An Bord Pleanála

Inspector's Report ABP-315087-22

Development	Upgrade and enhancement of the Glounthaune to Midleton rail line beginning in the townland of Johnstown to the east of Glountaune train station; and continuing along and parallel to the existing rail line for a distance of approximately 10km ending east of Midleton rail station in the townland of Broomfield East.
Location	The proposed development will traverse through the following townlands: Anngrove; Ballyadam, Ballyrichard More; Broomfield East; Broomfield West; Carrigane; Carrigtohill; Harpers Island; Johnstown; Killacloyne; Killahora; Knockgriffen (Barrymore); Knockgriffin (lmokilly); Terry's-Land; Townparks and Water-Rock.
Planning Authority	Cork County Council
Applicant	Córas Iompair Éireann (CIÉ)
Type of Application	Application pursuant to Section 37 of the Transport (Railway Infrastructure) Act 2001 (as amended and substituted)

Prescribed Bodies	Inland Fisheries Ireland OPW Transport Infrastructure Ireland
Observer(s)	Adrianna and Alan Watters Carrigtowhill and District Historical Society Cllr. Alan O'Connor Cllr. Oliver Moran Myrtle Hill Residents Association (Pat O'Connell) Sheenvale Limited Tim and Deirdre Murray Tom O'Donnell
Date of Site Inspection	31/05 – 01/06/2023
Date of Oral Hearing	26th & 27th June 2023, 3rd July 2023
Inspector	Conor McGrath

Contents

1.0 Introduction

This report relates to an application by Córas Iompair Éireann (CIE), for a Railway Order (RO) for the Glounthaune to Midleton Twin Track Project, made pursuant to the provisions of Section 37 of the Transport (Railway Infrastructure) Act 2001 (as amended and substituted).

The Glounthaune to Midleton rail line originally formed part of the Cork to Youghal line, which ceased operation in the late 1970s. The existing rail line was redeveloped and recommenced rail services in 2009 under the existing Railway Order, S.I. No. 145/2007 – Railway (Glounthaune to Midleton) Order 2007.

2.0 Site Location and Description

The proposed development comprises the upgrading of the existing Cork to Midleton railway line. The existing railway runs east from Kent Station in Cork City to Glounthaune Station, after which it divides into two routes, serving Cobh to the south and Carrigtwohill and Midleton to the east. It is proposed to upgrade the Midleton line from a single to a twin track line over a distance of approx. 10km, commencing at Chainage CH380 east of Glounthaune Station, and extending east to Midleton station (CH10630).

In the Glounthaune / Kilahora area the existing railway line runs along the shore of Lough Mahon / Cork Harbour which is designated as an SPA and SAC. This area includes Harper's Island nature reserve, to the south of the line (Ch600-700), which is an important roosting and feeding area for wintering birds in the harbour. The line is bounded to the north by the L3004 (former N25) and a number of dwellings and commercial buildings, while a pedestrian / service overbridge provides access to Harper's Island. From approx. Ch950 the line continues west through agricultural lands, and is traversed north-south by the L3004, west of Carrigtwohill at Kilacloyne Bridge (OBY1).

On the approach to Carrigtwohill, east of Kilahora Road, the rail corridor is bounded by Fota Retail and Business Park to the south and by IDA lands to the north and south. 2 no. road bridges cross the railway in this area. Further east, lands north of

the railway are designated as the Carrigtwohill North Urban Expansion Area (UEA). East of Carrigtwohill and Ballyadam Bridge (OBY7) on the Carrigane Road, a large area of IDA lands bounds the railway corridor to the south. There is an unused agricultural accommodation bridge over the railway at this location, Ballyadam House Bridge (OBY8).

The corridor continues east through agricultural lands and passes through the Water Rock Urban Expansion Area to the northwest of Midleton. There are two level crossings in this area, on the Castlerock Road (XY009) and on a private road (Ford XY010) to the east. East of the northern relief road, on the approach to Midleton station, lands north of the railway and are currently undeveloped / brownfield in nature. The railway passes over the Owenacurra river at overbridge UBY11. Lands to the north of the railway, east and west of the river are currently undeveloped. At Midleton Station, the R626 Upper Mill Road crosses the railway via an at-grade level crossing (XY012).

3.0 **Proposed Development**

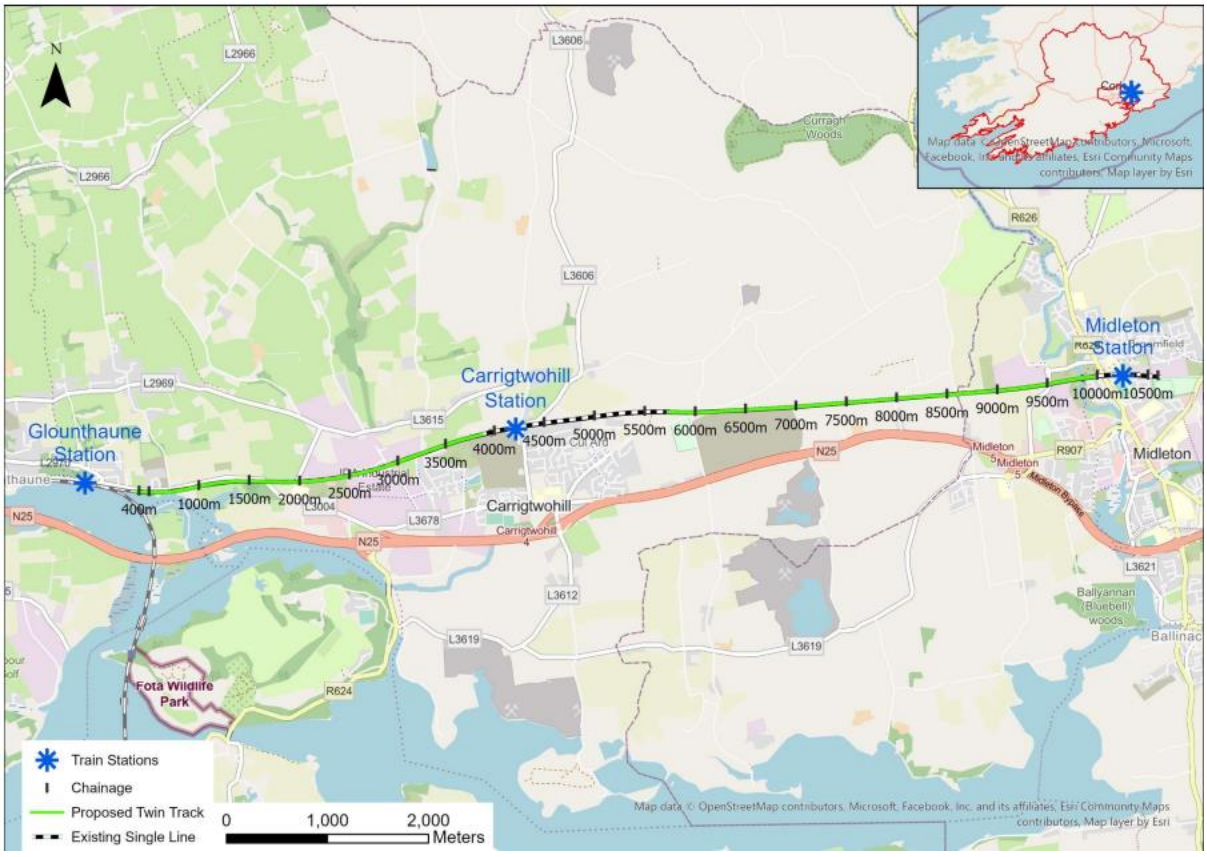
The proposed development will involve the upgrade and enhancement of the existing Glounthaune to Midleton railway line to a twin track configuration, comprising the following principal elements:

- Twin tracking of the single-track sections between Glounthaune and Midleton over a total distance of approximately 10km.
- Reconfiguration of the operational track layout.
- Widening of bridge deck (UBY11, crossing the Ownenacurra River).
- Extinguishment of one level crossing (Ford CCTV XY010) and widening of one level crossing (Water-Rock CCTV XY009).
- Provision of sidings / turn back facility at Midleton Station.
- Provision of new cable containment routes from Glounthaune to Midleton to facilitate signalling upgrades and alterations.
- Associated signalling upgrades and alterations; and
- All associated works, including 5 no. temporary construction compounds; drainage, retaining walls and boundary treatments).

Note, while the application originally proposed the removal of Ballyadam House overbridge (OBY08), at the oral hearing it was confirmed that the intention is now to retain this structure.

The objectives of the project are described in the application as being aligned with those of the Cork Metropolitan Area Transport Strategy (CMATS) and the Cork Area Commuter Rail programme (CACR), and include:

- Promotion of rail travel as an attractive alternative to private transport.
- Supporting compact growth of the Cork city region, particularly the intensification and consolidation of development at Water Rock, Carrigtwohill and Midleton.
- Supporting decarbonisation and climate change targets for sustainable transport.
- Better connectivity and enhanced reliability on the suburban rail network.
- Facilitating the future operation of higher frequency services.
- Facilitating increased capacity and more passenger journeys to help achieve the passenger and journey targets within CMATS.



Source: EIAR Mott MacDonald

Twin tracking is already in place over approximately 35% of the overall route which is ca. 10km in length. Where new track is required, some modifications to the alignment of the existing single track will be required to accommodate the second track within applicant's ownership boundary. The average working area on either side of the existing railway line is stated to be ca. 20m, with the majority of works contained within the Iarnród Éireann property boundary.

The application describes a predicted construction period of 36 months. The railway line will be closed for a period of up to four months, with weekend closures over 8 months. The level crossing at Castlerock Avenue will be closed for 16 weeks, with local diversions to be implemented.

There are currently 31 trains running daily each way Monday - Friday, between Kent Station and Midleton, from 5.45am till 22.45, with a reduced service on weekends. The proposed development will facilitate future increases in the frequency of train services, ultimately providing for a 10-minute frequency service.

Section 45(1) of the Transport (Railway Infrastructure) Act, 2001 (as amended and substituted) provides that "upon the commencement of a railway order, the Agency or CIE shall thereupon be authorised to acquire compulsorily any land or rights in, under or over land or any substratum of land specified in the order and, for that purpose, the railway order shall have effect as if it were a compulsory purchase order referred to in section 10(1) of the Local Government (No.2) Act, 1960 (inserted by section 86 of the Housing Act, 1966".

Temporary land-take is required over an area of c.7ha, which includes provision for 5 no. construction compounds. Compulsory acquisition of c.1.4ha of land is proposed as necessary to construct, operate and maintain the proposed development and associated infrastructure and to undertake mitigation measures outlined in the EIAR. Lands subject to compulsory acquisition predominantly comprises hedgerows along the boundary of the railway with agricultural lands.

4.0 Relevant Planning History

Railway (Glounthaune to Midleton) Order 2007: The Cork to Youghal railway line ceased passenger and goods services in the late 1970s. The existing Glounthaune to Midleton rail line was redeveloped and recommenced rail services in 2009 under the Railway Order, S.I. No. 145/2007 – Railway (Glounthaune to Midleton) Order 2007.

PA ref. 22/5032 ABP ref. ABP-316013-23: The development comprises the Midleton North wastewater pumping station and a c.650m long sewer network extension. The pumping station is located immediately north of the existing rail corridor (approx. CH10000), and adjoining the Mill Road level crossing in Midleton. Proposed construction compound no. 5 adjoins the pumping station site. This decision is subject to a current third-party appeal.

The subject development extends for approx. 10km and traverses both rural and expanding urban areas. Both the applicant and the planning authority have identified numerous planning applications and decisions within the zone of influence of the railway corridor. While it is not necessary to identify all such applications here, I note in particular the range of residential planning applications within the identified growth areas of Midleton, Carrigtwohill and Glounthaune. There are also a number of Part 8 active travel schemes which interact with the railway. These are considered further in section 10.0 below, EIA.

5.0 Policy and Context

5.1. European Policy

5.1.1. EU White Paper on Transport: Roadmap to a single European Transport Area – Towards a competitive and resource efficient transport system

This strategy document seeks to develop a transport system that meets the needs and aspirations of people while minimising undesirable impacts. The vision identifies four broad areas, including:

- Growing transport and supporting mobility while reaching a 60% emission reduction target.
- Promoting clean urban transport and commuting.

5.1.2. **The European Green Deal**

The Green Deal growth strategy sets out the EU's increased ambition on climate action. It identifies the need for a transformation in the economy and key roles for sectors such as transport, buildings, agriculture, and energy production.

The Green Deal recognises the role of rail in greening European transport and reaching both the EU targets and the Paris Agreement objectives. Rail is identified as the only mode of transport that is able to achieve economic growth whilst reducing its emission levels.

5.1.3. **European Sustainability and Smart Mobility Strategy** – Putting European Transport on Track for the Future (2020).

The strategy sets out how EU transport systems can achieve a green and digital transformation. In line with the European Green Deal, the result will be a 90% cut in emissions by 2050, delivered by a smart, competitive, safe, accessible and affordable transport system. In terms of sustainable mobility, pillars for action include:

(1) make all transport modes more sustainable,
(2) make sustainable alternatives widely available in a multimodal transport system, including the promotion of rail transport.
(3) put in place the right incentives to drive the transition.

5.2. **National Policy**

5.2.1. **National Planning Framework – Project Ireland 2040**

The NPF sets out the strategic planning and development context up to 2040. National Strategic Outcomes (NSOs) include:

- NSO 1 Compact Growth - build on existing assets and improve accessibility to and between centres and integration with their surrounding area.
- NSO 2 Enhanced Regional Accessibility - a more compact approach to urban development, enhancing connectivity between population centres, and strengthen public transport connectivity between cities and large growth towns.
- NSO 4 Sustainable Mobility - provide attractive public transport alternatives to the private car to reduce congestion and emissions, cater for long-term sustainable growth and meet the needs of smaller towns, villages and rural areas.
- NSO 7 Enhanced Amenities and Heritage – ensure placemaking results in attractive and appealing places for citizens which are easily accessible to all, supported by integrated transport systems. NSO 7 also seeks the implementation of planning and transport strategies for the five cities.

Section 3.4 identifies Cork as an emerging medium-sized European centre of growth and innovation. Identified 'key future growth enablers' for the Cork city and Metropolitan Area include:

- Progressing the sustainable development of new greenfield areas for housing, especially those on public transport corridors.
- The development of a much-enhanced Citywide public transport system
- Improved rail journey times to Dublin and consideration of improved onward direct network connections.

5.2.2. National Development Plan 2021-2030

The NDP provides for investment in sustainable mobility options, supporting the ambition for compact growth under the NPF. Commuter Rail is an investment priority and will be delivered under NSO 4. Cork Commuter Rail is specifically identified as a Major Regional Investment for the Southern Region.

5.2.3. National Investment Framework for Transport in Ireland

The framework supports the consideration and prioritisation of future investment, aligned with the NPF. Transport projects must align with 4 no. identified investment priorities to be considered for funding.

- Decarbonisation,
- Protection and Renewal,
- Mobility of People and Goods in Urban Areas, and
- Enhanced Regional and Rural Connectivity

The framework establishes an 'Intervention Hierarchy' (1 Maintain, 2 Optimise, 3 Improve, 4 New), with interventions being made according to the Investment Priorities.

5.2.4. **National Sustainable Mobility Policy** (April 2022)

This policy forms part of Ireland's climate action agenda, aligned with the national Climate Action Plan. The policy is focused on measures to promote and facilitate active travel and public transport and reduce private car usage nationally, particularly to, from, and within towns and cities. The policy aims to deliver at least 500,000 additional daily active travel and public transport journeys by 2030 and a 10% reduction in the number of kilometres driven by fossil fuelled cars.

The accompanying Sustainable Mobility Policy Action Plan 2022 – 2025 includes:
Goal 2: Decarbonise public transport
Core Action 11: Commence delivery of phase 1 of Cork Area Commuter Rail Programme. (2024 Kent Station platform completed. 2025 Midleton double-tracking completed.)

5.2.5. **Climate Action Plan 2023**

Key Targets: Meeting 2030 transport abatement targets requires transformational change and accelerated action across key decarbonisation channels. Table 15.6, key performance indicators, illustrates the level of change required:

- Targets include a 20% reduction in total vehicle kilometres, reduced fuel usage, and significant increases in sustainable transport trips and modal share.
- Fleet electrification and use of biofuels to provide the greatest share of emissions abatement in the medium term.

Measures and Actions

The Avoid-Shift-Improve framework for transport sustainability emphasises the crucial role of planning in designing transport systems to support net-zero ambitions. Key policies and strategies supporting decarbonisation include the need for investment in public transport services to improve attractiveness, capacity and frequency to achieve the level of modal shift and associated reduction in fossil-fuelled vehicle kilometres travelled.

Table 15.7 – Key Actions to Deliver Abatement in Transport for the Period 2023-2025, include Major Public Transport Infrastructure Programme, which includes advancement of the Cork Area Commuter Rail Programme.

5.2.6. **The National Recovery and Resilience Plan (NRRP) 2021**

The overall objective is to contribute to a sustainable, equitable, green and digital recovery effort, that complements and supports broader recovery efforts.

Priority 1 - Enhancing the Green Transition, identifies seven priority investments, including:

1.4 - Enable Future Electrification Through Targeted Investment in Cork Commuter Rail, providing significant capacity increases on the Cork Area Commuter Rail network, including construction of a through platform at Kent Station, line doubling between Glounthaune and Midleton, and re-signalling, with a view to future electrification.

5.2.7. **All-Island Strategic Rail Review - Public Consultation for Strategic Environmental Assessment - Department of Transport (July 2023)**

The All-Island Strategic Rail Review will inform the future development of the railway system to 2050, in line with net-zero emissions commitments in both jurisdictions.

The review notes that there is significant alignment between its Goals and Objectives and the ambitions set out in the National Transport Authority's Metropolitan Transport Strategies for urban areas, including CMATS. The consultation documents notes the current proposals to electrify and expand the Cork suburban network to serve several new stations and improve frequencies on all branches, including double tracking to Midleton.

5.3. Regional and Local Policy

5.3.1. Regional Spatial and Economic Strategy for the Southern Region

The 'Transport Vision for the Southern Region' states that investment in the Region aims to meet a number of objectives, including the following:

- To reduce the environmental impact of travel.
- To provide for the integrated development of sustainable transport infrastructure, to accommodate the switch from private car, for the travel needs of all individuals, in line with government transport policy.
- Supporting improved strategic and local connectivity.
- To expand attractive public transport and other alternatives to car transport.

The need to strengthen intra-regional connectivity between the metropolitan areas and large towns, and between large towns to improve public transport services and reliable journey times is identified.

Objectives RPO 155, 160 and 163 acknowledge the importance of public transport networks and the need to enhance capacity and services and achieve a higher modal shift. RPO 164 seeks to develop the Cork Metropolitan Area Transport Strategy 2040, while RPO 170 seeks strengthened investment in the rail network.

Section 6.3.6.3 *Transport Priorities for the Cork Metropolitan Area*, objectives include:
(A) An enhanced public transport system, including additional rail stations and higher service frequencies.
(D) The optimal use of the rail network through interventions including upgrading of existing and new stations on a network serving Glounthaune, Carrigtwohill West, Carrigtwohill, Water Rock and Midleton.

Cork Metropolitan Area Strategic Plan

Goal 1 - Sustainable Place Framework, seeks (inter alia):

- A network of compact metropolitan settlements and employment areas interconnected with sustainable public transport, pedestrian and cycling networks.

- A metropolitan area complemented by a network of connected regional settlements.

Goal 2 - Excellent Connectivity and Sustainable Mobility seeks, inter alia.

- well-connected metropolitan areas through efficient rail, road, bus networks and services.
- development of sustainable modes of transport; and
- provision of high-capacity public transport corridors, and sustainable higher densities and appropriate uses at public transport nodes.

Policy Objective 8 – Key Transport Objectives (subject to CMATS) include:
(e) Rail Network - the dual tracking of the Midleton rail line is a specific suburban rail project, along with the improved journey times and electrification of the rail fleet.

5.3.2. **Cork Metropolitan Area Transport Strategy (CMATS) 2040**

CMATS provides a land use and transport strategy for the managed delivery of an efficient transport network in the metropolitan area, informed by the NPF.

Suburban Rail Network: The over-arching objective of the enhanced suburban rail services is to maximise development opportunities offered by the existing railway line to support a greater level of coordination between land use and transport planning.

To provide the enhanced level of service identified by the Strategy, the development principles and supporting infrastructure required include (inter alia):

- New Railway Stations at Water Rock and Carrigtwohill West.
- Double Track between Glounthaune and Midleton to accommodate the increase in rail services to/from Midleton.

CMATS supports the electrification of rail services that would result in higher performance, lower maintenance costs, lower energy costs and reduced emissions. The lower air and noise emissions are critical to support residential amenity of new development consolidated around the railway corridor.

5.3.3. **Cork Area Commuter Rail Programme**

Iarnród Éireann describe the CACR programme as the heavy rail element of CMATS. Delivering increased train capacity and frequency, providing more connected communities and a more sustainable transport network, the project represents the largest ever investment in the Cork Rail Network.

The programme involves developments and enhancements to the rail network from Mallow through Cork to Cobh and Midleton and will include new rail infrastructure, electrification and re-signalling across the 3 main lines. The Programme is being progressed through a number of separate but interrelated projects:

- Kent Station Through Platform
- Signalling and Communications Upgrade
- Glounthaune to Midleton Twin Track
- New Stations, Track Works, Civils & Structures
- New Fleet Depot
- Electrification
- Rolling Stock

The National Recovery and Resilience Plan (NRRP) 2021 has prioritised the Kent Station Through Platform, the Signalling and Communications Upgrade and the Glounthaune to Midleton Twin Tracking projects for immediate progress via the EU Recovery and Resilience Facility. These are currently being progressed in tandem by the project team.

5.4. Local Policy

5.4.1. Cork County Development Plan 2022 - 2028

CS 2-3 County Metropolitan Cork Strategic Planning Area, includes inter alia:

- Promote the development of the City and Metropolitan Area as an integrated planning unit with equality of access, through an integrated transport system.
- Provide an enhanced public transport network linking the City, its environs, the Metropolitan Towns and the major centres of employment in line CMATS (2020).

Objective TM 12.1 supports the integration of land use with transportation infrastructure, through the development of diverse, sustainable, compact

settlements, and delivery of transport programmes and policies committed to in Project 2040 and CMATS.

Objective TM12.3 supports and prioritises the following key Rail Transport initiatives:

b) Secure the delivery of new stations to support planned population growth in Carrigtwohill (Carrigtwohill West), Midleton (Water Rock).

d) Support delivery of an integrated land-use and transportation framework to maximise rail use and connectivity with other transport modes.

Objective TM 12-4 seeks to protecting existing disused rail infrastructure.

Objective TM12-7 supports implementation of CMATS.

Objective CS 2-8 Climate Change, promotes sustainable settlement and transportation strategies, to reduce energy demand.

Objective CA 17-2 supports the transition to a low carbon, competitive, climate resilient and environmentally sustainable economy through polices that seek to deliver compact growth, integrated land use and transport, sustainable transport choices and liveable settlements;

Objective HE 16-6, seeks to protect and preserve industrial and post-medieval archaeology and the long-term management of heritage features. There is a general presumption for retention of these structures and features.

Objective HE 16-15: Protection of Structures on the NIAH, seeks to protect all structures included in the NIAH, that are not currently included in the RPS.

Objectives Objective HE 16-16, seeks to protect non-structural elements of the built heritage, including bridges.

Volume 4 South

2.45 Carrigtwohill

2.4. The overall aims for Carrigtwohill, identified as a Metropolitan Town, are to realise the significant population growth proposed and maximise the value of the suburban rail project.

The most significant area of future growth is located to the north of the rail line and is identified as an Urban Expansion Area (UEA), chosen because of the potential of the railway to achieve integrated and co-ordinated sustainable development.

It is an objective to implement the Carrigtwohill to Midleton section of CMATS Inter-Urban Route IU-1 as a high-quality pedestrian and cycle facility.

Objectives include:

CT-GO-07 Reserve land on either side of the railway to facilitate the possible future upgrading to double track standard.

CT-U-03: Provision of a cycleway and pedestrian pathway as part of the UEA.

CT-U-06, CT-U-08 and CT-U-09: Installation of segregated Pedestrian/Cycling Crossing at Wyse's Bridge, at Barry's Bridge and Ballyadam Bridge.

CT-U-07: Existing underpass to provide for Pedestrian/Cycling Link to Interurban Greenway (CT-U-03) (UBY5A).

CT-U-10: Construction of Pedestrian/Cycling Bridge north-south across the railway linking zoned residential lands and Educational Campus CT-C-04.

CT-U-11: Construction of Pedestrian/Cycling Bridge linking Open Spaces.

CT-U-12: Completion of the Northern Spine Link Road linking the Western Spine Link Road via the underpass to lands south of the railway.

3.3 Midleton

The vision for Midleton, identified as a Metropolitan Town, is to build on its rail connections to Metropolitan Cork and promote continued development of the town and its hinterland as a residential, employment, tourist and service location.

Section 3.3 notes that CMATS proposes upgrading the railway to a double track, and provide a new railway stop at Water-Rock, to align with strategic land use planning objectives. The Water-Rock Urban Expansion Area (UEA) is a priority growth area in Metropolitan Cork along the Eastern Rail Corrido and infrastructure delivery is currently underway.

Objectives include:

MD-GO-12: …….This plan supports the principles and objectives of CMATS and implementation of the Water-Rock Strategic Transport Study.

MD-GO-13: Reserve land on either side of the railway to facilitate the possible future upgrading to double track standard.

MD-X-01: Lands north of the railway and east of the Owenacurra River are zoned Special Policy Area MD-X-01, suitable for mixed use residential and office development. ……..Pedestrian and cyclist linkages shall be provided along the Owenacurra River. Proposals should include protection of the River Corridor and explore linking with Green Infrastructure sites to the north and south, perhaps include on site surface water attenuation / flood risk management measures.

