monitoring Method Statement, Punch Consulting Engineers 2011. - Appendix 3: List of planning legislation & policy. - Appendix 4: Ground Movement Assessment.	

S234	OPW (Natural History Museum)	3-storey building, constructed in 1856, located in a Conservation Area and designated Protected Structure and listed on NIAH. Submission describes architectural and cultural significance of the building and provides detailed summary of its sensitivities. Building contains exceptionally fragile elements. Uninterrupted access is required at all times and operations cannot be interrupted by disruption to any utilities. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. OPW reserves the right to develop the building above and below ground and this should not be impeded by MetroLink. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Excavation of Tara and St. Stephen's Green stations is unlikely to affect the building. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and for minimum 6 weeks of the initial operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Building lies outside the 1mm contour zone of influence of the building damage assessment report. OPW expects to be consulted on a 3 building damage assessment for the building and Real Tennis Court. Additionally, internal best practice requires that stage 4 and 5 assessments are	Yes

		undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. Pre and post-construction building surveys are required. OPW requests the specific construction vibration limits are applied to the complex and a monitoring regime implemented. Pre and post-construction building defect surveys are required. Building is unlikely to be affected by blasting works or dust from construction sites. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 18+400. Vibration during railway operation will not affect the building. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy. Any requirement for intermediate shafts may impact the building. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy. - Appendix 2: Ground Movement Assessment.	
S235	OPW (National Library of Ireland)	NLI comprises a number of buildings, a number of which are designated as Protected Structures and listed on the NIAH. Also located in a Conservation Area. Submission provides a detailed description of architectural and cultural significance of the buildings and also of identified building/collection sensitivities. High-resolution cameras within the NLI Digitisation Studios (Nos. 2-3 Kildare Street) are extremely vulnerable to vibration of the walls and/or floor.	Yes

		Uninterrupted access is required to the building at all times and operations cannot be interrupted by disruption to any utilities. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. Further development of the site is being considered and should not be restricted by MetroLink. OPW reserves the right to development the building, above and below ground. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Excavation of Tara and St. Stephen's Green stations is unlikely to affect the building. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and throughout the operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. 50% of the building lies within the 1mm contour zone of influence of the building damage assessment report. OPW expects to be consulted on a 3 building damage assessment for the building and Real Tennis Court. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. Pre and post-construction building surveys are required.	

		OPW requests the specific construction vibration limits are applied to the complex and a monitoring regime implemented. Building is unlikely to be affected by blasting works or dust from construction sites. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 18+400. Vibration during railway operation will not affect the building. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy. Any requirement for intermediate shafts may impact the building. Reference is made to damage caused to the Book of Kells during transit, thought to be caused by vibration. There are ancient and sensitive materials at NLI. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy. - Appendix 2: Ground Movement Assessment.	
S236	OPW (National Museum of Ireland)	Building has a centrepiece rotunda, flanked by 2-storey with attic over basement pavilions. Building is a designated Protected Structure and is listed on the NIAH, is located in a Conservation Area and in Zone 8 Georgian Conservation Area. Submission provides a detailed description of the building's architectural and cultural significance and also provides a list of building/collection sensitivities. Sound generated movement of 2mm/second can cause damage to collections. This needs to be further assessed with a wider scope to include vibration induced movements. Protection of objects and articles from dust is of high significance to the museum.	Yes

		Uninterrupted access to the building is required at all times and operations cannot be interrupted by disruption to any utilities. OPW reserves the right to develop the property, above and below ground and MetroLink should not impede this. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. Redevelopment of the building is planned, in line with provisions of the National Development Plan 2021-2030 and no new constraints should be introduced to limit this. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Excavation of Tara and St. Stephen's Green stations is unlikely to affect the building. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and for 6 weeks of the operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. 1/3 of the building lies within the 1mm contour zone of influence of the building damage assessment report. OPW expects to be consulted on a 3 building damage assessment for the building and Real Tennis Court. Additionally, internal best practice requires that stage 4 and 5 assessments are	

		undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. OPW requests the specific construction vibration limits are applied to the building and a monitoring regime implemented. Pre and post-construction building surveys are required. Building is unlikely to be affected by blasting works or dust from construction sites. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 18+400. Vibration during railway operation will not affect the building. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy. Any requirement for intermediate shafts may impact the building. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy. - Appendix 2: Ground Movement Assessment.	
S237	OPW (St Stephens Green Buildings)	Submission concerns maintenance compounds, glasshouses and superintendent's lodge located within St. Stephen's Green. The superintendent's lodge is designated as a Protected Structure. St. Stephen's Green is a National Monument and is designated as a Conservation Area. Day to day operations cannot be interrupted by disruption to any utilities. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. OPW reserves the right to develop the property, above and below ground, and this should not be impeded by MetroLink.	Yes

		Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. Tunnel alignment does not pass directly beneath the buildings. Excavation of St. Stephen's Green and Charlemont stations is unlikely to affect the building. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and for 6 weeks of the operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Buildings are outside the 1mm contour zone of influence of the building damage assessment report. OPW expects to be consulted on a 3 building damage assessment for the building and Real Tennis Court. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. No ground borne noise and vibration impacts are identified for the building and blasting works or dust arisings are also unlikely to have an effect. Pre and post-construction building surveys are required. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk.	

		Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 18+400. Vibration during railway operation will not affect the building. It is understood that Dublin Fire Brigade has not accepted the proposed fire strategy. Any requirement for intermediate shafts may impact the buildings. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy. - Appendix 2: Ground Movement Assessment.	
S238	OPW (St Stephens Green House)	8-storey over 2-level basement building. Day to day operations cannot be interrupted by disruption to any utilities. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. OPW reserves the right to develop the property, above and below ground, and this should not be impeded by MetroLink. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. Tunnel alignment does not pass directly beneath the building. Excavation of St. Stephen's Green and Charlemont stations is unlikely to affect the building. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult.	Yes

		Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and throughout the operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. Building is outside the 1mm contour zone of influence of the building damage assessment report. OPW expects to be consulted on a 3 building damage assessment for the building and Real Tennis Court. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. No ground borne noise and vibration impacts are identified for the building and blasting works or dust arisings are also unlikely to have an effect. Pre and post-construction building surveys are required. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk. Haulage routes/patterns need to be managed to minimise impact in the vicinity. Floating track slab is requested to be installed between Chainage 17+980 and 18+400. Vibration during railway operation will not affect the building. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy. - Appendix 2: Ground Movement Assessment.	

S239	OPW (St Stephens Green Park)	Historic space, designated as a National Monument and a Protected Structure and measuring 9.9ha. Classified as being of National importance under the ICOMOS-IFLA (International Committee for Historic Gardens) in 1982. Park contains a large number of protected structures. Submission provides a detailed description of the Park's cultural significance and importance. Proposal will significantly alter the environmental and biological benefits that habitats provide to the environment and wildlife. Board is asked to ensure that TII has fully assessed the project with regard to planning policy. OPW reserves the right to develop the property, above and below ground, and this should not be impeded by MetroLink. Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. The requirements of the National Monuments Act 1930, as amended, have to be complied with and there is a requirement to obtain Ministerial consent where there is potential demolition of a national monument. Park area under the ownership of the Minister extends to the area outside the park railings and within the surrounding posts. Section 15 of St. Stephen's Green (Dublin) Act 1877 provides that the Green shall be maintained as "an ornamental park or pleasure ground for the recreation or enjoyment of the public" and that the Green shall be allowed to be "used and enjoyed as a public park for the recreation and enjoyment of the public, and not for any other purpose". Section 116 of the Dublin Transport Authority Act 2008 disapplies section 15 of the 1877 Act in respect of railway works carried out pursuant to a railway order under applicable legislation and in respect of the operation of a railway or metro in or under the Green.	No

		The option studies have been reviewed by the OPW and its engineering consultants, who have concluded that some of the key assumptions adopted to reach their conclusion are flawed. OPW wishes to work with the applicant to develop a solution that satisfies the requirement for a station in the vicinity of the Green but has no impact on the Park. Western edge of St. Stephen's Green station box lies within the boundary of the Park and the eastern edge lies within the road St. Stephen's Green East. There are no plans that identify referenced chainages, which makes reviewing the Draft Railway Order difficult. The perimeter wall, railings, and paving are fundamental elements of the park that will be affected by the construction of the running tunnel and station box. The lakes within the park are both fed and drained through a network of pipes and these need to be considered in future assessments. OPW is not satisfied with the level of impact the project, in its current form, will have on the National Monument: Loss of trees & impact on biodiversity: 225 trees (28.2% of total) may be impacted by the project, including 5 No. Category A trees. 64 trees are proposed to be felled along with 75% of trees, shrubs and groundcover along the eastern boundary. These trees support wildlife and provide human benefits as well. The impact on biodiversity is unprecedented and contravenes policy within the Dublin City Development Plan: - Removal of 28% of trees is a clear violation of the St. Stephen's Green Park Conservation Management Plan 2015-2020. - Depth of soil may be insufficient to allow for large trees to reestablish. - Landscape, historical and visual character of the Green will be lost. The continuous tree-lined and Victorian landscape character of the Green will be lost and Lime walk may be impacted. - Noise pollution and visual intrusion and loss of habitat for wildlife. - Impact on tourism during construction. - Proposed reinstatement treatment is not in keeping with the historic fabric of the Green. Infrastructure within the Park will require exclusion zones and maintenance access areas.	

		- Applicant is requested to reconsider the application, to ensure compliance with policies G13, G107, G108 and G124 of the City Development Plan and sections 15.6.1 and 15.6.10. Impacts on built heritage: The proposal replaces historic elements with an incongruent contemporary plaza. All four squares of the Green should be read as one. - Proposed feature pavement, stainless steel security bollards and contemporary standard lighting are out of character and are evidence of an inaccurate assessment of the historic importance of the Park. - St. Stephen's Green station will directly impact 2 No. Protected Structures and 3 No. NIAH sites, contrary to policies BHA2, BHA3, BHA4 and BHA5 of the City Development Plan. - Removal of built heritage will degrade the importance of the Green. The dilution of historic monuments and spaces of historical and national significance is to be avoided or justified under the City Development Plan. - MetroLink is in contravention of the built heritage and archaeology chapter of the City Development Plan and is also against specified objectives for archaeology, architecture and built heritage outlined in the St. Stephen's Green Park Conservation Management Plan 2015-2020. Landscape and visual impact: The development will alter the landscape and historical layout of the park. The introduction of a plaza will upset the existing symmetry and alter the character of St. Stephen's Green, where the four corners of the square park should be read as one. The proposal is contrary to the vision outlined for the protection of the Green in the Dublin City Park Strategy 2019-2022. The development contravenes specified objectives of the St. Stephen's Green Conservation Management Plan 2015-2020. The proposed entrance alignment will impede on public usage of the park, encouraging commuters to transverse the Park in order to access the adjacent shopping district or access the Luas Green Line, effectively creating a cut-through. The Park was not designed to facilitate this kind of movement and no design or thought has gone into how commuters will connect from the Luas with the proposed MetroLink station. It is critical for the design of the MetroLink station to	

		provide an appropriate interchange and not for the Park to become a walkthrough for multi-modal transport use. The change in access and public use is a contravention of specified objectives within the St. Stephen's Green Park Conservation Management Plan 2015-2020. Condition sought regarding continuous monitoring of the property, 3 months in advance of construction and for a period of 6 weeks of the operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. A significant proportion of the Green lies within the 1mm contour zone of influence of the building damage assessment report. OPW expects to be consulted on a 3 building damage assessment for the building and Real Tennis Court. Additionally, internal best practice requires that stage 4 and 5 assessments are undertaken. OPW expects to be provided with monitoring close out reports on completion of excavation. Significant utilities diversions are likely to be required on St. Stephen's Green East. OPW requests construction vibration limits to be applied to the building and to ensure a monitoring regime is implemented. Pre and post-construction building surveys are required. Ground vibrations of up to 2.7mm/s may register during station excavation. Construction dust may also affect the Park. A groundwater monitoring scheme should be implemented, together with a contingency plan to manage residual risk.	

		There is a significant risk that lorry movements will impact on the historic, fabric, structure and elements of the Park. The applicant and contractors should demonstrate that this risk will be addressed and that measures are taken to ensure there is no impact arising. The Green may be impacted evacuation routes, firefighting access, ducts, etc. Floating track slab is requested to be installed between Chainage 17+980 and 18+400. Vibration during railway operation will not affect the building. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation & policy. - Appendix 2: Ground Movement Assessment.	
S240	OPW (The General Post Office)	History and design of the General Post Office (GPO) is outlined in submission. Any assessment of the building will need to be based on a full understanding of the construction and materials of the building and the effects of different periods of building. Iron cramps secure stone to the elevations. Bronze windows will be very inflexible. Historic glass is thinner and more fragile. A complex roof relies on metal for waterproofing and will be vulnerable to movement. Extensive plasterwork will be vulnerable to movement. Sensitivities include the building structure and heterogeneity, window and rooflights, special finishes and features and other aspects including basements, groundwater disturbance, foundation impacts, dampness, rodents, roofs and flashing. The GPO (incl. Nos. 1-6 Henry Street), GPO Arcade (Nos. 26-30 Henry Street) and bollards at the GPO kerb line are Protected Structures. Uninterrupted access to the building is necessary at all times. Planning history of Clerys Quarter and Dublin Central noted. OPW intend to refurbish GPO when An Post vacates offices. Board is asked to ensure that TII has fully assessed the project with regard to planning policy.	Yes

		Alignment drawing and contour drawing should different alignments, resulting in deficient information to assess the vulnerability of damage due to vibration. OPW would seek to enter into legal agreements with TII to ensure protection of State property. This will only be possible with more detailed design and Board should make Railway Order conditional on such legal agreements being in place. Blasting at O'Connell Street Station is unlikely to affect the GPO. Condition sought regarding continuous monitoring of the GPO, 3 months in advance of construction and throughout the operational stage. Board's attention is drawn to Part XI of the Planning and Development Act with regard to security issues and sharing of information on structure and operation of such buildings. Day-to-day operations of the property cannot be interrupted by disruptions to any utilities. Design and operation of MetroLink should be in line with best international practice in relation to anti-terrorism and security measures. GPO is Dublin's primary post office and is a cultural hub and museum of nationally significant heritage value. Any impact in terms of noise and vibration needs to be carefully considered. Area surrounding the property is also used for State commemorations and must continue to be available. OPW require Stage 2 and 3 assessments of ground movement are carried out. Mitigation, monitoring and surveying to be agreed with OPW and close-out reports sought following decommissioning of monitoring. OPW requests that specific study is carried out for this property to determine whether groundborne noise and vibration will have any impact. Specific assessment of blasting impacts on the property is requested. Dust from station construction is likely to affect the property. Assessment and limits on groundwater dewatering is sought.	

		Construction traffic issues. Operational noise and vibration will not impact on the property. OPW reserves the right to redevelop the site above and below ground. OPW is seeking: - That ABP note the historic significance of the property and ensure that all necessary conditions are attached to ensure its full protection and use. - To ensure minimum disruption to public access of the GPO and its use and functions. - To ensure no damage to the building and its architectural detailing, pre and post construction surveys, trials and monitoring are required as there is potential for major noise and vibration impacts. - Disruptions to traffic may occur. Unrestricted access needed for postal vans and lorries. - Precedents to be applied to the risk assessments to ensure the contractors are utilising best industry practice within the implementation of the project. - To ensure impact on future development of GPO is minimised, particularly in relation to emergency works which may need to be carried out on the building. - To mitigate noise and vibration to acceptable levels. The installation of a floating track slab at this portion of the alignment would be the preferred option. <u>Submission accompanied by:</u> - Cover letter common to all OPW submissions (summarised in submission S213). - Appendix 1: List of planning legislation and policy. - Appendix 2: Ground movement assessment.	
S261	Rail Users Ireland (Thomas J Stamp)	Supports proposed development. Glasnevin interchange welcomed as a critical modal interchange for Dublin. Proposal is a compromised solution with poor integration that will be inconvenient to passengers. All interchanges except Glasnevin are 'out of station' and require passengers to exit, cross public footpaths and in the case of Dublin Airport interact with road traffic. This is unacceptable. A minimum of two lifts should be provided at each station entrance to provide redundancy in the event of breakdowns.	No

		Single bore tunnels are at odds with normal practice globally. Twin bore has significant safety and operational benefits and requires narrower station boxes with central island platforms. 64m train length is restrictive and far below the length of typical metro trains elsewhere which are typically c. 100m. As we are building for the next 100+ years, starting with an assumption of 90 second headways is not a good starting point. 80m platforms should be built. There is likely to be a future Metro West, Green Line upgrade and Metro South West in the fullness of time and we have consistently under-specified capacity in Dublin (Green line Luas trams increased from 30m to 40m to 52m). Reversing section at Charlemont can only store one train. It should be longer to store several trains. Lack of integration at Charlemont – dedicated lifts and stairs should be provided for each Luas platform to the Metro to avoid the need to walk on the street. Single pedestrian entrance at St Stephens Green is insufficient given demand from Leeson Street end. Charlemont has two entrances, yet the busier St Stephens Green has only one. Zero integration with Irish Rail at Tara Street. Stating that integration is future work for Irish Rail is not acceptable. Tara Street is not suitable for high volume interchange. With the long term plan for DART Underground, Tara Street station would not be needed as an interchange. Significant cost, time, disruption benefits to omitting the station. At O'Connell Street, a direct access from the Luas platform into the Metro station is desirable. Zero integration at Dublin Airport. External walk required and interaction with vehicular traffic. Stating it will be the daa's problem is not a solution. An underground walkway from T1 and T2 needs to be considered, or connection via the existing bridge to the short-term car park.	
S274	Santry Forum	There should be a bike hub at each station. More connection to DART stations to include both Tara and Pearse St. Glasnevin Station should be renamed as it is misleading. Look at building they propose to demolish e.g. Brian Boru pub, and look at not taking land away from Na Fianna and residents of Mobhi Road. There should be shuttle buses between the various stations to ensure it is accessible to the residents of Santry.	No
S290	Tesco Ireland	Tesco has 2 distribution centres (Donabate and Ballymun) and 15 stores located along the alignment. In the case of the Ballymun Distribution Centre, a total of 1,200 vehicle movements in and out are required each day.	No

		North section: Significant concerns due to 'severe' impact assessment rating on general traffic and potential impacts on Tesco Holywell Store and Donabate Distribution Centre. Impact of R132 corridor works could be mitigated by: - Retain R125 access via Pinnock Hill roundabout. - Reduce proposed closure period of R125 access via Pinnock Hill roundabout. - Ensure junction capacity at Airside junction/Nevinstown Lane is maximised and schedule wider works to minimise overall impact on network. - Provide for direct engagement between MetroLink's Traffic Management Co-Ordinator and Tesco Ireland during design and build. Central and South Section: Significant concerns due to 'moderate' to 'severe' impact assessment ratings and impact on Ballymun Distribution Centre and ability to get goods from Ballymun and Donabate to stores in North Inner City. Impacts could be mitigated by: - Retain general traffic lane capacity along R108 combined with bus gates for public transport priority. - Ensure north-south movements on R108 are prioritised, particularly during Phase 1 of Northwood Station main works. - Ensure junction capacity at R108/Northwood Avenue is maximised with specific consideration given to the volume of HGVs using Northwood Avenue which are not appropriate to re-route. Retain turning lanes in and out of Northwood Ave. - Provide for direct engagement between MetroLink's Traffic Management Co-Ordinator and Tesco Ireland during design and build. In the operational phase, Teso seek to ensure that the level of traffic is safely accommodated at junctions along the route between the Ballymun Distribution Centre and R108 Ballymun road. Tesco would welcome opportunity to engage with MetroLink team to achieve a positive outcome.	
S321	Fingal County Council	Welcome the proposed development. It is a transformative piece of new public transport infrastructure and will facilitate Fingal's vision for compact growth and sustainable mobility. MetroLink is supported by national, regional and local policy.	Yes

		MetroLink will support the development potential of long-term strategic reserve lands at Lissenhall for mixed use urban district. Development Plan maps specifically show the MetroLink alignment as it passes through the relevant zoning objectives. Development Plan includes a dedicated Metro and Rail Economic Corridor zoning and map-based local objectives. A number of new Local Area Plans are proposed during the new CDP period to include sustainable integration of land use and transportation, regeneration and infill development and new residential and employment opportunities on or adjacent to the MetroLink route. No enforcement information or SAAOs relating to the site. Santry Lodge (Former Charter School), Old Ballymun Road, Santry, Dublin 9, is a new addition to the RPS adopted in February 2023. It is the protected structure that will be most affected by the proposed development and was highlighted in consultations on the MetroLink route, with the Council advising that it be avoided. Proposed route avoids the historic building of the former school but will alter and impact the overall site of Santry Lodge. A large section of the grounds is to be developed for the Metro track and an access road, the gate lodge is to be demolished, gates and gate piers moved, and attenuation tanks, relocated telecommunications mast and pumping station built. Tunnel walls are also proposed and there is a considerable loss of trees and planting. These works are within the curtilage of the protected structure and will alter the historic setting of the Former Charter School to its detriment. The route and design should be re-examined and re-designed at this location to ensure a more sensitive handling of the site. It would be preferable for the route to be amended so that it does not enter the site at all, or that it follows or runs as close as possible to the line of the M50 Junction 4 Exit Road and R108 leading into Ballymun, in the lands to the rear of Santry Lodge. There is one ACA close to the route which was recently adopted. It is to the west of Swords Main Street and does not adjoin the proposed route. Satisfied with the adequacy and provision of the public water supply and sewerage facilities. Satisfied that the flood history in the area will not impede the implementation or operation of MetroLink. With regard to pluvial flooding, they are satisfied with the availability and capacity of public surface water drainage facilities to facilitate the project due to the comprehensive SUDs proposals. With regard to fluvial flooding, they are satisfied that the risk has been addressed and that with mitigation measures it will not impact on flood levels.	

		Majority of the route is within 'Low Lying Agricultural' landscape character type. The most northern part is located within 'rolling hills with tree belts' LCT. In the absence of MetroLink, it is clear that there will be a significant constraint to the ongoing sustainable development of Fingal in the medium to long-term. Happy to see higher levels of bike parking now proposed, compared to previous iterations. FCC has an extensive network of cycling and walking infrastructure in development and MetroLink Stations will be key trip attractors. Fully supports the development and recommend that the Board consent to the proposed development. Conditions recommended, including community gain conditions to support sport, recreation, leisure and community development. A committee to include the applicant, FCC and the local community should be involved. A review of the Section 49 contributions scheme relating to MetroLink in the FCC and DCC areas is currently being carried out. <u>Submission accompanied by:</u> - Recommended conditions. - Planning application search along the proposed route (50m buffer on each side).	

Appendix 2C: Alphabetical List of Further Submissions (Following Second Public Consultation Period Post-Oral Hearing)

Ref. No.	Name	Associated First Submission No.	Area/ Category
1FS1	ACRA (Association of Combined Residence Associations)	S2	GEN
1FS2	Amanda Hughes	S6	AZ4 (e)
1FS3	An Taisce	S8	AZ4 (g)
1FS4	Andrew Conlon and Maeve Fitzpatrick	S9	AZ4 (e)
1FS5	Andrew Whelan	S10	MULT AZ's
1FS6	Berkeley Road Area Residents Association	N/A (New observer)	AZ4 (e)
1FS7	Brendan Heneghan	S27	AZ4 (i)
1FS8	Charlemont and Dartmouth Community Group (General Area Submission)	S42	AZ4 (i)
1FS9	Charlemont and Dartmouth Community Group (1, 3, 5 & 7-16 Dartmouth Square)	S41	AZ4 (i)
1FS10	Charlemont and Dartmouth Community Group (26-28 and 32-35 Dartmouth Road)	S40	AZ4 (i)
1FS11	Charlemont and Dartmouth Community Group (3-11 Cambridge Terrace)	N/A (New observer)	AZ4 (i)
~~1FS12~~	~~Ciaran Black and Leon McCarthy~~ WITHDRAWN	~~S43~~	
1FS13	Conor and Lorraine Power	S51	AZ4 (i)
1FS14	Cormac McKay and Aeravai	S54	GEN
1FS15	D. Holohan	N/A (New observer)	GEN
1FS16	DECC Geological Survey Ireland	S56	GEN
1FS17	Development Applications Unit (Department of Housing, Local Government and Heritage)	S63	MULT AZ's
1FS18	District 7 Community Alliance	S66	AZ4 (e)
1FS19	Donal O'Brolcain	S67	GEN
1FS20	Dublin City Council	S71	MULT AZ's
1FS21	Dublin Commuter Coalition	S72	GEN
1FS22	Dublin Cycling Campaign	S73	MULT AZ's
1FS23	Estuary Court Residents Association	S89/S90	AZ1(a)
1FS24	Fingal County Council	S321	MULT AZ's
1FS25	GADRA (Griffith Avenue and District Residents Association)	S99	MULT AZ4
1FS26	Grace Maguire	S107	AZ4 (i)
1FS27	Hampstead Residents CLG	S111	AZ4 (b)
1FS28	John Conway and Orlaith McCarthy	S149	AZ4 (i)
1FS29	Leo and Anne Crehan	S166	AZ4 (i)
1FS30	Lidl Ireland GmbH	S169	AZ3
1FS31	McGreevy and Taylor Families	N/A (New observer). See	AZ1(b)

		also S152 (John McGreevy)	
1FS32	Metro South West Group	S189	AZ4 (h)
~~1FS33~~	~~Michael A Doyle and Carmel Smith Doyle~~ WITHDRAWN	~~S190~~	
1FS34	NAMA	N/A (New observer)	AZ1(a)
1FS35	Niall Parsons	S203/S204	AZ4 (i)
1FS36	OPW	S213 -S240	MULT AZ4
1FS37	Royal Canal Clean-Up Group	S270	AZ4 (d)
1FS38	Shandon Residents Association	S279	AZ4 (d)
1FS39	Suzi Taylor	S286	AZ4 (i)
1FS40	Terry Reid and Denis McLoughlin	S60	AZ4 (i)
1FS41	Troys Butchers	S304	AZ4 (f)
1FS42	Union Investment Real Estate GmbH	S305	AZ4 (i)

Appendix 2D: Summary of Further Submissions (Following Second Public Consultation Period Post-Oral Hearing) by Area

AZ1 Northern Section (Estuary to Dublin Airport North Portal)		
Ref. No.	Observer	Main Issues
1FS23	Estuary Court Residents Association	Observer requests that TII should provide a construction programme for the section of cut and cover tunnel at Estuary Court. It is considered clear that the 40 month timeline that TII states it requires usage of green areas at Estuary Court is not solely related to the 105m length of tunnel constructed through the estate. Observer requests that TII should significantly reduce the occupation time of the south green, to reflect the actual construction time required to this section. No construction is required at the north green, so it is unreasonable for TII for what is in effect for their convenience. TII should withdraw their proposal to occupy the north green. Observer welcomes commitment within drawing No. ML-RO 301 H-J S1 that existing trees and vegetation along the R132 will be retained. Observer requests that TII would assess the impact of the loss of open spaces on child development. Observer presented a case that the route alignment should largely run under the R132 and this was dismissed by TII without adequate reasoning. The observer requests a substantiated reason as to why the proposal, which derives multiple specified benefits, will not work.
1FS31	McGreevy and Taylor Families	Observers are freehold owners of undeveloped lands at Pinnock Hill, Swords. TII proposes to CPO 1.068ha (57%) of the landholding, which includes all of the R132 road frontage and will leave the lands land-locked, with no means of access. The lands are zoned for development under the Fingal County Development Plan but the failure to provide for future access will negate future development potential. Stopping up or removal of the means of access to the lands is unacceptable and irrational. The extent of permanent land acquisition to facilitate the proposed Fosterstown Station exceeds what is required, with the result that the proposed CPO is unfair, unjust and bad in law.
1FS34	NAMA	Lands at Lissenhall that proposed to accommodate Estuary Station and the Park and Ride, which were previously in the ownership of Bovale Developments Ltd are now owned by Nama.

AZ2 Airport Section
None

AZ3 Dardistown Section (Dublin Airport South Portal to Northwood)		
Ref. No.	Observer	Main Issues
1FS30	Lidl Ireland GmbH	Owner of lands at Northwood that are identified for the proposed Northwood Station and are adjacent to the Northwood stop of the Ballymun/Finglas BusConnects scheme. The lands represent a strategically important development site, in view of its location at a planned public transport interchange and its designation under specified local, regional and national planning policies, and must be developed accordingly. The Guidance Note for Developers provided to the Oral Hearing render the maximisation of development on the site impossible due to unacceptably low loading limits allowed, which allow for the equivalent of a single house overhead. The observer met with TII on 11 occasions to high density development, in the form of adjacent to the station and overstation development. TII should have made provision for greater loadings at key locations along the alignment. Issues with restrictions on development are compounded proposed limits of deviation, which allow the alignment to move east or west. Observer contends that no substantial changes to the design of stations and tunnels is required in order to facilitate overstation development. It would be unsatisfactory for the Board to leave this issue to be sorted out during implementation as, to do so, would relinquish overall control over the design of the project. In the absence of provision for overstation development, the project is considered to be fundamentally inconsistent with proper planning and sustainable development. <u>Submission accompanied by:</u> - Additional submission by Punch Consulting - Copies of Oral Hearing submissions made by Tony Bamford and Punch Consulting - Copy of original public consultation submission

AZ4 (a): Northwood to Collins Avenue Station
None

AZ4 (b): Collins Avenue Station to Griffith Park Station (Incl. Albert College Park Intervention Shaft)		
Ref. No.	Observer	Main Issues
1FS27	Hampstead Residents CLG	The document drop that occurred on day 1 of the Oral Hearing was a tactic by the applicant and the documents were only released under duress. The independent tunnelling expert, RINA, was curtailed by both the scope of services published by the applicant and the scale of the Oral Hearing information dump. The applicant has not answered multiple questions regarding the preferred route consultation and the Albert College Park vent shaft. The Board was also requested to reinstate rights regarding public consultation. Meetings with the applicant have been inadequate, in terms of attendance by key project personnel and the availability/provision of relevant documentation. Previous experiences with contractors acting on the applicant's behalf have been negative and there is concern that other issues will arise. Sanctions should be put in place, where such transgressions arise and residents should be compensated when such transgressions arise. The Board is requested to include a condition on the Railway Order, requiring that: - Metrolink sites are quiet and dark at night. - Sprayed concrete lining works should only take place during daytime hours. - Charter is set up in relation to independent professional advice. - Residents are compensated in situations where contractors deviate from project controls/requirements. - Use of the ACP football field is adequately defined. - ACP construction compound is only for use as part of the construction of the vent shaft. - No trees will be removed along the Hampstead Avenue boundary or within the ACP CPO boundaries (delineated in blue). - Stakeholder engagement process is implemented.

AZ4 (c): Griffith Park Station to Glasnevin Station		
None		

AZ4 (d): Glasnevin Station to Mater Station		
Ref. No.	Observer	Main Issues

1FS37	Royal Canal Clean-Up Group	Observer expresses concern regarding the adequacy of proposals for access to and from the Royal Canal Way, at Glasnevin, in particular that insufficient consideration has been given to the scale and frequency of access. The submission includes an indication of the type and frequency of vehicles travelling along the Royal Canal Way. Concerns also expressed regarding the R108 and plaza layout at Glasnevin, with particular reference to provisions for vehicular entry and exit. Observer questions whether the proposed layout is in conflict with the Royal Canal Greenway Phase 3 Traffic Management Plan for Cross Guns Bridge and asks if consultation has taken place between State bodies regarding this aspect of the development. Survey figures of average pedestrian, cyclist and vehicular traffic provided to the Oral Hearing were out of line with real life experiences Observer expresses concern that there is no proposal to widen the Royal Canal towpath at the narrowest section, which extends c.50m. In particular the observer states that existing safety issues will be made worse, in view of increased usage by bicycles and scooters.
1FS38	Shandon Residents Association	It is hoped that Metrolink will solve traffic issues at Phibsborough, which is one of the key routes into the city and which experiences high levels of congestion and air and noise pollution. The observer expresses disappointment that minutes of the Oral Hearing will not be published under after the application has been decided. The observer had ongoing questions following closure of the Oral Hearing and engaged with TII via email on 10th September 2024, with a reply received on 30th September 2024. This submission focusses on TII responses contained with this email. TII has not provided a satisfactory reason why the temporary exit road cannot be routed through Cross Guns rather than via Shandon Park. Cross Guns is a more logical route and the Inspector is requested to require further investigation of this option There is further concern that large vehicles required to use the temporary bridge may be able to do so Routeing traffic through Shandon Park will lead to increased air pollution. Updated photomontages provided to the Oral Hearing on 27th March 2024 shows no discernible difference to the SE corner of Glasnevin Station from that shown on the originally submitted photomontages. Imagery provided to the Oral Hearing regarding planting proposals and the plaza layout are vague and greater detail is required. Since submission of the application, the National Biodiversity Plan 2023-2030, the Dublin City Biodiversity Action Plan 2021-2025 and the Phibsboro Biodiversity Action Plan have been published. The project must respect and enhance local native ecology.

		Observer repeats a request made at the Oral Hearing, that a hawthorn and blackthorn hedge to be removed from the Glasnevin area should be reinstated. It is a wasted opportunity to maintain a rigid approach to design features, rather than embracing opportunities to facility biodiversity net gain. Observer expresses disappointment that the Hegidans Brian Boru pub is to be demolished to facilitate Glasnevin Station and questions whether some remnants could be incorporated into the station design. <u>Submission is accompanied by:</u> - Briefing note prepared by the IEE and shared with TII.

AZ4 (e): Mater Station to O'Connell Street Station		
Ref. No.	Observer	Main Issues
1FS2	Amanda Hughes	Resident of Berkeley Road, Phibsborough, Dublin 7. The design, height and material finishes of the Mater Station entrance canopy and fire brigade lifts obscure views of the Mater Hospital from Berkeley Road and are visually overwhelming. It is inaccurate of the applicant to say that the St. Stephen's Green and Mater Station canopies were designed to be in keeping with the architectural heritage and historic location of the built environment. The shape, design and materials do not reflect or enhance either of these locations. The size and poor visual quality of the canopy structure will increase anti-social behaviour in the area. Observer proposes that a visually lighter canopy design should be provided and cites an example of the metro station entrance at Gare St Lazare, Paris. Alternatively, there should be a design competition for both the canopy design and fire brigade lifts. The plaza area and associated bollards at Mater Station are unnecessarily large and would benefit from additional planting, including trees instead of proposed bollards. Granite bollards at St. Stephen's Green Station would be more compatible with the built environment. Provision should be made for bat friendly lighting around the Mater Station site. The Board is requested to clarify which body will deal with residents concerns during the building phase. This is an important facility, in view of the close proximity of house on Berkeley Road to construction. Community gain in the area around Berkeley Road is welcomed, in view of the scale and duration of impacts during construction. The observer questions what provisions have been made for reimbursement of residents affected by increased insurance premiums due to the risk of subsidence and tunnelling.

		Retention of the POPS for 1 year after completion of construction will be inadequate for homeowners to see the effects of subsidence and should be extended. The amount of cover provided by POPS should be index linked to the construction industry value rather than the consumer index. Observer queries whether a traffic management has been put into place, so that access will not be impeded in Phibsborough during construction. Increased traffic in the Phibsborough area will affect air pollution levels that area already over WHO recommended levels and the observer is unaware of proposals to monitor levels during construction. Observer also questions how the public will be kept informed of such monitoring and which body will be responsible for same.
1FS4	Andrew Conlon and Maeve Fitzpatrick	Residents of Berkeley Road, Phibsborough, Dublin 7. Information provided by TII at the Oral Hearing regarding the boundary of the secondary construction site at Mater Station appears to be incorrect. The Arboricultural Impact Assessment drawings provided on 25th March 2024 shows the construction site boundary meeting the observers' house boundary. This brings into question the accuracy of information being provided by TII. Observers express concern that the updated CEMP provided to the Oral Hearing on 25th March 2024 directly addresses impacts at 21 Berkeley Road but does not address the observers' home, which is the closest residential property to the construction site. There is no indication that adequate mitigation is in place for the observers' home. Observers seek clarity regarding: - Construction and operational phase impacts on their home. - Security provisions and impact on access to the observers' home. - A clearly defined boundary for the western vent shaft construction site boundary. - TII to confirm that all possible mitigation measures will be implemented and provide a list of same. The revised POPS scheme is welcomed but it should be linked to the construction price index and could be extended to include additional costs such as insurance premiums, security costs and maintenance costs. Concerns raised by the Board's expert noise consultant are noted and TII are requested to provide db(C) measures for the vent located outside Nos. 19-20 Berkeley Road. Observers welcome proposals for and seek further information regarding the provision of independent advice throughout construction and the inclusion of provision for community gain. Observers welcome proposed reduced height of skylights within Four Masters Park but retain concerns regarding the overall design and scale of station infrastructure. The following amendments are sought: - TII to redesign fire brigade lifts.