MD-U-04: Provision of a Link Street and road bridge over the railway line at Water Rock, designed and constructed in accordance with DMURS.

MD-U-05 refers to provision of Water Rock rail stop and ancillary services.

MD-GR-03: Lands south of the railway form part of the floodplain in the Owenacurra River and provide open space for informal public recreation including an amenity walk.

5.5. Natural Heritage Designations

At its western end, the proposed development passes alongside Cork Harbour SPA and Great Island Channel SAC, as follows:

- Cork Harbour SPA (Ch.380 and Ch.850 approx.).
- Great Island Channel SAC (Ch.380 and Ch.850 & Ch.1300 – Ch.1650 approx.).

The railway passes over a number of watercourses which flows south toward these sites including the the Owenacurra River at its eastern end. Other designated sites occur at a remove and generally upstream of the proposed development. There is, however, potential for the use of the estuary system by the qualifying species of other designated sites in the wider area.

6.0 Planning Authority Submission – Cork County Council

The written submission from Cork County Council was received on 12th January 2023 and is summarised below. I refer the Board also to the report of the oral hearing and the submissions received during the course of the hearing which address many of the issues raised in the written submission of the County Council.

Planning Policy and Principle

- The scheme is acceptable in principle and is consistent with relevant local, regional and national policy.
- It represents strategic enabling infrastructure to improve public transport services along the suburban rail corridor, identified for growth in the metropolitan area. It aligns with wider active travel proposals in the area.
- It is identified in CMATS (2040) and will provide an alternative transport mode in the context of the cancelled N25 Carrigtwohill – Midleton upgrade.

Flood Risk

- Some sections of the route fall within identified flood risk zones.
- The flood risk assessment should have regard to the most recent flood zone mapping and hydraulic modelling datasets, including the data available from the Midleton Flood Relief Scheme and the 2022 Development Plan SFRA.
- S.50 consent from the OPW will be required in respect of works to bridges and watercourses.

Traffic and Transportation

- The main operational impact will be on the Mill Road level crossing in Midleton.
- A detailed Traffic Impact Assessment is required to consider the impacts of increased frequency of level crossing closures taking into account the traffic implications of future development, including Water Rock UEA.
- The development should ensure coordination of works with consented inter-urban pedestrian and cycle routes, as identified in CMATS and the Cork Cycle Network.
- Ballyadam House Bridge (OBY8) is identified as an crossing point on an emerging active travel route linking Ballyadam with Water Rock.

- The feasibility of retaining the bridge or making alternative provision should be assessed. The preferred option is to retain the bridge.
- The Railway Order should be implemented in a coordinated manner with local authority (part 8) projects relating to active travel, rail stops and overbridges, including apportionment of costs, to enable and support the use of rail facilities and enhance operational safety.

Housing Infrastructure Implementation Team (HIIT) Project Interaction

- The route traverses Urban Expansion Areas at Carrigtwohill and Water Rock.
- The potential for delivery of URDF infrastructure at Carrigtwohill North within this project should be considered.
- It should be confirmed that the project will not adversely affect the Northern Services Link Corridor (CT-U-18) and reopening of underpass UBY5B.
- Provision should be made within this project for pedestrian connectivity / links on existing bridges (Wyses Bridge OBY4), Station Road Bridge (OBY6) and Ballyadam (OBY7)).
- Any increase in flood risk and surface water management should be mitigated.
- Consideration should be given to the inclusion of the new Water Rock UAE railway stop within the railway order, and delivery of a new railway bridge including liability for cost of delivery.
- Flood risk assessment should consider the effects of increased run-off and assess flood risk mechanisms at Water Rock.
- Consideration should be given to grade separation at Mill Road level crossing.
- Consideration should be given to pedestrian cycle connectivity along the route.

Landscape and Visual

- The additional visual impact is not significant. A Landscape and Site Reinstatement Plan should be agreed in advance of works.
- Substantial new planting and a nature led approach will be required to mitigate impacts and ensure new biodiversity gain – Development Plan Policy BE15-6.

AA and Ecology

- There is potential to cause disturbance to SCI of Cork Harbour SPA.

- The PA ecologist is satisfied that potential impacts have been properly dealt with within the EIAR and NIS and that adverse effects can be avoided. Appropriate conditions are recommended in this regard.
- Other wider ecological and biodiversity impacts and mitigation measures are identified to minimise habitat loss.
- The main effect is permanent removal of vegetation. A Landscape and Site Reinstatement Plan and invasive species management plan should be agreed.
- Vegetation clearance should take place outside the breeding bird season.

Archaeology / Cultural heritage

- An Archaeological / Built Heritage Assessment should be carried out on all post-medieval and Industrial archaeological structures / features, and structures listed on the NIAH, which development plan policy seeks to protect and conserve.
- Three bridges on the line are listed on the NIAH, protected under objective 16-15.
- There should be a presumption in favour of retention of Ballyadam House Bridge.
- Conditions regarding monitoring and re-construction at Haly's Bridge may be considered.

Noise and Vibration

- Night-time construction work could have significant impacts on adjacent residential properties and may be impossible to avoid.
- Construction methodologies are to be refined at design stage, with agreement to be reached with stakeholders to minimise effects.
- Impacts can be managed through a construction noise management plan, complaint monitoring, EIAR mitigation measures and operational noise management.
- There is negligible likelihood of adverse operational vibration impacts.
- Future electrification of the line would reduce noise, vibration and air emissions.

Air Quality and Wastewater

- A dynamic dust risk and management plan should be implemented.
- Engagement with Irish Water regarding interaction with works at Midleton LIHAF pumping station and Midleton North pumping station is recommended.

Surface Water and Ground Water.

- Recommended conditions include finalisation of the CEMP to include a surface water management plan and measures to protect water quality.
- An updated SSFRA will be required.

Waste

- Finalised Construction and Demolition Waste Management Plan to be agreed.

Conclusion

- The project is acceptable in principle, however, there are a number of matters which the Board should consider.
- Where a decision is taken to grant permission, conditions are recommended to mitigate potential effects and address the concerns raised.
- Appropriate and proportionate development contribution conditions are requested to facilitate the delivery of multi-modal transport infrastructure to serve the Carrigtwohill and Water Rock areas.

Recommended Conditions: (30 no. including the following)

2. An archaeological / Built Heritage Assessment should be carried out on all post-medieval and Industrial archaeological structures / features, to include mitigation measures and reflect a presumption of preservation in line with development plan policy HE 16-6 and HE 16-15.

4. A Landscape and Site reinstatement Plan shall be agreed.

5. A final Invasive Species Management Plan shall be agreed.

6. Ground clearance, tree, scrub and vegetation removal shall not be undertaken between 1st March and 31st August. All works to accord with a finalised CEMP.

7. A construction noise and vibration management plan shall be developed in consultation with local community and stakeholders and shall be subject to review, and provide for on-going monitoring.

9. Monitoring of construction noise and vibration.

11. An operational noise management plan shall be developed in consultation with local community and stakeholders, subject to 6-monthly review.

12. A dynamic dust risk and management plan shall be implemented.

13. A construction and demolition waste management plan shall be agreed.

14. A CEMP, including a surface water management plan, shall be agreed.

24. All modified bridges and level crossings shall include appropriate provision for active travel links to the satisfaction of the PA. Details to be agreed.

25. Traffic management measures and diversions associated with works on the public road network shall be agreed with the Co. Co.

26. Wise's Road, Station Road (Barry's Bridge) and Ballyadam bridges (OBY4, 6 and 7) are inadequate to provide footpaths along the public road. The applicant shall include works to provide pedestrian / cycle connectivity at these locations as part of the project or by other means.

27. Any modification to the existing public sewer network extensions across the railway line shall be agreed with the Council.

28. Proposals to be agreed prior to commencement of development shall include:

    i. Widening of the deck of bridge UBY11 (Owenacurra River) on the downstream side to accommodate pedestrian and cyclists to support active travel links and connection to the Ballinacurra – Midleton greenway.
    ii. Permit Cork Co. Co. to construct a shared surface parallel to the railway between structure UBY11 and the Mill Road.
    iii. Install a pedestrian crossing on Mill Road south of the level crossing.
    iv. Allow access to the train station from Mill Road south of the level crossing.
    v. All modified bridges shall include provision for active travel.
    vi. Allow Cork Co. Co. access via buried underpass (Structure UBY5B) west of Carrigtwohill station to access lands north and south of the railway.
    vii. Minimise the amount of time the Mill Road level crossing is closed.
    viii. Construct a new bridge to replace Ballyadam Bridge to facilitate pedestrians and cyclists on the inter urban route Cork – Midleton.

29. A contribution of 33% of the total cost of the rail overbridge at Water Rock UEA shall be paid.

30. The applicants shall confirm its programme to deliver the rail stop at Water Rock which was included in the Part 8 development by agreement with Irish Rail / CIE.

Internal Technical Reports accompanying the submission include:

- Coastal and Flood Projects Department.
- Traffic and Transportation.
- Environment Directorate – Noise.
- Environment, Climate Change and Emergency Services – Air quality.
- Environment Directorate – Surface water and Groundwater.
- Environment Directorate – Waste.
- Area Engineer – Midleton MD Office.
- Area Engineer – Cobh MD Office.
- Housing Infrastructure Implementation Team (HIIT)
- County Ecologist.
- County Archaeologist.
- Conservation Officer.
- National Roads Office.

7.0 Prescribed Bodies

7.1. Inland Fisheries Ireland (IFI):

- Planning conditions recommended to attach to any decision to grant permission include compliance with IFI "*Guidelines on the protection of fisheries during construction works in and adjacent to waters*."

7.2. OPW:

- Any Railway Order should be subject to a condition requiring the applicant to obtain S.47 and S.50 consent for any culverts or bridges over watercourses.
- Not all works requiring such consent are identified in the application or EIAR.
- Consultation regarding construction methodologies is required.

- Further investigations are required to confirm possible interference with watercourses, including at the location of sheet piling at chainage 6,400m.
- There should be liaison with the team implementing the Midleton Flood Relief Scheme.
- S.50 application assessments should have regard to the methodologies used in the Midleton FRS.
- Regard should be had to the preferred design of the FRS particularly on the left bank of the Owenacurra Bridge (UBY11) and the Mill Race culvert (ch.10,000).
- The design of bridges and culverts should have regard to current guidance.

7.3. **Transport Infrastructure Ireland**

- TII acknowledges and supports the enabling function of this project with respect to sustainable mobility targets. Conditions recommended.
- Development shall be undertaken in accordance with TII publications. Details of works on or in the vicinity of national roads shall be agreed.
- All works to national roads, including temporary works, shall be subject to Road Safety Audit.
- Details of delivery haul routes and arrangements for abnormal loads should be agreed, including the capacity of all structures to accommodate abnormal loads.
- A construction traffic management plan should be agreed.

8.0 **Observations**

8.1. **Carrigtowhill and District Historical Society** (petition included)

- The removal of Ballyadam House Bridge (OBY08), which is a local historic landmark, does not appear justified or necessary.
- Insufficient regard is had to the historic nature of the bridge, constructed as part of the original railway.
- Previous works removing historic walls and features along the railway have impacted on the character of the area.
- Other bridges and structures on the line are protected structures / listed on the NIAH and historic monuments associated with the railway should be preserved.

- Bridges not listed in the RPS comprise part of the post-medieval / industrial heritage, which are to be retained under objective HE16-6.

8.2. Cllr. Alan O'Connor

- Supports the development subject to concerns regarding removal of Ballyadam House Bridge and the effects of increased service frequency on access to Myrtle Hill Terrace across Myrtle Hill level crossing, Lower Glanmire Road.
- Ballyadam House Bridge (OBY08) was part of the original line (1859) and is part of a series of attractive historic buildings in the vicinity.
- Removal would be contrary to the principles of the NDP and NPF and Development Plan provisions including Objectives 16-6 TM12-4.
- The EIAR acknowledges its removal as a significant, negative effect, which it justifies on the basis of lack of use, maintenance cost and risk to safety.
- Current use does not justify its removal which would obviate possible future use to access IDA lands to the south.
- The bridge currently accommodates safe use of the railway and removal is not required to facilitate the twin track proposal.
- Any future maintenance costs would be offset by proposed demolition and storage and preservation costs.
- Conservation by record is not appropriate and its non-protected status does not justify its removal.
- The NIAH is a representative sample of sites, and includes nearby bridges of similar design and merit.
- The conclusion of the landscape and visual impact assessment is subjective.
- Its low visibility is the result of inappropriate works to the parapet of Barry's Bridge and does not justify its removal.
- The application indicates that restoration of Carrigtwohill Station buildings will be considered to off-set loss of the bridge, however, this does not comprise a firm commitment in the application.
- NSO 07 of the NPF would suggest that both restoration of buildings and retention of the bridge should be undertaken.

8.3. **Cllr. Oliver Moran**

- The increased frequency of services facilitated by the development will impact on level crossing access to properties at Myrtle Terrace, Glanmire Road, in Cork City.
- New pedestrian and vehicular access to these properties is required.
- Demolition of Ballyadam Bridge (OBY8) would have an irreversible negative impact on local heritage, which is not justified by its omission from the NIAH.
- The NIAH should be requested to review inclusion of the bridge in the inventory.
- If safety is an issue, it's removal would be required regardless of this development.

8.4. **Pat O'Connell – Myrtle Hill Terrace Residents Association**

- The increased frequency of services facilitated by the development will impact on level crossing access to properties at Myrtle Terrace, Lower Glanmire Road.
- A previous legal agreement requires that the level crossing remain open and operate in a reasonable fashion. (Written evidence provided.)
- The crossing was to operate in accordance with procedures prior to 1991.
- This binding legal commitment has not been taken into consideration and access to these properties will be made impossible.
- There is no alternative parking space for residents if access is restricted and the walking distance to town would be increased by 2km.
- There will be negative impacts on the amenities and community of the area.

8.5. **Tom O'Donnell**

- The EIAR does not consider the environmental impact of intensification of use and frequency of train services to Kent Station.
- There has been no consultation of local residents in relation to such impacts.
- There will be an associated increase in public announcements which will impact on local receptors.

8.6. **Adrianna and Alan Watters:**

- Structural surveys of properties (on Lower Glanmire Road) adjoining the proposed platform extension at Kent Station were not undertaken, which include older properties and protected structures.
- There has been no consultation with residents.
- Noise impacts from train movements and public announcements will increase with additional train services facilitated by this development.

8.7. **Sheenvale Limited**

- Concerns arise regarding the siting of construction compound no. 5 and proposed temporary land take affecting lands in Midleton.
- There was a lack of landowner consultation and deficiencies in the notices.
- It is not clear why the adjacent western Compound no. 4 is not sufficient and the rationale for the siting, extent and design of construction compound no. 5 is unclear.
- The consideration of alternatives in the EIAR does not consider the desirability or duration of the temporary land take, or alternative access arrangements, and its impacts on these lands in terms of delay, costs or viability of their development.
- The EIAR is unclear with regard to structures to be located within compounds located within flood risk areas.
- There is no coordination with Irish Water proposals for an adjacent pumping station and construction access across the observer's lands under PA ref 22/5032.
- There is an overlap between the IW application boundary (22/5032) and the proposed temporary land take for the Railway Order.
- The cumulative impact of these two schemes is not considered in the application.
- Does the IW pumping station impact on future electrification of this line?
- Construction compound no. 5 and access arrangements will impact on the future development of Sheenvale lands.
- The compound entrance, adjacent to the Irish Water construction entrance, has the potential to impact on traffic on Mill Road unless properly coordinated.
- These construction traffic impacts have not been considered.

- Having regard to the increased frequency of train movements and level crossing closures, there will be profound operational impacts on traffic in the area.
- The failure to redesign the level crossing, given planned growth in the town is questionable.
- There is a risk of degradation of the riparian corridor of the Owenacurra River.
- The zoning objectives seek to protect the riparian corridor and provide a cycle / pedestrian corridor along the River.
- Habitat mapping does not accurately describe the observers' lands or the presence of invasive species.
- The flood risk assessment is deficient and does not consider cumulative effects with proposed pumping station.
- Works to the historic Mill Race have archaeological and flood risk implications.
- The flood implications for adjacent lands and roads of works to Owenacurra River Bridge UBY11 are not fully considered nor the impact on potential flood storage.
- These works are not considered in Phase 1 of the Midleton Flood Relief Scheme.

8.8. **Tim and Deirdre Murray**

- The observer's house is 5.1m from the railway track and there are existing noise mitigation measures along the boundary with the railway.
- Since reopening of the railway in 2007, there have been increases in the frequency and duration of train services over the day.
- Original 2006 noise assessments were based on smaller trains than now used on the line, which result in increased noise and vibration exposure.
- This development will significantly increase the frequency of train movements.
- The current mitigation does not achieve its objective of reducing noise levels by 8dB to 56dBA, as per studies in 2006. Further studies in 2019 identified significantly higher operational noise levels.
- Vibration levels are double that previously predicted, however, no mitigation was provided, and this will be increased by the proposed development.
- The EIAR recognises the risk to air quality from train movements, further impacting on residential amenity.

- The EIAR refers to noise levels set out in UK Railway Regulations, but also cites the WHO Guidelines, which levels are already exceeded at this location.
- Noise levels for the observer's property were extrapolated from those taken at the service station across the road which is at greater remove from the railway.
- Reported vibration levels were also recorded at greater remove from the railway than their property, and do not reflect levels recorded in 2019.
- Construction noise will negatively impact on residential amenity.
- 30 days of intense night-time works will occur adjacent the property, but the noise impact is categorised as not significant with no proposed mitigation.
- The railway entrance adjacent to the observer's property is not identified as a construction access points, despite advice that it would be used for construction.
- Accurate consideration should be given to night-time train movements, train sizes and speeds.
- Monitoring of noise and vibration should use the equivalent 8-hr period.
- The identified construction mitigation measures, including relocation of residents, are unacceptable.
- Predicted operational noise levels contradict previous estimates and it is indicated that improvements to the existing acoustic barrier will be undertaken.
- It is not reasonable to expect residents to habituate to increased train horn noise.
- Based on 2019 monitoring, the predicted increase in vibration will be substantial but is categorised as negligible. No operational vibration mitigation is possible.
- The photomontages do not reflect the visual impact of the existing barrier on the observer's property.
- The was no formal communications with the observers.
- The plans indicate the development boundary encroaching onto their property.
- The track will move closer to the dwelling and will increase in height.
- The proposed track crossover at this location could increase noise and vibration.
- 2023 noise surveys undertaken on behalf of the Observers, indicate average daily noise ranges of 58 – 65dB at first floor and 52-60dB at ground floor level. This includes trains passing between 5.59am and 11.42pm.
- The assessed noise levels are not accurate.

- Highest recorded noise levels were LAeq 82.2dB and a LAF max of 92.7dB, and most train passes are above 80bB. Increased train movements will increase average values.
- Given predicted noise levels above WHO guidelines, mitigation would be difficult requiring glazing and other measures. The scale of noise barrier required would not be feasible.
- Vibration impacts cannot be mitigated and noise mitigation for external amenity areas would not be possible.

Appendices to the submission included:

- The Noise Impact Assessment report prepared as part of the original Rail Order application (2006).
- Photographs of the property.
- A copy of a 2019 Noise and Vibration Assessmen Report (Byrne Environmental Consulting) in respect of the observer's property.
- The results of Railway Traffic Noise Monitoring (i-Acoustics) 2023, and associated correspondence.

Note:

Observations received from the following parties were withdrawn during the course of the application:

- Paul Glavin
- Liam Walsh Agri Ltd.
- Martina O'Connell
- Dawn Meats

9.0 Assessment

I have examined the application details and all other documentation on file, including the submissions to the Oral Hearing, the submissions from Cork County Council,

prescribed bodies and observers in relation to the application. I have inspected the site and it's environs and, having regard to relevant local, regional and national policies and guidance, I consider the critical issues in respect of this application before the Board can be considered under the following broad headings:

- Land Use and Development Principle
- Flooding and Drainage
- Noise and Vibration
- Biodiversity / Ecology
- Traffic and Transportation
- Air Quality
- Acquisition of Land and Matters Arising
- Cork County Council Conditions

Environmental Impact Assessment and Appropriate Assessment are considered under separate headings in this report below.

9.1. Land Use and Development Principle

The existing Cork – Midleton railway reopened in 2009 on foot of S.I. No.145/2007-Railway (Glounthaune to Midleton) Order 2007. The proposed development relates to the twin tracking of this existing railway line which works are supported by policy and objectives at local, regional and national level, as described in detail in section 5.0 above.

I note in particular the objectives of the Cork County Development Plan 2022 and the Cork Metropolitan Area Transport Strategy (CMATS) which seek to complete the twin tracking of this line as part of the wider Cork Area Commuter Rail programme. At national level the CACR programme is supported in the National Development Plan 2021-2030 and in the Climate Action Plan 2023. The National Development Plan specifically identifies this as a Major Regional Investment for the Southern

Region and is an action under the Sustainable Mobility Policy Action Plan 2022 – 2025, as well as the National Recovery and Resilience Plan 2021.

The development is therefore regarded as being in the interests of the common good and aligned with the proper planning and sustainable development of the area.

9.2. Flooding and Drainage

The application is accompanied by a Flood Risk Assessment, which identifies a number of locations traversed by this linear project as being at risk of flooding, although there is no reported incidence of historic flooding events along the existing railway line. While the application acknowledges the risk of flooding to the current operational railway line it concludes that the proposed development will not result in an increase in the prevailing flood risk and will not increase the risk of flooding elsewhere. Future risk of flooding of the operational railway, which will increase with climate change, will be managed through the operational plan and will be subject to an early flood warning system.

I note the written submission of Cork County Council (January 2023) in respect of the application. The Council are the lead authority for the Midleton Flood Relief Scheme, which is currently nearing the end of Phase 1 - Identification of Preferred Options. Their written submission raised concerns regarding the use of the most up-to-date datasets in the FRA, and identified three particular areas of concern along the proposed route:

- The Owenacurra River and proposed modifications to the Owenacurra Railway Bridge (UBY11).
- The Water Rock area, and
- Culverts crossing the line and in particular proposed modifications to culverts at Carrigtwohill (UBY1A, 1C or 2C)

At the oral hearing the applicants addressed the matters raised by the County Council and advised that there had been discussions with the planning authority in the intervening period. The applicants advised that their flood risk assessment used data available from Floodinfo.ie (CFRAMS and NIFM) as this data was published at the time of writing and while subsequent Cork Co. Co. flood maps from 2022 were

reviewed, these were not considered to give rise to significant changes to the findings of the FRA.

In respect of the Owenacurra Bridge, works will be required to widen the deck of the bridge upon the existing piers to accommodate the second track. The widened span arrangement, soffit level, structural form and articulation will match the existing bridge. Abutment widening will not impact on existing conveyance of water or flood levels in the Owenacurra River and therefore no impact on Midleton FRS due to backed-up water is predicted to arise. It was confirmed that no modification to the Mill Race (UBY12) to the east of UBY11 is proposed.

Following questioning at the oral hearing, the applicants provided an updated soffit level at the existing bridge of 7.28m OD, based on updated surveys. Such level would be marginally in excess of the 1% AEP identified in the Midleton FRS at nodal point 30WE_3380. This node was confirmed at the hearing by Cork County Council to reflect the bridge location. Cork County Council confirmed that discussions had taken place with the applicants subsequent to their written statement to the Board, and that they were now satisfied with the proposed development in respect of the flood risk arising at this location. It was also confirmed that they were satisfied that no material change in flood storage upstream of the bridge would arise as a result of the works proposed in the application. In response to queries from Sheenvale Ltd. at the oral hearing, the applicants confirmed that there was no plan for changes in ground levels at construction compound no.'s 4 or 5.

With regard to potential flood effects in the Water Rock area, it has been clarified that the development will not encroach upon or interfere with any flood storage areas or existing drainage and that no risk of flooding to other lands therefore arises as a result of the proposed development. In this regard, I note that published FRS studies of flood flows in the vicinity of the Castle Rock Level crossing indicate that the railway does not act as a preferential flow path for waters flowing east. While the applicants' submissions refer to the possibility of incorporating drainage channels parallel to the railway as part of this scheme, Cork County Council confirmed to the hearing that they are not seeking such provision and did not consider such provision appropriate at this time. They were otherwise satisfied with the development proposals in this area.

There are works proposed at four culverts along the route. The existing IDA Open Culvert, which runs parallel to the existing railway from ch 2000, is to be realigned slightly over a length of approximately 200m to tie into culvert UBY2A which is being lengthened. A sheet pile wall will be installed just north of the works area to retain the existing embankment during construction. Modelling was undertaken in respect of these works which identified insignificant effects on flood levels.

Minor modifications are also proposed at culvert UBY1B and UBY1C (Killacloyne Stream). No modelling was undertaken in respect of these works and the applicants instead rely on the modelling undertaken in respect of UBY2A to conclude that there would be minimal flood effects arising from such works. Under questioning at the oral hearing, the County Council indicated that such conclusions would appear to be reasonable but that provision for the final design detail to be agreed would be an appropriate approach to these works. I consider that such matter would be appropriately addressed by way of condition. I note also the submission of IFI in respect of the design of such works.

In overall terms, Cork County Council expressed their satisfaction with the project. It was the position of both the applicants and the County Council that on-going consultation should be undertaken between the applicants and the FRS design team in respect of the drainage aspects of the proposed development. I consider that such can be addressed by way of condition and this would also be aligned with the comments from the OPW in relation to the development.

Having reviewed the written submissions on the file and submissions to the oral hearing, and the documentation published as part of the Midleton FRS consultation process, I am satisfied that the proposed development will not increase the risk of flooding to the railway and will not give rise to an increased risk of flooding elsewhere, subject to final design and drainage details being agreed with Cork County Council as the lead party in the Midleton FRS.