		- Narrow the frame of the Mater Station entrance in order to reduce its size and visual impact. - Increase planting as part of the final design.
1FS6	Berkeley Road Area Residents Association	The Mater Station canopy design is inappropriate for the location. There was no consultation with local residents during the design phase. Observer notes from comments provided to the Oral Hearing that greater consideration was given to the viewpoint of passers-by than local residents when designing the canopy. Submission welcomes design amendments and requests the following additional amendments. Redesigned station entrance, to narrow columns and the entrance façade. Redesign of the proposed fire brigade lifts. Use of granite bollards. Reduction in use of hard landscaping, together with greater use of soft landscaping. Observer seeks a formative role in the design of Four Masters Park layout, given it is now out in the public. Observer requests that park railing are restored prior to reinstatement. The POPS should linked to the Construction Price Index, rather than the Consumer Price Index. The scheme should also cover additional costs such as increased home insurance premiums. Proposals regarding site access and working hours are welcomed. Observer seeks a formal outline of mitigation measures to address Aspergillus risks. Engagement with community groups regarding dust mitigation and agreement on a Traffic Management Plan should take place prior to commencement of works. Observer expresses concern regarding potential operational noise levels of 40dB for homes above the tunnel, particularly if the system moves to 24 hour operations. Floating track should be used, to minimise noise under homes. TII should provide dB(c) measures for ventilation shafts. Observer welcomes proposals for the provision of a stakeholder management plan and requests clarification regarding access to independent expertise during construction and, also, community gain proposals.
1FS18	District 7 Community Alliance	Observer is an alliance of 6 residents associations and a business association in the Mountjoy, Broadstone and Dorset Street areas of Dublin. Whilst amendments to station skylights are welcomed, the scale and visual impact of the proposed Mater Station entrance are needlessly and unacceptably harmful to the historical surroundings. Photomontages provided to the Oral Hearing demonstrate the invasive effect of over ground structures on the streetscape. The station entrance and passenger and fire brigade lifts should be more sensitive to the local urban fabric but instead TII has given priority to uniform design in order to provide a common design language. Both should be redesigned.

		Steel bollards surrounding the perimeter of the Mater Station site should be granite, rather than polished steel. It is noted that granite bollards are now proposed at St. Stephen's Green Station. It is unclear how far along Berkeley Road the bollards will extend and the applicant requests clarification of this. Hard surfacing with the proposed Four Masters Park layout is excessive. Soft landscaping should be incorporated, in order to soften the effect of paving and to allow for water permeability. Observer seeks commitment from TII that park railings from Four Masters Park will be conserved by a professional conservator prior to reinstatement. The drawing of railing reinstatement contained within the document Mater Railing Length and Green Space, provided to the Oral Hearing on 19th March 2024 is unclear and a clearer version is requested. The POPS should be index linked to the Construction Price Index and additional costs incurred by residents, for example increased insurance premiums, should be covered by TII. The updated Cumulative Impacts Assessment provided by TII to the Oral Hearing on 28th February 2024 does not include the following developments: - 4790/23: Mixed use development including 93 No. apartments and cafe/retail unit at 36-40 Upper Dominick Street. - 4145/22: Mixed use development including 80 No. apartment 2 No. retail units, coffee shop, car parking and cycle parking spaces at 168-169 Phibsborough Road. - A new hospital building proposed between the Mater Private Emergency Ward block. Submission expresses concern regarding proximity of construction sites to property along Berkeley Road and the impact of building works on dust-sensitive properties. Aspergillus is of great concern to residents. TII was asked at the Oral Hearing to carry out a survey and risk assessment of Aspergillus for Berkeley Road. They agreed to respond to this but have not done so. Observer again requests that the issue is addressed and that assurances are provided regarding mitigation measures. Observer requests that differing positions between TII's noise consultants and the Board's noise expert regarding tunnel and vent noise levels is resolved. Observer requests that the applicant should be required to agree dust mitigation measures and a traffic management plan with local residents representative prior to commencement of works. For the operational phase the observer requests implementation of traffic calming measures and segregated cycle lanes on Berkeley Road. Observer seeks a written commitment from TII that construction staff will not park in the vicinity of station works and that off-site parking will be provided. Observer requests clarification in relation to the provision of independent expert advice and the issue of community gain.

AZ4 (f): O'Connell Street Station to Tara Station		
Ref. No.	Observer	Main Issues
1FS41	Troys Butchers	Commercial occupier at Moore Street, Dublin 1. TII has not followed legal public tendering processes regarding the contract for enabling works for the O'Connell Street Station. A conflict of interest arises between the applicant, the DHLGH and DCC regarding delivery of the O'Connell Station and overhead development. Agreement with another third party landowner regarding enabling works could result in the station being relocated to a different site and would render supporting assessments invalid. Concerns that the O'Connell Street Station site is not being compulsorily purchased and that a private developer will benefit from the project, while other traders will be forced out of business due to disruption. Traffic projections provided by the applicant do not other construction traffic associated with development of the wider Hammerson lands, other residential traffic and service vehicles working in the vicinity. Presence of lorries, etc, will make an unsafe, noisy and dirty shopping environment, impacting on people wanting to buy fresh food. Moore Street will become a no-go area during construction of the proposed development and overhead development. It is incorrect to state that traffic can disperse via Parnell Sq West, as there is a traffic island that was put in place to facilitate Luas tracks. Traffic will therefore disperse via Parnell Street Nos. 10-25 Moore Street are proposed to be added to the Register of Protected Structures. These buildings are entitled to protection and preservation, in this context. TII representatives indicated on site that they intend to temporarily CPO 24/25 Moore Street. This is not mentioned by the application and thus makes it invalid. Loss of 24/25 Moore Street will also affect the Dublin Central Masterplan proposal. it is questioned whether Dublin City Council will agree to sell 24/25 Moore Street as a construction compound as it contains pre-1916 elements within its boundaries. The Moore Street, Moore Lane, Henry Place and O'Rahilly Parade historic area satisfies criteria laid down by the High Court for preservation as a National Monument. Concerns are expressed regarding delays to planned restoration works at 14-17 Moore Street.

		The proposal grossly interferes with the 1916 Cultural Quarter Bill that is currently progressing through relevant stages of legislation. The business lost c.€480,000 over the 3-year construction phase of Luas Cross-City and has not returned to pre-Luas performance levels. The proposed development will result in closure of the business. Observer seeks clarity over how the applicant intends to mitigate expected financial losses. Consideration should be given to mental health impacts on affected business owners.

AZ4 (g): Tara Station to St Stephen's Green Station		
Ref. No.	Observer	Main Issues
1FS3	An Taisce	Observation welcomes clarification from TII regarding interchange with other public transport modes. Cut and cover construction at Tara Station will lead to the loss of vital community infrastructure and will add to the capital cost. This approach will exact a higher human cost compared to the mined approach, which would allow retention of the College Gate apartments and leisure centre and could save c. €60m. Concerns identified by TII regarding the mined approach have been successfully mitigated by other engineers and design teams around the world as part of the construction of underground rail systems. The Board is requested to require that the applicant retain the College Gate complex, through utilisation of other construction methods. The Markievicz Leisure Centre can be described as critical infrastructure, as the only publicly accessible swimming pool in the south inner city.

AZ4 (h): St Stephen's Green Station to Charlemont Station		
Ref. No.	Observer	Main Issues
1FS32	Metro South West Group	Charlemont station has not been adequately justified and should be dropped from the proposed development. Submission suggests 3 options to the Board: - Grant RO as far as Parnell Square East. - Grant RO as far as Tara Street. - Grant RO as far as St. Stephen's Green East. Submission restates the observer's detailed case that south-west Dublin is underserved by public transport and identifies benefits associated with extension of the Metrolink.

		Assertions by the applicant at the Oral Hearing, that a Metrolink extension could serve Portobello and Rathmines, are questioned. Assertions by the applicant that they will be able to run additional Luas trams south of Charlemont are questioned. The stairwell that provides interchange between Metrolink and Luas services is inadequate and endangers public safety. A situation where Luas trams will reverse from Charlemont towards Sandyford would be impractical and dangerous. <u>Submission is accompanied by:</u> Assessment of the Passenger Capacity of the BusConnects Corridors in South West Dublin and a copy of the group's submission to the Oral Hearing.

AZ4 (i): Charlemont Station and Tunnel Turnback		
Ref. No.	Observer	Main Issues
1FS7	Brendan Heneghan	Charlemont Station has not been adequately justified as a terminus location and should not proceed as it is inadequate for interconnection with Luas. The stairwell connection is incapable of processing the projected volume of passengers interchanging. Reference is made to connectivity provisions for the Madrid and Porto metro/light rail systems, in comparison to the proposed development. Charlemont Station should not be permitted in the absence of adequate consideration of extension options to the south of the city. The applicant's statements that all options are open are not credible. Passenger projections at Charlemont are not credible and verbal submissions provided by the applicant at the Oral Hearing are contradicted by written submissions to it. The applicant has only considered what happens within stations, as is evidenced by multiple submissions at the Oral Hearing regarding the external layout of Charlemont Station. Proposed cycle parking provision at Charlemont is inadequate and makes the station unattractive for users accessing by bicycle. To permit the development as proposed would contravene the development plan. It is unsatisfactory that on the opening day of the Oral Hearing the applicant proposed a new drop-off facility over the Grand Canal. This is an example of failure to consider above ground issues. It is not accepted that a decision to not provide parking at Charlemont will restrict its usage for drop-offs. This will be a material feature of the station.

		Concerns regarding the prolonged impact of construction on adjacent housing. Inadequate consideration has been given to the impact of the proposed Charlemont drop-off on wildlife. The Board should consider its omission from the project. Observer disagrees with the applicant's statements regarding the difficulty of running Luas trams between Charlemont and St. Stephen's Green. It is unclear how the applicant proposes to turn Luas trams at Charlemont and it is questioned whether the applicant actually intends to turn trams at Charlemont or whether this submission is an attempt to justify the case for Charlemont Station. If it is intended that trams will terminate at Charlemont, the inbound platform will become congested. It is unsatisfactory that the applicant presented a new POPS scheme at the Oral Hearing. The €75,000 claim limit will not be sufficient for housing in the Charlemont area, the Board should impose a greater limit. The Gillarduzzi Paper presented and discussed at the Oral Hearing supports claims that there are likely to damage issues for housing at Charlemont. Expresses concern that 'new' buildings at St. Stephen's Green and Earlsfort Terrace were not assessed by the applicant and questions if additional buildings are likely to have been missed by the assessment. Questions aspects of drawings provided to the Oral Hearing on days 9 and 11, with reference to these new buildings. The applicant has not adequately addressed concerns re use of the Luas station at Charlemont as a bridge, crossing of the Luas track by passengers coming from Sandyford, passengers likely to access bus services at St. Stephen's Green, lack of bus services at Ranelagh Road, lack of evidence regarding issues with running more Luas trams on the section south of Charlemont, comparative figures for train stations with extensive infrastructure.
1FS8	Charlemont and Dartmouth Community Group (General Area Submission)	It has been evident since the outset that the application was incomplete. The applicant provided c.200 documents to the Oral Hearing including 20 items of significant further information on the opening day. The Board should have suspended the process at that stage and either requested the applicant to withdraw the application or to publish additional notices to advertise such changes, with the Oral Hearing recommencing thereafter. The Oral Hearing was allowed to proceed and the applicant was allowed to submit further information to the extent that it became a new application, to which parties were not given ample opportunity to review. Observer acknowledges that current public notice have given parties the opportunity to comment but do not allow for further questioning of the applicant. This gives rise to a flaw in the procedure, particularly where there are unclear and contradictory submissions regarding noise. The late nature of these submissions and the

		inability to ask fundamental questions at the Oral Hearing on these submissions has put third parties at a significant disadvantage and prejudiced their rights to fair procedure. Observer requests an award of costs under S42(10) as additional and unreasonable costs have arisen from the manner in which the applicant has fed material into this process. It is evident that Metrolink was originally conceived as a single project extending from Swords to Sandyford, including eventual conversion of the Luas Green Line to Metro. The GDA Transport Strategy 2022-2042 confirms that onward extension to Sandyford no longer forms part of the Strategy. The conversion of the Green Line to Metro has effectively been abandoned, but the proposed development fails to recognise this. The Charlemont Terminus will be remote from the City Centre that it is intended to serve and will be a stranded terminal station. Observer questions whether Charlemont Station is an interchange or a terminus. Observer states that is untrue to state that Charlemont is at the heart of the integrated transport network for Dublin as the only interchange is with Luas services going south. There is no interchange with bus, Dart underground, taxi or kiss and ride facilities or cycle provision. Better interchange with Luas can be achieved at St. Stephen's Green, without duplicating light rail provision between St. Stephen's Green and Charlemont. Measure INT5 of the GDA Transport Strategy is an important policy that the Board should have regard to in relation to interchange. With reference to the low percentage of passengers predicted to access Luas at Charlemont, to whole concept of a major interchange at Charlemont is flawed. Submissions made to the Board by the Metro South West group are fully supported. The applicant provided no evidence to the Oral Hearing that the proposed alignment would facilitate extension to the southwest. Observer offers the view that it would be impractical to do so. The GDA Transport Strategy indicates future Luas extensions to Knocklyon and Kimmage. The proposal prejudices the potential to provide Metro connections to areas such as Portobello and Rathmines. A Metro terminating at St. Stephen's Green will facilitate onward extension to these areas and further to the southwest. The stairwell connection that will provide interchange between Luas and Metrolink will have to accommodate peak flows of more than 666 passengers per hour, on a walkway that is less than the standard width of a footpath and will give rise to a risk to passenger safety. The manner in which information regarding this stairwell was presented to the Oral Hearing mean that relevant questions could not be posed to the applicant. The further information submission does not address EIAR deficiencies identified in the original submission regarding:

		- Inadequate description of all aspects of the development, particularly enabling works already undertaken at Charlemont and future project elements. - Inadequate assessment of alternative options regarding alignments, station locations, station design at Charlemont and future alignments. - Failure of the traffic and transport assessment to consider egress and access from the station entrance onto Dartmouth Road. - Noise assessments in chapters 13 and 14 only considers running trains in the operational phase, no assessment of noise associated with escalator operation is provided. Observer requests the following amendments: - Omit section from Tara Station to Charlemont Station from the Railway Order - Require submission of a Railway Order application for the section between Tara Street Station and St. Stephen's Green Station, to provide a terminal hub station that can integrate with Luas Green Line and future Dart underground.
1FS9	Charlemont and Dartmouth Community Group (1, 3, 5 & 7-16 Dartmouth Square)	It is misleading of the applicant to classify Oral Hearing documents submissions as 'errata', given they submitted approx. 200 new documents over its course. There are significant variations in the assessment of airborne noise and vibration impacts as they relate to properties at Dartmouth Road, as contained in the document Appendix A13.7: Charlemont Station - Errata. The description of this assessment as errata downplays the nature of the revision as it effectively comprises a new assessment. Residents of Dartmouth Square are unclear as what height the proposed noise to the rear of their properties will be. Some understand that it is to be increased to 7m in height but there is no statement to this effect provided to the Oral Hearing. Table 13.85 of the EIAR indicates that it would be 7m on the northern boundary and 4m on other boundaries. The document Appendix A13.7: Charlemont Station - Errata is inadequate and unclear in its assessment. There is no explanation of the mitigation measures incorporated or assumptions underpinning the assessment. Proposals relating to the provision of noise insulation or temporary rehousing are outside of the control of the applicant and cannot be classified as mitigation measures under the EIA Directive. It is unclear if this errata document replaces in totality Appendix A13.7 of the EIAR. Reference properties 21-29 assessed within the unmitigated scenario in Appendix A13.7 are not referenced in the unmitigated results presented in the Errata document. They are, however, referenced in the mitigated results section of the Errata but only in relation to Station Piling Works North.

		Notwithstanding assessment deficiencies, it is clear that there will be significant to very significant impacts at multiple residential properties and in a number of instances the scale of impact requires refusal of permission. The impact of the 8.5 year construction phase on affected residents is described as devastating. In view of its designation as a main construction compound, Charlemont Station will effectively become a 24/7 construction site and all phases of construction will give rise to noise. The impact of construction on human health is not adequately assessed within the EIAR, with particular reference to impacts on sleep and the amenity value of rear gardens. Evidence submitted to the Oral Hearing has illustrated that the development will have a dramatic impact on property values. The applicant has not provided any evidence to support its contention that there will be no impact on property values. Planning decisions should not affect third party amenities with associated property devaluation and Article 43 of the Constitution protects property rights. This development, if permitted, will infringe those rights. The maximum €75,000 payout under the POPS is inadequate, in view of the old age and construction of affected housing at Charlemont. Observer seeks a guarantee and indemnification from TII regarding potential claims in the event of structural damage to housing. TII admitted under questioning at the Oral Hearing that the D-wall is a more-efficient method of reducing water ingress and, therefore, reducing the risk of settlement. If this is the case, D-wall construction should be specified for the 'red wall' of the station box that is closest to housing Dartmouth Square. TII has a duty of care to all Protected Structure homeowners along the terrace to the west of the Square. The Board is requested to include a condition, in the event of a grant, requiring incorporation of D wall construction. The Board is urged to omit the southern section of the Railway Order.
1FS10	Charlemont and Dartmouth Community Group (26-28 and 32-35 Dartmouth Road)	It is misleading of the applicant to classify Oral Hearing documents submissions as 'errata', given they submitted approx. 200 new documents over its course. There are significant variations in the assessment of airborne noise and vibration impacts as they relate to properties at Dartmouth Road, as contained in the document Appendix A13.7: Charlemont Station - Errata. The description of this assessment as errata downplays the nature of the revision as it effectively comprises a new assessment. It is unclear if this errata document replaces in totality Appendix A13.7 of the EIAR. Reference properties 21-29 assessed within the unmitigated scenario in Appendix A13.7 are not referenced in the unmitigated results presented in the Errata document. They are, however, referenced in the mitigated results section of the Errata but only in relation to Station Piling Works North. Proposals relating to the provision of noise insulation or temporary rehousing are outside of the control of the applicant and cannot be classified as mitigation measures under the EIA Directive.

		There are technical deficiencies in the airborne noise assessment, based on observations provided by the CDCG expert witness, Kenneth Goodwin, and the RINA Independent Engineer. Questioning of this assessment at the Oral Hearing was not possible as the document was only presented to it. Notwithstanding assessment deficiencies, it is clear that there will be significant to very significant impacts at multiple residential properties and in a number of instances the scale of impact requires refusal of permission. The impact of the 8.5 year construction phase on affected residents is described as devastating. In view of its designation as a main construction compound, Charlemont Station will effectively become a 24/7 construction site and all phases of construction will give rise to noise. The impact of construction on human health is not adequately assessed within the EIAR, with particular reference to impacts on sleep and the amenity value of rear gardens. Evidence submitted to the Oral Hearing has illustrated that the development will have a dramatic impact on property values. The applicant has not provided any evidence to support its contention that there will be no impact on property values. Planning decisions should not affect third party amenities with associated property devaluation and Article 43 of the Constitution protects property rights. This development, if permitted, will infringe those rights. The Board is urged to omit the southern section of the Railway Order.
1FS11	Charlemont and Dartmouth Community Group (3-11 Cambridge Terrace)	Amendments to the assessments submitted to the hearing, particularly regarding noise, significantly affect residents at Cambridge Terrace. It is misleading to categorise the document Appendix A13.7: Charlemont Station - Errata as an errata document. It provides an impact assessment with mitigation measures in place and is effectively a new assessment. The errata document is inadequate and unclear in its assessment. There is no explanation of the mitigation measures incorporated or assumptions underpinning the assessment. There are 11 houses at Cambridge Terrace, but only 5 houses were assessed by the application and those closest to the station site were not assessed. Given there are variations in assessment results, it is important that all houses are assessed. Proposals relating to the provision of noise insulation or temporary rehousing are outside of the control of the applicant and cannot be classified as mitigation measures under the EIA Directive. The original assessment erroneously identified properties at Cambridge Square, rather than Cambridge Terrace. There are significant variations in the assessment of airborne noise and vibration, as they relate to properties at Cambridge Terrace. From a review of the updated assessment, it can be seen that 11 Cambridge Terrace is predicted to experience significant to very significant impacts in all phases of construction, while Nos. 7 and 10 will experience such effects during piling works and excavation works.

		In view of its designation as a main construction compound, Charlemont Station will effectively become a 24/7 construction site and all phases of construction will give rise to noise. The impact of construction on human health is not adequately assessed within the EIAR, with particular reference to impacts on sleep and the amenity value of rear gardens. Evidence submitted to the Oral Hearing has illustrated that the development will have a dramatic impact on property values. The applicant has not provided any evidence to support its contention that there will be no impact on property values. Planning decisions should not affect third party amenities with associated property devaluation and Article 43 of the Constitution protects property rights. This development, if permitted, will infringe those rights. The Board is urged to omit the southern section of the Railway Order.
FS12	Ciaran Black and Leon McCarthy	WITHDRAWN
1FS13	Conor and Lorraine Power	Residents of Dartmouth Square, Ranelagh, Dublin 6. Submission restates that the observers do not object to the project as a whole, just the choice of Charlemont as a Terminus. The observers met with TII representatives following the Oral Hearing and did not receive reassurances regarding disturbances and potential damage to their home. Updated noise monitoring within the observers' rear garden showed that noise levels have reduced from those recorded in 2018 and also show that predicted noise levels from this development will be unacceptable. It is unclear whether the proposed noise barrier to the rear of the observers' home is 4m or 7m tall. In any case, the measure proved ineffective during recent construction works at 2 Grand Parade. The impact of construction will be profound for a decade - the observers' rear garden proved to be unusable for periods of the 2 Grand Parade redevelopment, yet no rules were breached. A repeat situation seems inevitable. TII should not be allowed to act with scant regard to the impact on residents, when it can be argued that Charlemont is not a necessary component of the proposed development. <u>Submission accompanied by:</u> Technical Note 5 Dartmouth Square West Noise Monitoring Results - July 2024, prepared by AWN Consulting.
1FS26	Grace Maguire	Resident at Dartmouth Square West. Observer objects to the Charlemont Terminus - A City Centre terminus would be more appropriate. The Rathmines Army Barracks site would also be more appropriate and allows greater choice for future extensions. To locate a project such as this in a residential neighbourhood is outrageous. The development will change the character of the area, with reference to 24 hour activity and noise.

		The construction phase may give rise to structural damage of homes. Additional Luas development would be a better way to connect new communities.
1FS28	John Conway and Orlaith McCarthy	Residents of Dartmouth Square, Ranelagh, Dublin 6. TII erroneously stated that they undertook a survey at the observers' home and retracted this when challenged at the Oral Hearing. This undermines confidence that the applicant is acting in good faith. The applicant's claim that Charlemont Station is an interchange is undermined by connectivity issues, for passengers accessing and egressing the station. The observers understand that a 7m noise barrier will be erected along the rear boundary of their property. Concerns this will prove ineffective, exposing properties to excessive noise for years. Payments under the POPS, in the event of structural damage, will be inadequate. The TII predicted ground settlement identifies substantial damage to the observers' home. Seek construction of the station box walls in closest proximity to their home, including an identified 'red wall' to be Diaphragm wall construction. The Board will make a grave error if it grants permission for a terminus at this location. Permission should be conditional regarding: - Construction of 30m x 30m red wall at northeastern corner of site by D-wall construction. - TII to provide indemnity and guarantee payment for structural damage at 1-17 Dartmouth Square caused by the development. - TII to demonstrate the effectiveness of proposed noise barrier.
1FS29	Leo and Anne Crehan	Residents of Dartmouth Square, Ranelagh, Dublin 6. The proposed Charlemont Station is a terminus, not an interchange. The Architectural Conservation Area location is unsuited for a terminus. Interchange between Metrolink and Luas at Charlemont is substandard. Luas platforms are not wide enough and the stairwell connection between stations is inefficient. Claims regarding superior bus connectivity are disputed, in view of distances to nearby bus stations. Concerns regarding proposal to use secant piles rather than diaphragm walls, when excavating the station box. This is considered a less effective method of reducing the risk of settlement. The POPS scheme will be inadequate to deal with costs associated with building damage caused by construction. The proposed 7m noise barrier proposed to the rear of Nos. 1-17 Dartmouth Square West will be ineffective and will expose residents to excessive noise for years. Permission should be conditional regarding: - Section from Tara Street to Charlemont should be omitted.

		- If Charlemont Station is not omitted, permission should be conditional regarding. - D-wall construction must be used around the excavation of the station box. - TII to provide indemnity and guarantee payment for structural damage caused by the development. - TII to provide a triple-glazed solution for the rear windows of houses at Dartmouth Square West.
1FS33	Michael A Doyle and Carmel Smith Doyle	WITHDRAWN
1FS35	Niall Parsons	Resident at Dartmouth Square. Observer expresses concern that the Charlemont Terminus construction will affect property prices in the area. This was raised in the observer's initial submission on the application but was not adequately addressed by TII. Statements from TII that the development will have a positive effect on house prices are not accepted as the development has already negatively affected property prices at Dartmouth Sq West. Observer points to professional valuation reports that have been prepared and submitted to the Board by others, as demonstration of the effect of the development on property prices. The development will affect the amenity of the wider community, with reference to noise, activity and congestion associated with a busy transport hub. The following amendments are requested: - Omission of the section from Tara Street to Charlemont Station. - Omission of Charlemont Station in particular. - Require submission of a Railway Order application for the section from Tara Street to St. Stephen's Green that would provide a terminal hub station and allow for integration with other public transport modes.
1FS39	Suzi Taylor	Resident at Dartmouth Road, Ranelagh, Dublin 6. Observer's property will be profoundly impacted by the proposed development. Observer does not consider prolonged rehousing is a realistic option and questions what they would return to. Efforts to maintain and protect protected structures at Dartmouth Road are debased by the proposed development. Observer questions how construction will impact on quality of life and whether construction will allow for acceptable internal and external living environments. Noise levels will be significant during peak construction periods and although classed as acceptable, will be very disruptive. Notice should be given to residents of noisy work phases. Observer questions what measures the applicant will implement to avoid building damage, not just to detect same. It is also questioned if the POPS will be index linked. Removal of spoil to recovery facilities will itself be disruptive, involving regular HGV movements.

		Closure of the road section from Dartmouth Square to Dartmouth Place/Dartmouth Terrace will deprive residents of parking for up to 30 months and there is no indication of alternative parking being provided. Site hoardings will have an enclosing effect on the observer's home, reducing light and creating a claustrophobic feeling. Littering will become an issue, with all pedestrian flows limited to one side of the road. The station will have a profound effect on the neighbourhood, associated with increased activity. The development will affect property values in the area.
1FS40	Terry Reid and Denis McLoughlin	Resident at Dartmouth Square West. Observer seeks refusal of the Metrolink section between St. Stephen's Green and Charlemont. Should the Board decide to grant the Railway Order, observer requests the following: - Use of diaphragm walls during construction of the station box. - TII indemnify residents at Dartmouth Square West against damage to homes caused by construction. - TII should provide triple glazed windows for homes in the area.
1FS42	Union Investment Real Estate GmbH	Owner of 2 Grand Parade, Charlemont, Dublin 6. Commercial development undertaken at 2 Grand Parade is now complete and the building is occupied. Revised drawings provided to the Oral Hearing that show reduced permanent and temporary land-take at the site are welcomed and the observer looks forward to further engagement over outstanding matters. Revised drawing No. ML1-JAI-SRD-ROUT_XX-DR-Z-02090 provided to the Oral Hearing, which identifies reinstatement of 14 No. parking spaces following construction, is welcomed. The location of the stairwell connection to Charlemont Luas station, to the front of 2 Grand Parade, is unacceptable and will affect the observers building in a number of ways. The structure will obscure designated fire escape routes from the building. There would be an additional risk of fire spread in the event of a fire. Additional information is required regarding pedestrian flows and capacity for normal and evacuation scenarios The stairwell and lift shaft will negatively affect the appearance and setting of the Carroll's Building, a Protected Structure that is integrated into the 2 Grand Parade development. The stairwell could give rise to privacy issues. The importance of views of the Carroll's Building was afforded high priority by the Board in its consideration of Ref. ABP-300873-18. The applicant's proposed approach is not in keeping with this approach. Revisions to this aspect of the project are required prior to the granting of the Railway Order. The alternative arrangement proposed by Henry J Lyons Architects at the Oral Hearing, involving relocation of the lift shaft to the opposite side of Grand Parade, would strike a more appropriate balance. <u>Submission is accompanied by:</u>

		Copies of Oral Hearing submissions.

General or Not Specific to One Area		
Ref. No.	Observer	Main Issues
1FS1	ACRA (Association of Combined Residence Associations)	Submission outlines and justifies the Metro Dart, as an alternative development to the proposed Metrolink. The proposed Metro Dart follows the same alignment as the approved Metro North project except it is overground. The Metro Dart project will yield immediate returns on investment, following completion of individual elements, whereas the proposed Metrolink will not yield a return until it is completely finished. Metrolink will not resolve existing capacity issues at Connolly Station. If Metrolink is consented, there will be no opportunity to access Dublin Airport from mainline rail throughout the island of Ireland as the Metro system will operate on a different gauge to standard rail. If Metrolink is developed, the alternative Metro Dart project cannot be delivered.
1FS14	Cormac McKay and Aeravai	Observer expresses disappointment that his request for an on-site visit to The Boring Company and current RoBo taxi operations has not received a reply. Observer considers it important to visit and experience the potential future of underground transport. Observer also suggests visiting an electrical aviation deployment site, which he considers is likely to be a more common transport method in the future. Adequate due diligence has not been carried out on the application, which is based on unsound finance projections and an out of date business case. Both should be updated before proceeding with the application. Issues raised by the observer at the Oral Hearing were not satisfactorily addressed and should be considered by the Inspectors. Potential PFAS soil contamination at Dublin Airport may need to be safely removed during tunnelling in order to protect groundwater. Long-term health effects arising from noise pollution have not been considered by TII.
1FS15	D. Holohan	Resident at Greystones, Co. Wicklow. Observer expresses concern that internal finishes may strike some as unwelcoming, particularly in underground stations. Additional coloured finishes would be visual benefit. Observer suggests multiple changes to station signage and informational text contained on building elevations and further suggests limiting the level of 3rd party signage at stations, to minimise visual clutter and maintenance issues.

		Observer suggests that consideration should be given to whether there is a need for security roller shutter or aircraft hangar doors at station entrances.
1FS16	DECC Geological Survey Ireland	No further comments.
1FS19	Donal O'Brolcain	Further information provided by TII shows that the Railway Order process is marked by the suppression of data, which makes it difficult to participate in the process. Observer questions the value of TII providing NTA Dublin Airport Passenger Survey in an unsummarised/raw form. Summaries make it easier for people to participate in decision-making, by allowing them to understand this data. A data dump such as this is unacceptable. The submission again questions aspects of the proposed development, in the context of other options that would serve the Greater Dublin Area and at less expense. It also questions whether value for money is being provided, in view of limited journey time savings likely to be achieved. The Board is asked to refuse the Railway Order. Observer again proposes a Luas loop development as an alternative to the proposed development <u>Submission accompanied by:</u> Correspondence between observer and TII and NTA including various reports.
1FS21	Dublin Commuter Coalition	Failure to operate Metrolink on a 24 hour basis leaves Airport passengers reliant on less frequent bus services. At a minimum, a reduced frequency service should be maintained. A 24 hour service will have a positive impact on the night-time economy and the non-provision of this service should be reconsidered. There is an under-provision of 2,259 bicycle parking spaces across the Metrolink network, based on current demands. The Board should require appropriate safe parking space provision at all stations, as a condition of the Railway Order. TII comment that additional lifts will not be provided due to footfall or economic reasons are not accepted. There are legal and moral responsibilities to provide adequate levels of access for all people. Issues with Dart and Luas access lifts are cited as examples of a failure to provide levels of access. Welfare facilities should be provided at all stations. Observer references retrofit being undertaken in London, to install toilets at Tube stations that currently have none.

Extend over Multiple Assessment Zones

Ref. No.	Observer	Main Issues
1FS5	Andrew Whelan	If Metrolink is constructed as presented, it may limit any planned Dublin Airport extension. The shallow tunnel depth outlined may jeopardise construction of an automatic people mover (APM) above the tunnel. Greater depth will allow greater flexibility for the construction of a APM link to the indicative Western Satellite Pier.
1FS17	Development Applications Unit (Department of Housing, Local Government and Heritage)	The Department's queries regarding the National Monument of Lissenhall Bridge have been resolved by the provision of additional information on how the structure will be protected during construction, including the minimum extent of an exclusion zone. The Department is satisfied that the proposed Otter by-pass plan for Cross Guns Bridge, contained in the Biodiversity Update Report provided to the Oral Hearing, can form the basis of a finalised plan to be submitted and agreed with the planning authority before commencement of development. The finalised by-pass plan should include timelines for the bypass plan and should include updated survey data on otter, undertaken not more than 2 months before commencement of construction and encompassing at a minimum the area between locks 1 and 10 of the canal. Monitoring during relevant construction works and for a further 6 months following completion should also be provided for. It should be noted that the downstream end of the otter fencing will need to extend across the width of the basin immediately above the upper gates of the 5th lock, in order to funnel otter into the passageway. Regarding the applicant's assertion that mammal ledges and/or tunnels are not proposed over the Mayne River in view of a minimal impact on the ecological corridor function in this area, the Department agrees with this evaluation. The Department recommends that the Board should give consideration to requiring the applicant to install new mammal ledges over the Santry River, as part of both the new proposed culvert and existing culvert, in view of recent survey results that have proven the continued presence of otter in this river. Proposed planting of wildflower meadows along the alignment route does not accord with good conservation practice and should be omitted from the proposed development. The All-Ireland Pollinator Plan advises against planting wildflower seed outside a garden setting. The Department's comments in relation to all other matters remain as outlined in the original submission.
1FS20	Dublin City Council	DCC has no additional substantive comments on the application, with its previous written submission setting out its views on the application. Submission restates the contribution that the development will make towards achieving multiple strategic objectives within the City Development Plan.
1FS22	Dublin Cycling Campaign	The observer does not consider proposed cycle parking provision meets the threshold for proper planning and sustainable development or that cycling has been adequately integrated into the project.

		Information provided to the Oral Hearing by TII demonstrates that there will be growth in cycle parking demand and this is predicted to increase over time, as demand levels grow. It is noted that the parking demand assessment only projects to 2035, whereas other parts of the transport assessment project scenarios through 2050 and 2065. It is submitted that TII's updated assessment provided to the Oral Hearing attempts to demonstrate there is less demand for cycle parking, rather than proposing revised parking plans. It is noted that TII states they will work with local authorities and other stakeholders to ensure there is adequate provision for cycle parking but the Board can only consider the application before it and it does not have powers to require cycle parking as part of future developments, whether that is to be provided by TII or another body. Two-tier cycling stands can be incorporated in multiple locations, but appear to have been dismissed by TII without assessment in the EIAR. This has not been adequately considered in the application. It is accepted that in some constrained locations, for example Mater or St. Stephen's Green, there is a lack of space for cycle parking. But other options such as at Tara or within the Glasnevin Station building have not been adequately considered.
1FS24	Fingal County Council	Submission reaffirms support for Metrolink and restates predicted benefits that will accrue from the project. The development will support Fingal in becoming climate resilient and will act as a catalyst for future development, also improving access to services and amenities. The development will support and encourage connectivity and permeability along its corridor and will also complement objectives of the R132 Connectivity Project. Attention is drawn to minor revisions to requested conditions that are contained in the document Day 09: Book 1 of 1 Letter from TII to Fingal County Council dated 1 March 2024.
1FS25	GADRA (Griffith Avenue and District Residents Association)	The application originally submitted was incomplete and much of the information provided by the applicant to the opening day of the Oral Hearing had been requested repeatedly by stakeholders ahead of the Hearing. Observer objects to the number of Non-Disclosure Agreements that TII has entered into with other state bodies, which likely includes taxpayer money being spent without transparency. Observer will seek access to these agreements, using available access to public information pathways. Observer objects to TII proposal that Local Liaison Officers will be the first point of contact for the Independent Engineer. An engineering point of contact should be provided and this should be a condition of the Railway Order. Further, the Independent Engineer should be appointed and operate independently from TII, under the brief of the Department of Transport. TII reliance on data that suggests that the bus stop at Ballymun Church is busier than the bus stop at the entrance to DCU, as justification for the location of Collins Avenue Station is questioned. Observer believes that data recorded was collected during the Covid pandemic, when staff/student presence at the DCU campus was

		reduced. Observer does not accept that the Church bus stop is busier than the DCU bus stop, in view of the scale of the university operation. Extracts of correspondence between the NTA and an elected representative, Gary Gannon TD, regarding usage of these bus stops, is provided in support of the observer's position. The Board is requested to ensure accurate data is being used and is further requested to review of the position of Collins Avenue Station, the need for the Albert College Park Intervention Shaft, in view of the above-outlined concerns, and also the impact of development of lands between Hampstead and Griffith Avenue on the analysis of the location of the station. The Independent Monitoring Engineer needs to have formal contact with the Independent Engineer and vice versa Observer requests real time monitoring information with trigger monitoring and action plans for residential areas, not just schools and universities. The stakeholder engagement plan has failed in relation to key objectives, evidenced by the applicant having to resort to Freedom of Information requests and the Information Commissioner for access to information. The Board should impose a condition requiring that a real stakeholder engagement plan is put in place. Observer objects to out of hours ground investigation works undertaken. Future applications for out of hours works should be made to the planning authority, with clear reasoning for the derogation and a name and contact details for the planning authority officials granting such derogation. Should the project stall for any major reason, TII should be responsible for addressing and restoring all sites along the route. TII has not satisfied the requirements of the Act, in respect of public consultation, as it did not consult with the public in relation to the position of the Albert College Park intervention shaft. Inadequate information has been provided by the applicant in relation to the intervention shaft. Observer questions what safety standard has been utilised in relation to the design and scale of the proposed intervention shaft Observer objects to the enclosure of the intervention shaft site and exclusion of the public from same. The hard shoulder on the Ballymun Road provides an adequate hardstanding area for emergency assembly and would allow the intervention shaft site to be reduced by 66%. The size of the intervention shaft site is unjustified, and the Board should require the shaft footprint should be reduced and the compound should be omitted entirely. A station could also be provided at Albert College Park, instead of the intervention shaft, and TII has not shown that this option was seriously considered. TII has also not shown the construction of the intervention shaft in the north-west corner of the park, where it was approved as part of Metro North, was considered.