Justification Test

The development relates to the enhancement of existing railway infrastructure which is identified as being at risk of coastal and fluvial flooding. Such development would constitute Highly Vulnerable development – essential infrastructure. In accordance

with the provisions of the *Planning System and Flood Risk Management Guidelines for Planning Authorities (2009)*, the development should therefore be subject to the Development Management Justification Test:

1. *The subject lands have been zoned or otherwise designated for the particular use or form of development in an operative development plan, which has been adopted or varied taking account of these Guidelines.*

The development relates to the extension / enhancement of existing railway infrastructure, and is consistent with and supported by local, regional and national planning policy, including in particular the Cork County Development Plan 2022 which was subject to SFRA, and Cork Metropolitan Area Transport Strategy (CMATS) 2040. There is no viable alternative location or route option available.

2. *The proposal has been subject to an appropriate flood risk assessment that demonstrates:*

   a. *The development proposed will not increase flood risk elsewhere and, if practicable, will reduce overall flood risk*;

   The submitted Stage I Flood Risk Assessment identifies the key flood sources and the need for hydraulic modelling at specific locations. The new track will run alongside and at the same level as the existing railway track, although some modification to existing ground levels and cut / fill will be required. The detailed Stage III assessment concludes that changes in flood levels arising from the proposed development will be insignificant and that there will be no impact on flood storage.

   b. *The development proposal includes measures to minimise flood risk to people, property, the economy and the environment as far as reasonably possible;*

   The assessment of flood risk considers existing and future flood risk. The detailed assessment of the design concludes that there will be no increase in existing flood risk arising and that operational plans for the railway should include an early warning system for flooding.

   c. *The development proposed includes measures to ensure that residual risks to the area and/or development can be managed to an acceptable level as regards the adequacy of existing flood protection measures or the design, implementation and funding of any future flood risk management measures and provisions for emergency services access;*

   It is concluded that there will be no change to the existing level of risk to the operational railway and there will be no increase in risk to other lands upstream or

downstream of the development. Such risk to the existing railway will be managed in the operational plan for the railway, including an early warning system. There will be no interference with the emerging preferred design options of the Midleton FRS.

d. The development proposed addresses the above in a manner that is also compatible with the achievement of wider planning objectives in relation to development of good urban design and vibrant and active streetscapes;

The Proposed Development is aligned with the policies and objectives of the Cork County Development Plan 2022.

Having regard to the foregoing, I conclude that the development would be acceptable.

9.3. Noise and Vibration

The proposed development relates to the twin tracking of the existing railway line, which will facilitate a future increase in services between Midleton and Glounthaune. The route passes through agricultural areas, and existing and expanding urban areas. The EIAR identifies a study area of 300m from the red line boundary of the scheme for noise, and 100m for vibration for both construction and operational phases. Potential noise and disturbance effects on adjoining European Sites are considered in more detail in section 11.0 below, Appropriate Assessment. The assessment of noise and vibration in the EIAR includes the results of baseline noise and vibration surveys at locations representative of identified sensitive receptors, including residential properties.

Construction:

This is a linear project and construction works are likely to progress along the route such that works in any one location will not occur for the full duration of the project construction schedule. During the hearing, the applicants advised that the EIAR considers construction activities for each area or section of the line and describes the worst-case noise levels that could occur close to any receptor in that area during that period of works.

For example, earthworks are scheduled to take two weeks in a particular area / section with a duration of 1/2 days adjacent to each sensitive receptor. The worst-case noise level of 77d is reported for each receptor along that section for the entire two-week period. Noise levels will reduce after 1/2 days, however, as works move away from that property and will not be 77db at each receptor for the entire two weeks. It is noted that there may be long breaks between different activities and works phases.

The analysis undertaken in the EIAR indicates that daytime construction works will potentially exceed the relevant emission limit values at a number of sensitive locations, however, the duration of such exceedance is generally very limited and significant negative effects are not considered likely.

The majority of works will occur at night-time, however, and the standard night-time construction limit value of LAeqT 45dB will be significantly exceeded at a number of locations, indicating potentially significant adverse impacts on residential amenity. In determining the significance of such effects, the applicants refer to the provisions of BS 5228 Part 1:2009+A1:2014.

Having regard to the expected duration of activities, significant effects are expected at NSL 2 and 3 in Glounthaune, at NSL13 at Waterrock, and at properties at Millbrook drive (NSL 14 and 15), close to works at Owenacurra Bridge and Construction Compound no. 5. The EIAR concludes that construction activity along the line has the potential to give rise to significant adverse effects on residential amenity, particularly due to the night-time nature of works. While specific mitigation measures are not described in the EIAR, general measures to mitigate the effects of construction activity include the following:

- Implementation of a CEMP to include noise and vibration mitigation in consultation with Cork Co. Co. This includes limits on noise and vibration from construction activities, the provision of mitigation measures, adopting best practicable means.
- A comprehensive noise and vibration monitoring protocol
- A stakeholder communications plan.
- Standard construction mitigation measures such as selection of quiet equipment and management of vehicle movement and operations.

- The installation of noise barriers in respect of construction compounds.
- Timing of works to minimise impacts on adjoining residential or educational properties.

In addition, the EIR refers to mitigation in the form of provision of noise insulation measures and/or temporary rehousing of residents during periods of particularly intense noise construction work. While it is indicated that night works should be avoided where possible at predominantly residential areas to reduce the adverse noise impacts, having regard to the constraints on the location and timing of works there would appear to be limited scope for such avoidance.

At the oral hearing, the applicants advised that specific active construction mitigation measures cannot be identified at this time, pending the appointment of contractors and programming of construction activity. Such measures may include the erection / use of temporary noise barriers and would be expected to result in substantially lower values than the worst-case noise levels identified in the EIAR. Best available techniques would be employed during construction but where levels remain unacceptable, other mitigation would be offered such as temporary housing. It was confirmed to the hearing that the trigger for such an offer of rehousing, in accordance with BS5228 would be 10dB above the relevant threshold value, which in this case would equate to 55dB at night.

Having regard to the nature of the project and the constraints on the location and timing of works, I conclude that there remains potential for significant negative residual effects on residential receptors during construction activity, particularly at NSL 2 & 3 at Glounthaune. In order to mitigate such effects, I consider it appropriate that a finalised construction noise management plan be agreed, which plan shall identify the specific mitigation measures to be applied in respect of each activity proposed. Works should be carried out, and mitigation provided, in accordance with BS5228 Parts 1 & 2. On-going monitoring of construction noise and vibration emissions should be undertaken, as recommended in the submission of Cork County Council. Emissions in excess of the identified night-time limit value at sensitive receptors should not exceed the duration as set out in the ABC method described in BS5228-1:2009+A1:2014. Where values exceed 55dbA during the night-time period, additional mitigation should be offered to affected households, in accordance with

the standard. In accordance with the discussion during the oral hearing, the results of such on-going monitoring should be readily available to residents / occupiers of the affected properties.

Having regard to its proximity to the Murray Property (NSL2), I consider that the existing adjoining railway access should not be used for construction access to the railway during night-time hours. This would not affect existing operational use of the entrance for maintenance purposes.

British Standard BS 5228-2:2009+A1:2014 – Part 2: Vibration sets out guidance and a code of practice for vibration control on construction sites. It notes that the threshold of perception is typically in the PPV range of 0.14 mm·s−1 to 0.3 mm·s−1. Above these levels vibrations can disturb, startle, cause annoyance or interfere with work activities. The assessment set out in the EIAR concludes that negative vibration disturbance effects are likely at a number of sensitive receptors along the route during construction works. The limited duration of such effects (<1 day) is such that significant effects are considered to be unlikely, however, and it is noted that the levels are not sufficient to cause either cosmetic or structural damage to properties.

Operational Noise:

While the development will not directly result in the generation of operational noise, it will facilitate increased frequency of rail services and associated noise and vibration emissions. There is no guidance nationally in respect of noise from railway operations and the EIAR therefore refers to the UK Noise Insulation (Railway and other Guided Transport System) Regulation 1996 which identifies a duty to offer noise mitigation to properties subject to rail noise at levels equal to, or in excess of 68 dB LAeq, 18hr (daytime) or 63 dB, 6hr (night-time). The application proposes that noise mitigation will be provided to avoid exceedance of these criteria. While the applicants acknowledge the World Health Organization document "*Environmental Noise Guidelines for European Region*" 2018, it is indicated that these standards have no policy status in Europe at this time and that the noise criteria values identified therein are generally already exceeded in urban areas.

In considering operational noise effects, I note the existing operational nature of the railway and associated noise emissions. The closest residential properties to the

railway occur at NSL2 & 3 at Glounthaune. NSL2 is occupied by the Murray family, who are Observers on the application. Properties in this area are provided with transparent acoustic barriers along the railway boundary. Due to the dormer nature of property NSL2 and its proximity to the railway, it is most exposed to potential noise effects. The observers have argued that existing railway operations have a negative impact on their residential amenity which will be exacerbated by the increased frequency of trains facilitated by the twin tracking of the line. These effects were the subject to detailed discussion at the oral hearing.

Noise emissions from rail movements and the effect on this property have been considered in a number of previous studies, including the original 2006 Railway Order application, a follow-up survey in 2019 of noise levels at the Murray Property and in the observer's own 2023 survey of noise levels, as well as the current application. It was agreed between representatives of both sides at the hearing, that daytime ambient noise levels at the rear of the Murray property are generally >60dB, which includes noise from road and other activities in the area. It was also accepted by the parties that the predicted and recorded average operational levels in the previous assessments and surveys, and in the current application documents, show broadly similar results.

The difference between the parties arises in relation to the use of longer-term average values to assess impacts on residential amenity. Representatives for the Observers argue that such average values understate the effects of train movements on residential amenity and that regard should be had to the Lmax values arising from train passing movements. Notwithstanding such submissions, having regard to the absence of any policy guidance or standard for the application of measures other than average noise levels in respect of railway noise, I do not consider that this approach is warranted in this case. I note also that the 2018 WHO guidelines, referenced by the observers, make no recommendation for the use of such single-event noise indicators. It is the case that operational noise will be curtailed during night-time period – albeit between the period of midnight and 6am.

I acknowledge the submissions of the observers, which are based on their experience of existing permitted railway operations. I note that there is clear policy support for the proposed enhancement of the rail line and increased frequency of services thereon. It is the potential noise effects of the increased frequency of

services which is of concern in this report, rather than existing operational effects. Table 16.27 of the EIAR sets out the predicted increase in noise levels from increased railway operations. In respect of the Murray property, it predicts that at first floor level facing the railway there will be an increase of +3dB to 67dB L_{Aeq} 18hr. The applicants acknowledge that the existing noise barrier has little effect at first floor level given its elevation over the barrier, however, the EIAR notes that the levels remain below the 68dB value in the UK Noise Insulation Regulations.

In response to the concerns expressed by the observers at the oral hearing the applicants have proposed the following specific mitigation measures:

- An upgrade to the acoustic screen to increase the mass / strength and height to achieve an estimated reduction in noise levels of up to 6dB. Final design is still to be confirmed.
- Mechanical ventilation for habitable rooms facing the railway, acoustically treated, with a potential reduction of 10dB, due to the ability to keep windows closed.

In addition, the applicants have identified some embedded design features of the project which have the potential to reduce rail noise at this location, including:

- The use of continuously welded track passing the house.
- The removal of existing railway points below the adjoining overbridge (OBY1), which will reduce noise and also remove the requirement for periodic maintenance of the points works which are currently undertaken at night.
- An existing track expansion joint adjoining this property will be removed with the result of reducing the noise of trains passing this point.

I acknowledge that there was no agreement at the date of the oral hearing between the parties with regard to the implementation of these measures however, the applicants have made a commitment to implement same where such agreement is reached. I consider that these identified measures represent a reasonable response to the additional noise levels likely to result from an increased frequency of train passing movements at this point, over the levels of existing authorised rail operations.

Elsewhere along the line, I note also the potential for increases in future noise levels from rail operations of up to 4dB and would recommend that additional noise attenuation be provided along the railway boundary in proximity to such residential

receptors. In particular, maintenance and (where necessary) renewal of existing noise attenuation barriers should be undertaken adjacent to NSL 1, 3, 4 at Glounthaune, NSL 6 & 7 at Maple Lane, Carrigtwohill, and new barriers provided along the boundary with NSL 8 & 9 and along the boundary will Millbrook NSL 14 & 15 in Midleton. This could be subject to condition in the event of a decision to grant this application. While the line also runs adjacent to Carrigtwohill Community College at Ch. 2100, I note that these school buildings were subject to a grant of temporary permission on lands zoned for Business and General Employment, while a permanent school has been granted permission elsewhere in Carrigtwohill. Further mitigation at this location is not therefore considered necessary.

I conclude therefore that having regard to the existing ambient environment, the existing operational nature of the railway and the extent of modelled increase in noise, and subject to the proposed mitigation measures above, the overall effect of the proposed twin tracking on the residential amenity will not be significant adverse.

Concerns have been raised regarding the effect of increased frequency in the use of train horns on the line in the future. I note that such horns are a safety feature and their use cannot be excluded by condition. It may be considered appropriate however, that a protocol for their use be developed to seek to minimise their effects on adjoining residential amenity.

The application models operational vibration levels based on measurements taken at sample locations along the route, with derived values for each NSL. At the oral hearing, the applicants confirmed that vibration levels recorded in the 2019 study at the Murray property (Byrne Environmental) were reviewed and used to calibrate the results of the modelling. Predictions of operational emissions are based on the use of VDV (vibration dose values) rather than PPV (peak particle velocity) which is the standard measure used in respect of construction activity. Use of VDV to evaluate human exposure to vibration in buildings in residential and other uses is consistent with relevant guidance, including BS6472. While the assessment predicts a maximum increase of 36% in day-time levels at NSL2, the future values remain below the relevant criteria values. On the basis of the available evidence, I conclude that the significant negative effects from an increase in train movements along the line are not likely.

Operational effects at Kent Station:

Observers have raised concerns with regard to the potential effects on residential properties in the vicinity of Kent Station in terms of noise arising from increased frequency of train movements. While remote from the proposed works area, the proposed development will facilitate an increase in rail services, which has the potential to impact on properties elsewhere.

Section 6 of the EIAR describes the proposed development and section 6.14 states that “In the future it is intended that trains will operate up to a 10-minute service at peak hours, when future electrified or alternative fuelled vehicles are available”. This is replicated on page 2 of the Planning Report accompanying the application and is aligned with the evidence of Mr. James Kenny for CIE to the oral hearing. Mr. Kenny further clarified that the intention is that electrification of the network will be the trigger for further increase in services. Notwithstanding such statement, it is considered reasonable to have regard to the possible worst-case scenario of an increase in train movements using similar diesel-powered units on the line.

One other element of the Cork Area Commuter Rail (CACR) programme identified as facilitating increased frequency of services on the line is the proposed Kent Station Through-Platform project, approved by Cork City Council under PA ref. 22/41299. That application was accompanied by a *Planning and Environmental Considerations Report* which included an assessment of Noise and Vibration in respect of that development but also having regard to the potential increase in rail movements under the CACR programme. The grant of permission in that case is subject to conditions relating to noise emissions.

The operational noise assessment included baseline monitoring at adjoining sensitive receptors. It assumed a worst-case potential increase in the number of trains under the wider CACR programme, assuming no change in type of diesel rolling stock. This estimated an increase in noise of approximately 4.8 dB in the daytime LAeq,16h, which was classified as a minor impact. It was acknowledged that the future introduction of electric or battery-operated trains, would reduce noise levels at these locations. To avoid adverse impacts from new public address systems as part of that development, the application specified maximum noise levels

from the system at sensitive receptors. The level of ground-borne vibration from operating trains on completion of the CACR were determined to be significantly less than the relevant limit values. The assessment concluded that there was less than a low probability of adverse comment from train operations, with only a potential minor impact arising.

Based on these previous assessments, including the recorded baseline levels and predicted worst-case increase in noise and vibration, and the conditions attaching to Cork City Council ref. 22/41299, I conclude that significant indirect effects on properties in the vicinity of Kent Station in respect of noise and vibration due to increased frequency of train movements facilitated by the proposed development are not likely.

9.4. Biodiversity & Ecology

The development relates to the twin tracking of an existing railway line and much of the proposed works occur within the existing rail corridor with limited expansion required into adjoining lands. While the railway will run adjacent to two European Sites at its western extent, the majority of habitats adjacent to the existing rail line are categorised as being of Local Importance only. No rare or protected plant species were identified during surveys of the identified study area, however, it is proposed that pre-development confirmatory surveys will be undertaken in this regard.

The most sensitive habitats recorded include a small area of Upper Salt Marsh in the vicinity of Harper's Island, ca. 10 m south of the existing rail line (Chainage 800 – 900m). This habitat has links to the Annex I habitats, "Atlantic salt meadows (1330)', which is a QI habitat of the Great Island Channel SAC. This area is located outside but immediately adjacent to the SAC and is evaluated as being of National Importance. An area of Mud Shore recorded to the south of Glounthaune Station has links to the Annex I habitat "Mudflats and sandflats not covered by sea water at low tide (1140)" and is evaluated as being of International Importance. Proposed works will avoid such areas.

Watercourses traversed by the railway are described as being of local importance (Killacloyne Stream, Tibbotstown River and Water Rock River), with the exception of

the Owenacurra River which is of County Importance. This river is an important sea trout river and supports Atlantic salmon, European eel, brown trout and Lamprey species and habitats. Otter activity has been recorded along both sides of the river and in Lough Mahon with a holt adjacent to Harper's Island.

Construction works at the Owenacurra River crossing will impact on the watercourse, however, no permanent infrastructure within the river is proposed. The only in-stream works relate to scaffolding required during construction, which may give rise to sediment release and impacts on the stream bed, impacting on fish / aquatic species and habitats. Works to existing culverts alongside and under the railway have the potential to impact on water quality and habitats, however, such effects are regarded as short-term and not significant. I note the submission of IFI in this regard, and subject to the identified mitigation measures, no significant negative effects are considered likely.

Invasive species have been recorded at locations along the route (4 no .species), including one large stand of Japanese knotweed immediately upstream of the Owenacurra railway bridge on the east bank. I note proposals for a finalised management plan in this regard and the separate regulatory requirements for the control of such invasive species.

No biological water quality data was available for the Killacloyne, Tibbotstown and Water Rock Rivers, however, an assessment undertaken in the application assigns Q-ratings of Q3-4 (moderate status) to Killacloyne Stream and Tibbotstown River. EPA data assigns a WFD status for the Owennacurra River of Q3-4 (moderate status) in the vicinity of the development, and identifies it as being 'at risk' of failing to meet its Water Framework Directive objectives. The applicants assessment concludes, however that the Water Rock River, Owennacurra River and the higher reaches of Tibbotstown River met the good status requirements (i.e., ≥Q4) of WFD. Transitional waters in Lough Mahon and North Channel Great Island are identified as being of 'intermediate status', while the Owennacurra Estuary is identified as 'potentially eutrophic'. Having regard to the temporary nature of construction activities and the identified mitigation measures for the protection of water quality during construction and operation it is not considered that the development will negatively impact on water quality or undermine the objectives of the water framework directive in this regard.

The primary effects of the proposed development arise during the construction phase, related to the loss of habitat and disturbance effects. The EIAR identifies the direct loss of up to 7km of hedgerow of Local importance (Higher Value) along the route and of 3.2ha of scrub habitat, also of Local Importance (higher value). Other direct effects are not considered significant having regard to the nature of the habitats impacted and the spatial extent of potential effects.

Vegetation clearance (track side hedgerows and scrub) would result in the loss of potential nesting habitat for breeding birds, and disturbance during construction works, with potential to result in a permanent slight negative effects on local bird populations. No suitable nesting habitat for riverbank nesting species such as kingfisher were recorded, however. More sensitive areas where red and amber listed birds were recorded or may potentially occur are located off-site and include saltmarsh and intertidal mud habitat edge located between Glounthaune station and Chainage 850m. Mitigation identified in the application includes the timing of works and the reinstatement of trees and hedgerows removed and of any cleared areas. I note the report of the Cork County Council ecologist in this regard.

The adjoining harbour area is an important site for wintering birds. Winter bird surveys were conducted in winter 2022 and subsequently in 2022/2023. The EIAR notes that no significant areas of potential suitable habitat for wintering birds will be permanently impacted by the proposed development. The potential effect of the development on the qualifying interest of the adjoining European Sites is addressed in detail in section 11.0 below, Appropriate Assessment.

As described below there is potential for disturbance and displacement effects on wintering birds, particularly during construction activity. Having regard to the extent and location of the main roosting and foraging areas for such species, to the timing and duration of construction activity, and proposals for the erection of acoustic and visual barriers where works occur during the wintering bird season, significant disturbance effects on wintering birds during construction are not considered likely. No significant operational disturbance effects are considered likely given the nature of existing rail operations and the likelihood of habituation to any additional operational noise emissions.

Surveys identified a relatively small number of trees with potential bat roost features. The loss of such trees and of foraging habitat, has the potential to result in a permanent slight negative effect. Buildings with bat roost features will not be directly impacted by the development, while existing bridge structures were assessed as having negligible roost potential.

Badger setts were identified at three locations in close proximity to the existing rail line and within the development area. Direct impacts on active badger setts would have a significant negative effect at a local level, however, such effects could be adequately mitigated through best practise measures, including adherence to NRA guidance for such works. While no direct effects on otter holts are identified, there is potential for disturbance effects during construction.

Significant operational effects are not considered likely having regard to the existing function and operation of the railway. Some additional effects arising from maintenance of the line may arise but are not regarded as significant. Additional operational lighting may give rise to insignificant localised permanent effects on bats.

Identified mitigation measures include:

- The appointment of a contractor's Ecological Clerk of Works and monitoring by an independent Environmental Clerk of Works.
- Specific measures to avoid the spread of invasive species.
- Reinstatement of any cleared areas and of hedgerows and tree-lines.
- Avoidance of works within the area of Upper Salt Marsh.
- Timing of works with potential to impact on wintering birds / SCI's of European Sites, and erection of acoustic and visual barriers where works are required within the main wintering season.
- Pre-development confirmatory surveys for rare or protected plant species and for fauna of interest.
- Site clearance outside bird breeding season.
- Specific measures in respect of otter, bat and badger, as outlined in published guidance, including NRA guidelines.
- Adherence to published guidance on design of operational lighting, particularly in respect of avoidance of impacts on bats.
- Adherence to IFI guidance and the timing of in-stream works.

The potential benefits arising from such strategic public transport projects are noted and avoidance of impacts on biodiversity, including removal of existing trees and hedgerows, would appear to be unavoidable. Having regard to the nature of habitats and species potentially impacted by the development, however, and the identified mitigation measures, it is not considered that the development would give rise to unacceptable impacts on biodiversity and ecology.

9.5. **Transportation and Traffic:**

The proposed development is a strategic project aligned with local, regional and national objectives to improve sustainable connectivity between urban centres and reduce reliance on private vehicle trips, with consequent reductions in vehicle emissions. The project follows and expands the potential capacity of an existing operational railway and is regarded as acceptable in principle in terms of planning and transportation policy.

Construction Phase

The road network in the area is generally of good quality and includes the L3004 and the N25, which is a busy national route. Having regard to the nature of the project, the routing of construction traffic is focused on the five construction compounds, where each compound is to serve works on a certain section of the line. The EIAR identifies the proposed construction haul routes associated with each compound, and subject to a final construction traffic management plan being agreed with the relevant roads authorities, I consider that the road network is of adequate quality and capacity to accommodate the identified movements.

Concerns have been expressed by observers regarding the effect of construction traffic accessing construction compound no. 5 from Upper Mill Road in Midleton. I note that this road is subject to existing peak hour queuing at the level crossing. The applicants advised the oral hearing that peak construction traffic at this location will equate to 40 no. HGV movements per day for one week. Subject to the timing of such movements outside the peak hours of traffic at the adjacent level crossing, I do not consider that the effects of such construction traffic movements are likely to be significant.

Observers have also raised a concern with regard to the siting of the entrance to construction compound no. 5 adjacent to the proposed construction entrance to the adjacent Irish Water pumping station site (PA ref. 22/5032) and the potential cumulative effects of construction traffic movements. I note that the *Design Process Traffic Management Plan* submitted in respect of that Irish Water planning application identified a peak construction traffic volume of 34 no. 2-way movements at the pumping station site over a limited number of days and proposed that night-time working be undertaken along this section of Upper Mill Road. The subject applicants have committed to working collaboratively with other developers, and subject to a final Construction Traffic Management Plan being agreed with the Roads Authority, including the scheduling of HGV movements, I consider that significant effects in the event of concurrent construction activities on these sites can be avoided.

Operational Phase

Section 3.75 of the County Development Plan notes that the land use strategy will lead to a reduction in car journeys in future years. In Midleton, issues arising from congestion on the N25 route are noted to be partly off-set by the availability of good quality suburban rail and bus services. The potential to off-set or mitigate future road congestion could be enhanced by future investment including improving rail service frequency/quality. It further notes that investment in the reopening of the Suburban Rail route delivers the potential to provide development in locations with easy access to rail services. Similar comments are contained in relation to development at Carrigtwohill.

In operational terms, the principle impacts of the development on local traffic arise from the increased frequency of level crossing closures, particularly at Mill Road in Midleton (XY012) and at Water Rock Road (YX009). The proposal to close the private Ford level crossing (X010) will not result in any implications for the public road network and I note that objections in respect of this closure were withdrawn. The volumes of traffic traversing Water Rock / Castlerock Road are not so significant that the increased frequency of closure would give rise to significant effects. I note also planning authority objectives to close this level crossing as part of infrastructure proposals for the Water Rock Urban Expansion Area (UEA), although this does not comprise part of this current development proposal.

The primary effect arising from an increased frequency of level crossing closure will therefore occur at Upper Mill Road (XY011) in Midleton. Queuing currently occurs at this level crossing during peak hour periods, when barriers close for approx. 2 minutes, four times per hour. Such queues can extend through the signalised junctions to the north and south of the crossing, however, queues are observed to clear between closures.