		The ACP Comparison of Shaft v Station document submitted on day 4 of the Oral Hearing does not identify the fenced compound and does not identify that the shaft is above ground and station below ground. The Floating Slab Track drawing submitted on day 4 does not identify the intervention shaft at all. Mobility Management Plan proposals regarding transport of site workers to construction sites are questioned. It is suggested that pay and display parking will be required in the GADRA area. Residents should be given advance notice of TBM activity and that a plan should be communicated to stakeholders regarding rehousing of vulnerable residents for the period of TBM movements. Observer requests inclusion of floating slab track in the GADRA area and questions why it is not proposed in all residential areas. Disruption to utilities should be avoided and mitigated where unavoidable. TII should engage with residents in advance, to agree timings and duration of impacts. Retained trees, hedging and shrubs within Albert College Park should be protected by appropriate protective fencing, prior to commencement of construction. Albert College Park should be included within the TII Ballymun decarbonisation zone.
1FS36	OPW	Submission concerns multiple OPW properties. Submission acknowledges engagement with TII that has resulted in agreement on many issues related to construction of Metrolink. Such discussions will continue. <u>St. Stephen's Green Park</u> Regarding the St. Stephen's Green station, the delivery of Metrolink infrastructure cannot be at the expense of Ireland's national heritage. SSG holds significant historical and legal status, being a National Monument provided under specified Acts. The proposed station would have a direct, severe, negative, profound and permanent impact on the heritage value of the Green. The Board is asked to consider the inherent importance of SSG to the people of Dublin and whether modifications to the Railway Order would reduce the impact on SSG. The Board should note that unagreed conditions between the OPW and TII, provided to the Oral Hearing, remain unagreed. <u>Other OPW Property</u> The Board should ensure that the development will not limit the State's capacity to develop its property, both vertically and horizontally particularly around Leinster House, Government Buildings, the National Gallery, the National Museum and the National Concert Hall.

		The list of Trigger Action Plan locations provided to the Oral Hearing contains omissions, as has been confirmed by TII following its closure. The observer requests the Board to seek and confirm a full list of list of properties that will be subject to a Trigger Action Plan. The observer requests that instrumentation and monitoring are installed and baselined before any excavation works commence. <u>Draft Guidance Note for Developers</u> The Board is requested to consider how proposed exclusion and protection zones would operate prior to the Railway Order and during the construction and operational phases. The observer requests clarification on the scope of this document (noting that two versions were submitted to the Oral Hearing) - Concerns are expressed that the Railway Order could be construed as conferring powers on TII to regulate other extant permissions that are affected by the development. The Board is requested to take account of the issue, including through imposition of an appropriate condition on the Railway Order.

Appendix 2E: Alphabetical List of Further Submissions (Following Circulation of Applicant's Response to Wild Ireland Defence CLG Oral Hearing Submission)

Ref. No.	Name	Associated First Submission No.	Area/ Category
2FS1	ACRA (Association of Combined Residence Associations)	S2	GEN
2FS2	Breda Scully	S25	AZ4(e)
2FS3	Donal O Brolcain	S67	GEN
2FS4	Dublin Town (Richard Guiney)	S266	GEN
2FS5	GADRA (Griffith Avenue and District Residents Association)	S99	MULT AZ4
2FS6	Hampstead Residents CLG (Declan Campbell)	S111	AZ4(b)
2FS7	John Bernard Reid	S148	GEN
2FS8	Juliana and Joe Boland and Family	S155	AZ1(b)
2FS9	Metro Dublin (Cormac Rabbitt)	N/A	GEN
2FS10	National Transport Authority	S199	GEN
2FS11	Office of Public Works	S213-S240	MULT AZ4
2FS12	Troys Butchers	S304	AZ4(f)

Appendix 2F: Summary of Further Submissions (Following Circulation of Applicant's Response to Wild Ireland Defence CLG Oral Hearing Submission) by Area

AZ1 Northern Section (Estuary to Dublin Airport North Portal)		
Ref. No.	Observer	Main Issues
2FS8	Juliana and Joe Boland and Family	It may be years before adverse effects on water, associated with PFAS, are detected, by which time it could be too late for aquatic life.

AZ2 Airport Section		
None		

AZ3 Dardistown Section (Dublin Airport South Portal to Northwood)		
None		

AZ4 (a): Northwood to Collins Avenue Station		
None		

AZ4 (b): Collins Avenue Station to Griffith Park Station (Incl. Albert College Park Intervention Shaft)		
Ref. No.	Observer	Main Issues
2FS6	Hampstead Residents CLG	Submission relates to matters that are outside of the specific parameters of the further submissions period.

AZ4 (c): Griffith Park Station to Glasnevin Station		
None		

AZ4 (d): Glasnevin Station to Mater Station		
None		

AZ4 (e): Mater Station to O'Connell Street Station		
Ref. No.	Observer	Main Issues
2F2	Breda Scully	Submission relates to matters that are outside of the specific parameters of the further submissions period.

AZ4 (f): O'Connell Street Station to Tara Station		
Ref. No.	Observer	Main Issues
2FS12	Troys Butchers	Cumulative impacts arising from the Dublin Central GP (Hammerson) planning applications seem to have been omitted from the updated cumulative impacts assessment. The Board should consider the impact of traffic, dirt, noise, dust and vibration on the observer's business. Remainder of submission relates to matters that are outside of the specific parameters of the further submissions period.

AZ4 (g): Tara Station to St Stephen's Green Station		
None		

AZ4 (h): St Stephen's Green Station to Charlemont Station		
None		

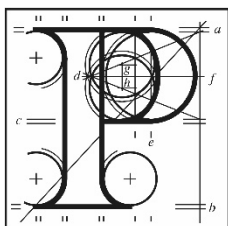
AZ4 (i): Charlemont Station and Tunnel Turnback		
None		

General or Not Specific to One Area		
Ref. No.	Observer	Main Issues
2FS1	ACRA (Association of Combined Residence Associations)	Submission relates to matters that are outside of the specific parameters of the further submissions period.
2FS3	Donal O'Brolcain	Submission relates to matters that are outside of the specific parameters of the further submissions period.
2FS4	Dublin Town (Richard Guiney)	Relevant issues relating to biodiversity and the natural environment have been adequately considered in the Appropriate Assessment.
2FS7	John Bernard Reid	Supports the submission made in response to the Wild Ireland Defence submission.
2FS9	Metro Dublin (Cormac Rabbitt)	The Metro Dublin project should be considered as part of the cumulative assessment of the proposed development. Failure to do so is a breach of the EIA Directive and result in the EIAR being incomplete and potentially flawed. Metro Dublin is in the pre-application stage and is undergoing feasibility and consultation. Remainder of submission relates to matters that are outside of the specific parameters of the further submissions period.
2FS10	National Transport Authority	No further comment.

Extend over Multiple Assessment Zones		
Ref. No.	Observer	Main Issues
2FS5	GADRA (Griffith Avenue and District Residents Association)	Submission relates to matters that are outside of the specific parameters of the further submissions period.
2FS11	Office of Public Works	Proposed mitigation related to cumulative impacts includes the production of a Guidance Note for Developers and the OPW requests further details regarding exclusion and protection zones as they relate to the National

		Library of Ireland (Ref. 2381/24 refers) and the National Concert Hall (Ref. 4065/24 refers). Submission also requests further clarity regarding the processes involved in protecting OPW property, to avoid future disputes and misunderstandings. Regarding potential significant cumulative impacts on landfill capacity (development Refs. 2381/24, 4065/24 and 4078/24 refer), clarification and details should be provided on how this issue will be addressed. Documentation should be provided regarding proposed utility diversions, with particular focus on potential overlap with the development proposed under Ref. 4065/24 at the National Concert Hall. Negotiations between the applicant and the OPW regarding potential cumulative settlement impacts at the National Concert Hall buildings (Ref. 4065/24 refers) should be undertaken in a timely manner. The proposed development should not limit the State's capacity to develop its property, vertically and/or horizontally.

Appendix 3: Oral Hearing Outline Report



An
Bord
Pleanála

ABP-314724-22

Oral Hearing Outline Report

Case	MetroLink Railway Order Application
Dates	<u>Week 1:</u> Monday 19th – Thursday 22nd February <u>Week 2:</u> Monday 26th – Thursday 29th February <u>Week 3:</u> Monday 4th – Thursday 7th March <u>Week 4:</u> Monday 11th – Wednesday 13th March <u>Week 5:</u> Tuesday 19th – Thursday 21st March <u>Week 6:</u> Monday 25th – Thursday 28th March (22 days in total)
Location	Gresham Hotel, O'Connell Street, Dublin 1

Notes:

1. All of the proceedings of the oral hearing were recorded and the recording is available on the Board's computer network. What follows below is a brief outline of the proceedings. This outline is intended to function as an aid in following the recording.
2. The applicant provided a written response to the submissions in advance of the oral hearing. Observers were therefore informed that each submission to the oral hearing should comprise solely of a response to the applicant's written response and a response to any matters raised by the applicant in their submissions at the start at the oral hearing. An opportunity was allowed for observers to pose questions to the applicant following their submission, if desired.
3. The Agenda requested that the applicant's submission consist of a brief overview of the proposed development and that it then address the following matters:

- Identify any errata or proposed changes, modifications or updates as required, including Draft Railway Order, associated Schedules and property drawings.
- Submit copies of any agreements made for the purposes of the Thirteenth Schedule of the Draft Railway Order.
- Address implications of any policy changes since lodgement of the application (e.g. Dublin City Development Plan 2022-2028, Fingal County Development Plan 2023-2029, Greater Dublin Area Transport Strategy 2022-2042, Climate Action Plan, National Biodiversity Action Plan etc.).
- Address implications of any relevant legislative or guidance updates since lodgement of the application (e.g. TII Carbon Tool and Ambient Air Quality Standards Regulations 2023).
- Identify additional projects permitted since lodgement of the application for the purposes of assessment of cumulative impacts and in-combination effects.
- Address potential implications of the designation of the North West Irish Sea cSPA with regard to both Appropriate Assessment and the Biodiversity assessment contained in the EIAR. Identify if there have been any changes (e.g. Conservation Objectives or qualifying interests) for any relevant European Site.
- Provide a list of all other consents, licences and approvals that will be required for the proposed development.
- Present the following:
 - Property Owner Protection Scheme.
 - Collins Avenue Station: Environmental Assessment Report of the Options.
 - Approach to the proposed Asset Protection Policy.
 - MetroLink Land Acquisition Strategy (referenced in Chapter 21 of EIAR).

- Stakeholder and Community Engagement Plan (referenced in Chapter 5 of EIAR).
 - MetroLink Preferred Route Design Development Report 2019.
 - Proposed approach to monitoring, communications and risk management during the construction phase, including respective roles and responsibilities of contractor(s) and TII.
 - Overview of the fire safety, emergency and evacuation strategies (to include basis for, and location of, 1 No. intervention shaft at Albert College Park as proposed and the need for separate fire brigade/emergency services lifts at each underground station).
 - Character appraisal/impact assessment of Santry Lodge and its curtilage.
4. Following the submissions by the applicant, the Planning Authorities, prescribed bodies and elected representatives, the oral hearing was divided into two Modules, with each Module further divided into geographical areas, given the linear nature of the proposed development.
- Module 1 was limited to the following topics only:
 - Tunnelling and Excavation Related Issues (Groundborne Noise and Vibration, Hydrogeological and soils impacts, settlement, property damage etc.).
 - Airborne Noise and Vibration.
 - Module 2 related to all other matters, including land/property acquisition issues. The Module 1 topics were not permitted to be raised in Module 2.
5. The issues raised by observers, prescribed bodies and the Inspectors and the responses provided by the applicant are addressed throughout the assessment section of this report.

A list of all documents submitted at the oral hearing is provided in Appendix 4. Each document is assigned a reference number, cross-referenced to the original written

submission reference number (where applicable), and they are referenced as appropriate throughout the report.

The Board's representatives scheduled formal questioning blocks and also questioned the applicant on relevant matters as they arose during both Modules 1 and 2. Questioning blocks are set out in the following sections.

Day 1: Monday 19th February 2024

I opened the oral hearing at c. 10:00 on Monday 19th February 2024 and introduced the Board's representatives, comprising Inspectors Niall Haverty (lead Inspector) and Barry O'Donnell (second Inspector), consultants Peter Jackson, Bo Jensen and Ragnar Glav (Tyréns Group AB), and ABP administrative support (Shaun McGee).

The applicant then introduced their team and spent the majority of Day 1 responding to the matters listed in the Agenda.

Following the conclusion of the applicant's submissions, the following planning authorities and prescribed bodies made submissions:

- Fingal County Council (Rosin Burke & Gerald Curley)
- Dublin City Council (Deidre Scully & Brendan O'Brien) (S71, FS20).
- Dept. of Housing, Local Government and Heritage (S63)
- An Taisce (Ian Lumley) (S8, FS3).
- Office of Public Works (Alan Dalton & John Downey) (S213-S240, FS36).
- National Transport Authority (Eoin Gillard & David Clements) (S199).

The applicant submitted the following documents:

- OH1-OH39 inclusive.

Day 2: Tuesday 20th February 2024

- DAA (Mark Finnegan) (S68).

The following elected representatives made submissions:

- Senator Marie Sherlock (S181).
- Duncan Smyth TD (S74).
- Jim O'Callaghan TD (S142).

- Senator Michael McDowell (accompanied by Gerry Duggan & Colm McCarthy) (S192).
- Councillor Yvonne Collins (S320).
- Paul McAuliffe TD (S254).
- Ivana Bacik TD (S134).
- John Lahart TD.

Following the elected representatives, Module 1 (tunnelling and excavation related issues and airborne noise and vibration) began. The agenda clearly indicated in advance that only these topics would be discussed during this module.

The following observers made submissions and/or asked questions of the applicant:

- ACRA and Ballymun Road Residents Association (Paul Cusack & William Rafter) (S1)

Day 3: Wednesday 21st February 2024

The following observers made submissions and/or asked questions of the applicant:

- Senator Lorraine Clifford Lee.
- Hammerson ICAV (Stephen Little & Eleanor MacPartlin) (S110).
- Hertz Europe Service Centre Ltd. (Tom Corr) (S115).
- Seatown Villas Residents (Thomas Lowndes) (S277).
- Estuary Court Residents Association (John Cumiskey) (S89, S90, FS23).
- Woodies DIY (Henk Van Der Kamp) (S315).
- O'Scanaill Veterinary Hospital (Dermot Flanagan SC & Diarmuid Healy) (S242)
- Juliana Boland (S155).
- Lidl Ireland GmbH (Eamon Galligan SC, Fergal Ruane, Tony Bamford, Marie-Claire Daly) (S169, FS30).

- Mouna Unlimited Company (Tom Flynn SC, Ellen O'Callaghan BL, Stephen Ward & Joe Gibbons) (S196).
- Frances McGuire (accompanied by Shane McGuire) (S97).
- Hampstead Residents CLG (Declan Campbell) (S111, FS27).

The applicant submitted the following documents:

- OH47-OH52 inclusive.

Day 4: Thursday 22nd February 2024

The following observers made submissions and/or asked questions of the applicant:

- Louise Boughton (S173).
- Our Lady of Victories Campus (Sean Aherne BL) (S244, S245)
- Griffith Avenue & District Residents Association (GADRA) (Una Caulfield & Ruth Carthy) (S99, FS25).

The applicant submitted the following documents:

- OH66 and OH68-OH70 inclusive.

The Board's representatives raised questions in relation to Module 1 matters.

Day 5: Monday 26th February 2024

The following observers made submissions and/or asked questions of the applicant:

- OPW (David Browne SC, John Downey, Margaret Gormley, Neil Moss) (S213-S240).

The applicant submitted the following documents:

- OH73-OH80 inclusive

The Board's representatives raised questions in relation to Module 1 matters.

Day 6: Tuesday 27th February 2024

The following observers made submissions and/or asked questions of the applicant:

- Lesley Hewson and Prospect ACA (S168, S260).
- Lorraine & Dymphna Rooney (S171, S75).

- Anne G. Meehan (S13).
- Management Company on Behalf of The Court Apartments (Charlie Lowe) (S175).
- Claire Dunne (S45).
- Maeve Fitzpatrick & Andrew Conlon (S9, FS4).
- Berkeley Road Services and Traders Association (Suetlana Onofzos, Vitalia Peciuliene, Dimitri Masei) (S19).
- Brendan Flanagan (accompanied by Kevin Flanagan) (S26).
- Owners of 9/10/11 Nelson Street / Nelson Property Management Co. (Katrien Goosens) (S247).
- Breda Scully (S25).
- District 7 Community Alliance (Raghnall Ó Floinn & Anthony Kelly) (S66, FS18).

The applicant submitted the following documents:

- OH89-OH94 inclusive

Day 7: Wednesday 28th February 2024

The following observers made submissions and/or asked questions of the applicant:

- The Rotunda Hospital (Sean Mahon) (S296).
- Millenium Theatre Company (Sean Mahon) (S194).
- Esprit Investments Limited (Blaine Cregan, John Flaherty) (S88).
- Greybirch Ltd. (David Rehill) (S109).
- Wynns Hotel (Blaine Cregan, Robert Coughlan, Jack Loftus) (S317).

The applicant submitted the following documents:

- OH98, OH100 and OH103-OH114 inclusive

Day 8: Thursday 29th February 2024

The following observers made submissions and/or asked questions of the applicant:

- Mater Hospital (Jarlath Fitzsimons) (S186, S187).
- Earldev Properties Unlimited Company (Eamon Galligan SC, Robert Coughlan, Conor O'Donnell) (S79).

The applicant submitted the following documents:

- OH116-OH125 inclusive and OH134-OH135.

Day 9: Monday 4th March 2024

The following observers made submissions and/or asked questions of the applicant:

- Residents at Harcourt Terrace (Niall Sudway) (S85, S167, S250, S314).
- Hines Real Estate Ireland Limited (Eamon Galligan SC, Richard Osborne, Mide Neary) (S117).
- Irish Life Assurance PLC (Conor Sheehan BL, Richard Osborne, Colman Billings, Conor O'Donnell) (S129).
- Charlemont and Dartmouth Community Group (Jerry Barnes, Paul Quigley, Brian Kavanagh, Kenneth Goodwin) (S40, S41, S42, FS8, FS9, FS10 and FS11).

The applicant submitted the following documents:

- OH147-OH150C inclusive

Day 10: Tuesday 5th March 2024

The following observers made submissions and/or asked questions of the applicant:

- Charlemont and Dartmouth Community Group (Jerry Barnes) (S40, S41, S42, FS8, FS9, FS10 and FS11).
- Grand Parade Property Trading Company DAC (Luke Wymer, John Keane) (S108)
- Union Investment Real Estate GmbH (Luke Wymer, John Keane) (S305, FS42).
- Ciaran Black, Leon McCarthy, Michael A Doyle and Carmel Smith Doyle (accompanied by Michael Furminger BL) (S43, S190, FS12 and FS33).
- Conor and Lorraine Power. (S51)

- Denis McLoughlin and Teresa Reid (S60, FS40).
- John Conway (S149, FS28).
- Leo Crehan (S166, FS29).
- Suzi Taylor (S286).
- Andrew Whelan (S10, FS5).
- Frank McDonald (S98).
- CLG Na Fianna (C/O Cormac O'Donnchu) (S46).
- Metro South West Group (Brendan Heneghan, Pauline Foster) (S189, FS32).
- Earldev Properties Unlimited Company (Fergal Ruane) (S79).

The applicant submitted the following documents:

- OH155-OH157 inclusive and OH166-OH175 inclusive.

Day 11: Wednesday 6th March 2024

The following observers made submissions and/or asked questions of the applicant:

- Earldev Properties Unlimited Company (Eamon Galligan SC, Conor O'Donnell) (S79).
- Hines Real Estate Ireland Limited (Eamon Galligan SC, Conor O'Donnell) (S117).
- Irish Life Assurance PLC (Conor Sheehan BL) (S129).
- Jerdip Properties Unlimited (Danielle Conaghan) (S140).
- RGRE Burlington Limited and RGRE Harcourt Terrace Limited (John Spain) (S265).
- Trinity College Dublin (Jarlath Fitzsimons SC) (S303).
- O'Scanail Veterinary Hospital (Dermot Flanagan SC) (S242).

The applicant submitted the following documents:

- OH179-OH183 inclusive and OH185-OH193 inclusive.

The Board's representatives raised questions in relation to Module 1 matters.

This concluded Module 1 of the Oral Hearing (other than a satellite day addressing Module 1 issues on Day 18, 21st March 2024).

Day 12: Thursday 7th March 2024

Module 2 (All other matters, including land/property acquisition issues) began on Day 12.

The following observers made submissions and/or asked questions of the applicant:

- IPUT plc (John Spain) (S125)
- Irish Life Assurance plc (John Spain) (S125)
- Rohan Holdings Limited (S268)
- Department of Housing, Local Government (Terry Doherty) (S63, FS17)
- Estuary Court Residents Association (Barry Arthurs, Dennis O'Callaghan, Noel Murtagh) (S89, S90, FS23)
- Fingallians GAA Club (Brendan McGrath, Seamus Shaw, and Liam O'Culbáird) (S95)
- Woodies DIY c/o Grafton Group PLC (Robert Nowlan, Simon Thornton) (S315)
- Bovale Developments ULC (Christy O'Sullivan) (S23, S24)
- Seatown Villas Residents (Thomas Lowndes) (S277)
- Hammerson ICAV (Eleanor Mac Partlin) (S110)
- Julianna Boland (S155)

The applicant submitted the following documents:

- OH195-OH198 inclusive and OH202.

Day 13: Monday 11th March 2024

The following observers made submissions and/or asked questions of the applicant:

- John McGreevy (Dermot Flanagan SC) (S152)
- Hugo Byrne c/o John Byrne (Christy O'Sullivan) (S119)

- Lidl Ireland GmbH (Eamon Galligan SC, Tony Bamford, Gerry Murphy, Tim Murnane) (S169, FS30)
- Sainfoin Property Company Limited (Dermot Flanagan SC) (S273)

The applicant submitted the following documents:

- OH211-OH213 inclusive

Day 14: Tuesday 12th March 2024

The following observers made submissions and/or asked questions of the applicant:

- Albert College Residents Association & Ballymun Road North Residents (Paul Cusack and William Rafter) (S1)
- Frances Maguire (accompanied by Shane Maguire) (S97)
- Hampstead Residents CLG (Declan Campbell) (S111, FS27).
- Louise Boughton (S173)
- Griffith Avenue and District Residents Association (Una Caulfield and Ruth Carthy) (S99)
- Anne G. Meehan (S13)
- Prospect Architectural Conservation Area (Alfreda O'Brien Kavanagh) (S260)

The applicant submitted the following documents:

- OH216-OH217 and OH224-OH226 inclusive

Day 15: Wednesday 13th March 2024

The following observers made submissions and/or asked questions of the applicant:

- John McGreevy (Dermot Flanagan SC) (S152)
- Farrier Technology Limited (Donal Duffy) (S93)
- Iona and District Residents Association (Rory Flynn) (S123, S124)
- Management Company on Behalf of The Court (Charlie Lowe) (S175)
- Claire Dunne (S45)
- Hedigans Limited (Dermot Flanagan SC and Michael Hedigan) (S112)

- Royal Canal Clean-up Group (Nessa Winder) (S270, FS37)
- Shandon Residents Association (Valerie Vetter) (S279, FS38)
- Sarah Meredith (S275)
- Shandon Mill Owners Management Company CLG (Martin O'Malley) (S278)
- October Investments Limited (Dermot Flanagan SC) (S211)
- O'Scanaill Veterinary Hospital (Dermot Flanagan SC) (S242)
- Vincent Harrison and Others (represented by Nessa Winder) (S309, S310)
- Bindford Limited (Christy O'Sullivan) (S21)
- Andrew Conlon and Maeve Fitzpatrick (S9, FS4)
- Nelson Property Management Company (Katrien Goosens) (S247)
- Breda Scully (accompanied by Brigid McCarthy) (S25)
- Brendan Flanagan (S26)

The applicant submitted the following documents:

- OH227, OH236-OH237 and OH245-OH246.

Day 16: Tuesday 19th March 2024

The following observers made submissions and/or asked questions of the applicant:

- District 7 Community Alliance (Anthony Kelly, Pauline Caddell and Raghnaill Ó Floinn (S66, FS18)
- Donal O'Brolcáin (S67, FS19)
- Troys Butchers (Stephen Troy) (S304, FS41)
- The Heritage Council (Ian Doyle and Shay Kelleher)

The applicant submitted the following documents:

- OH250-OH254 inclusive.

The Board's representatives raised questions in relation to Module 2 matters.

Day 17: Wednesday 20th March 2024

The following observers made submissions and/or asked questions of the applicant:

- Aine Wellard (S4)
- Voice of Vision Impairment Ireland (Dr Robbie Synnott) (S311)
- Townsend Apartment Management Company Limited (Martin Sheridan) (S302)
- Nicola Brait and Greta Tumiatti (William Egan) (S206)
- College Gate Apartments (Tom Corr) (S17, 238, S61, S77, S147, S158, S177, S184, S308)
- Hertz Europe Service Centre Limited (Tom Corr) (S115)
- Save Markievicz Pool & Gym Campaign (John Dean and Alan Munnelly) (S276)

The applicant submitted the following documents:

- OH258-OH265 inclusive.

Day 18: Thursday 21st March 2024

The following observers made submissions and/or asked questions of the applicant in relation to Module 2:

- Bernard Seymour (S20)

The following observers made submissions and/or asked questions of the applicant in relation to an outstanding Module 1 issue:

- Hines Real Estate Ireland Limited (Eamon Galligan SC, Richard Osborne, Colman Billings and Mide Neary) (S117).
- Irish Life Assurance PLC (Conor Sheehan BL, Richard Osborne, Colman Billings, Conor O'Donnell, Stephen Kearney) (S129).

The applicant submitted the following documents:

- OH273-OH278 inclusive and OH288-OH300 inclusive.

Day 19: Monday 25th March 2024

The following observers made submissions and/or asked questions of the applicant:

- O'Scanail Veterinary Hospital (Dermot Flanagan SC) (S242)

- October Investments Limited (Dermot Flanagan SC) (S211)
- Records Residents Association (Pauline Foster and Yvonne Trainer) (S263)
- Metro South West Group (Brendan Heneghan, Pauline Foster, Sean Ward and Austin Smyth) (S189, FS32)
- Charlemont and Dartmouth Community Group (Jerry Barnes, Ciaran McKeown, Damien Keaney) (S40, S41, S42)
- Union Investment Real Estate GmbH (Eamon Galligan, Luke Wymer, Sarah O’Keeffe, James Slattery) (S305, FS42)

The applicant submitted the following documents:

- OH314-OH324 inclusive.

Day 20: Tuesday 26th March 2024

The following observers made submissions and/or asked questions of the applicant:

- The Office of Public Works (David Browne SC, Alan Dalton and Isobel Chicote) (S213-S240, FS36).
- Brendan Heneghan (S27, FS7)
- Caitriona Shaffrey (S34)
- Ciaran Black, Leon McCarthy, Michael A Doyle and Carmel Smith Doyle (accompanied by Michael Furminger BL) (S43, S190, FS12 and FS33).
- Suzi Taylor (written submission read into the record by Inspector) (S286, FS39)
- Conor Power and Lorraine Power (S51, FS13)
- Grace Maguire (S107, FS26)
- John Conway (S149, FS28)
- Leo Crehan (S166, FS29)
- Rethink Metrolink (S264)
- Nicholas Mansergh (S205)

The applicant submitted the following documents:

- OH327 and OH342-OH350 inclusive.

Day 21: Wednesday 27th March 2024

The following observers made submissions and/or asked questions of the applicant:

- ACRA Association of Combined Residents Association (Duncan Stewart, Tom Newton and Catriona McClean) (S2)
- Andrew Whelan (S10, FS5)
- Dublin Commuter Coalition (Jason Cullen) (S72, FS21)
- Dublin Cycling Campaign (Kevin Baker) (S73, FS22)
- Bovale Developments ULC (Christy O'Sullivan) (S23, S24)
- Hugo Byrne c/o John Byrne (Christy O'Sullivan) (S119)
- Bindford Limited (Christy O'Sullivan) (S21)
- Frank McDonald (S98)
- Peter Twamley (S257)
- Dublin Town (Gerald Farrell)
- Ruadhan MacEoin (S271)
- Cormac McKay (S254, FS14)
- Dublin Chamber (Stephen Browne) (S70)
- Michael Boyle
- Dublin Central GP Limited (Brendan Slattery) (S69)
- Sabrina Joyce Kemper and Wild Ireland Defence CLG
- Cormac Rabbitt

The applicant submitted the following documents:

- OH351-OH352, OH357, OH364 and OH370-381 inclusive.

Day 22: Thursday 28th March 2024

The following parties made closing statements:

- Senator Marie Sherlock (S181).

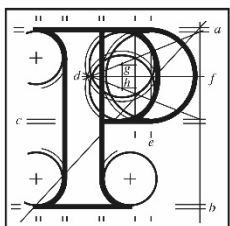
- Association of Combined Residents Associations (Tom Newton) (S2, FS1).
- Voice of Vision Impairment (Dr Robbie Sinnott) (S311).
- Brendan Heneghan (S27, FS7).
- Metro South West Group (Brendan Heneghan) (S189, FS32)
- Anne G. Meehan (S13).
- GADRA and Hampstead Residents CLG (Declan Campbell) (S99, S111, FS25 and FS27).
- Jim O'Callaghan TD (S142).
- National Transport Authority (Eoin Gillard) (S199).
- Applicant (Peter Walsh, Declan McGrath SC).

The applicant submitted the following documents:

- OH382-OH386 inclusive.

I closed the oral hearing at c. 12:03 pm.

Appendix 4: List of Documents Submitted at Oral Hearing



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List of Documents Submitted at Oral Hearing

Doc. No.	Submitted By	Associated Submission No.	Presenter	Topic
Day 1 (19th February 2024)				
OH1	TII		Multiple speakers	Metrolink Oral Hearing Opening Statement Slide-deck
OH2	TII		Aidan Foley	Witness Statement
OH3	TII		Aidan Foley	Stakeholder Communications Plan
OH4	TII		Aidan Foley	Metrolink Preferred Route Design
OH5	TII		Aidan Foley	Property Owners' Protection Scheme (POPS)
OH6	TII		Ronan Hallissey	Collins Avenue Environmental Assessment Report of Options
OH7	TII		Aidan Foley	Draft Guidance Note for Developers
OH8	TII		Ronan Hallissey	Witness Statement
OH9	TII		Ronan Hallissey	Schedule of Errata
OH10	TII			Errata Appendix 4, Chapter 9 - Erratum
OH11	TII			Errata Appendix 5, Chapter 14 - Groundborne Noise & Vibration Addendum
OH12	TII			Errata Appendix 10, Updated Appendix A13.7 - Charlemont Station
OH13	TII			Errata Appendix 11, Updated A14.5 - Groundborne Noise and Vibration and Blasting Modelling Results
OH14	TII			Errata Appendix 12, Updated and Additional GBNV - Figures1
OH15	TII			Errata Appendix 13, Addendum to EIAR, Chapter 24
OH16	TII			Errata Appendix 14, Errata Planning Report

OH17	TII		Ronan Hallissey	Schedule of Updates
OH18	TII		Ronan Hallissey	Updates Appendix 1 R132 Landscape Amendments
OH19	TII			Updates Appendix 2 Santry Lodge – Architectural Heritage Impact Assessment
OH20	TII			Updates Appendix 3 Operational Stage Impact on Development Potential
OH21	TII		Ronan Hallissey	Updates Appendix 4 Charlemont PRM Lay-by (Drop-Off) Assessment
OH22	TII			Updates Appendix 5 Updated Planning Report
OH23	TII			Updates Appendix 6 FINAL Redline - UPDATED FINAL Draft Railway Order – MetroLink (73110936.1)
OH24	TII		Ronan Hallissey	Updates Appendix 7 Review of GDA Transport Modelling Impacts
OH25	TII			Updates Appendix 8 Impact on the Preliminary Design Building Damage Assessment Results due to Imposition of Limits of Deviation
OH26	TII			Updates Appendix 9 Ground Movement Instrumentation and Monitoring Note
OH27	TII			Update Appendix 10 Outline Mobility Management Plan
OH28	TII			Updates Appendix 11 DART MetroLink Sequencing
OH29	TII			Book of updated Railway Order Drawings
OH30	TII		Avril Challoner	Witness Statement
OH31	TII		Rob Goodbody	Witness Statement
OH32	TII		John Kehoe	Witness Statement
OH33	TII		Paul Brown	Witness Statement
OH34	TII		Michael Horan	Witness Statement
OH35	TII		Michael Horan	MetroLink Amendments to Book of Reference (included in Michael Horan's witness statement)
OH36	TII		Michael Horan	Metrolink Land Acquisition Strategy (included in Michael Horan's Witness Statement)
OH37	TII		Michael Horan	Metrolink CPO Guidelines (included in Michael Horan's Witness Statement)
OH38	TII		Sandeep Upadhya	Witness Statement

OH39	TII		Declan McGrath SC	Legal Submissions
OH40	Fingal Co. Co.	S321	Roisin Burke, Senior Planner	Metrolink opening statement
OH41	An Taisce	S8	Ian Lumley	Witness Statement
OH42	OPW	S213-S240	John Downey - Downey Planning	Witness Statement
OH43	NTA	S199	David Clemence & Eoin Gillard	Witness Statement
Day 2 (20th February 2024)				
OH44	Senator Michael McDowell	S192	Gerry Duggan	Witness Statement
OH45	ACRA & Ballymun Road Residents	S1	Paul Cusack	Witness Statement
Day 3 (21st February 2024)				
OH46	Estuary Court Residents Association	S89, S90	John Cumiskey	Witness Statement
OH47	TII		James Maloney	Oral Hearing – AZ1 O'Scanails
OH48	TII		James Maloney	Oral Hearing – AZ1 Seatown West and Estuary Court
OH49	TII			Updates Appendix 6 – Draft Railway Order and Schedule – Clean version
OH50	TII			Metrolink – Draft Guidance Note for Developers
OH51	TII		Terri Hayes	DCU Collins Avenue – Groundwater Flow Pattern
OH52	TII		Matt Foy	Collins Avenue – Population
OH53	O'Scanails Veterinary Hospital	S188, S242		WITHDRAWN
OH54	O'Scanails Veterinary Hospital	S188, S242		WITHDRAWN