The proposed increase in services will result in closures up to 12 times per hour, for a maximum of 2 minutes per closure, at three-minute intervals on average. It is indicated that the permanent closure of the Ford Level Crossing will facilitate reduced closing times at the Mill Road Crossing. The analysis undertaken as part of the application indicates that the intervals between closures are sufficient to facilitate clearance of queuing traffic during regular operations, and while there will be impacts and delay arising from the future increased frequency of closures, the effects would not be significant. In the worst-case scenario, some additional delay may be experienced by vehicular traffic. The assessment considers the worst-case scenario of 12 no. closures per hour, although the applicants commit to review the optimisation of timetables to reduce the level crossing closure periods.

The potential effects of the proposed development on the operation of the surrounding road network have been recognised and previously subject to assessment in planning policy documents and background studies, including the 2018 Cork County Council *Strategic Transport Assessment for Water Rock UEA*. This assessment of the infrastructure requirements for the town arising from the development of the UEA had regard to the proposed increased frequency of rail services and associated level crossing closures at Mill Road. A package of road infrastructure upgrades were identified, to be phased with development of the UEA.

The original written submission of Cork County Council to the Board raised concerns regarding the effect of the increased frequency of closures on the surrounding road network. Notwithstanding that statement, Cork County Council confirmed to the oral hearing that following subsequent discussions with the applicants, they were now satisfied with the assessment of the effect of such barrier closures. It was confirmed that the 2018 UEA study had regard to such effects and had identified road network improvement measures to accommodate existing and future traffic flows on the

network. The first measures in this regard were included as part of the approved Water Rock UEA Infrastructure Part 8 project.

While third parties have queried the failure to assess alternative railway level crossing design options, I accept that there are no reasonable alternative design options for this level crossing given existing constraints at this location and conclude that the alleviation of traffic at this point in the network would require wider network measures, as identified by the planning authority in their 2018 study.

I accept that there would be effects on traffic flows on the surrounding road network, as previously been assessed by the County Council in 2018. It is also noted, however, that the project itself is a mitigation measures in respect of traffic flow and the climate effects of transport emissions. The local authority are implementing active travel measures in the town to improve the availability and attractiveness of alternative modes of transport and connections to the train station, town centre, schools etc. There is a balance to be struck between impacts on road transport in order to facilitate a strategic public transport project and in this regard, I consider that the identified effects arising from the increased frequency of level crossing closure would be acceptable.

In respect of impacts on the operation of the existing level crossing at Myrtle Hill, the applicants confirmed to the oral hearing that no increase in service frequency beyond current infrastructure capacity would occur, until necessary interventions at this level crossing have been implemented, which would be subject to a separate consent process. I note further that observer's written submissions to the Board include evidence of a separate legal agreement dating to 1993 in respect of the operation of this level crossing. In this regard, I conclude that interference with access to these existing properties would not arise from the proposed development.

In their original written statement, Cork County Council had recommended a number of conditions to the Board. These included conditions, no.'s 24, 26, and 28, requiring that active travel measures be implemented on existing rail overbridges and level crossings along the route.

The applicants in this case disputed the appropriateness of such conditions. I note that the rail order does not propose any modifications to these bridges which are in

IE ownership, and that such modifications are not required to facilitate the twin-tracking of the line. These works would therefore fall outside what might be reasonably considered to be the scope of this development, notwithstanding the accepted need and benefits of such works. In correspondence presented to the oral hearing Cork County Council confirmed that such provision at these bridges was no longer being sought.

There are a number of active travel proposals along the rail corridor, which interact with the proposed development. In particular, I note the consented and proposed Part 8 proposals for the Carrigtwohill – Midleton Greenway and the Ballinacurra – Midleton Greenway.

The proposed Carrigtwohill – Midleton Greenway runs parallel to the railway corridor to the north of Carrigtwohill and proposes a crossing point at approx. chainage 5450 UBY6C, to Ballyadam Bridge. The emerging preferred routh then runs east parallel to the railway to Water Rock, where it will link with the network proposed part of that UEA. The retention of Ballyadam House Bridge (OBY08) could facilitate the crossing of the railway for this route and it was confirmed in the applicant's submissions to the oral hearing that this bridge would now be retained, which would address recommended condition no. 28(viii).

The Ballinacurra – Midleton Active Travel route runs generally south to north along the Owenacurra River. It is proposed to pass under the railway line west of the existing railway overbridge (OBY11) to meet the Northern Relief Road. Submissions to the oral hearing by both Cork County Council and the applicants confirmed that the while final design details for this active travel route at this location have not yet been confirmed, there were no structural or design implications for the subject rail project.

As part of recommended condition no. 28, Cork County Council sought the widening of the Owenacurra Railway Bridge (UBY11) on its southern side to accommodate pedestrians and cyclists and provision for a shared footpath / cycleway parallel to the railway to connect to Mill Road and the train station. While this would reflect an objective of the development plan, subsequent county council submissions to the hearing withdrew this recommended condition.

With regard to the opening of an underpass to the west of Carrigtwohill Station (UBY5B), which is associated with the Urban Expansion Area at this location, I note that the applicants advised that there was no objection in this regard and that the development would facilitate such route as identified in the Development Plan. I do not consider that a condition in this regard is necessary.

Condition no. 30 recommended by the planning authority requested that Irish Rail provide the new train station at Water Rock, as part of the Rail Order works. At the oral hearing the applicants confirmed their intention to provide such infrastructure and having regard to the already approved nature of that development as part of a Local Authority Part 8 development, I do not consider this recommended condition to be necessary or appropriate.

The applicants also confirmed that there was no objection to the conditions recommended by TII in respect of the development.

9.6. **Air Quality**

The Air Quality Standard Regulations 2011 implement the European Union Directive 2008/50/EC on Ambient Air Quality and Cleaner Air for Europe (CAFE). The regulations establish Limit Values (LVs) and thresholds for concentrations of certain pollutants, to prevent or reduce harmful effects on human health and the environment. The EPA is designated as the competent authority for assessing ambient air quality in the territory of the State. Air quality monitoring at sites for Cork City and Environ (zone B) and Rest of the Country (Zone D) recorded annual mean NO2, PM10 and PM2.5 concentrations well below the respective national AQS.

Construction activity has the potential to give rise to impacts on air quality from vehicle emissions and generation of dust. The EIAR divides this linear development into ‘areas’ for the assessment of dust risk and the application of different mitigation measures in respect of demolition, earthworks, construction and trackout. The assessment of construction traffic volumes concludes that the effects in terms of vehicle emissions are not likely to be significant. Having regard to the temporary nature of the works, the identified mitigation measures and the conclusions of the assessment which are considered reasonable, significant negative effects from the generation or deposition of particulate matter are not considered likely.

During the operational phase, an increase in diesel rail movements could result in an increase in concentrations of nitrogen dioxide (NO2), particulate matter (PM10 and PM2.5) at sensitive receptors. UK guidance LAQM. (TG16) (Defra) indicates that emissions from railway operations should be assessed, where:

- There is relevant exposure within 15 m of a location where diesel trains are regularly stationary (>3 times a day) for periods of 15 m or more, or;
- There is relevant exposure within 30m of railway tracks, and where the backgrounds NO2 concentration is above 25 µg/m3.

Having regard to separation of sensitive receptors from the railway and background air quality with annual mean NO2 concentrations well below the criteria value, the risk of exceedance of the long-term standard in this area is not considered to be significant and further assessment is not required. It is also the case that an increased frequency of rail services has the potential to contribute to a reduction in emissions from private vehicles, where it results in significant modal shift.

Observers have queried the potential effect on air quality at Kent Station arising from the increased frequency of train movements. This is not addressed in the EIAR although the application acknowledges the purpose of the proposed project as being to facilitate future increases in service frequency and passenger capacity, as part of the wider Cork Area Commuter Rail (CACR) programme.

Section 6 of the EIAR describes the intent to increased frequency of train services, up to a 10-minute service at peak hours, when future electrified or alternative fuelled vehicles are available. This is aligned with the evidence of Mr. James Kenny for CIE to the oral hearing, who clarified that the intention is that electrification of the network which will be the trigger for further increase in services. Notwithstanding these statements, it is reasonable to consider a worst-case scenario of an increase in the frequency of diesel rail services.

One other element of the CACR programme identified as facilitating increased frequency of services on the line is the proposed Kent Station Through-Platform project, approved by Cork City Council under PA ref. 22/41299. That application was accompanied by a *Planning and Environmental Considerations Report* which included an assessment of Air Quality in respect of the proposed development, but

which also had regard to the potential increase in rail movements under the CACR programme.

Section 7.2.5.2 of that *Planning and Environmental Considerations Report* noted the potential impact on air quality at sensitive receptors from increased operational diesel rail movements. This assessment had regard to the UK Guidance LAQM.TG(16) and concluded that having regard to the separation of sensitive receptors from the railway tracks both close to the station and in the wider area and to monitored air quality results, that there would be no significant effects from the proposed development on air quality. It further noted that despite the possibility for greater through-traffic at the station in the future, train positioning movements and idling in the station and the wider area would potentially decrease due to the greater operational flexibility provided by the development. The assessment concluded that the effect of additional diesel train movements in the future was not significant.

Having regard to the conclusions of such assessment, I consider that it is reasonable to conclude the proposed development would not be likely to result in significant indirect effects on air quality at Kent Station or properties in the vicinity.

9.7. Acquisition of Land and Matters Arising

9.7.1. Extinguishment of Right of Way – Ford Level Crossing 0X10

Two observations to the closure of this right of way were received by the Board on behalf of Ms. Martina O'Connell and Dawn Meats Ltd. These observations were subsequently withdrawn, and there is no objection to the closure of this level crossing or extinguishment of this private right of way, which will facilitate improved safety on the railway and contribute to facilitating improved service provision along this route.

9.7.2. Construction Compound no. 5

Compound no. 5 is located on part of a larger brownfield site, to the east of the Owenacurra River, north of the railway. I note the submission of Sheenvale Ltd. with regard to the effect of the temporary landtake for this compound on their wider property, and its future development, including the effect of the proposed access

arrangements. These wider lands have been vacant for some time and are zoned for mixed use development in the current development plan.

It is acknowledged that the temporary land take has the potential to negatively impact on the development of these lands in the short-term, however, I note also that there is no current live planning permission or planning application relating to these lands. Such temporary effects on the development potential of the lands are matters which would be more properly addressed through the arbitration process.

I accept as reasonable the argument that a compound is required on both sides for the river to facilitate the bridge extension works (UBY11) and that the eastern compound (no. 5) provides a suitable location for construction activities based on road access, the available area and access to the bridge and to the railway. Notwithstanding the risk of flooding identified in the FRS, there remains a requirement for a compound on each bank of the river to facilitate bridge works. I note the provisions of section 11.5.3 of the EIAR in respect of flood risk at such location and consider that subject to conditions in this regard, the siting of the compound facilitating this strategic project would be acceptable.

The extent of the compound area to be temporarily acquired is queried by observers. Having regard to the location and extent of uses to be carried out thereon, the area does not appear unreasonable and I do not consider that any revision or reduction to the area would materially alter any potential effect on the future development of these wider lands. I note also that the construction access utilises an existing entrance onto Mill Road. It was confirmed to the oral hearing that the extent of temporary land take identified in the rail order application represents the maximum extent of lands which might be affected but that there is no obligation to include the full extent of such lands in a subsequent notice to treat. The duration of potential effects is also raised in the observer's submission. While the applicants point to the indicative construction timeline, such duration remains uncertain at this time. I regard this as a factor to be considered in the determination of potential compensation in respect of the temporary land-take.

As referenced in the Sheenvale observation, there is a minor overlap in the application boundaries between the Rail Order application and the Irish Water application on Mill Road. I regard this overlap is minor and do not consider that there

is any conflict between the two projects is this regard. The Irish Water pumping station planning application is the subject to a third party appeal and remains undecided at this time. (PA ref. 22/5032 ABP-316013-23). There is potential for traffic from concurrent activity on these projects to impact on traffic movements on Mill Road. As discussed above, however, I am of the view that such effects can be adequately managed via a construction traffic management plan to be agreed with the Roads Authority, Cork County Council.

The observers have made reference to the inclusion of the site on the RZLT maps, which is currently under appeal. Such matters are outside the scope of this assessment.

9.7.3. CPO and Compensation

The development proposes the temporary and permanent acquisition of lands to facilitate the development, under s.45 of the 2001 Act, as amended. Where relevant, the nature and amount of compensation payable will depend on the specific circumstances and typical heads of claims may include market value of property, disturbance costs, damages and severance and injurious affection.

Interference with property rights must be justified by the common good. This has been interpreted as a requirement to satisfy the following criteria[1]:

- There is a community need that is to be met.
- The particular site is suitable to meet that community need.
- Any alternative methods of meeting the community needs considered and are they demonstrably preferable (taking into account environmental effects, where appropriate), and
- 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.

[1] *Compulsory Purchase and Compensation in Ireland: Law and Practice*, Second Edition, by James Macken, Eamon Galligan, and Michael McGrath and published by Bloomsbury Professional (West Sussex and Dublin, 2013).

It is clear in this instance that the enhancement of rail services between Midleton and Kent Station in the manner proposed will satisfy a community need, contributing to improved public transport provision and a reduction in private transport use and carbon emissions in line with planning policy at local, regional and national level. The proposal is for the enhancement of an existing rail line and the site is therefore suitable to meet this community need. Such enhancement minimises the land take required to facilitate enhanced rail services. The only alternative which could contribute to these objectives would be an improvement in bus transport provision, however, this would not deliver the same benefits in terms of journey time, connectivity to onward rail journeys and reduced carbon emissions. The consideration of alternative options was considered in the policy documents facilitating this development, including CMATS and the County Development Plan and in the EIAR accompanying the application.

In respect of the closure of rail crossing at Ford Crossing (0010), the alternative would be to retain the existing level crossing available for use by the relevant landowners. At the oral hearing, representatives for the applicant addressed the safety implications of such an arrangement and the operational standards in this regard, and also noted that closure of this level crossing would assist in a reduction in closure times at Mill Road level crossing.

I note that objections to the closure of this level crossing have been withdrawn and that the applicants have indicated that they have no objection to the retention of services which currently run under the railway. I consider that the proposed extinguishment of private rights over this level crossing (XY010) would be justified.

I consider that the permanent and temporary acquisition of the lands and interference with private rights identified in the book of reference, as amended by submissions to the oral hearing, would be justified in this instance.

9.8. Cork County Council Conditions

The written submission of Cork County Council included 30 no. recommended conditions to attach to any decision to grant the rail order. During the course of the oral hearing a revised schedule of conditions agreed with the applicants was

submitted for the consideration of the Board. I have addressed a number of these recommended conditions in section 9.5 above in respect of traffic and transportation.

Recommended condition no. 29 requests a development contribution of 33% of the cost of the proposed new bridge over the railway at the Water Rock UEA, which bridge was part of the approved Part 8 Infrastructure development. In response, the applicants submitted a proposed revised wording for this condition to the Oral Hearing, as follows, which was agreed with Cork County Council:

> "In accordance with section 44 of the Transport Railway Infrastructure Act 2001, as amended, CIÉ agrees to a condition in the Railway Order providing that prior to the commencement of development, CIE shall make a financial contribution agreed with Cork County Council, toward the total cost of the rail overbridge at the Water Rock Urban Expansion Area".

Having regard to the agreed nature of this condition, and the proposal of the applicants in this case to secure the closure of Ford Level Crossing (XY010), I consider that in the event of a decision to grant the railway order, the attachment of such a condition would be appropriate.

The schedule of conditions otherwise agreed between the applicant and Cork County Council are generally considered reasonable and I have had regard to such conditions in my assessment and recommendation set out in this report.

10.0 Environmental Impact Assessment

10.1. Statutory Provisions

The Transport (Railway Infrastructure) Act 2001 (as amended by the 2006 Planning and Development (Strategic Infrastructure) Act) provides for the making of an application for a Railway Order to An Bord Pleanála. The European Union (Railway Orders) (Environmental Impact Assessment) (Amendment) Regulations 2021 (S.I. No. 743 of 2021) gives effect to the transposition of the EIA Directive (2011/92/EU as amended by Directive 2014/52/EU) on the assessment of the effects of certain public private projects on the environment by amending the 2001 Act.

Section 37 of the 2001 Act as amended (including by SI 743/2021) requires that the application be accompanied by a report on the likely effects on the environment. Section 42A requires that in carrying out an environmental impact assessment the Board shall, where appropriate, co-ordinate the assessment with any assessment under the Habitats Directive. Section 42B states that the Board shall reach a reasoned conclusion on the significant effects on the environment of the activity to which the application relates.

The EIAR accompanying this Rail Order application contains four volumes. Volume 1 comprises a Non-Technical Summary, Volume 2 is the Main Text - EIAR, Volume 3 contains Appendices while Volume 4 contains Photomontages.

Chapters 1 & 2 of Volume II set out an introduction to the EIAR and describe the methodology used. Appendix 1.1 sets out the experience and expertise of the contributors to the EIAR. Chapter 3 considers the policy context while Chapter 4 describes the alternatives considered. Chapter 5 describes consultations undertaken, and a public consultation report is included in Appendix 5.1. Chapter 6 describes the proposed development and construction methodologies.

The likely significant direct and indirect effects of the proposed development are considered in the remaining chapters of Volume II under the following headings, in accordance with Article 3 of the EIA Directive 2014/52/EU:

Ch. 7 Population and Human Health
Ch. 8 Air Quality
Ch. 9 Climate
Ch. 10 Land, Soils and Hydrogeology
Ch. 11 Surface Water and Flood risk
Ch. 12 Biodiversity
Ch. 13 Landscape and Visual
Ch. 14 Archaeology, Architectural and Cultural Heritage
Ch. 15 Roads and Traffic
Ch. 16 Noise and Vibration
Ch. 17 Material Assets
Ch. 18 Major Accidents and/ or Disasters
Ch. 19 Cumulative Effects

Ch. 20 Interactions of the Foregoing

Ch. 21 Summary of Mitigation and Monitoring Measures

The 2018 Guidelines on carrying out Environmental Impact Assessment state that the EIAR must include the expected effects arising from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project. This is considered under Chapter 18 of the EIAR, while chapter 11 considers the risk of flooding. A detailed flood risk assessment is contained in Appendix 11.

The application is also accompanied by an Appropriate Assessment Screening Report and Natura Impact Statement to facilitate the combined assessment of the development.

Alternatives

The requirement to consider alternatives under the EIA Directive is transposed through Section 39 (1) of the 2001 Act as amended, which requires inter alia 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. This is addressed in chapter 4 of the EIAR. A detailed Option Appraisal Report set out in Appendix 4 describes a Multi-Criteria Analysis (MCA) technique used to identify the Preferred Option. It is stated that the approach was informed by the Dept. of Transport “Common Appraisal Framework (CAF) for Transport Projects and Programmes” (2020).

The project facilitates an increase in train frequency on an existing railway line and alternative locations for the railway line were not considered. Alternatives considered to meet the project objectives include the following:

1. ‘Do Nothing’ alternative – no change to the railway line.
2. ‘Do Minimum’ – inclusion of additional passing loops to provide the required 10-minute service interval. This option was found to be impractical due to operational challenges, where any slight delays in running time would restrict the movement of other trains in the intervening periods, causing significant reliability issues. This option would also increase operational safety risks.
3. Full Twin Track - Optimised Alignment – This option considers the twin tracking of the single-track sections between Glounthaune and Midleton, with minimum

intervention to reconfigure the operational track layouts. This re-uses existing infrastructure where possible whilst facilitating enhanced service intervals of 10 minutes.

4. Full IRL1 Gauge and standard Cross Section – This option consists of providing the full IRL1 gauge with standard cross sections along the route. New bridges would be required at four locations, where existing bridges do not achieve IRL1 gauge, of which three are listed on the NIAH.

Option 4 is stated to meets the project objectives, is technically feasible and deliverable. There would be significant permanent effects on NIAH bridges and the demolition and reconstruction of bridges would have greater potential environmental effects. Consultation with Cork County Council was that such significant effects should be avoided if possible.

Option 3 would require a derogation from design standards but is feasible. All NIAH bridges along the railway line would be retained which is identified as a benefit in terms of cultural heritage and also construction effects and nuisance. This option requires the widening of the Owenacurra River bridge, however, the use of the existing piers would reduce environmental effects. While the removal of Ballyadam House Bridge (OBY 8) was identified as having a local negative heritage effect, this structure is now to be retained obviating such effects. Option 3 was identified as the preferred option and was taken forward as the proposed development for assessment in the EIAR.

Section 4.5 also describes the design process which sought to reduce environmental effects including the following:

- At the western end of the scheme, adjoining European sites, the alignment was designed such that additional land requirements occur to the north of the railway line where possible and avoid direct effects on the designated sites to the south.
- Where space was restricted and environmental constraints arise, piled retaining walls are proposed to avoid the requirement for embankments.
- The design sought to maximise works within the existing railway corridor and minimise effects on 3rd party lands.
- An iterative process is described to identify suitable locations for construction compounds. In relation to the most easterly compounds (no. 4 and 5), a single

compound was originally identified west of the Owenacurra River Bridge (OBY11) to provide construction access to the bridge abutments. The access corridor and compound area were designed to minimise effects on the floodplain.

- At the oral hearing it was confirmed that compounds (no. 4 and 5) are required on both sides of the river for bridge extension works and that there will be no changes to ground levels on either site. Both compounds will be set-back a minimum of 15m from the riverbank. The extent of compound no. 5 was stated to be dictated by the uses proposed thereon, the set-back from the river and use of an existing entrance onto Mill Road.

Having regard to the relevant national, regional and local planning policies and objectives relating to this development and the detail provided in the application, it is considered that the requirements with regard to the consideration of alternatives has been adequately addressed in the application documentation.

Cumulative effects:

Section 2.3.10 of the EIAR describes how potential cumulative effects are addressed under each topic. This section identifies the larger scale projects in the vicinity of the proposed development which were identified through a planning search in 2022. I note also the plans and projects identified in the Cork County Council written submission. Chapter 19 of the EIAR summaries the potential cumulative effects of the development.

In considering cumulative effects in this assessment, I have had regard to the projects set out the following table.

Development	Planning Reference	Location	Summary of Details
Part 8: Burys Bridge to Carrigtwohill via Glounthaune Pedestrian and Cycle scheme	ABP CPO Ref. CH04.310856	Burys Bridge, Kilcoolishal to Carrigtwohill	Construction of a dedicated pedestrian and cycle route on the northern side of the L3004 (former N25) Part 8 approved in 2020
Part 8: Carrigtwohill to Midleton Inter-Urban Cycleway -		Carrigtwohill to Midleton	Construction of a dedicated pedestrian and cycle route from the west of Carrigtwohill to the eastern side, including a new cycle and footbridge over the existing rail line Approved March 2022
Ballinacurra to Midleton Train Station - pedestrian and cycle route			Dedicated pedestrian and cycle route, including an underpass under the existing railway line. Subject to AA screening and approved in 2020
Part 8 Water Rock Urban Expansion Area Infrastructure Works	Part 8 Approved with modifications	Water-Rock (townland), west of Midleton	Various infrastructural works and services including – • Closure of Water Rock level crossing to vehicular traffic. • New bridge over the Cork to Midleton railway line connecting the Services Corridor Link Road to lands to the south. • new serviced road corridor to access the proposed railway stop and bridge and ancillary works • New railway stop along the Cork to Midleton railway line. Subject to EIA and AA screening and approved in March 2019
PCI & Strategic Infrastructure Development and Strategic Housing Development: Application made directly to ABP			
Dunkettle Interchange Improvement Motorway Scheme	ABP - MA0011 and HA0039	Cork City	Revisions to Dunkettle Interchange. Subject to EIA and AA.
Celtic Interconnector	ABP Case Ref: VA04.310798	Ballynanelagh, Ballyadam and other townlands	Onshore portion of an electricity interconnector, including connection to the Irish National Grid, a converter station and all associated and ancillary works. Subject to EIA and AA and approved in May 2022
Harpers Creek	ABP-301197	Harpers Creek, Glounthaune.	174 No residential units creche & doctor's surgery. Granted - 29/05/2018. Extension of duration granted 22/6659.
Ballynaroon Housing development	ABP-312658	Glounthaune.	Construction of 112 no. residential units. Subject to AA Screening and granted in June 2022.
Section 34 Planning Applications			
Bluescape Development	19/5659	Glounthaune	55 no. 2-storey houses - Granted August 2019.

Stryker Ireland Ltd	185546	IDA Business Park, Annsgrove, Carrigtwohill	Phased extension to a manufacturing facility (6,235m2). Phase 2 remains to be implemented. Granted 08/08/2018
Ruden Homes Ltd.	ABP-313827-22	Castlelake, Carrigtwohill	Current application for 716 no. residential units, accompanied by an EIAR and NIS.
Murnane & O'Shea Ltd	194124	Carrigane Road, Carrigtwohill	Construction of 94 no. dwelling houses and ancillary works. Granted 13/01/2020
Murnane & O'Shea Ltd	214267	Carrigane Rd. Carrigtwohill	Construction of 10 no. houses – revisions to ref. 19/4124. Granted 01/04/2021
Murnane & O'Shea Ltd	215150	Carrigtohill (townland), Carrigtwohill	Construction of 67 no. dwelling houses and ancillary works. Subject to AA Screening and granted 08/12/2021
The Cork Education and Training Board - Post Primary School	204810	Fota Retail & Business Park, Carrigtwohill.	8 No prefabs – Temporary (5 year) permission granted 03/07/2020.
Minister for Education and Skills	19/5707	Castlelake, Carrigtwohill	Permission granted for 2 no. new primary schools and one post-primary school. Subject to EIA Screening and AA.
Smithkline Beecham (Cork) Ltd	20/4090	IDA Business Park, Carrigtwohill	The development of a single storey laboratory building. Subject to AA screening and granted 23/04/2020
Compass Homes Ltd	21/6240 ABP-312738-22	Station Road, Carrigtwohill.	Construction of 38 houses and a café. Subject to screening for EIA and AA. Granted December 2022
Connaught Trust Limited	21/7130	Ballyadam and Carrigtwohill.	63 no. residential units south of the railway line. Subject to AA screening and granted November 2021
IDA Ireland	21/7374	Carrigane Road, Hedgy Boreen, Ballyadam, Carrigtwohill	New site access, local road improvement and site development works. Subject to screening for EIA and AA and granted 18/02/2022.
Cruachan Investment Limited Partnership	21/7424	Titan Container Storage, Fota Point Enterprise Park, Carrigtwohill	Construction of warehouse/ industrial buildings and associated works (part of permitted development ref 06/6741). Subject to AA screening and granted December 2022.
Park Hill View Estates Ltd,	18/7236	Broomfield West, Midleton.	Demolition of sheds and construction of 41 no. dwelling units. Subject to AA screening and granted 20/08/2019.
Castle Rock Homes (Midleton) Ltd - Bloomfield Village	166818 PL 04.249008	Broomfield Village, Midleton	Construction of 100 no. dwellings, crèche and ancillary works. Subject to AA screening and granted 22/01/2018. Extension of duration granted under 22/5841.
Castle Rock Homes (Midleton) Ltd	186553	Midleton	Construction of 26 no. houses. Currently underway – part of overall development includes Pl. Ref 18/7321. Granted 18/01/2019
Castle Rock Homes (Midleton)	187321	Midleton	The construction of 13 no. dwelling houses. Granted 12/02/2019

Ancelstierre Investments Ltd,	194216	Avoncore, Mill Rd, Midleton	Construction of 40 no. dwelling houses. Subject to AA and granted 02/08/2019
Vella Homes Ltd	216874	Junction of Mill Rd & Northern Relief Rd, Midleton.	The construction of a mixed-use residential development with café/community space and all ancillary site works. Subject to AA and granted 14/06/2022.
EMR Projects Ltd	217264	Knockgriffin and Water Rock, Midleton	284 No Residential units on 6.7Ha site; childcare facility; retail unit; café unit; medical clinic; office units). Subject to EIA and screening for AA. Granted 27/01/2023
Ingram Homes Ltd	22/5839	Water Rock, Midleton	400 no. residential units and ancillary works. Subject to AA and screening for EIA. Granted 22/12/2022
Haven Falls Ltd.	22/6627	Water Rock, Midleton	Current LRD application for 330 residential units. NIS and EIA screening submitted.
Dawn Meats Ltd	21/7265	Water Rock, Midleton	Mixed use development including 434 residential units, n/h centre, nursing home and R&D facility. Subject to EIA and AA. Granted 16/06/2023
Irish Water pumping station Midleton North wastewater pumping station and network	225032 ABP-316013-23	Lands to the west of Mill Road and adjoining the railway, Midleton	Pumping station works include boundary fencing, retaining wall, and modifications to an existing entrance from Mill Road & a new below ground pipeline (c. 650m long) to the previously approved Water-Rock pumping station. Subject to AA and currently on appeal.
South Midleton Wastewater Network Diversion Project	Future Irish Water application	Townparks, Midleton	Pumping station located east of Ballick Road and rising main to Midleton North Pumping Station to cater for future developments.
Cork City Council			
Kent Station through platform	22/41299	Kent Station, Cork City	New through platform and associated works. Subject to AA and granted permission in September 2022.

10.2. Assessment of Likely Significant Direct and Indirect Effects

10.2.1. Chapter 7 Population and Human Health

Likely significant effects:

- Construction activity will give rise to potentially significant construction noise and disturbance effects to adjoining residential properties.
- Dust emissions during construction have the potential to impact on adjoining residential properties.
- There will be some temporary travel disruption during construction, arising from temporary road closures and suspension of rail services during construction, with associated travel delays.
- The construction stage will give rise to temporary positive employment effects and increased economic activity in the area.
- There will be operational benefits from an increased level of rail service within the metropolitan area which will facilitate sustainable growth in the surrounding area.
- Disruption to movement along public roads due to increased frequency of level crossing closures, particularly on Mill Road, Midleton.
- Increased frequency of services will give rise to an increase in operational noise emissions and potential disturbance to adjoining receptors along the route.
- Facilitating increased modal shift will have potential positive effects on the operation of the surrounding road network and on air quality.

Mitigation:

- Implementation of a CEMP, and a construction traffic management plan to be finalised and agreed with the local authority and TII.
- Measures to mitigate likely significant effects on human health during the construction phase identified elsewhere in the EIAR, particularly in respect of noise and vibration.
- Temporary bus transfer during the suspension of train services along the route during the construction phase.
- Operational mitigation measures at identified residential receptors including new / enhanced acoustic barriers and other acoustic measures, as described at the oral hearing.

Cumulative Effects:

There is potential for temporary cumulative impacts during concurrent construction activity due to traffic disruption, noise and dust. The EIAR refers to engagement with the proponents of nearby developments and appropriate mitigation measures, including the scheduling of works. Having regard to relative separation distances from identified projects and receptors, and implementation of the identified mitigation measures, no significant negative cumulative construction effects on population and human health are not considered likely.

The proposed development will facilitate increased public transport capacity and services which will facilitate the sustainable development of the area in line with development plan policy, with an overall positive effect.

Residual Effects:

There are particular constraints on the project in respect of the location and timing of works along this operational railway. It is considered that subject to the monitoring and mitigation measures identified, the potentially significant temporary effects on residential receptors during construction in respect of noise and vibration, can be adequately mitigated.

It is anticipated that the residual operational effects on residential amenity of the additional train services along this line can be satisfactorily mitigated by the measures identified in respect of noise and vibration, particularly those measures identified at the oral hearing. There will be wider positive operational effects overall from enhanced rail services.

Conclusion:

I have considered all of the application documentation and submissions received, and I am satisfied that impacts predicted to arise in relation to population and human health would be adequately avoided, managed and mitigated by the measures which form part of the proposed scheme. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of population and human health.

10.2.2. **Chapter 8 Air Quality**

Likely Significant Effects

- There is potential for emissions from construction plant and traffic. Peak construction traffic volumes, distributed along the project route, are not predicted to exceed UK guideline values for assessment of vehicle emissions, however, significant effects on air quality are not expected.
- While some significant localised increases in traffic due to construction activity are identified, having regard to the temporary nature of such effects and to the low baseline traffic volumes and residual capacity available on these routes, significant effects on air quality are not considered likely.
- Construction activity gives rise to a risk of temporary air quality / dust impacts from demolition, earthworks, construction activity and track-out. The assessed risk along the line ranges from low to medium and significant impacts are unlikely due to phasing of construction along the works area and the geographic extent of the proposed development.
- While an increase in vehicle queuing is anticipated due to the increased frequency of level crossing closures, given the background air quality, such activity is not likely to cause an exceedance, or raise pollutant concentrations to 90%, of the relevant standards.
- Emissions from stationary and moving diesel trains can give rise to high short-term NO2 and SO2 concentrations close to the track.

Mitigation:

- Implementation of the CEMP, based on IAQM Guidance, to include a dust risk management plan (as recommended by Cork County Council), best construction practise and plant operation to minimise the generation and suspension of dust or particulate matter, including water suppression and measures to address any dry spillages and spillages as soon as reasonably practicable.
- A construction traffic management and logistics plan to be agreed with the local authority.
- Develop and implement a stakeholder communications plan before works commence.
- Regular site inspections to monitor compliance with the CEMP, with increased inspection frequency during activities or periods of high dust potential.

- Maintain records of dust and air quality complaints, causes and action taken.
- Sustainable vehicle operations.
- Appropriate waste management measures.
- In line with IAQM guidance, undertake liaison meetings with construction sites in the vicinity to co-ordinate plans and minimise emissions.
- UK guidance indicates that trains could contribute to a risk of exceedance of the short-term SO_2 standard, if they are regularly (>= 3 times a day) stationary for > 15min, and there are sensitive receptors within 15m. Trains could also contribute to a risk of exceedance of the long-term NO2 standard when moving past sensitive locations within 30m, where the background annual mean NO2 concentration is above 25µg/m3

  Baseline air quality is well below the relevant emission limit values for NO2 and PM10 & 2.5. Standing or idling trains would be greater than 15m from sensitive receptors and the risk of exceedance of the 1-hour SO_2 standard is negligible.

  Having regard to the background annual mean NO2 concentration in the study area (within 30m of the railway tracks), the risk of exceedance of the long-term NO2 standard in this area due to emissions from moving trains is not significant.
- The development will facilitate modal shift to public transport use and contribute to a reduction in emissions from private vehicles on the road network.

Cumulative impacts:

There is a risk of cumulative construction dust impacts associated with the construction phases of nearby committed development, however, subject to the identified mitigation measures including liaison with nearby construction sites, significant cumulative air quality impacts associated with the construction phase are not considered likley. While there is potential for cumulative temporary impacts from construction traffic, the total increase in HGV movements is unlikely to be higher than relevant criteria values and emissions are therefore not likely to require further assessment.

Potential cumulative effects of the CACR programme due to an increased frequency of train movements at Kent Station and environs were previously assessed in respect

of the through-platform project at Kent Station, and found not to give rise to significant effects on air quality. See also section 9.6 of this report above, air quality.

Residual Impacts:

Significant residual effects in relation to air quality are not considered likely.

Conclusion:

I have considered all of the application documentation and submissions received, and I am satisfied that impacts that are predicted to arise in relation to air quality would be avoided, managed and mitigated by the measures which form part of the proposed scheme. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of air quality.

10.2.3. **Chapter 9 Climate**

Likely Significant Effects:

- Construction activity will require the use of additional materials and result in emissions from construction vehicles.
- The diversion of traffic due to temporary road closures, resulting in longer journeys may give rise to increased emissions.
- Operational impacts, including emissions from diesel trains and from maintenance activities, will arise from the use of fossil fuels over the lifetime of the project, possibly reducing in the event of future electrification of the line.
- Increased frequency of level crossing closure will potentially result in increased vehicle queuing and emissions.

The EIAR notes that based on 2022 guidance, all GHG emissions can be considered significant regardless of scale.

Mitigation

- Implementation of the CEMP, including measures to reduce emissions during construction and a Construction Traffic Management Plan, to minimise disruption.
- The shore-term nature of construction activities.
- Implementation of a Construction Resource Waste Management Plan including the reuse of excavated materials on site where possible.

- The development will facilitate reduced operational transport emissions through increased modal shift.
- Regular operational maintenance of trains and adherence to regulations to reduce gas leakage from electrical switchgear.

Cumulative Effects

Some temporary cumulative effects from concurrent construction activity may arise but are not anticipated to be significant. An increased frequency in diesel train services as part of CARC, in advance of electrification of the network could have a negative effect on climate from emissions. There is potential for such increased frequency of services to contribute to the achievement of modal shift targets and reduction in transport emissions in line with the Climate Action Plan and other relevant policy provisions.

Residual Effects

The EIAR does not take account of the potential reduction in private car journeys and associated emissions arising from the proposed development and therefore describes the overall effect of the development as significant negative. When potential modal shift is considered, this effect reduces to minor adverse – negligible, with further potential improvements with a move to electrification of the line.

Conclusion:

I have considered all of the application documentation and submissions received, and I am satisfied that impacts that are predicted to arise in relation to Climate would be avoided, managed and mitigated by the measures which form part of the proposed scheme. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of Climate.

10.2.4. **Chapter 10 – Land, Soils and Hydrogeology**

Likely Significant Effects:

- Works will require the clearance of vegetation and soils along the route, while temporary construction compounds will result temporary change of use of lands.

- There is a risk of rutting, erosion and/or compaction of underlying soils and geology from construction vehicles and machinery. The risk to recharge and flow paths is low given the relative size of aquifer bodies.
- The effect of excavation of soils/subsoils is not significant given the extent of local deposits.
- Areas of high landslide susceptibility or geohazard present a risk of failure from construction activities. Excavation has the potential to impact on the integrity of karst features.
- Creation of new pathways for surface flow into the bedrock aquifer could increase erosion / dissolution of karst with a risk of ground collapse or subsidence.
- There is a risk of pollution / sediment release to nearby wells / groundwater, or the mobilisation of sub-surface contamination during excavation, particularly in areas of karst, with a risk of impacts on downstream conservation sites.
- A risk of mobilisation of contaminants arises at Ch. 9710m – Ch. 9805m where shallow piling is proposed in an area of soils at risk of contamination. Superficial deposits are classified as a locally important gravel aquifer.
- The extent of the scheme relative to WFD waterbodies poses very low risk to the delivery of WFD objectives.
- Modified surface water flows during operations could result in enhanced erosion in karst areas, resulting in subsidence.
- Increased operational services increases the risk of spillage of contaminants and pollution of the underlying aquifer bodies and/or karstic features.

Mitigation

- Implementation of the CEMP which will include a construction earthworks programme and standard measures for the release of sediment and contaminants, including compliance with Ciria guidelines (C532).
- Ground investigation to identify the presence of made ground or contamination, and adherence to protocols to deal with unexpected contamination. Soils at risk of contamination have not been identified in areas of sheet piling activity.
- Alternative (non-piling) retention methods or a piling risk assessment will be undertaken where potentially contaminated land is identified.

- Pre-construction surveys to confirm the presence of areas of landslip hazard and creation of a Geotechnical Risk Register.
- Pre-construction surveys of karstic features. Retain existing drainage outfalls and create no new outfalls, while drainage design will avoid discharge to any identified karst area or feature.
- Methodologies to protect exposed limestone bedrock and preserve hydraulic connectivity, including use of liners and appropriate granular fill.
- Avoidance of karst features at Water Rock and monitoring of vibrations during works to ensure they remain within TII criteria.
- Where bedrock is encountered, alternative piling / retention methods will be required and may require a karst stability assessment and use of impermeable liners to prevent loss of concrete to the limestone.
- As far as possible, reuse excavated material to minimise offsite disposal.
- Adherence to waste management regulation requirements.
- Pre-construction verification surveys of the identified boreholes / wells, and regular water quality testing.
- Storage to avoid areas at risk of flooding or areas of convergence of flow.
- Regular operational inspection and maintenance of trains (and other machinery).

Cumulative Effects

The potential for cumulative effects with concurrent development in the surrounding area includes reduced run-off / changes to ground water recharge and potential ground water contamination from earthworks. Having regard to the scale of the proposed development, and the extent of the hydrological / geological features, and subject to the identified mitigation measures however, significant cumulative effects are not considered likely.

Residual Effects:

It is concluded that a low risk of adverse residual impact to soils and geology during construction arises. Subject to the identified mitigation measures, no significant geohazard impacts associated with landslide susceptibility and karst erosion during both construction and operation are considered likely. Similarly, there is negligible residual impact during construction and operation to hydrogeology and the proposed development will not result in a change in status of any WFD waterbodies or prevent

any water bodies from reaching good status in the future.

Conclusion

I have considered all of the application documentation and submissions received, and I am satisfied that impacts that are predicted to arise in relation to Land, Soils and Hydrogeology would be avoided, managed and mitigated by the measures which form part of the proposed scheme. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of Land, Soils and Hydrogeology.

10.2.5. **Chapter 11: Surface Water and Flood Risk**

Likely Significant Effects:

- The existing railway is at risk of coastal and fluvial flooding, however, the proposed development will not increase the risk of flooding of the railway or elsewhere.
- Construction activity may give rise to impacts on surface water quality from contaminant and sediment runoff, spillages, discharges or physical modification of culverts.
- Impacts on drainage infrastructure and patterns from working in or near watercourses, including works at the Owenacurra River.
- Construction works may affect the flow area of existing watercourses and potentially impact existing fluvial flood risk, particularly works at the Owennacurra River bridge (OBY11) and modifications to culverts.
- Potential operational spillages create a risk of contamination or waterbodies.

Mitigation:

- Implementation of the CEMP including standard measures for the management and control of polluting substance and silt release including Ciria 532, with specific measures adjacent to karst features. Activities will be planned and managed to minimise potential impacts.
- Management and control of potentially contaminating substances and refuelling activities. All tanks and drums will be bunded in accordance with best practice guidelines.

- Appointment of an Environmental Clerk of Works.
- Adherence to IFI guidelines and best practice measures.
- Confirmatory pre-construction surveys and seasonal constraints to be agreed with IFI, and NPWS and Cork County Council, as appropriate.
- Regular water quality monitoring upstream and downstream of works areas.
- Avoiding tracks and tracking beside streams and maintaining suitable buffer zones between storage / working areas and watercourses and karst features.
- Material storage will avoid areas at risk of flooding or of flow convergence.
- Use of geotextile or timber matting on soft ground, and in all protected areas
- Minimise the period for which areas of clearance are left open. Re-instatement method statements will be subject to approval.
- Avoid wet concrete operations adjacent to watercourses where possible.
- Finalised drainage design to be agreed, in conjunction with Midleton FRS.
- Finalised design of works to extend/reconfigure existing culverts to be agreed, along with the timing of works to avoid effects on fisheries.
- Post-construction site restoration, in agreement with IFI at the culvert works areas and the Owenacurra River Bridge.
- Catch netting on the underside of the Owenacurra River Bridge.
- Drainage design will avoid discharge of surface to karst features or bedrock.
- Measures identified in the Stage 3 FRA.
- Construction compounds set back >15m from the Owenacurra riverbank and there will be no changes to ground levels or interference with flows.
- Review construction activities within watercourses or impeding flow area or inside the existing floodplain.
- Works will not be carried out during extreme rainfall or high flow events.
- An early flood warning system will allow the removal of plant and material during construction. Incorporate the flood warning system into the operation phase.
- Adherence to waste management regulations.
- Spill kits will be provided to all crews carrying out maintenance activities. Inspect trains regularly for any leaks.

Cumulative Effects

There is potential for concurrent construction activity to give rise to temporary impacts on waterbodies and water quality. The EIAR notes that recent engagement with other developments will continue and appropriate mitigation measures will be implemented including the scheduling of works to ensure impacts on water are mitigated and minimised. Completion of the Midleton flood relief scheme would have a beneficial effect for the area. Having regard to the extent and duration of works proposed and the mitigation measures identified in the EIAR and FRA, and the measures to be implemented by other projects, significant cumulative effects are not considered likely.

Residual Effects:

No significant residual effects of the construction or operational phases are identified. The proposed development will not result in a change in status of any WFD quality elements or prevent any waterbodies from reaching good status in the future. While the existing track is at risk of coastal, pluvial and fluvial flooding, the proposed track will continue to be at the same flood risk and there will be no increase in flood risk elsewhere as a result of the proposed development.

Conclusion:

I have considered all of the application documentation and submissions received, and I am satisfied that impacts predicted to arise in relation to Surface Water and Flood Risk would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of Surface Water and Flood Risk.

10.2.6. **Chapter 12 Biodiversity**

Likely Significant Effects:

Construction Phase

- Potential degradation and loss of habitats in adjoining European Sites from pollution of watercourses, direct impact to the mudflat habitat, and potential spread of invasive species.

- Potential noise and visual disturbance to wintering bird / SCI populations of Cork Harbour SPA and ex situ impacts to SCI populations of Ballycotton Bay SPA.
- Loss of habitats including tree and hedgerow removal.
- The loss of potential bat roost and foraging habitat and habitat for breeding bird species. There is potential for disturbance effects during works.
- The spread of non-native invasive species.
- Potential temporary construction impacts on water quality impacts in watercourses and downstream fisheries.
- Potential permanent significant negative effects on badger population at a local level due to direct impacts on active setts within the zone of influence.
- Potential temporary disturbance of otters utilising the coastal areas and the freshwater features.

Operational Phase

- Potential for pollutant runoff from increased service operations.
- Maintenance activities may result in some disturbance to fishery habitats.
- Increased lighting may cause disturbance effects to foraging bats.
- An increased frequency of train operations has potential to result in a localised increase in noise levels and disturbance to wintering birds / SCI species.
- Maintenance works have the potential to result in disturbance effects to SCI species and spread of invasive species impacting on supporting habitats.
- Maintenance activities could impact on breeding birds through disturbance or loss of habitat.

Mitigation:

Construction

- Implementation of the CEMP including measures for the protection of water quality and appointment of an Ecological Clerk of Works (ECOW), with review by an independent Environmental Clerk of Works (EnCoW).
- Implementation of an updated Invasive Species Management Plan.
- Minimise habitat loss and fully reinstate habitats where possible, subject to a landscape reinstatement plan and a five year after-care plan.
- There will be no direct loss of habitats in European sites.

- Pre-development confirmatory survey for rare or protected plant species.
- Pre-construction confirmatory frog surveys during the breeding season at suitable locations. Any translocation will be undertaken under license.
- Pre-construction surveys to identify any otter holts, in line with NRA Guidelines and identified additional noise mitigation proximate to active holts.
- Adherence to NRA guidance for mitigation of impacts on badger, including pre-construction surveys, timing of activity, and specific mitigation for sett evacuation, destruction and replacement under licence.
- Design and Construction of bat mitigation measures in line with NRA and NPWS Guidelines, including pre-felling surveys of trees and lighting design
- Timing of works along the shore of SPA outside the wintering bird season. Where necessary works are required, a visual and acoustic barrier will be provided to reduce noise and visual disturbance of wintering birds.
- Temporary lighting will be directed away from the SPA and standard noise mitigation measures implemented.
- Timing of vegetation clearance outside the breeding bird season. Where required during the breeding season, pre-construction surveys will inform activity. An exclusion zone will be established around any nesting birds.
- Pre-development surveys at river crossings for kingfisher and riparian breeding birds and compensate for the loss of any potentially suitable nesting sites.
- Compliance with IFI requirements and Guidelines for protection of fisheries and biosecurity. Instream works carried out outside of the salmonid spawning season within an isolated works area.

Operational Mitigation

- Unless incompatible with operational requirements, outdoor lighting design will follow recommendations from Bat Conservation Trust. Excessive light spill to vegetated features will be avoided.
- Prior to maintenance works, badger and otter surveys will be conducted.
- No trackside maintenance, or vegetation clearance will take place between Ch 0-800 during the wintering season for birds.
- Woody vegetation clearance required for maintenance will take place outside the bird breeding season or will be subject to pre-works surveys.

Cumulative Effects:

There is potential for concurrent construction activity in the area of this linear project, as described above, to give rise to cumulative effects, including in particular habitat loss, disturbance effects and impact on aquatic habitats due to release to sediments or contaminants to waters. Having regard to the temporary nature of impacts identified in this case, the nature of the habitats affected and the spread of activities along the route, and subject to implementation of the identified mitigation measures, significant cumulative effects on biodiversity are not considered likely. I refer also to the conclusions of section 11.0 of this report below, Appropriate Assessment.

Residual Effects:

Subject to the identified mitigation measures, no significant residual effects on biodiversity are not expected at construction or operational stages. No significant effects on European sites are considered likely and as per the conclusions of Section 11.0 below, Appropriate Assessment, no adverse effects on the integrity of European Sites are likely.

Conclusions

I have considered all of the application documentation and submissions received, and I am satisfied that impacts predicted to arise in relation to biodiversity would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of biodiversity.

10.2.7. **Chapter 13 Landscape and Visual**

Likely Significant Effects

Having regard to the nature of the proposed development within an existing rail corridor and the to character of the surrounding landscape, no significant negative effects on landscape are predicted during construction or operation.

The EIAR includes an assessment of 12 no. representative viewpoints along the route, aided by photomontages of the proposed development. No significant residual effects on visual amenity are identified, which conclusions are considered reasonable.

Mitigation

None proposed.

Cumulative effects

Having regard to the nature and location of the proposed development no significant cumulative effects with other plans or projects are considered likely.

Residual Effects

No significant residual effects are likely.

Conclusion

I have considered all of the application documentation and submissions received. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of landscape and visual amenity.

10.2.8. **Chapter 14 – Archaeology, Architectural and Cultural Heritage**

Likely Significant Effects

- Most impacts are likely to be direct impacts as a result of sub-surface disturbance or construction works in Areas of Archaeological Potential (AAP) – bordering the estuary at Glounthaune and at construction compounds no. 4 and 5, bordering the Owenacurra River.
- There will be direct impacts on Owenacurra Bridge (OBY11).
- Extension of UBY 2 will necessitate modifications to Haly's Bridge (OBY 2), which is listed on the NIAH.

Mitigation:

- Archaeological monitoring of sub-surface groundworks at identified AAP's.
- Retention of OBY 8, Ballyadam House Bridge.
- Protection of the historic buttresses of the Owenacurra River bridge (UBY 11).
- Piling design for retaining wall at culvert UBY 2 close to Haly's Bridge (OBY2).
- Final specification for the recording, demolition and re-building of the NE wing-wall of Haly's Bridge (OBY 2) using lime mortar and the original stone to be agreed.

- Monitoring of architectural heritage structures during construction, with 5-year post-construction maintenance inspections.

Cumulative Effects

Having regard to the nature of works along the existing rail corridor and location relative to identified plans and projects, no significant cumulative effects on cultural heritage are identified.

Residual Impacts

No significant residual impacts are identified.

Conclusion:

I have considered all of the application documentation and submissions received, and I am satisfied that impacts predicted to arise in relation to cultural heritage would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of cultural heritage.

10.2.9. **Chapter 15 – Roads and Traffic**

Likely Significant Effects:

Construction

- Construction activity is predicted to generate up to 5,500 HGV loads to and from the site (11,000 HGV movements), with a maximum of 30 loads per day.
- There is a risk of collisions and safety effects on the road network from the additional construction traffic movements and impacts on pedestrian amenity.
- Temporary delay and disruption from temporary road closures and construction traffic, including closure of Water Rock level crossing (XY009) / Castle Rock Avenue and diversions via L3617 to Carrigtwohill.
- Temporary disruption to rail services during construction. A replacement bus service will operate during this period with some delay to rail users.
- Construction compound no. 5 will be accessed from Upper Mill Road, Midleton which currently experiences peak hour queuing during level crossing closures, with possible interference with traffic flows.