OH55	Lidl Ireland GMBH	S169	Tony Bamford – Planning and Development Consultants	Response to TII comments on Item 10 in relation to Lidl Ireland GMBH submission
OH56	Lidl Ireland GMBH	S169	Marie Clare Daly - Punch Consulting Engineers	Lidi Ballymun Metrolink Site – Attachment 4A – Engineering Report – Module 1
OH57	Lidl Ireland GMBH	S169	Eamon Galligan SC	Legal submission
OH58	~~Mouna Unlimited Company~~	~~S196~~		WITHDRAWN
OH59	~~Mouna Unlimited Company~~	~~S196~~		WITHDRAWN
OH60	~~Mouna Unlimited Company~~	~~S196~~		WITHDRAWN
OH61	Hampstead Residents CLG	S111	Declan Campbell	Witness Statement
Day 4 (22nd February 2024)				
OH62	Louise Boughton & Glenn Sharpe	S173	Louise Boughton	Witness Statement
OH63	Louise Boughton & Glenn Sharpe	S173	Louise Boughton	Property Details drawing – St Canice’s Road to Griffith Avenue – P304 G-H
OH64	Louise Boughton & Glenn Sharpe	S173	Louise Boughton	Property Details drawing – Hampstead Avenue
OH65	Louise Boughton & Glenn Sharpe	S173	Louise Boughton	Photographs

OH66	TII		Neil Cowey	Oral Hearing – Alternative Station Location at Albert College Park Support slides
OH67	Griffith Avenue & District Residents Association (GADRA)	S99	Una Caulfield and Ruth Carthy	Witness Statement
OH68	TII		Ronan Hallissey	Metrolink Regeneration Braking Technical Note
OH69	TII		Micheal O'Connell SC	Metrolink – Figure 14.8 – EIAR proposed locations for Floating Slab Track drawings: DR-Y-40021 to DR-Y-40027
OH70	TII		Micheal O'Connell SC	Letter from Roadstone confirming that Article 27 is compliant on excavated material from proposed Metrolink works
Day 5 (26th February 2024)				
OH71	OPW	S213-S240	David Browne SC	Legal submission
OH72	OPW	S213-S240	David Browne SC	Booklet of Authorities
OH73	TII		Micheal O'Connell SC	Agreed Submission with OPW (letter to Rosemary Collier)
OH73A	TII		Micheal O'Connell SC	Agreed Submission with OPW (Drawings)
OH74	TII		Micheal O'Connell SC	Unagreed Proposed St Stephens Green Railway Order Conditions
OH75	TII		Maurice Gallagher & John Kinnear	Glasnevin Construction Sequencing
OH76	TII		Micheal O'Connell SC	DCC Conditions Charlemont Estuary (letter to Deirdre Scully)
OH77	TII		Micheal O'Connell SC	DAA Conditions Charlemont Estuary (letter to Eamonn Kelly)
OH78	TII		John Kinnear	Corrected Settlement Contour Drawings
OH79	TII		Matt Foy	Impact of Dublin City Transport on Metrolink Haulage Route
OH80	TII		Matt Foy	Charlemont Passenger Figures
Day 6 (27th February 2024)				

OH81	Lesley Hewson	S168	Lesley Hewson	Witness Statement
OH82	Dympna Rooney & Lorraine Rooney	S75, S171	Lorraine Rooney	Witness Statement
OH83	Anne G Meehan	S13	Anne G Meehan	Witness Statement
OH84	Management Company Board on behalf of The Court	S175	Charlie Lowe	Witness Statement
OH85	Claire Dunne	S45	Claire Dunne	Witness Statement
OH86	Brendan Flanagan	S26	Brendan Flanagan, Kevin Flanagan	Witness Statement
OH87	Nelson Property Management Company	S247	Katrien Goosens	Witness Statement
OH88	Breda Scully	S25	Breda Scully	Witness Statement
OH89	TII		Declan McGrath SC	Uisce Eireann CEO Letter to TII
OH90	TII		Declan McGrath SC	Note on Nevinstown to R132 Link Road
OH91	TII		Declan McGrath SC	Airport Tunnel Drawing 03035 and Drawing 03036
OH92	TII		Declan McGrath SC	Dewatering - Permeabilities Targeted with Grout Bottom Plug
OH93	TII		Declan McGrath SC	Audibility of Alarms in Stations Note
OH94	TII		Declan McGrath SC	Technical Note on Excavated Material
Day 7 (28th February 2024)				
OH95	Rotunda Hospital	S296	Sean Mahon - O'Connell Mahon Architects	Witness Statement

OH96	Millenium Theatre Company	S194		WITHDRAWN
OH97	Esprit Investments Ltd	S88	Blaine Cregan - John Spain Associates	Witness Statement
OH98	TII		Ronan Hallissey	Cumulative Impacts Addendum Report
OH99	Greybitch Ltd.	S109	David Rehill	Witness Statement
OH100	TII			Glasnevin GSWR Rail Bridge Clearance
OH101	Alstead Securities Ltd.	S5	Inspector Niall Haverty (email read out)	Letter Re: agreement reached
OH102	Wynns Hotel	S317	Blaine Cregan - John Spain Associates	Witness Statement
OH103	TII		Ronan Hallissey	Floating Slab Track Locations
OH104	TII		Ronan Hallissey	MetroLink Floating Slab Track (Maps)
OH105	TII		Micheal O'Connell SC	Legal Submission: Role of Dublin Fire Brigade and CRR
OH106	TII		Micheal O'Connell SC	Fire Strategy and Intervention Shaft
OH107	TII		Micheal O'Connell SC	R132 Seatown Villas Retained Cut Section
OH108	TII		Micheal O'Connell SC	Derivation of the Single Bore Tunnel as the Proposed MetroLink Tunnel Option
OH109	TII		Ronan Hallissey	Glint and Glare Assessment
OH110	TII		James Maloney	Update to Chapter 5 MetroLink Construction Phase: Working Hours
OH111	TII		Maurice Gallagher	Explanation of Bentonite Usage Rate
OH112	TII		Rick Methold	Prediction of Groundborne Noise from Groundborne Vibration
OH113	TII		John Kinnear	Summary of Gillarduzzi Paper
OH114	TII		John Kinnear	Gillarduzzi Paper: Investigating property damage along Dublin Port Tunnel

Day 8 (29 th February 2024)				
OH115	Mater Misericordiae & The Childrens University Hospitals and Mater Misericordiae University Hospital	S186, S187	Jarlath Fitzsimons SC	Letters Re: Agreement reached
OH116	TII		Maurice Gallagher	Provisions for Control of TBM Launch and Reception at Station Boxes
OH117	TII		Micheal O'Connell	Update to Chapter 5 MetroLink Construction Phase - Working Hours
OH118	TII		Maurice Gallagher	Updated Appendix A5.5 Figures
OH119	TII		Rick Methold	Additional Groundborne Noise Vibration Commitments - Switches and Roughness
OH119A	TII		Rick Methold	Additional Groundborne Noise Vibration Commitments - Presentation
OH120	TII		Maurice Gallagher	Tunnel Lining Support - Note on Half Built Rings
OH121	TII		Micheal O'Connell SC	List of Oral Hearing Speakers as of 29 February 2024
OH122	TII		Jennifer Harmon	Errata Update - Ch.13 Airborne Noise and Vibration - Table 13.64 Mater Station
OH123	TII		Micheal O'Connell SC	Letter from Dublin Fire Brigade to TII - 28.02.24
OH124	TII		Aidan Foley	Stakeholder Engagement Plan - Updated 29 February 2024
OH125	TII		Ronan Hallissey	List of Additional Mitigation Measures / Schedule of Env Commitments
OH126	Earldev Properties Unlimited Company	S79	Blaine Cregan - John Spain Associates	Cover letter
OH127	Earldev Properties	S79	Robert Coughlan - Punch Consulting Engineers	Civil/Structural Engineering Report

	Unlimited Company			
OH128	Earldev Properties Unlimited Company	S79	Conor O'Donnell - AGL Consulting	Statement of Evidence on Tunnelling Induced Ground Movements & Building Damage Assessment
OH129	Earldev Properties Unlimited Company	S79	Conor O'Donnell - AGL Consulting	Refined Phase 2a Building Damage Assessment for Arthur Cox Building
OH130	Earldev Properties Unlimited Company	S79	Conor O'Donnell - AGL Consulting	Refined Phase 2a Building Damage Assessment for Arthur Cox Building - Addendum
OH131	Earldev Properties Unlimited Company	S79	Conor O'Donnell - AGL Consulting	Jacobs IDOM Preliminary Phase 3 Ground Movement Induced Damage Assessment - Arthur Cox Building
OH132	Earldev Properties Unlimited Company	S79	Eamon Galligan SC	Legal Submission
OH133	Earldev Properties Unlimited Company	S79	Eamon Galligan SC	Required conditions
OH134	TII		Ronan Hallissey	Cover note on Glint and Glare Survey
OH135	TII		Ronan Hallissey	Management of Bentonite Slurry during Tunnelling
Day 9 (4th March 2024)				
OH136	Hines Real Estate Ireland Ltd.	S117	Eamon Galligan SC	Legal Submission

OH137	Hines Real Estate Ireland Ltd.	S117	Richard Osborne - Waterman Moylan	Preliminary Report on MetroLink Route and its Potential Effect on AerCap House
OH138	Hines Real Estate Ireland Ltd.	S117	Richard Osborne - Waterman Moylan	Summary Presentation on the Proposed MetroLink Route and its Potential Effect on AerCap House
OH139	Irish Life Assurance PLC	S129	Conor Sheehan BL	Statement on Behalf of Irish Life Assurance PLC
OH140	Irish Life Assurance PLC	S129	Allegro Acoustics	EIAR Review
OH141	Irish Life Assurance PLC	S129	Richard Osborne - Waterman Moylan	Summary Presentation on the Proposed MetroLink Route and its Potential Effect on the Cadenza Building
OH142	Irish Life Assurance PLC	S129	Richard Osborne - Waterman Moylan	Preliminary Report on MetroLink Route and its Potential Effect on the Cadenza Building
OH143	Irish Life Assurance PLC	S129	Colman Billings - BDA Façade Consultants	Impacts on façade of the Cadenza Building - Presentation
OH144	Irish Life Assurance PLC	S129	Colman Billings - BDA Façade Consultants	Impacts on façade of the Cadenza Building - Report
OH145	Irish Life Assurance PLC	S129	Conor O'Donnell - AGL Consulting	Phase 2a Building Damage Assessment for Cadenza Building
OH146	Irish Life Assurance PLC	S129	Conor O'Donnell - AGL Consulting	Statement of Evidence on Tunnelling Induced Ground Movements & Building Damage Assessment for the Cadenza Building
OH147	TII		Declan McGrath SC	Agreement with Fingal Co. Co.
OH148	TII		Declan McGrath SC	Response to Hampstead Residents CLG
OH149	TII		Declan McGrath SC	Response to Submissions of the Elected Representatives at Charlemont Station
OH150A	TII		Declan McGrath SC	Tunnel Alignment Drawing Number ML1-JAI-RTA-ROUT_XX-DR-Y-02027

OH150B	TII		Declan McGrath SC	Tunnel Alignment Option_2 Sheets_Drawing Number ML1-JAI-RTA-ROUT_XX-DR-Y-01027
OH150C	TII		Declan McGrath SC	Underground Pumping Station_Drawing Number ML1-JAI-RTA-ROUT_XX-DR-Y-00601
OH151	Charlemont & Dartmouth Community Group	S40-S42	Paul Quigley	Soils and Hydrogeology
OH152	Charlemont & Dartmouth Community Group	S40-S42	Brian Kavanagh	Building Settlement
OH153	Charlemont & Dartmouth Community Group	S40-S42	Kenneth Goodwin	Airborne Noise and Vibration
OH154	Suzi Taylor	S286	Suzi Taylor	Letter Re: not speaking in Module 1.
Day 10 (5th March 2024)				
OH155	TII		John Kinnear	Response to Earldev Submission
OH156	TII		John Kinnear	Dublin Port Tunnel Paper
OH157	TII		John Kinnear	Copenhagen Metro Circle Line Paper
OH158	Charlemont & Dartmouth Community Group	S40-S42	Jerry Barnes - MacCabe, Durney, Barnes	Witness Statement
OH159	Union Investment Real Estate GmbH	S305	Luke Wymer - John Spain Associates	Witness Statement
OH160	Union Investment Real Estate GmbH	S305	John Keane - DBFL Consulting Engineers	Impact of tunnelling and excavation works on 2 Grand Parade Office Development

OH161	~~Gíaran Black & Léon McCarthy, Michael A. Doyle & Carmel Smith Doyle~~	S43, S190		WITHDRAWN
OH162	Conor & Lorraine Power	S51	Lorraine Power	Witness Statement
OH163	Denis McLoughlin & Teresa Reid	S60	Terry Reid	Witness Statement
OH164	John Conway & Orlaith McCarthy	S149	John Conway	Witness Statement
OH165	Leo & Anne Crehan	S166	Leo Crehan	Witness Statement
OH166	TII		Declan McGrath SC	Email from Waterways Ireland to TII dated 1 March 2024
OH167	TII		Declan McGrath SC	MetroLink TBM Mode of Operation
OH168	TII		Jennifer Harmon	Noise Control from Fixed Installations
OH169	TII		Neil Cowie	Update to R132 Seatown Villas Retained Cut Section
OH170	TII		Declan McGrath	Low Point Sump Construction Method Statement
OH171	TII		Declan McGrath	POPS Boundary Map
OH172	TII		Jorge Bernabeu Larena	Dewatering assessment in Station Boxes and SCL Tunnels
OH173	TII		Paul Brown	MetroLink Monitoring During Construction
OH174	TII		Rick Methold	Additional Groundborne Noise Commitment
OH175	TII		Rick Methold	Risk Management Plan – ‘Trigger Action Plan’ (TAP)
OH176	Frank McDonald	S98	Frank McDonald	Witness Statement
OH177	Metro South West Group	S189	Brendan Heneghan & Pauline Foster	Witness Statement

OH178	Earldev Properties Unlimited Company	S79	Fergal Ruane - Byrne Wallace	Letter Re: Fair procedures and Module 1
Day 11 (6th March 2024)				
OH179	TII		Jorge Bernabeu	Updated Tunnel Alignment Saint Stephen's Green_Charlemont RO Application Alignment and Deeper Vertical Alignment Option_2 Sheets_Drawing Number ML1-JAI-RTA-ROUT_XX-DR-Y-01027
OH180	TII		Jorge Bernabeu	Updated Tunnel Alignment Saint Stephen's Green_Charlemont RO Application VS Deeper Vertical Alignment Option_Drawing Number ML1-JAI-RTA-ROUT_XX-DR-Y-02027
OH181	TII		Jennifer Harmon	Airborne Rail Noise Effects at Glasnevin during Metrolink Project
OH182	TII		James Maloney	MetroLink-Mouna Private Rising Main Interface - Technical Note and Drawings
OH183	TII		John Kinnear	Methodology Used for Assessment of the Likely Significant Effects on Buildings from Ground Movement and Settlement
OH184	Trinity College Dublin	S303	Jarlath Fitzsimons SC	Letter Re: Agreement reached
OH185	TII		Declan McGrath SC	Further updated Tunnel Alignment Saint Stephens Green_Charlemont RO Application Alignment and Deeper Vertical Alignment Option_2 Sheets Drawing Number ML1-JAI-RTA-ROUT_XX-DR-Y-01027 (P03)
OH186	TII		Declan McGrath SC	Further updated Tunnel Alignment Saint Stephen's Green_Charlemont RO Application VS Deeper Vertical Alignment Option Drawing Number ML1-JAI-RTA-ROUT_XX-DR-Y-02027 (P03)
OH187	TII		Aidan Foley	Property Owners Protection Scheme Updated 6 March 2024
OH188	TII		Declan McGrath SC	Property Owners Protection Scheme Boundary Drawings
OH189	TII		Declan McGrath SC	Supplemental Note: Dewatering Assessment in Station Boxes and SCL Tunnels v2
OH190	TII		Ronan Hallissey	Trigger Action Plan Note No 2 - Applicable Locations

OH191	TII		Declan McGrath SC	Assessment of Borehole data at Arthur Cox Building and Cadenza Building
OH192	TII		Paul Brown	Working Draft - Process for the oversight and implementation of Phase 3 assessments
OH193	TII		Ronan Hallissey	EIAR Addendum: Downward Tunnel Realignment St Stephens Green Station to Charlemont Station
Day 12 (7th March 2024)				
OH194	IPUT plc and Irish Life Assurance PLC	S125	John Spain Associates	Letter Re: Agreement reached
OH195	TII		N/a	List of Oral Hearing Speakers as of 7 March 2024 (End of Module 1)
OH196	TII		Andrew Speer	Statement of Evidence on AA/NIS Update and EIAR Biodiversity Update
OH197	TII		Avril Challoner	Chapter 16 Air Quality: Ecology Related Addenda to EIAR
OH198	TII		Andrew Speer	EIAR Biodiversity Update Report and Drawings
OH199	Estuary Court Residents Association	S89, S90	Barry Arthurs	Witness Statement
OH200	Fingallians GAA Club	S95	Brendan McGrath, Seamus Shaw & Liam O'Colbert	Witness Statement
OH201	Juliana and Joe Boland & Family	S155	Juliana Boland	Witness Statement
OH202	TII		Andrew Speer and Declan McGrath SC	MetroLink Appropriate Assessment Update Report
Day 13 (11th March 2024)				
OH203	John McGreevy	N/A (New)	Dermot Flanagan SC	Copy of Agreement between Vantage Towers Limited and Others
OH204	Lidl Ireland GmbH	S169	Tony Bamford - Tony Bamford Planning	Introduction to Presentation

OH205	Lidl Ireland GmbH	S169	Tony Bamford - Tony Bamford Planning	Rebuttal to Submissions Attachment 1.
OH206	Lidl Ireland GmbH	S169	Tony Bamford - Tony Bamford Planning	Future Development of subject site
OH207	Lidl Ireland GmbH	S169	Gerry Murphy - MCA Architects	Mixed use retail development Northwood
OH208	Lidl Ireland GmbH	S169	Gerry Murphy - MCA Architects	Current scheme with exclusion zones overlaid – (3 A3 size drawings)
OH209	Lidl Ireland GmbH	S169	Tim Murnane - Punch Consulting Engineers	Civil Structural Engineering Report – Module 2
OH210	Lidl Ireland GmbH	S169	Eamon Galligan SC	Legal submission
OH211	TII		Matt Foy	Review of Charlemont Station
OH212	TII		Micheal O'Connell SC	Response to public representatives (Day 2 of OH)
OH213	TII		Ronan Hallissey	Note on removal of pipe and instream supporting structure at the Broadmeadow River
OH214	Sainfoin Property Company Ltd	S273	Dermot Flanagan SC	Letter Re: Agreement reached with TII
Day 14 (12th March 2024)				
OH215	ACRA & Ballymun Road Residents	S1	Paul Cusack	Witness Statement
OH216	TII		Various	Collins Avenue Station EPR Summary
OH217	TII		James Maloney	MetroLink AZ4 Collins Avenue
OH218	Frances Maguire	S97	Shane and Frances Maguire	Witness Statement
OH219	Hampstead Residents CLG	S111	Declan Campbell	Witness Statement