- The principle operational impact arises the increased frequency of level crossing closures at both Water Rock and Mill Road and resultant delay and disruption to road users and pedestrians. In a worst-case scenario peak periods queues may not fully disperse between closures and some vehicles may be delayed for around seven minutes.
- Potential effects on level crossing operation at Myrtle Hill, Lower Glanmire Road.

Mitigation and Monitoring Measures

- Adherence to the Construction Traffic Management Plan, to be agreed with the relevant Roads Authorities, to include the routing and scheduling of traffic.
- The quality and residual capacity of identified haul routes and transport of sleepers and rails to site by train.
- The relatively low number of construction workers and their distribution at several locations along the route.
- Current traffic volumes on Castle Rock Road indicate no significant impact from more frequent level crossing closures.
- Mill Road barrier opening times will be sufficient for normal vehicle queues to dissipate between closure periods and no significant driver delay is predicted.
- Examination of the potential optimisation of train times and rationalisation of signalling systems to reduce level crossing closure periods.
- Optimisation of traffic signal timing at the existing junctions to the north and south could reduce vehicle queueing activity at the Mill Road level crossing.
- The replacement bus service will match rail capacity.
- Facilitating improved rail services will assist in mitigating traffic congestion and vehicle emissions.
- No increase in service levels beyond current infrastructure capacity until necessary interventions at Myrtle Hill level crossing are implemented.

Cumulative Effects:

Having regard to the temporary nature of activities and the quality and capacity of the identified haul routes, and subject to the agreement of a construction traffic management plan with the local / roads authority, significant cumulative effects from construction traffic with permitted and proposed developments in the area are not considered likely.

The EIAR states that prior to commencement of construction, engagement with concurrent developments will take place and measures will be implemented including the scheduling of works and regular liaison meetings to ensure that plans are co-ordinated and impacts are minimised.

Construction of the Irish Water pumping station at Mill Road, Midleton, adjacent to the railway has potential to result in temporary cumulative construction impacts, however, having regard to mitigation measures identified in respect of that development including the timing of construction traffic movements, significant impacts on traffic flows on Mill Road are not considered likely.

In respect of Water Rock Urban Expansion Area the 2018 Cork County Council Water Rock UEA Strategic Transport Assessment identified the likely operational traffic effects and road network improvements required to accommodate such development, having regard to the increased frequency of level crossing closures. The approved UEA Infrastructure Part 8 included network improvements to accommodate the first phases of development in the UEA.

The EIAR refers to potential cumulative effects with the planned upgrade to the N25 corridor between Carrigtwohill and Midleton in 2025-2026. I note that this road upgrade scheme did not secure government funding in 2022 to progress to planning and design stages, and potential cumulative effects do not therefore arise.

Residual Impacts

No significant residual traffic and road impacts are likely during the construction and operational phases.

Conclusion:

I have considered all of the application documentation and submissions received, and I am satisfied that impacts predicted to arise in relation to roads and traffic would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of roads and traffic.

10.2.10. **Chapter 16 – Noise and Vibration**

Likely Significant Effects

- Construction activity has the potential to exceed daytime noise criteria values at a number of identified noise sensitive locations.
- The majority of the construction work will occur at night, however, with potential for exceedances of the night-time noise criteria. While this arises for a limited duration (1-2 days) for a number of NSL's, certain NSL's are subject to exceedances of up to 14 days, constituting potentially significant adverse noise impacts.
- Piling works associated with retaining walls at 8 no. locations will exceed the night-time criteria at the closest receptor.
- Works at Owennacura bridge are expected to last eight weeks. Exceedances of the relevant night-time thresholds could result in adverse noise impacts on sensitive receptors.
- Construction compound activity is predicted to have potentially significant adverse impacts for night-time construction works at identified NSLs.
- Construction vibration has the potential to cause significant disturbance at a number of sensitive receptors, however, exposure duration is predicted to be less than or equal to one day and no structural damage is predicted.
- Construction activity has the potential to result in disturbance effects on wildlife, including SCI species of Cork Harbour SPA.

Operational Noise and Vibration:

- Increased rail traffic facilitated by the proposed development could result in an increase in overall noise levels along the route.
- Predicted night-time noise levels would remain similar to the existing as the number of night-time train events is assumed to remain unchanged.
- The EIAR notes that one residential property (NSL 2) would lie within 1dB of the relevant day-time limit value of 68dB. I note also that a number of other properties are predicted to be close to this value and will see operational noise increases of up to 4dB.
- The increased number of train movements will increase the number of horns sounded.
- There is potential for operational disturbance effects on wildlife, including SCI species of Cork Harbour SPA

- Vibration levels at receptors are predicted to be below identified thresholds for day or night-time periods.

Mitigation and Monitoring

Construction

- Implementation of the CEMP to include standard plant and construction mitigation measures in accordance with, best practise guidelines, including BS 5228-1:2009+A1:2014, parts 1 & 2.
- Agreement of a construction noise and vibration management plan, be developed after consultation with stakeholders and the local community, and agreed in writing with Cork County Council, to include noise and vibration monitoring protocols.
- Provision of noise insulation measures and / or temporary rehousing of residents during periods of particularly intense noise construction work (>55dB).
- Avoidance of night works where possible at predominantly residential areas while day-time construction should be avoided adjacent to the community college.
- Community liaison and engagement.
- The provision of noise barriers or site hoarding at site compounds 1, 3, 4 and 5 due to their proximity to residential receptors.
- The limited duration of construction noise and vibration emissions in excess of limit values at a number of identified noise sensitive locations.
- Application of the measure identified in section 10.2.6 of this report with regard to the timing of works and erection of acoustic barriers along the shore of Cork Harbour SPA.

Operation

- Standard maintenance activities.
- Measures at NSL 2 to be agreed including enhancement of the current noise barrier in terms of length and height and installation of acoustically treated mechanical ventilation.
- Additional mitigation along the route comprising renewal (where required) and maintenance of existing noise attenuation barriers adjacent to NSL 1, 3, NSL 6 & & (properties at Maple Lane), and provision of new barriers along the boundary with NSL 8 & 9 and along the boundary will Millbrook NSL 14 & 15.

- Patterns of roosting activity adjoining the railway and habituation of wintering birds to such noise emissions.
- Preparation of a protocol for the use of train horns to minimise the effect of this safety feature.

Cumulative effects

Construction has the potential to take place concurrent with a number of other projects, however, given the separation distances and temporary nature of construction activity and the identified mitigation measures, significant adverse construction noise and vibration impacts are not considered likely.

While additional receptors could also be constructed before operations commence, these new receptors would not be subject to higher noise or vibration levels than assessed for the existing receptors. No permanent significant cumulative noise effects are considered likley to occur.

The potential cumulative effects of the CACR programme at Kent Station environs due to an increased frequency of train movements and along the route were previously assessed in respect of the through-platform works at Kent Station and found not to give rise to significant additional noise or vibration effects on sensitive receptors. See also section 10.3 of this report above.

Residual Effects

Construction activity could result in temporary significant residual effects on adjoining residential properties. Having regard to strategic nature of the project and the constraints on the timing and location of works, subject to the identified mitigation measures the effects are regarded as acceptable.

Subject to the successful implementation of the identified mitigation measures, significant residual operational noise or vibration effects arising from the additional train movements facilitated by the proposed development are not considered likely.

Conclusion:

I have considered all of the application documentation and submissions received, and I am satisfied that impacts predicted to arise in relation to noise and vibration would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme. I am satisfied that the proposed development would

not have any unacceptable direct, indirect or cumulative impacts in terms of noise and vibration.

10.2.11. **Chapter 17 Material Assets**

Likely Significant Effects

- There is limited potential for disruption to third-party utility services during construction works.
- There will be a net positive effect from works facilitating increased service provision along the line.
- Development will give rise to excavation of c.40,000m^3 of material and a requirement for and c.38,000m3 of fill and ca. 14,000 m3 of ballast.
- Construction activity will result in waste generation.

Mitigation and Monitoring Measures

- Adherence to a Construction Resource Waste Management Plan as part of the CEMP and waste management plan and waste regulation requirements.
- All reasonable measures to avoid unplanned disruptions to utility services during the proposed works.
- Seek to maximise reuse of excavated materials and minimise disposal off-site.
- Target of an overall recycling rate of 70% for C&D waste, in accordance with EU targets under the Waste Framework Directive

Cumulative Effects

There is potential for construction activity to occur concurrently with other identified projects in the area, however, no significant cumulative construction phase impacts on material assets are likely. Identified road and haul routes are of sufficient quality to accommodate the increased traffic movements.

During the operational phase, facilitating increased service provision will be a positive effect which will serve other development in the wider area, and along with other active travel projects, will have a positive cumulative impact.

Residual Effects

The development facilitating the enhancement of rail services, will have an overall positive residual effect, serving existing development and future growth in line with local and regional planning policy.

Conclusion:

I have considered all of the application documentation and submissions received, and I am satisfied that impacts predicted to arise in relation to material assets would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of material assets.

10.2.12. **Chapter 18 – Major Accidents and/or Disasters**

Likely Significant Effects

- There are no COMAH sites in proximity to the route or likely to be affected by, or create a risk for, the proposed development.
- The existing railway is at risk of coastal and fluvial flooding, however, the proposed development will not increase this risk or give rise to an increased risk of flooding of the railway or elsewhere.
- There is a risk of ground collapse / subsidence associated with karst cavities in bedrock due to increased erosion.
- A risk of potential derailment arises in a similar manner to all rail operations.

Mitigation and Monitoring Measures

- Adherence to best practise design standards and legislation.
- Drainage design to address the risk of localised erosion in karst areas resulting in subsidence, & measures identified under Ch. 10, Land, Soils, Hydrogeology.
- Installation and operation of early flood warning systems.
- Standard operational practises satisfactorily mitigate the risk of derailment.

Cumulative Effects:

Having regard to separation from identified projects and plans, no significant cumulative effects are considered likely.

Residual Impacts

No significant residual effects predicted.

Conclusion:

I have considered all of the application documentation and submissions received, and I am satisfied that the proposed development is not likely to result in significant effects on the environment having regard its potential to cause, or its vulnerability to, major accidents or disasters. There will be no increased risk in respect of flooding and adequate mitigation is identified in respect thereof.

10.2.13. **Significant Interactions**

Population and Human Health	• Air Quality: Potential dust emissions from construction activity and traffic and potential operational emissions from increased operation of diesel trains. • Climate: Potential reduced reliance on private transport and associated emissions. • Water and Flood Risk: Potential pollution and sediment risk to watercourses and groundwater during construction. Potential operational effects due to spills or leakage of contaminants. • Roads and Traffic: Community impacts from construction traffic, delays and diversion, and from suspension of train services during construction. Potential for the operational phase to encourage modal shift and contribute to reducing congestion. • Noise & Vibration: Construction emissions impacts on the local community particularly during night-time working. Increased operational noise emissions.
Air quality	• Biodiversity: Dust deposition and soiling during construction, can impact water quality and vegetation. • Roads and Traffic: Potential impacts from emissions from construction vehicles and traffic. Operational effects from increased vehicle queuing at level crossings and potential increased use of diesel trains.

Climate	• Water and Flood Risk: Climate change increases potential future flood risk. • Biodiversity: Facilitating modal shift and a future reduction in emissions will reduce effects on habitats, flora and fauna. • Roads and Traffic: Facilitating modal shift will contribute to a reduction in private vehicle use and emissions.
Land, Soils & Hydrogeology	• Water and Flood Risk: Construction works and sediment run-off create a risk to watercourses and water quality. • Biodiversity: Excavation and construction runoff has potential to impact on conservation sits and watercourses and creates a risk of spread of invasive species. There will be direct effects from the removal of badger setts. • Archaeology, Architectural and Cultural Heritage: Potential direct impact on previously unrecorded archaeology from excavation or disturbance of ground and drainage patterns. Excavation of archaeological materials has potential to expand knowledge and understanding of the history of the area.
Water and Flood Risk	• Biodiversity: Potential for release of sediment or contaminants to surface and ground water watercourses particularly during construction, with impacts on aquatic species and downstream conservation sites. • Traffic and Transport: There is potential for sediment / contaminant run off from local roads during construction.
Biodiversity	• Noise & Vibration: Disturbance effects during construction and from increased operational train frequency, including effects on wintering and breeding birds. • Potential disturbance effects during maintenance activities.
Archaeology, Architectural and Cultural Heritage	• Material Assets: Potential for impacts on previously unrecorded archaeology during excavation works or ground disturbance.

Traffic & Transport	• Noise & Vibration: Traffic noise is likely to arise from movement of construction traffic with potential impacts during night-time works. Operational train movements will result in increased noise levels along the line. • Material Assets: The transportation of materials and waste to and from site has the potential to impact on local traffic and transport patterns during construction.

Reasoned Conclusion on the Significant Effects

Having regard to the examination of environmental information contained above, and in particular to the EIAR and other information provided by the developer, and the submissions from the planning authority, prescribed bodies and observers during the course of the application and the oral hearing, it is considered that the main significant direct and indirect effects of the proposed development on the environment are, and will be mitigated as follows:

Construction activity will give rise to noise and vibration emissions, with temporary significant effects on adjoining sensitive receptors. Such effects from such activities would be adequately mitigated by:

- Implementation of the CEMP to include a construction noise management plan based on best practise mitigation measures and adherence to guidelines for such activities, including BS 5228-1:2009+A1:2014, parts 1 & 2.
- Implementation of a comprehensive noise and vibration monitoring protocol to be agreed.
- Community liaison and engagement.
- Appointment of an Ecological Clerk of Works (ECOW).
- The short-term nature of the activities.
- Provision of noise insulation measures and / or temporary rehousing of residents during periods of particularly intense noise construction work in accordance with relevant guidance.

- Avoidance of night works where possible at residential areas, and of day-time works adjacent to the community college.

Increased frequency of train movements facilitated by the proposed twin tracking will result in an increase in operational noise levels along the line. The impacts from such additional movements would be adequately mitigated by:

- Specific measures at NSL 2, as described at the oral hearing, to include the installation / enhancement of noise barriers and installation of acoustically treated mechanical ventilation, subject to agreement with the property owners.
- Embedded design measures, including the use of continuously welded track and removal of a track expansion joint and existing points in proximity to NSL2.
- Standard maintenance activities to reduce rail noise.
- Additional mitigation along the route comprising renewal and maintenance of existing noise attenuation barriers and provision of new barriers along the boundary with NSL 8 & 9 and along the boundary with Millbrook, Midleton, at NSL 14 & 15.
- The development of and application of a protocol for the use of train horns along the line.

Construction activity will result in excavation and clearance of vegetation and soils along the corridor, with risk of the release of sediment or other contaminants to surface and groundwaters and potential impacts on karst features in the area. The impacts from such activities would be adequately mitigated by:

- Adherence to provisions of the finalised CEMP, including standard, best practise guidance and measures, measures for the control of earthworks, soils, materials and pollutants, drainage design and the management of surface waters, and protocols to deal with contaminated soils.
- Appointment of an Ecological Clerk of Works (ECOW).
- Soil and stockpile management, including separation from waterbodies and from areas subject to flooding.
- Measures for the identification and design of works in the vicinity of karst features and drainage design to avoid discharge to identified karst area or features.

- Adherence to IFI guidance and best practice for the protection of fisheries, including the timing of works and post-construction site restoration.
- Application of an early flood warning system during the construction and operational phases.

Construction and maintenance activity will result in the removal of terrestrial habitat and potential disturbance and displacement of species occurring on or around the site during construction and operational phases, including wintering birds. The impacts from such activities would be adequately mitigated by:

- Adherence to the provisions of the CEMP and appointment of an Ecological Clerk of Works (ECOW).
- Pre-development surveys for ecological features of interest and adherence to any relevant licencing requirements.
- Reinstatement of habitats on completion of works.
- Adherence to published guidance and best practise in respect of potential impacts on badger and otter, including guidelines published by the NRA.
- Design and construction of bat mitigation measures, in line with NRA and NPWS Guidelines, including pre-felling surveys of trees and lighting design.
- Timing of construction works outside the wintering bird season or alternatively, the installation of a visual and acoustic barrier from Ch 340 to 850, with temporary lighting directed away from the SPA.
- Timing of vegetation clearance and trackside maintenance outside the breeding bird season or pre-construction surveys to inform activity where required.
- Implementation of an updated Invasive Species Management Plan.
- Compliance with IFI requirements and Guidelines for protection of fisheries and biosecurity, during construction and operation.
- Outdoor lighting design in line with published guidelines, where operational requirements permit, including the use of LED lighting with no UV element. Excessive light spill to vegetated features will be avoided.

Traffic generated during construction will give rise to potential disturbance and congestion on the local road network, which would be adequately mitigated by:

- Implementation of a Construction Traffic Management Plan including the routing and scheduling of construction traffic.
- The existing quality and residual capacity of identified haul routes and the short-term nature of construction activities.

Excavation and development of the site will give rise to direct impact on features of archaeological interest and previously unrecorded features. The impacts would be adequately mitigated by:

- Archaeological monitoring of sub-surface groundworks at identified AAP's.
- Retention of OBY 8, Ballyadam House Bridge.
- Protection of historic buttresses of the Owenacurra River bridge (OBY11).
- Piling design for retaining wall at culvert UBY2 at Haly's Bridge (OBY2).
- Specification for works affecting the NE wing-wall of Haly's Bridge (OBY 2) to be agreed.
- Monitoring of architectural heritage structures during construction, with post-construction maintenance inspections.

I have 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.

Cumulative Impacts and Impacts from interactions

It is considered that effects as a result of interactions, indirect and cumulative effects can be avoided, managed or mitigated by the measures which form part of the proposed development, the proposed mitigations measures detailed in the Environmental Impact Assessment Report and the additional documentation furnished, and with suitable conditions. There is, therefore, nothing to prevent the approval of the development on the grounds of significant environmental effects as a

result of cumulative impacts or impacts arising from interactions between environmental factors.

Conclusion

The submitted EIAR has been considered with regard to the guidance provided in the *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment*, Department of Housing, Planning, Community and Local Government (2018), *Guidelines on the Information to be contained in Environmental Impact Assessment Reports*, EPA 2022, and (Draft*) Advice Notes for Preparing Environmental Impact Statements* Environmental Protection Agency 2015.

The assessments provided in the individual EIAR chapters and supplementary documentation submitted to the Board, are considered to be satisfactory. The likely significant environmental effects arising as a consequence of the proposed development have otherwise been satisfactorily identified, described and assessed. They would not require or justify refusing permission for the proposed development or require significant amendments thereto.

11.0 Appropriate Assessment

11.1. Introduction

11.1.1. This section details the appropriate assessment of the Designated Development, comprising an assessment of all aspects that could affect the conservation objectives of European sites and presents precise and definitive conclusions as to the implications for the overall integrity of those sites.

11.1.2. Proposed Development

The proposed development will involve the upgrade and enhancement of the existing Glounthaune to Midleton railway line to a twin track configuration over a total distance of approximately 10km. The development comprises the following principal elements:

- Twin tracking of the single-track sections between Glounthaune and Midleton.

- Reconfiguration of the operational track layout.
- Widening of bridge deck (UBY11, crossing the Ownenacurra River).
- Extinguishment of one level crossing (Ford CCTV XY010) and widening of one level crossing (Water-Rock CCTV XY009).
- Provision of sidings/turn back facility at Midleton Station.
- Provision of new cable containment routes from Glounthaune to Midleton to facilitate signalling upgrades and alterations.
- Associated signalling upgrades and alterations; and
- All associated works (e.g. temporary construction compounds; drainage, retaining walls, boundary treatments).

The development is described in detail in section 2.0 above and in section 6.0 of the EIAR and section 2.4 of the NIS.

11.1.3. Documentation Submitted and Methodology

The application was accompanied by

- A Report to Inform Screening for Appropriate Assessment (Nov 2022), &;
- A Natura Impact Statement (Nov 2022)

Supporting documents / appendices to the NIS include:

- Drawings Outlining the Proposed Development.
- Habitats Maps
- A Construction Environmental Management Plan.

The NIS identifies and scientifically assesses possible adverse effects of the proposed development, alone and in combination with other plans and projects on European sites in view of their conservation objectives and identifies mitigation measures designed to avoid and/or reduce adverse effects. It is considered that these documents were prepared by suitably qualified and experienced professionals.

The applicant's description of the methodology includes:

- Habitat surveys in April 2022 and in July / August 2022, including observations of breeding birds.
- Winter bird surveys (January - March 2022 inclusive) to identify waterfowl roosts or foraging areas in the vicinity of the proposed development. Surveys / counts of

waterfowl were also conducted of potentially suitable lands (farmland) within approximately 0.5km of the SPA, to confirm high tide roost locations. This was focussed between Glounthaune station east to chainage 850m, adjacent to the SPA boundary (intertidal mudflats) / zone of influence of the development during construction.

In additional supplementary wintering bird survey data (Oct 2022 – March 2023), was provided to the oral hearing to support the information contained in the NIS. This assessment has had regard to this supplementary data.

The applicant's Screening Report refers to consultations with the following bodies in 2022:

- Cork County Council
- DAU
- Dept. of Housing, Planning and Local Government.
- IFI

A number of submissions and observations have been received in relation to the application, including submissions from Cork County Council and IFI.

11.2. Appropriate Assessment

Article 6(3) of the Habitats Directive requires that any plan or project not directly connected with or necessary to the management of a European site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to appropriate assessment of its implications in view of the site's conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of the European site.

The proposed development is not directly connected with or necessary to the management of any European site. The requirements of Article 6(3) as related to appropriate assessment of a project considered under Part XAB of the Planning and Development Act 2000 (as amended) are considered fully in this section.

11.3. Stage I - Screening the Need for Appropriate Assessment

The screening stage aims to establish if the proposed development is likely to result in significant effects on any European site. If the possibility of significant effects cannot be excluded on the basis of objective information, without extensive investigation or the application of mitigation, a plan or project should be considered to have a likely significant effect, and Appropriate Assessment should be carried out.

The applicant's Screening Report identifies the potential Zone of Influence (ZoI) of the proposed development in respect of construction and operational phases, and based on the source-pathway-receptor model, the following European Sites were identified for screening:

Site	Qualifying Interests	Separation / connection	Likely effect?
Great Island Channel SAC (001058) (NPWS, 2014)	Mudflats and sandflats not covered by seawater at low tide [1140]. Atlantic salt meadows [1330]	The development site overlaps with the northern edge of the SAC. The development also crosses watercourses with downstream connectivity to the SAC.	Given its location relative to the European site, and the identified downstream hydrological connectivity, a viable source-pathway connection is identified.
Cork Harbour SPA (004030) (NPWS, 2014)	Little grebe [A004] Great crested grebe [A005] Cormorant [A017] Grey heron [A028] Shelduck [A048] Wigeon [A050] Teal [A052] Pintail [A054] Shoveler [A056] Red-breasted merganser [A069] Oystercatcher [A130] Golden plover [A140]	The development site immediately adjoins the SPA over a distance of approx. 800m. There is potential for SCI species to occur outside of the SPA boundary in proximity to the development in suitable supporting habitat. Additionally, the	No direct impacts are likely. Given the location of the development relative to the SPA boundary, and the identified downstream hydrological connectivity, a viable source pathway connector link is identified.

	Grey plover [A141] Lapwing [A142] Dunlin [A149] Black-tailed godwit [A156] Bar-tailed godwit [A157] Curlew [A160] Redshank [A162] Black-headed gull [A179] Common gull [A182] Lesser black-backed gull [A183] Common tern [A193] Wetland and waterbirds [A999]	Proposed Development crosses three watercourses with downstream connectivity to the European site and supporting habitats.	There is potential for disturbance / displacement effects on foraging and roosting activity.
Ballycotton Bay SPA (004022)	Teal [A052] Ringed plover [A137] Golden plover [A140] Grey plover [A141] Lapwing [A142] Black-tailed godwit [A156] Bar-tailed godwit [A157] Curlew [A160] Turnstone [A169] Common gull [A182] Lesser black-backed gull [A183] Wetland and waterbirds [A999].	The SPA is located approx. 13km from the works area, however, qualifying interests may occur outside of the SPA and mix with other SCI in Cork Harbour SPA. There is potential, therefore, for ex-situ impacts on SCI species in suitable supporting habitat.	Given the potential for ex-situ disturbance / displacement effects on SCI species within the ZoI of the development a viable source pathway connector link is identified.
Blackwater River (Cork/Waterford) SAC (002170) (NPWS, 2012)	Estuaries [1130] Mudflats and sandflats not covered at low tide [1140] Perennial vegetation of stony banks [1220]	The closest extent of the SAC is approx. 12km north of the development, and lies within a	Given the location of the development relative to the SAC, no viable source pathway connector links are identified.

	Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows [1330] Mediterranean salt meadows [1410] Water courses of plain to montane levels with Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Alluvial forests with Alnus glutinosa and Fraxinus excelsior [91E0] Freshwater pearl mussel [1029] White-clawed crayfish [1092] Sea lamprey [1095] Brook lamprey [1096] River lamprey [1099] Twaite shad [1103] Salmon [1106] Otter [1355] Killarney fern [1421]	separate catchment.	

I regard the conclusions of the applicants Screening Report as reasonable, with regard to the sites screened in for Stage II assessment.

At the oral hearing it was suggested by an observer that the assessment should consider the increased frequency of movements which would be facilitated between

Midleton and Mallow, as part of the Cork Area Commuter Rail programme, and that the Blackwater River SAC should therefore be included in the assessment.

In this regard I note the scope of works described in this application which will facilitate increased rail frequencies between Midleton and Kent Station. The increase in rail movements along the line on the Great Island SAC, Cork Harbour SPA and Ballycotton Bay SPA has been assessed in the submitted NIS. There is no dependency on the proposed development for increased suburban rail frequency between Mallow and Kent Station, and I note that that section of the rail network is already twin track. Such movements would be outside the scope of the project currently before the Board. I therefore concur with the conclusions of the applicant's Screening Assessment that the Blackwater River SAC does not require Stage II assessment.

In Combination Effects

Having regard to the linear nature of the project and the development plan objectives for the surrounding area, there are a large number of proposed and consented projects with potential to act in combination with the proposed development. I note the review of planning applications in the vicinity of the proposed development undertaken by the applicants and the projects identified in the written submission of Cork County Council. Section 10.4.9 of this report below considers these projects in more detail.

11.3.1. **Screening Conclusion**

On the basis of the information on the file and the submissions to the oral hearing, including the AA Screening Report and supporting information, and having regard to the nature and scale of the proposed development and likely effects, proximity and functional relationship between the proposed works and European sites and their conservation objectives, and taken in conjunction with my assessment of the subject site and the surrounding area, I conclude that the proposed development could result in significant effects on three European sites (Great Island Channel SAC (001058), Cork Harbour SPA (004030) and Ballycotton Bay SPA (004022)) and that Appropriate Assessment is required to determine if adverse effects on site integrity

can be ruled out. There is also the potential likelihood for significant in-combination effects with other plans or projects or activities.

I confirm that the sites screened in for appropriate assessment are the sites included in the NIS prepared by the applicant. The conclusions are summarised in the tables below.

Site code	European Site	Separation Distance	Connections (source, pathway receptor)	Considered further in screening
001058	Great Island Channel SAC	0	Water, air	Y
004030	Cork Harbour SPA	0	Water, air	Y
004022	Ballycotton Bay SPA	c.13km	Ex-situ – water, air	Y
002170	Blackwater River (Cork / Waterford) SAC	c. 12km	No pathway	N

The potential for significant effects on the conservation objectives of European Sites outside of the zone of influence can be screened out with confidence because of the separation distances and the lack of substantive ecological linkages or pathways between the proposed works and other European sites.

In reaching the conclusion of the screening assessment, no account was taken of measures intended to avoid or reduce the potentially harmful effects of the project on any European Site.

11.4. Natura Impact Statement

11.4.1. The NIS accompanying the application examines and assesses potential adverse effects on the conservation features of the European Sites and concludes that the identified mitigation measures will ensure that no adverse effects on the integrity of any European sites in light of the site's conservation objectives are likely.

I have reviewed the AA Screening Statement, the NIS, and supporting documentation and the submissions received on the case, and submitted to the oral

hearing. These documents provide adequate information in respect of the baseline conditions and the identification of potential adverse impacts. Details of mitigation measures set out in Section 7 of the NIS comprise embedded, general and site-specific measures.

I am satisfied that sufficient information is available to the Board to allow for a complete assessment of the designated development in view of the requirements of appropriate assessment, and that precise and definitive findings can be reached with regard to the implications of the project on European Sites.

11.4.2. **Basis for Assessment**

The following is an objective assessment of the implications of the project on the relevant conservation objectives of the European sites, based on the best available knowledge. All aspects of the project which could result in significant effects are assessed and mitigation measures designed to avoid or reduce any adverse effects are examined and assessed. I have had regard to the following guidance:

- 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. (2009).
- Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EC (2002)
- Guidelines on the implementation of the Birds and Habitats Directives in Estuaries and coastal zones EC (2011)
- Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC (2018).

The following European Sites have been screened in for Stage II Assessment:

- Great Island Channel SAC (001058)
- Cork Harbour SPA (004030)
- Ballycotton Bay SPA (004022)

A description of these European sites and their Conservation Objectives and Qualifying Interests, including relevant attributes and targets, are set out in section 4.0 of the NIS and are summarised above. I have also examined the relevant Natura 2000 data forms and Conservation Objectives Supporting Documents for these sites available through the NPWS and European websites (www.npws.ie and https://natura2000.eea.europa.eu).

11.4.3. **Receiving Environment**

Great Island Channel SAC:

QI	Conservation Objective	National Conservation Status and Trend
Mudflats and sandflats not covered by seawater at low tide [1140]	To maintain the favourable conservation condition	Inadequate and deteriorating
Atlantic salt meadows [1330]	To restore the favourable conservation condition	inadequate and deteriorating

The proposed development site adjoins and marginally overlaps with the SAC along its northern edge. The site-specific conservation objectives identify tidal mud flat habitat within 20-50m of the development site, south of Glounthaune Station. The closest area of potential Atlantic Salt Meadow habitat mapped in the published conservation objectives, is located c.400m south of the site. The application records an area of degraded upper saltmarsh habitat approx. 10m south of the development footprint (Ch,800-900) located outside but immediately adjacent to the SAC. Such habitat is noted to have links to the Annex I habitats, “Atlantic salt meadows (1330)’, which is a QI habitat of the SAC.

An area of Mud Shore was recorded to the south of Glounthaune Station and has links to the Annex I habitat “Mudflats and sandflats not covered by sea water at low tide (1140)”.

The Natura 2000 Standard Data Form (NPWS 2019) for the SAC identifies those impacts and activities with high negative effects on the site. While non-native invasive species have been recorded during surveys of the development site, none

of the other impacts and activities identified in the Data Form are associated with the proposed development.

Cork Harbour SPA

QI	Conservation Objective	Long-Term Population Trend
Little grebe	To maintain the favourable conservation condition	Stable or increasing
Great crested grebe		Intermediate decline
Cormorant		Stable or increasing
Grey heron		Stable or increasing
Shelduck		Stable or increasing
Wigeon		Intermediate decline
Teal		Stable or increasing
Pintail		Intermediate decline
Shoveler		Intermediate decline
Red-breasted merganser		Intermediate decline
Oystercatcher		Stable or increasing
Golden plover		Large decline
Grey plover		Large decline
Lapwing		Large decline
Dunlin		Moderate decline
Black-tailed godwit		Stable or increasing
Bar-tailed godwit		Intermediate decline
Curlew		Moderate decline
Redshank		Stable or increasing
Greenshank		Stable or increasing
Black-headed gull		Unknown
Common gull		Unknown
Common tern		Increasing
Lesser black-backed gull		Unknown
Wetland and waterbirds	To maintain favourable conservation condition of the wetland habitat as a resource for the regularly-occurring migratory waterbirds that utilise it.	NA

The proposed development is located outside of but immediately adjacent to, the SPA. None of the impacts and activities with high negative effect on the SPA, which are identified in the Natura 2000 Standard Data Form are likely to arise from the proposed development.

Winter surveys did not record concentrations of wintering waterfowl outside the SPA. All concentrations were within the SPA boundary, particularly in the Harper's Island area, where the main flocks were recorded (generally > 100m from potential works areas). Harpers Island is an important feeding and roosting site for wintering birds within the SPA, and surveys have identified internationally important numbers of numbers of Black-Tailed Godwit at this location. Other counts of note were Black-Backed Gull, Dunlin, Curlew, Little Grebe, Redshank, Shelduck and Teal. Mapping in the published Site-Specific Conservation Objectives indicates that the closest roosting area to the proposed development are 30m to the south, associated with redshank and greenshank.

The 2022/2023 survey results noted that September and January were the peak periods for wintering birds. The NIS and EIAR report small, scattered roost areas of gull, waterfowl and wader species were recorded within up to 20m of potential works areas, east of Glounthaune station (Chainage 340m to 800m), within the ZoI of the construction phase. The 2022/2023 surveys recorded roosting activity on the rock armour alongside the existing railway which suggests that regular noise disturbance from train passing movements is not a significant issue for wintering birds.

Ballycotton Bay SPA

QI	Conservation objective	Long-term population trend
Teal	To maintain the favourable conservation condition	Stable or increasing
Ringed plover		Intermediate decline
Golden plover		Large decline
Grey plover		Large decline
Lapwing		Large decline
Black-tailed godwit		Stable or increasing
Bar-tailed godwit		Intermediate decline
Curlew		Moderate decline
Turnstone		Intermediate decline
Common gull		Unknown
Lesser black-backed gull		Unknown

This site is remote from the proposed development (c.13km) and there is no direct hydrological connection thereto. There are no core roosting areas within the ZoI of the proposed development. There is potential, however for mobile SCI species associated with this SPA to occur in close proximity to works areas, using habitats within the Cork Harbour SPA. The results of the wintering bird surveys referenced above are therefore relevant in this regard.

Watercourses

Specialist aquatic surveys of waterbodies within and downstream of the development were undertaken, including Killacloyne Stream, Tibbotstown River, Water Rock River and the Owenacurra River which watercourses drain to the European sites. Several aquatic species present in the study area are QI of other European sites, however, none of the species recorded during the aquatic surveys of the five sites are QIs for the Great Island SAC or Cork Harbour SPA. There is potential for watercourses to act as a pathway for impacts on these European Sites however.

Invasive Species

Surveys of the development site identified the presence of 4 no. species of scheduled non-native invasive species.

11.4.4. **Impact Prediction:**

Section 5.0 of the NIS identifies potential impacts on the QIs/SCIs of the European sites, as follows:

Construction Phase Impact Types

- Potential direct habitat loss.
- Noise and Vibration
- Pollution/Sedimentation Associated with Construction
- Human, Lighting and Machinery Presence – Visual Disturbance
- Dewatering associated with construction (however, there are no GWDTEs associated with European sites located within >2km of the development.)

- Lighting
- Introduction/Spread of Invasive Species
- Dust

Operational Phase Impact Types

- Increased noise and disturbance, and lighting effects.
- Potential spread of invasive species.

These are considered to reasonably describe the potential effects of the proposed development on the European Sites, and the following conclusions can be reached.

Great Island Channel SAC

- There is no potential, for direct loss of, or impacts to, existing QI or supporting non-designated habitat within the SAC.
- There are no noise or vibration sensitive QIs associated with the SAC.
- Pollution or degradation of water quality has the potential to negatively impact on invertebrate communities associated with mudflats and sandflats.
  There is a risk of contaminants or pollutants entering groundwater, particularly in karst areas, with potential downstream impacts on the site.
- Sediment release will not impact on Salt Marsh habitats or result in enrichment.
- There is potential for the spread of invasive species during construction.
- Potential significant operational effects arising from the spread of invasive species and water quality are limited to maintenance activities.

Cork Harbour SPA

- There is no potential for direct impacts on mudflat, saltmarsh or other habitats used by SCI birds within the SPA.
- Deterioration in water quality has the potential to result in a degradation of mudflat and sandflat habitats and invertebrate communities, which are important for foraging birds.
- There is potential for noise disturbance of wintering birds from noise from construction activities, which will be limited in duration and extent.

- There is potential for visual (human presence) and lighting disturbance of SCI species within the SPA during the construction phase.
- There is potential for the spread of invasive species.
- Increased operational noise levels from increased frequency of trains could result in disturbance or displacement effects. Wintering birds are already subject to regular train noise, however, such that significant effects from the predicted additional noise levels are not considered likely to arise. Water birds regularly adapt to non-impulsive predictable noise, similar to train noise.

- No change will arise to operational lighting in the vicinity of any European sites.
- Maintenance works have the potential to cause increased spread of invasive species within the SPA and potential disturbance effects.

Ballycotton Bay SPA

- There is no potential for direct impacts to supporting habitat within the SPA. There is no hydrological connectivity and no potential for impacts associated with surface water emissions.
- There is potential for temporary ex-situ noise, visual (human presence) and lighting disturbance of wintering birds using the adjoining site from construction activities.
- While the NIS indicates that given the wide dispersion of SCI across habitats in the wider Cork Harbour area, significant ex-situ effects are not likely, I consider that the potential effects and the mitigation measures identified in respect of Cork Harbour SPA are relevant to Ballycotton Bay SPA.
- There is no potential for significant effects from the spread of invasive species to Ballycotton SPA, however, effects on ex-situ supporting habitats are possible.
- Operational effects reflect those identified in respect of Cork Harbour SPA.

11.4.5. Potential for Adverse Effects on Site Integrity

Great Island Channel SAC		
QI	**Impact**	**Adverse effect**
Mudflats and sandflats not covered by seawater at low tide [1140]	No encroachment and no direct loss of habitat.	

Attribute	**Target**	Potential for temporary surface water pollution run-off to enter the habitat during construction, however, there will be no permanent loss of habitat area within the SAC. Potential for temporary impacts on water quality from pollution of watercourses and through groundwater contamination. The release of cement fines can result in changes in pH with impacts on invertebrate communities and their distribution.	
Habitat area	Stable or increasing subject to natural processes		None
Community Distributio**n**	Conserve community type in a natural condition: Mixed sediment to sandy mud with polychaetes and oligochaetes community complex		Potential for adverse effects on site integrity
Atlantic Salt Meadows [1330]			
Attribute	**Target**		
Habitat Area	Stable or increasing, subject to natural processes.	No ingress into salt meadow habitat. There will be no loss or decline of salt meadow habitat area.	None
Habitat Distribution	No decline or change		
Physical structure: Sediment supply	Maintain / restore natural circulation of sediments and organic matter, without physical obstructions	No ingress into salt meadow habitat. There are no physical barriers that might alter natural circulation of sediment or organic material.	
Physical Structure: Creeks and pans	Maintain/restore creek and pan structure, subject to natural processes, erosion and succession	There will be no ingress into salt meadow habitat and no alteration to the physical structure of the salt marsh.	
Physical structure: flooding regime	Maintain natural tidal regime	There will be no ingress into salt meadow habitat and no alteration to the natural tidal regime	
Vegetation structure: zonation	Maintain range of coastal habitats including transitional zones, subject to natural processes, erosion and succession	Potential spread of invasive species and establishment in areas subject to less tidal inundation, with the potential to cause changes to the zonation within the salt meadow habitat.	Potential adverse effects
Vegetation structure: height	Maintain structural	Where invasive species become established, there is potential for	

	variation within sward	a loss of structural variation within the swards.	
Vegetation Structure: cover	Maintain > 90% area outside creeks vegetated	Where invasive species become established, there is potential for increase in bare earth following winter die back	
Vegetation composition	Maintain range of sub-communities with typical species	Where invasive species become established, there is potential to alter vegetation composition, with a loss of species typically associated with salt marsh	
Vegetation structure: negative indicator species	No significant expansion of common cordgrass (annual spread <1%)	Common cordgrass has not been identified. No potential for its introduction or expansion as a result of the works.	None

Cork Harbour SPA			
QI		**Impact**	**Adverse effect**
Little grebe Great crested grebe Cormorant Grey heron Shelduck Wigeon Teal Pintail Shoveler Red-breasted merganser Oystercatcher Golden plover Grey plover Lapwing Dunlin Black-tailed godwit Bar-tailed godwit Curlew Redshank Greenshank Black-headed gull Common gull Common tern Lesser black-backed gull		No direct loss of roosting or foraging habitat. Potential impacts arise in relation to temporary noise and visual disturbance during construction activity or operational maintenance activities. For many species low numbers are recorded in the vicinity of the site, relative to the overall numbers occurring within the SPA and no long-term reduction in population trends or distribution is likely. Internationally important numbers of Black-Tailed Gotwit are recorded at Harper's Island, however, while other species occur in notable or nationally important numbers, including Dunlin, Lapwing, Black-Headed Gull, Curlew, Little Grebe, Redshank, Shelduck and Teal. There is potential for significant construction disturbance effects, although there will continue to be significant suitable areas available to SCI outside the ZoI of the development.	Potential temporary adverse effects due to disturbance and displacement during construction or operational maintenance
Attribute:	Target:		
Population Trend	Stable or increasing		
Distribution	No significant decrease		

		Increases in operational noise not considered likely to result in significant disturbance effects. In the absence of mitigation, adverse effects cannot be ruled out.	
QI			
Wetlands		Reductions in water quality by accidental pollution of surface and ground waters has the potential to degrade wetland habitats, which are key foraging habitat for SCI birds. The accidental spread of invasive species could degrade salt marshes and reduce wetland quality, lowering the carrying capacity for wetland birds. However, this will not constitute a reduction in the permanent area occupied by wetland habitats.	None
Attribute:	Target:		
Habitat Area	Stable and not significantly less than 2587ha.		

Ballycotton Bay SPA			
QI		**Impact**	**Adverse effect**
Teal Ringed plover Golden plover Grey plover Lapwing Black-tailed godwit Bar-tailed godwit Curlew Turnstone Common gull Lesser black-backed gull		No loss of suitable roosting or foraging habitat. Potential ex-situ impacts arise in relation to temporary noise and visual disturbance during construction activity or operational maintenance. For many species low numbers are recorded in the vicinity of the site, relative to the overall numbers occurring within the SPA and no long-term reduction in population trends or distribution is likely. Internationally important numbers of Black-Tailed Gotwit are recorded at Harper's Island, however, while other species occur in notable or nationally important numbers, including Lapwing, Curlew and Teal. There is potential for significant ex-situ construction disturbance effects, although there will	Potential temporary adverse effects due to ex-situ disturbance and displacement during construction and maintenance.
Attribute:	**Target**:		
Population Trend	Stable or increasing		
Distribution	No significant decrease		

		continue to be significant areas available to SCI outside the ZOI of the development. Increases in operational noise not considered likely to result in significant disturbance effects. Without mitigation, adverse effects cannot be ruled out.	

11.4.6. **Mitigation:**

Section 7.0 of the NIS summarises the mitigation measures in respect of the potential effects on relevant European Sites, and broadly classifies them as follows:

Measure	Great Island Channel SAC	Cork Harbour SPA	Ballycotton Bay SPA
Protect water quality	✓		
Mitigate disturbance to Wintering Birds		✓	✓
Mitigate Spread of Invasive Species	✓		

General

An ECoW will be employed by the Contractor to oversee implementation of the mitigation measures, while an independent Environmental Clerk of Works (EnCoW) will be employed by the Employers Representative team, who will review outputs from the contractor's ECoW.

Mitigation Against Surface and Ground Water Pollution - General

- Measures prescribed as standard best construction practice and aligned with CIRIA Guidelines C532, including measures to prevent the runoff of concrete into nearby watercourses and drains.

- Where concrete pours are required within a watercourse, regular monitoring of the pH of the watercourse will be undertaken and appropriate remedial action identified where required.
- Specific measures and design for watercourse crossings and in-stream works and compliance with IFI Guidelines.
- The management and control of equipment to prevent leaks or spillages.
- The management and control of hydrocarbons or other contaminants.
- A pre-construction survey of karstic features and provision of a buffer area surrounding such features. Additional pollution prevention measures, such as double silt fencing, will be applied where excavation occurs adjacent to an identified feature.
- Storage of materials will avoid areas at risk of surface water or groundwater flooding or areas of convergence of flow.
- New drainage will avoid discharge to any karst feature or area of karst bedrock.

Mitigation Against Disturbance to Wintering Birds

- All works along the coastal section are proposed during the summer.
- If works are proposed between September - March then sound reducing hoarding will be placed along works area to reduce noise impacts and the visibility of workers. (Chainage 340m and 850m.)
- Any temporary lighting will be cowled and angled away from the SPA and watercourses.
- All plant will be the quietest of its type practical and will be operated and maintained in accordance with the manufacturer's recommendations, including the use and maintenance of specific noise reduction measures.
- No operational track maintenance of vegetation clearance between ch.0-800 during the wintering season for birds / September – March.

Mitigation to Prevent the Spread of Invasive Species

It is an offence under Regulation 49 of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) to plant, disperse, allow, or cause to disperse, spread or otherwise cause to grow any plant species specified in the Third

Schedule. Identified biosecurity measures will be implemented to prevent the introduction and/or spread of invasive species. This is an obligation regardless of proximity to any European Site and is not a strict mitigation measures under the Habitats Directive.

11.4.7. **Further discussion:**

Section 7.0 of the NIS describes the mitigation measures for SCI birds in SPA sites as precautionary (not strictly required) for SCI birds in SPA sites, to minimise localised noise and visual disturbance if required. It indicates that mitigation is adaptive and will be decided by the site EcoW based on the results of monitoring of bird distribution, if the timing of works beside Cork Harbour SPA extends into the main winter season (October to March inclusive).

Notwithstanding this statement, I consider it appropriate that placement of barriers along the boundary of the works area be prescribed rather than discretionary, that it be undertaken where works overlap with the wintering bird season (Sept – March), notwithstanding the results of any monitoring undertaken, in order to obviate potential adverse effects in accordance with Table 7.3 of the NIS. In the event of a decision to grant the railway order, a condition providing clarity in this regard would be appropriate.

Section 2.6 of tThe NIS predicts that the zone of influence of the development in respect of noise disturbance effects on roosting and foraging wetland wintering birds within the SPA is 40m after which it predicts that construction noise levels will fall to below the identified criteria value of 65dB (potential disturbance level to birds. This is stated to be based on a 2009 study by Cutts et al[2]. Section 5.3.2 refers to the predictions of the EIAR that track installation work is the key source of noise and that the distance at which the sound level falls below 65dB) is 54m. The NIS indicates that the 65dB noise level only includes a very small portion of the edge of the SPA and will further reduce before it reaches the main mudflat areas and the northern

[2] 1 Cutts, N., Phelps, A., & Burdon, D. (2009). Construction and waterfowl: Defining sensitivity, response, impacts and guidance. Report to Humber INCA by the Institute of Estuarine and Coastal Studies, University of Hull. EN (2003) The Humber Estuary European Marine Site: English Nature's advice given under Regulation, 33(2)

edge of Harpers Island. The NIS identifies a zone of temporary elevated noise of >50dB, which extends for 300m from works areas.

In considering potential disturbance effects, I note more recent studies and publications from the University of Hull (Cutts et al 2013), "*The Waterbird Disturbance Mitigation Toolkit*"[3], which examines construction activity and suggests the following likely disturbance effects:

- high level disturbance effects on birds are likely with continuous noise above 72dB, or sudden noise above 60dB;
- moderate level disturbance effects are likely with regular noise of 60 – 72dB or sudden noise of 55 – 60dB; and,
- there is unlikely to be any response by waterbirds to any noises below 55dB.

This is considered to form a reasonable basis for assessment of potential disturbance effects. The toolkit also considers potential visual disturbance effects on waterbirds.

During the oral hearing further detail on the potential noise effects of construction activity on roosting and foraging birds was sought, having regard the results of winter bird surveys. Further revised information was provided to the hearing, including the results of 2022/2023 winter bird surveys and additional noise contour mapping. These submissions confirm that the majority of roost sites will not be subject to noise effects of more than 55dB and that only limited areas would be subject to potentially moderate level disturbance due to sudden noise of 55-60dB.

Identified mitigation measures include the intent to carry out works between Ch 340 and Ch850 during summer months, outside the key wintering bird season. Where works in this area are necessary between September and March, appropriate sound reducing hoarding will be erected, in accordance with the provisions of BS5228. Having regard to the predicted construction noise emissions and the limited duration of works, it is considered that these measures would ensure that emissions from construction activity would not result in significant disturbance effects on wintering birds. In addition, such hoarding would address potential visual disturbance from

[3] Cutts, N., Hemingway, K. and Spencer, J. (2013). Waterbird Disturbance Mitigation Toolkit. Institute of Estuarine and Coastal Studies, University of Hull

human activity along the railway. Similarly, any temporary lighting will be cowled and angled away from the SPA and watercourses.

Having regard to the limited area affected by such construction noise levels, the numbers of birds recorded therein and the wider area available to such species, any residual construction effects are not considered likely to negatively impact on the population or distribution of wintering birds.

The applicants predict that operational daytime noise will rise slightly compared to baseline, generally between +3 and +4 dB, at the closest noise sensitive receptors to the SPA boundary, with no significant change to night-time noise. The applicant's winter bird surveys record roosting activity on the rock armour along the boundary with the railway, which indicates that existing rail movements do not result in significant disturbance effects to SCI species. The assessment of the existing and future noise environment set out in the EIAR does not suggest that there will be a significant change in disturbance effects arising from the future increased frequency of rail movements at this location, and no adverse effects are therefore considered likely. Section 12.8.4 of the EIAR also notes that operational maintenance activity will be restricted within the wintering bird season, which would adequately mitigate any potential adverse effects in this regard.

Note: In an e-mail submission to An Bord Pleanála, dated Tuesday 27th June 2023, the applicants provided supplementary information on the potential effects of construction noise on wintering birds, including a map of construction noise contours and roost areas. The narrative accompanying this map indicates, at point no. 5, that "*Iarnród Éireann are committing to not carrying out works with a noise level in excess of 55dB during the wintering season, to avoid impacts on roosting wintering birds*".

This commitment is not consistent with the more stringent mitigation measures set out in the NIS and considered above, which exclude any construction activity in this area during the wintering season. Having regard to the potential for visual as well as noise effects and the absence of any measures to ensure compliance with this 55dB limit, I cannot conclude that a sufficient degree of certainty is achieved with regard to the absence of effects. I therefore recommend that the mitigation measures described above be adopted without amendment incorporating this new commitment.

11.4.8. **Potential for Adverse Effects on Site Integrity**

Having regard to the foregoing, I conclude that the potential for adverse effects therefore arises in respect of the following:

Potential effect	Conclusion
Potential noise and visual disturbance of wintering birds which are qualifying interests of Cork Harbour SPA and Ballycotton Bay SPA.	These potential effects would be satisfactorily mitigated by the timing of works to occur outside the peak season for these SCI; and where works must occur within this period, by the erection of suitable noise and visual barriers (as specified), as well as the limited duration of works proposed. No adverse effects are considered likely.
Potential impacts on water quality and dependent habitats in Great Island SAC and Cork Harbour SPA, and associated Impacts on invertebrate communities, which key for foraging SCI of Cork Harbour SPA and Ballycotton Bay SPA.	These potential effects will be adequately mitigated by the identified measures and application of standard construction practices. This combined with the limited extent and duration of works will ensure that adverse effects on the integrity of the European network does not arise.
Potential spread of non-native invasive species.	Four species of non-native invasive plant have been identified which are listed in the Third Schedule of the 2011 EC (Birds and Natural Habitats) Regulations. While the potential for spread and establishment of such plants within European sites is identified, I note that it is an offense to disperse, spread or otherwise cause to grow in any place such species. Soils and other material containing these plants are also identified in the regulations as vector materials, subject to the same strict legal controls. Failure to comply with the legal requirements set down can result in either civil or criminal prosecution.