OH220	Louise Boughton & Glenn Sharpe	S173	Louise Boughton	Witness Statement
OH221	Griffith Avenue & District Residents Association (GADRA)	S99	Una Caulfield & Ruth Carthy	Witness Statement
OH222	Anne G Meehan	S13	Anne G Meehan	Witness Statement
OH223	Prospect ACA	S260	Alfreda Kavanagh	Witness Statement
OH224	TII		John Keogh & Donnacha Gallagher	Glasnevin Area & Glasnevin Station
OH225	TII		Matt Foy	Updates to STMP Haulage Route
OH226	TII		Matt Foy	Updates to Scheme Traffic Management Plan - 12.03.24
Day 15 (13th March 2024)				
OH227	TII		Matt Foy	Scheme Traffic Management Plan Update
OH228	John McGreevy	N/A (New)	Dermot Flanagan SC	Davey Smith Architects - Lands identified on Metrolink location map
OH229	John McGreevy	N/A (New)	Dermot Flanagan SC	Proposed alternative site access – Aerial View photo
OH230	Farrier Technology Ltd.	S93	Donal Duffy - Downey Planning	Witness Statement
OH231	Iona and District Residents Association	S123, S124	Rory Flynn	Iona District Traffic Situation, Survey, and Solutions
OH232	Management Company Board on behalf of the Court	S175	Charlie Lowe	Witness Statement
OH233	Claire Dunne	S45	Claire Dunne	Witness Statement
OH234	Hedigans Limited (Michael	S112		WITHDRAWN

	& Peter Hedigan)			
OH235	Shandon Residents Association	S279	Valerie Vetter	Witness Statement
OH236	TII		Donnacha Gallagher	Station Integration & Common Components
OH237	TII		Matt Foy	Estimation of Flows along Grand Canal Way
OH238	Sarah Meredith	S275	Sarah Meredith	Witness Statement
OH239	Shandon Mill Owners Management Company CLG	S278	Martin O'Malley - O'Malley Associates	Witness Statement
OH240	Vincent Harrison and others	S309, S310	Nessa Winders	Witness Statement
OH241	Andrew Conlon & Maeve Fitzpatrick	S9	Andrew Conlon & Maeve Fitzpatrick	Witness Statement
OH242	Nelson Property Management Company	S247	Katrien Goosens	Witness Statement
OH243	Breda Scully	S25	Breda Scully	Witness Statement
OH244	Brendan Flanagan	S26	Brendan Flanagan	Witness Statement
OH245	TII		Declan McGrath SC & Terrie Hayes	Errata: Chapter 18 – Temporary Instream Works During Construction (Broadmeadow River)
OH246	TII		Declan McGrath SC	Environmental Commitments agreed with Our Lady of Victories Schools
Day 16 (19th March 2024)				
OH247	District 7 Community Alliance	S66	Tony Kelly, Ragnall O Floinn, Pauline Caddell	Witness Statement

OH248	Donal O'Brolcáin	S67	Donal O'Brolcáin	Witness Statement
OH248A	Donal O'Brolcáin	S67	Donal O'Brolcáin	Presentation
OH249	The Heritage Council	N/A (New)	Ian Doyle, Shay Kelliher	Witness Statement
OH250	TII		Declan McGrath SC	Mater Railing Length & Green Space
OH251	TII		Declan McGrath SC	Update to Chapter 5: Construction Compound Spatial Requirements
OH252	TII		Declan McGrath SC	Estimation of Flows along Royal Canal
OH253	TII		Ronan Hallissey	Verified Views Fingallians Pitches
OH254	TII		Ronan Hallissey & James Maloney	O'Connell Street Station presentation
Day 17 (20th March 2024)				
OH255	Townsend Apartment Management Company Ltd	S302	Martin Sheridan	Witness Statement
OH256	Legal Rep. for Owner in College Gate	S206	Egan Solicitors, Nicola Brait, Greta Tumiatti	Witness Statement
OH257	Owners in College Gate Apartments	S17, S38, S61, S77, S115, S147, S158, S177, S184, S206, S302, S308	Tom Corr	Capital Gains Tax
OH258	TII		Mark McGarry	Hostile Vehicle Mitigation
OH259	TII		Declan McGrath SC	Tara Station – Mined Option

OH260	TII		Declan McGrath SC	Oral Hearing Tara Station Location Options support slides
OH261	TII		Declan McGrath SC	Charlemont LUAS Stairs & lift connection
OH262	TII		Declan McGrath SC	EIAR addendum: Leinster Street Pumping station
OH263	TII		Declan McGrath SC	Errata: Chapter 11 Population and Land Use
OH264	TII		Matt Foy	Pedestrian Impact for Dartmouth Road
OH265	TII		Declan McGrath SC & Matt Foy	NTA State Airports Passenger Survey 2022 Foreword and link to Excel Docs
OH266	Save Markievicz Pool & Gym Campaign	S276	John Dean, Alan Munnelly	Witness Statement
OH267	Save Markievicz Pool & Gym Campaign	S276	John Dean, Alan Munnelly	Mr X and Transport Infrastructure Ireland
OH268	Save Markievicz Pool & Gym Campaign	S276	John Dean, Alan Munnelly	Copy of TII Document: Update to Boards of TII and NTA 19 February 2019
Day 18 (21st March 2024)				
OH269	Bernard Seymour	S20	Bernard Seymour	Witness Statement
OH270	Save Markievicz Pool & Gym Campaign	S276	John Dean, Alan Munnelly	Copy of emails Re: FOI request
OH271	Save Markievicz Pool & Gym Campaign	S276	John Dean, Alan Munnelly	Copy of Jacobs IDOM Report on Tara Street Station
OH272	Save Markievicz Pool & Gym Campaign	S276	John Dean, Alan Munnelly	Copy of Jacobs IDOM presentation on Tara Street Station
OH273	TII		John Kinnear	Arthur Cox Enhanced Building Damage Assessment Report
OH274	TII		John Kinnear	Aercap House Enhanced Building Damage Assessment Report

OH275	TII		John Kinnear	Cadenza Building Enhanced Building Damage Assessment Report
OH276	TII		John Kinnear	Draft Trigger Action Plan
OH277	TII	S140	Declan McGrath SC	Letter Re: Agreement reached Jerdip Properties Unlimited Company
OH278	TII	S79	Declan McGrath SC	Letter Re: Agreement reached Earldev Properties Unlimited company
OH279	Hines Real Estate Ireland Ltd.	S117	Eamon Galligan SC	Legal submission
OH280	Hines Real Estate Ireland Ltd.	S117	Richard Osborne - Waterman Moylan	Witness Statement
OH281	Hines Real Estate Ireland Ltd.	S117	Colman Billings - BDA Façade Consultants	Aercap House MetroLink Interface
OH282	Hines Real Estate Ireland Ltd.	S117	Brady Shipman Martin	Planning note
OH283	Irish Life Assurance PLC	S129	Conor Sheehan BL	Legal submission
OH284	Irish Life Assurance PLC	S129	Richard Osborne - Waterman Moylan	Witness Statement
OH285	Irish Life Assurance PLC	S129	Colman Billings - BDA Façade Consultants	Cadenza MetroLink Interface
OH286	Irish Life Assurance PLC	S129	Stephen Kearney - Allegro Acoustics	Witness Statement
OH287	Irish Life Assurance PLC	S129	Conor O'Donnell - AGL Consulting	Statement of Evidence on Tunnelling Induced Ground Movements & Building Damage Assessment for the Cadenza Building
OH288	TII		John Kinnear	Enhanced Assessment Overview
OH289	TII		Paul Cullen	Building Desk Study
OH290	TII		Mathew Foy	Educational & Jobs Forecasts – Collins Avenue

OH291	TII		Declan McGrath SC & Rob Goodbody	Status of Buildings on Moore Street
OH292	TII		Ronan Hallissey	O'Connell St Update: Overview of the O'Connell St Construction Scenarios
OH293	TII		Declan McGrath SC	Legal submission: Note on issues raised by residents of Harcourt Terrace
OH294	TII		John Kehoe	Planning Report Update
OH295	TII		Neil Cowie	Technical Note – Public welfare facilities provision at stations
OH296	TII		Neil Cowie	Technical Note - OCS/OCR Benefit over third rail
OH297	TII		Declan McGrath SC	EPA letter to TII dated 19 March 2024 Re: By-Product Notification
OH298	TII		Declan McGrath SC	Accessibility Statement
OH299	TII		Ronan Hallissey	Photomontage (Henry Street)
OH300	TII		John Kinnear	Drawings Sheet 1-28 Settlement Contours
Day 19 (25th March 2024)				
OH301	Recorders Residents Association	S263	Pauline Foster, Yvonne Traynor	Witness Statement
OH302	Recorders Residents Association	S263	Pauline Foster, Yvonne Traynor	Atkins Luas Metro Plan
OH303	Recorders Residents Association	S263	Pauline Foster, Yvonne Traynor	Comparison of public transport
OH304	Metro South West Group	S189	Sean Ward, Brendan Heneghan, Pauline Foster	Witness Statement
OH305	Metro South West Group	S189	Prof Austin Smyth - Transport Analysis & Advocacy Ltd.	Review and Audit of the NTA/Jacobs Metro to Knocklyon Feasibility Study

OH306	Metro South West Group	S189	Prof Austin Smyth - Transport Analysis & Advocacy Ltd.	Accompanying presentation
OH307	Charlemont & Dartmouth Community Group	S40-S42	Jerry Barnes - MacCabe Durney Barnes	Witness Statement
OH308	Charlemont & Dartmouth Community Group	S40-S42	Ciaran McKeon - Transport Insights	Transport Statement
OH309	Charlemont & Dartmouth Community Group	S40-S42	Damien Keaney BL	Legal submission
OH310	Union Investment Real Estate GmbH	S305	Luke Wymer - John Spain Associates	Witness Statement
OH311	Union Investment Real Estate GmbH	S305	Sarah O'Keefe - Henry J Lyons	Imagery supporting oral submission
OH312	Union Investment Real Estate GmbH	S305	James Slattery - Slattery Conservation Architects Ltd	Witness Statement
OH313	Union Investment Real Estate GmbH	S305	Eamon Galligan SC	Legal submission
OH314	TII		Declan McGrath SC	Schedule of Errata - Draft Update
OH315	TII		Declan McGrath SC	Schedule of Updates - Draft Update
OH316	TII		Declan McGrath SC	Buildings Desk Study

OH317	TII		Declan McGrath SC	Arboricultural Impact Report
OH318	TII		Declan McGrath SC	Arboricultural Impact Report - Drawings
OH319	TII		Declan McGrath SC	Note on Plan Level Biodiversity Policy Compliance
OH320	TII		Declan McGrath SC	Updated Appendix A5.1 Outline Construction Environmental Management Plan
OH321	TII		Declan McGrath SC	Updated Chapter 31 Summaries of the Route-wide Mitigation & Monitoring Proposed
OH322	TII		Declan McGrath SC	Working Draft Additional Environmental Commitments
OH323	TII		Declan McGrath SC	Updated Drawings
OH324	TII		Declan McGrath SC	Charlemont Drop-off Biodiversity Update Report
Day 20 (26th March 2024)				
OH325	OPW	S213-S240	David Browne SC	Witness Statement
OH326	Brendan Heneghan	S27	Brendan Heneghan	Witness Statement
OH327	TII		Matthew Foy	NTA's ERM Model
OH328	Caitriona Shaffrey	S34	Caitriona Shaffrey	Witness Statement and supporting imagery
~~OH329~~	~~Ciaran Black & Léon McCarthy, Michael A. Doyle & Carmel Smith Doyle~~	~~S43, S190~~		WITHDRAWN
~~OH330~~	~~Ciaran Black & Léon McCarthy, Michael A. Doyle & Carmel Smith Doyle~~	~~S43, S190~~		WITHDRAWN

OH331	~~Ciaran Black & Léon McCarthy, Michael A. Doyle & Carmel Smith Doyle~~	~~S43, S190~~		WITHDRAWN
OH332	~~Ciaran Black & Léon McCarthy, Michael A. Doyle & Carmel Smith Doyle~~	~~S43, S190~~		WITHDRAWN
OH333	~~Ciaran Black & Léon McCarthy, Michael A. Doyle & Carmel Smith Doyle~~	~~S43, S190~~		WITHDRAWN
OH334	~~Ciaran Black & Léon McCarthy, Michael A. Doyle & Carmel Smith Doyle~~	~~S43, S190~~		WITHDRAWN
OH335	Suzi Taylor	S286	Read out by Inspector Barry O'Donnell	Letter submitted on behalf of Ms Taylor
OH336	Conor & Lorraine Power	S51	Conor Power	Witness Statement
OH337	Conor & Lorraine Power	S51	Lorraine Mulligan	Witness Statement
OH338	John Conway & Orlaith McCarthy	S149	John Conway	Witness Statement
OH339	Leo & Anne Crehan	S166	Leo Crehan	Witness Statement
OH340	Rethink Metrolink	S264	Peter Nash & Liam Murphy	Witness Statement

OH341	Dr Nicholas Mansergh	S205	Dr Nicholas Mansergh	Witness Statement
OH342	TII		Declan McGrath SC	Further Updated FINAL Draft Railway Order
OH343	TII		Declan McGrath SC	Further Updated FINAL Draft Railway Order - Redline
OH344	TII		Declan McGrath SC	Utilities & Infrastructure Amendments – Swords Pumping Station
OH345	TII		Declan McGrath SC	Additional Errata Relating to Ch. 20
OH346	TII		Declan McGrath SC	Hines Transport Statement - Charlemont Planning Barriers
OH347	TII		Declan McGrath SC	Updated Ch. 31 Summaries of The Route-wide Mitigation and Monitoring Proposed - Redline
OH348	TII		Declan McGrath SC	Updated Appendix A5.1 Outline Construction Environmental Management Plan - Redline
OH349	TII		James Maloney	A3 & A1 Drawings – General Arrangement Ballymun (Sheet 4 of 11)
OH350	TII		Declan McGrath SC	Grand Parade Drop Off – Construction Summary
Day 21 (27th March 2024)				
OH351	TII		Declan McGrath SC	Estuary to Charlemont Updated Drawings
OH352	TII		Matt Foy	Cycle Parking Overview
OH353	ACRA – Association of Combined Residents Associations	S2	Tom Newton	Newton Transport Plan
OH354	ACRA – Association of Combined Residents Associations	S2	Duncan Stewart	Witness Statement

OH355	ACRA – Association of Combined Residents Associations	S2	Catriona McClean	Witness Statement
OH356	Andrew Whelan	S10	Andrew Whelan	Witness Statement
OH357	TII		Matthew Foy	Cycle Parking Review
OH358	Dublin Commuter Coalition	S72	Jason Cullen	Witness Statement
OH359	Dublin Cycling Campaign	S73	Kevin Baker	Witness Statement
OH360	Bovale Developments ULC; Balheary Properties ULC and Lissenhall Demesne Properties ULC	S24	Christy O'Sullivan - ILTP Consulting	Letter Re: Agreement reached
OH361	Bovale Developments ULC	S23	Christy O'Sullivan - ILTP Consulting	Letter Re: Agreement reached
OH362	Hugo Byrne CO John Byrne	S119	Christy O'Sullivan - ILTP Consulting	Letter Re: Agreement reached
OH363	Bindford Limited	S21	Christy O'Sullivan - ILTP Consulting	Letter Re: Agreement reached
OH364	TII		Declan McGrath SC	Letter from Greybitch Re: Agreement reached
OH365	Frank McDonald	S98	Frank McDonald	Witness Statement
OH366	Peter Twamley	S257	Peter Twamley	Witness Statement
OH367	Ruadhan MacEoin	S271	Ruadhan MacEoin	Witness Statement
OH368	Michael Boyle	N/A (New)	Michael Boyle	Witness Statement

OH369	Sabrina Joyce Kemper & Wild Ireland Defence CLG	N/A (New)	Sabrina Joyce Kemper	Witness Statement
OH370	TII		Declan McGrath SC & Ronan Hallissey	Photomontages
OH371	TII		Ronan Hallissey	EIAR Addendum: Photomontages
OH372	TII		Declan McGrath SC	List of Oral Hearing Speakers as of 27/03/24
OH373	TII		Declan McGrath SC	List of Agreements Reached with Third Parties
OH374	TII		Declan McGrath SC	Final Schedule of Errata
OH375	TII		Declan McGrath SC	Final Schedule of Updates
OH376	TII		Declan McGrath SC	Final Schedule of Additional Environmental Commitments
OH377	TII		Rob Goodbody & Ronan Hallissey	Carroll's Building Stairs and Lift
OH378	TII		Declan McGrath SC	Outline Guidance Note for Developers – March 2024
OH379	TII			EIAR Ch.11 – Populations and Land Use Operational Stage Impact on Development Potential
OH380	TII			EIAR Ch.11 – Populations and Land Use Operational Stage Impact on Development Potential - Redline
OH381	TII		Emily Egan McGrath SC	List of Agreements Reached with Third Parties (Updated)
Day 22 (28th March 2024)				
OH382	TII		Ronan Hallissey	3D Design Bureau Verified Views – Update LLCA22 St Stephens Green and LLCA23 Charlemont
OH383	TII		Ronan Hallissey	Landscape and Visual Impact of the Proposed Design Changes at Pinnockhill

OH384	TII		Ronan Hallissey	Landscape and Visual Impact of the Proposed Design Changes at Tara Street
OH385	TII		Declan McGrath SC	List of MetroLink OH Speakers as of 28/03/24
OH386	TII		Declan McGrath SC	Transport (Railway Infrastructure) Act 2001 (unofficial consolidation - March 2024) & Book of Legislation (2 folders)
OH387	Hampstead Residents CLG	S111	Declan Campbell	Concluding Remarks