	I note the conclusions of the submitted NIS which are considered to be reasonable. The control measures identified are a mandatory requirement irrespective of proximity to any European Site and are not therefore regarded as a mitigation measure.

11.4.9. **In Combination Effects:**

Other plans and projects that could act in-combination with the proposed development are identified in the NIS and in the written submission of Cork Co. Co. Having regard to the location of the proposed development and the identified mitigation measures, no potential for adverse in-combination noise or visual disturbance effects on the adjoining European Sites are considered likely to arise. There is potential for in-combination effects with concurrent development in the area on water quality in rivers and streams flowing to the European Sites and I have regard to the projects identified below in this regard.

Development	Planning Reference	Location	Summary of Details
Part 8: Burys Bridge to Carrigtwohill via Glounthaune Pedestrian and Cycle scheme	ABP CPO Ref. CH04.310856	Burys Bridge, Kilcoolishal to Carrigtwohill	Construction of a dedicated pedestrian and cycle route on the northern side of the L3004 (former N25). Part 8 approved in 2020. Largely complete in the vicinity of these sites.
Part 8: Carrigtwohill to Midleton Inter-Urban Cycleway -		Carrigtwohill to Midleton	Construction of a dedicated pedestrian and cycle route from the west of Carrigtwohill to its eastern side, including a new cycle and footbridge over the existing rail line Approved March 2022
Ballinacurra to Midleton Train Station - pedestrian and cycle route			Dedicated pedestrian and cycle route and underpass under the existing railway line. Subject to AA screening and approved in 2020
Part 8 Water Rock Urban Expansion Area Infrastructure Works	Part 8 Approved with modifications	Water-Rock (townland), west of Midleton	Various infrastructural works and services including – • Closure of Water Rock level crossing to vehicular traffic. • New bridge over the Cork to Midleton railway line connecting the Services Corridor Link Road to lands to the south. • new serviced road corridor to access the proposed railway stop and bridge and ancillary works • New railway stop along the Cork to Midleton railway line. Subject to EIA and AA screening and approved in March 2019
PCI & Strategic Infrastructure Development and Strategic Housing Development: Application made directly to ABP			
Dunkettle Interchange Improvement Motorway Scheme	ABP - MA0011 and HA0039	Cork City	Revisions to Dunkettle Interchange. Subject to EIA and AA.
Celtic Interconnector	ABP Case Ref: VA04.310798	Ballynanelagh, Ballyadam and other townlands	Onshore portion of an electricity interconnector, including connection to the Irish National Grid, a converter station and all associated and ancillary works. Subject to EIA and AA and approved in May 2022
Harpers Creek	ABP-301197	Harpers Creek, Glounthaune.	174 No residential units creche & doctor's surgery. Granted - 29/05/2018. Extension of duration granted 22/6659.
Ballynaroon Housing development	ABP-312658	Glounthaune.	Construction of 112 no. residential units. Subject to AA Screening and granted in June 2022.
Section 34 Planning Applications			
Bluescape Development	19/5659	Glounthaune	55 no. 2-storey houses - Granted August 2019.

Stryker Ireland Ltd	185546	IDA Business Park, Annsgrove, Carrigtwohill	Phased extension to a manufacturing facility (6,235m2). Phase 2 remains to be implemented. Granted 08/08/2018
Ruden Homes Ltd.	ABP-313827-22	Castlelake, Carrigtwohill	Current application for 716 no. residential units, accompanied by an EIAR and NIS.
Murnane & O'Shea Ltd	194124	Carrigane Road, Carrigtwohill	Construction of 94 no. dwelling houses and ancillary works. Granted 13/01/2020
Murnane & O'Shea Ltd	214267	Carrigane Rd. Carrigtwohill	Construction of 10 no. houses – revisions to ref. 19/4124. Granted 01/04/2021
Murnane & O'Shea Ltd	215150	Carrigtohill (townland), Carrigtwohill	Construction of 67 no. dwelling houses and ancillary works. Subject to AA Screening and granted 08/12/2021
The Cork Education and Training Board - Post Primary School	204810	Fota Retail & Business Park, Carrigtwohill.	8 No prefabs – Temporary (5 year) permission granted 03/07/2020.
Minister for Education and Skills	19/5707	Castlelake, Carrigtwohill	Permission granted for 2 no. new primary schools and one post-primary school. Subject to EIA Screening and AA.
Smithkline Beecham (Cork) Ltd	20/4090	IDA Business Park, Carrigtwohill	The development of a single storey laboratory building. Subject to AA screening and granted 23/04/2020
Compass Homes Ltd	21/6240 ABP-312738-22	Station Road, Carrigtwohill.	Construction of 38 houses and a café. Subject to screening for EIA and AA. Granted December 2022
Connaught Trust Limited	21/7130	Ballyadam and Carrigtwohill.	63 no. residential units south of the railway line. Subject to AA screening and granted November 2021
IDA Ireland	21/7374	Carrigane Road, Hedgy Boreen, Ballyadam, Carrigtwohill	New site access, local road improvement works and site development works. Subject to screening for EIA and AA and granted 18/02/2022.
Cruachan Investment Limited Partnership	21/7424	Titan Container Storage, Fota Point Enterprise Park, Carrigtwohill	Construction of warehouse/ industrial buildings and associated works (part of permitted development ref 06/6741). Subject to AA screening and granted December 2022.
Park Hill View Estates Ltd,	18/7236	Broomfield West, Midleton.	Demolition of sheds and construction of 41 no. dwelling units. Subject to AA screening and granted 20/08/2019.
Castle Rock Homes (Midleton) Ltd - Bloomfield Village	166818 PL 04.249008	Broomfield Village, Midleton	Construction of 100 no. dwellings, crèche and ancillary works. Subject to AA screening and granted 22/01/2018. Extension of duration granted under 22/5841.
Castle Rock Homes (Midleton) Ltd	186553	Midleton	Construction of 26 no. houses. Currently underway – part of overall development includes Pl. Ref 18/7321. Granted 18/01/2019
Castle Rock Homes (Midleton)	187321	Midleton	The construction of 13 no. dwelling houses. Granted 12/02/2019

Ancelstierre Investments Ltd,	194216	Avoncore, Mill Rd, Midleton	Construction of 40 no. dwelling houses. Subject to AA and granted 02/08/2019
Vella Homes Ltd	216874	Junction of Mill Rd & Northern Relief Rd, Midleton.	The construction of a mixed-use residential development with café/community space and all ancillary site works. Subject to AA and granted 14/06/2022.
EMR Projects Ltd	217264	Knockgriffin and Water Rock, Midleton	284 No Residential units on 6.7Ha site; childcare facility; retail unit; café unit; medical clinic; office units). Subject to EIA and screening for AA. Granted 27/01/2023
Ingram Homes Ltd	22/5839	Water Rock, Midleton	400 no. residential units and ancillary works. Subject to AA and screening for EIA. Granted 22/12/2022
Haven Falls Ltd.	22/6627	Water Rock, Midleton	Current LRD application for 330 residential units. NIS and EIA screening submitted.
Dawn Meats Ltd	21/7265	Water Rock, Midleton	Mixed use development including 434 residential units, n/h centre, nursing home and R&D facility. Subject to EIA and AA. Granted 16/06/2023
Irish Water pumping station Midleton North wastewater pumping station and network	225032 ABP-316013-23	Lands west of Mill Road and adjoining the railway, Midleton	Pumping station works include boundary fencing, retaining wall, and modifications to an existing entrance from Mill Road & a new below ground pipeline (c. 650m long) to the previously approved Water-Rock pumping station. Subject to AA and currently on appeal.
South Midleton Wastewater Network Diversion Project	Future Irish Water application	Townparks, Midleton	Pumping station located east of Ballick Road and rising main to Midleton North Pumping Station to cater for future developments.
Cork City Council			
Kent Station through platform	22/41299	Kent Station, Cork City	New through platform and associated works. Subject to AA and granted permission in September 2022.

Having regard to the identified mitigation measures in respect of the proposed development, and the findings of the AA Screening and Appropriate Assessments undertaken in respect of identified development within these catchments, significant in-combination effects on the conservation objectives of European Sites are not considered likely.

11.5. Appropriate Assessment Conclusions

Having carried out screening for appropriate assessment of the proposed development, it was concluded that it would be likely to have a significant effect on the following European Sites:

- Great Island Channel SAC (site code 001058)
- Cork Harbour SPA (site code 004030)
- Ballycotton Bay SPA (site code 004022)

Consequently, an appropriate assessment was undertaken of the implications of the project on the qualifying features of those sites in light of their conservation objectives. Following such assessment, it has been ascertained that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of those European Sites in view of their Conservation Objectives. No reasonable scientific doubt remains as to the absence of such effects.

This conclusion is based on:

- A full and detailed assessment of all aspects of the proposed project including the proposed mitigation measures in relation to the Conservation Objectives of these European Sites.
- No reasonable scientific doubt as to the absence of adverse effects on the qualifying interests, including wetland habitats and Species of Conservation Interest of the Cork Harbour SPA following the application of mitigation measures.
- No reasonable scientific doubt as to the absence of adverse effects on the qualifying interests of the Great Island Channel SAC following the application of mitigation measures.

The mitigation measures will ensure no adverse effects on the integrity of any European sites in light of the site's conservation objectives.

12.0 Recommendation

The proposed development is aligned with local, regional and national planning and transport policy, comprises an enhancement of existing rail infrastructure and is considered to be acceptable in principle. It is considered that the effects of the development on the environment and amenities of the area will be adequately addressed by the measures identified in the application and the conditions set out below. The development is considered to accord with the proper planning and sustainable development of the area, and it is therefore recommended that this application for the Rail Order be granted based on the reasons and considerations, and subject to the conditions, set out below.

13.0 Reasons and Considerations

In coming to its decision, the Board had regard to:

(a) the nature, scale and extent of the proposed development,

(b) the characteristics of the site and of its surroundings,

(c) Relevant policy provisions, including:

EU Policy

- EU White Paper on Transport: Roadmap to a single European Transport Area – Towards a competitive and resource efficient transport system.
- The European Green Deal.
- European Sustainability and Smart Mobility Strategy – Putting European Transport on Track for the Future (2020).

National Policy

- National Planning Framework (2018).
- National Development Plan 2021 – 2030.

- Climate Action Plan 2023.
- National Investment Framework for Transport in Ireland.
- National Sustainable Mobility Policy (April 2022).
- The National Recovery and Resilience Plan (NRRP) (2021).

Regional Policy

- Regional Spatial and Economic Strategy for the Southern Region.
- Cork Metropolitan Area Strategic Plan.
- Cork Metropolitan Area Transport Strategy (CMATS) 2040.

Local Policy

- Cork County Development Plan 2022 – 2028.

(d) The Draft Railway Order and supporting documents and drawings submitted with the application, including the Environmental Impact Assessment Report, the Appropriate Assessment Screening report and the Natura Impact Statement, and the documentation submitted at the oral hearing,

(e) the submissions on file including those from prescribed bodies, the relevant local authority, the observers and persons affected by the proposed land acquisition, and the submissions made at the oral hearing,

(f) the report of the Inspector.

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, 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 are as follows:

Construction activity will give rise to noise and vibration emissions, with temporary significant effects on adjoining sensitive receptors. Such effects from such activities would be adequately mitigated by:

- Implementation of the CEMP to include a construction noise management plan based on best practise mitigation measures and adherence to guidelines for such activities, including BS 5228-1:2009+A1:2014, parts 1 & 2.
- Implementation of a comprehensive noise and vibration monitoring protocol to be agreed.
- Community liaison and engagement.
- Appointment of an Ecological Clerk of Works (ECOW).
- The short-term nature of the activities.
- Provision of noise insulation measures and / or temporary rehousing of residents during periods of particularly intense noise construction work in accordance with relevant guidance.
- Avoidance of night works where possible at residential areas, and of day-time works adjacent to the community college.

Increased frequency of train movements facilitated by the proposed twin tracking will result in an increase in operational noise levels along the line. The impacts from such additional movements would be adequately mitigated by:

- Specific measures at NSL 2, as described at the oral hearing, to include the installation / enhancement of noise barriers and installation of acoustically treated mechanical ventilation, subject to agreement with the property owners.
- Embedded design measures, including the use of continuously welded track and removal of a track expansion joint and existing points in proximity to NSL2.
- Standard maintenance activities to reduce rail noise.
- Additional mitigation along the route comprising renewal and maintenance of existing noise attenuation barriers and provision of new barriers along the boundary with NSL 8 & 9 and along the boundary with Millbrook, Midleton, at NSL 14 & 15.
- The development and application of a protocol for the use of train horns along the line.

Construction activity will result in excavation and clearance of vegetation and soils along the corridor, with risk of the release of sediment or other contaminants to surface and groundwaters and potential impacts on karst features in the area. The impacts from such activities would be adequately mitigated by:

- Adherence to provisions of the finalised CEMP, including standard, best practise guidance and measures, measures for the control of earthworks, soils, materials and pollutants, drainage design and the management of surface waters, and protocols to deal with contaminated soils.
- Appointment of an Ecological Clerk of Works (ECOW).
- Soil and stockpile management, including separation from waterbodies and from areas subject to flooding.
- Measures for the identification and design of works in the vicinity of karst features and drainage design to avoid discharge to identified karst area or features.
- Adherence to IFI guidance and best practice for the protection of fisheries, including the timing of works and post-construction site restoration.
- Application of an early flood warning system during the construction and operational phases.

Construction and maintenance activity will result in the removal of terrestrial habitat and potential disturbance and displacement of species occurring on or around the site during construction and operational phases, including wintering birds. The impacts from such activities would be adequately mitigated by:

- Adherence to the provisions of the CEMP and appointment of an Ecological Clerk of Works (ECOW).
- Pre-development surveys for ecological features of interest and adherence to any relevant licencing requirements.
- Reinstatement of habitats on completion of works.
- Adherence to published guidance and best practise in respect of potential impacts on badger and otter, including guidelines published by the NRA.
- Design and construction of bat mitigation measures, in line with NRA and NPWS Guidelines, including pre-felling surveys of trees and lighting design.
- Timing of construction works outside the wintering bird season or alternatively, the installation of a visual and acoustic barrier from Ch 340 to 850, with temporary lighting directed away from the SPA.
- Timing of vegetation clearance and trackside maintenance outside the breeding bird season or pre-construction surveys to inform activity where required.
- Implementation of an updated Invasive Species Management Plan.
- Compliance with IFI requirements and Guidelines for protection of fisheries and biosecurity, during construction and operation.
- Outdoor lighting design in line with published guidelines, where operational requirements permit, including the use of LED lighting with no UV element. Excessive light spill to vegetated features will be avoided.

Traffic generated during construction will give rise to potential disturbance and congestion on the local road network, which would be adequately mitigated by:

- Implementation of a Construction Traffic Management Plan including the routing and scheduling of construction traffic.
- The existing quality and residual capacity of identified haul routes and the short-term nature of construction activities.

Excavation and development of the site will give rise to direct impact on features of archaeological interest and previously unrecorded features. The impacts would be adequately mitigated by:

- Archaeological monitoring of sub-surface groundworks at identified AAP's.
- Retention of OBY 8, Ballyadam House Bridge.
- Protection of historic buttresses of the Owenacurra River bridge (OBY11).
- Piling design for retaining wall at culvert UBY2 at Haly's Bridge (OBY2).
- Specification for works affecting the NE wing-wall of Haly's Bridge (OBY 2) to be agreed.
- Monitoring of architectural heritage structures during construction, with post-construction maintenance inspections.

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 noted that the proposed development is not directly connected with, or necessary for the management of any European Site.

The Board completed an Appropriate Assessment Screening exercise in relation to potential effects on designated European Sites, taking into account the Screening Report submitted with the application, the report and screening assessment completed by the Board's Inspector which concluded that the following sites are the European Sites for which there is a likelihood of significant effects on:

- Great Island Channel SAC (Site code 001058)
- Cork Harbour SPA (Site code 004030)
- Ballycotton Bay SPA (code 004022).

The Board determined that Appropriate Assessment was required for these European Sites.

Appropriate Assessment - Stage 2:

The Board considered that the Natura Impact Statement and associated documentation submitted with the application, the mitigation measures contained therein, the submissions and observations on file, including submissions to the Oral Hearing held on 26 & 27th June and 3rd July 2023, and carried out an Appropriate Assessment of the implications of the proposed development on European Sites in view of their conservation objectives. The Board considered that the information before it was adequate to allow the carrying out of an Appropriate Assessment and to allow it to reach complete, precise and definitive conclusions for Appropriate Assessment.

In completing the assessment, the Board considered in particular the likely direct and indirect impacts arising from the proposed development both individually and in combination with other plans and projects, the mitigation measures which are included as part of the current proposal and additional mitigation measures recommended by the inspector in view of the sites' conservation objectives. In completing the Appropriate Assessment, the Board accepted and adopted the Appropriate Assessment carried out by the Board's Inspector, of the potential effects of the development on the aforementioned European Sites, having regard to the sites' conservation objectives. In overall conclusion, the Board was satisfied that the proposed development would not adversely affect the integrity of the

- Great Island Channel SAC (Site code 001058)
- Cork Harbour SPA (Site code 004030)
- Ballycotton Bay SPA (code 004022).

, in view of the conservation objectives of those sites and there is no reasonable scientific doubt as to the absence of such effects.

Proper Planning and Sustainable Development

It is considered that, subject to compliance with the conditions set out below, the proposed development would accord with national, regional and local planning and related transportation policy, would not have an significant impact on the landscape or biodiversity of the area, would not result in unacceptable impacts on the residential amenities of the area or of property in the vicinity, and would result in improvements to railway safety, reliability and efficiency. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Conditions

1.	The development shall be carried out and completed in accordance with the plans and particulars lodged with the application on 10/11/2022 as amended by the further plans and particulars submitted to the oral hearing held on 26 & 27th June and 3rd July 2023, 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: (i) The Book of Reference and the Second and Third Schedules of the Railway Order shall be updated to reflect the changes set out in the corrigenda list titled "*Schedule of Proposed Amendments to Book of Reference*" which was submitted at the oral hearing on the 26th June 2023. (ii) The Eighth Schedule, entitled 'Conditions, Modifications, Restrictions and Requirements' shall be added to the Railway Order and shall consist of the Board's reasoned conclusion and the conditions hereby attached to the grant of the Railway Order. **Reason:** In the interests of clarity and the proper planning and sustainable of the area.

3.	a) All of the environmental, construction and ecological mitigation and monitoring measures set out in the Environmental Impact Assessment Report, the Natura Impact Statement and other particulars submitted with the application and as submitted to the Oral Hearing, shall be fully implemented by the developer, except as may otherwise be required in order to comply with the conditions of this order. b) Notwithstanding the results of monitoring of bird distribution, where works are proposed between September and March along the coastal section (0 – 850m chainage) a sound reducing hoarding will be placed along the works area as described in Table 7.3 of the NIS. **Reason:** In the interest of clarity and the protection of the environment during the construction and operational phases of the development.
4.	The period within which the railway works hereby permitted is to be completed shall be ten years from the date of this order. **Reason**: Having regard to the nature and scale of the development, the Board considers that this is an appropriate period for completion of the works.
5.	Notwithstanding the extent of deviation provided for in Article 6(1) of Part II of the Railway Order, such horizontal deviation shall not result in any encroachment onto any European Site and shall not exceed 0.5m where it occurs within 10m of any residential building. **Reason**: In the interest of clarity and in order to protect the residential amenities and biodiversity of the area.
6.	In accordance with the details submitted to the Oral Hearing on 26/06/2023, Ballyadam Bridge House shall be retained in-situ. **Reason**: In the interest of clarity and in order to protect the architectural and cultural heritage of the area.
7.	a) Final surface water drainage design details shall be submitted to and agreed in writing with Cork County Council prior to the commencement of works, having particular regard to the emerging requirements of the

	Midleton Flood Relief Scheme. All storm water drainage systems shall be installed in accordance with SuDS guidance. b) The final drainage design details to be agreed shall also include The corrections to drainage drawings, dwg. C745-WP3_03-XX-XX-XXX-DR-MMD-DE-0023 and dwg. C745-WP3_03-XX-XX-XXX-DR-MMD-DE-0026, as advised to the oral hearing on 26/06/2023. c) The final design of modifications to the IDA culvert and to culverts UBY2A, UBY1B and UBY1C, shall be submitted to and agreed in writing with Cork County Council prior to the commencement of development of such works. d) Any new or modified culverts or bridges, or other works affecting or crossing any watercourse, shall be subject to relevant consent under section 47 or section 50 the Arterial Drainage Act 1945, as amended. e) Prior to the commencement of works, a Flood Emergency Management Plan shall be submitted to and agreed in writing with the planning authority. **Reason:** In the interest of environmental protection and public health.
8.	a) All works shall be carried out in accordance with IFI "*Guidelines on Protection of Fisheries during construction works in and adjacent to waters*." b) No physical interference with the bed or bank of any watercourse shall be undertaken without prior consultation and agreement with IFI, including the provision of appropriate bed materials at the site of culvert works. c) The developer shall consult with IFI prior to any instream works on the Owenacurra River or at any culvert works. d) All instream works shall be carried out in the dry and only carried out in the period July to September inclusive.

	e) Instream works shall be subject to prior removal and relocation of fish stocks by means of electro-fishing as necessary, and the free passage of fish should not be obstructed by works design or construction. **Reason:** To protect aquatic species and habitats.
9.	a) All watercourses in or adjacent to the works area shall be monitored on a daily basis by the EnCoW to ensure they are not being impacted by silt/sediment laden storm water run-off from works area. Visual inspections shall be continued during the operational period until vegetation is established on site. Any escape of contaminants shall be notified immediately to IFI. b) A record shall be kept of daily visual examinations of watercourses which receive flows from the permitted development, during and for an agreed period after the construction phase. **Reason**: In order to protect water quality
10.	a) Construction activity shall be managed in accordance with a construction noise and vibration management plan, which shall be developed after consultation with stakeholders and the local community, and agreed in writing with Cork County Council prior to the commencement of development. This plan should be subject to periodic review and shall provide details of the intended construction practice, including measures for the suppression and mitigation of on-site noise and vibration. b) The plan shall be developed having regard to, and all construction activity shall be undertaken in accordance with, best practise guidelines, including BS 5228-1:2009+A1:2014, parts 1 & 2. **Reason**: In order to protect the amenities of the area
11.	a) The construction noise and vibration management plan shall include a comprehensive monitoring programme with regular reporting to Cork County Council.

	b) Noise monitoring locations shall be agreed in writing prior to commencement of development. c) Monitoring of the construction phase shall be carried out by a suitably qualified competent person to ensure that all environmental noise and vibration mitigation measures are satisfactorily implemented. d) The results of construction noise and vibration monitoring shall be readily available to owners / occupiers of affected properties, in a manner to be prescribed in the plan. **Reason**: In order to protect the amenities of the area
12.	a) The applicant shall record all complaints received relating to construction activity. The record shall contain the name of the complainant, nature, time and date and a summary of the subsequent investigation and response. All records of complaints shall be made available to the planning authority on request whether requested in writing or by a member of staff of the planning authority at the site. b) A designated member of the company's staff shall interface with the Planning Authority or member of the public in the event of complaints or queries in relation to environmental emissions. **Reason**: To ensure a satisfactory standard of development
13.	a) A noise management plan shall be developed after consultation with stakeholders and the local community in respect of the operational and maintenance phase and shall be agreed in writing with Cork County Council. A performance review shall be completed by the applicant every 6 months and shall be made available on request. b) Such plan shall make provision for implementation of the mitigation measures described at the oral hearing in respect of NSL2, including in particular, works to existing noise barriers and installation of mechanical ventilation or other such measures as may be agreed. c) The management plan shall include a protocol for the use of train horns, which shall be developed and applied to the operation of the railway in

	order to minimise the effect on residential amenity of these essential safety features. **Reason**: In order to protect the amenities of the area
14.	a) An inspection and assessment of the condition and effectiveness of existing acoustic barriers along the railway within the site shall be undertaken. Where renewal or enhancement is required to achieve with compliance BS 5228-1:2009+A1:2014, such works shall be completed prior to commencement of operations on the new track. b) Additional acoustic mitigation barriers shall be erected along the boundary with NSL 8 & 9 and along the boundary with the Millbrook development in Midleton (NSL 14 & 15), in accordance with the specification set out in BS 5228-1:2009+A1:2014. **Reason**: In order to protect existing residential amenities
15.	A Landscape and Site Reinstatement Plan shall be submitted to the Planning Authority for agreement prior to the commencement of development. The plan shall be prepared with input from the project ecologist and shall have regard to guidance set out in *Pollinator-friendly management of: Transport Corridors. All-Ireland Pollinator Plan, Guidelines 9*. National Biodiversity Data Centre Series No. 20, Waterford. Sept, 2019. Updated Oct 2022. The plan should be compatible with the principle of no net biodiversity loss and should be prepared in accordance with the following key principles: a) species grassland areas to be allowed to regenerate naturally where possible and appropriate; b) species-rich topsoil to be protected and reused as appropriate; c) the development of species rich meadow type habitats on new embankments / verges (without application of new topsoil) to be encouraged where appropriate; d) native tree and shrub species mixes of local provenance to be used where new planting is proposed;

	e) use of non-native flowering plants, trees and shrubs to be confined to planters and flower beds associated with rail stations only. **Reason**: In order to promote and protect biodiversity
16.	Prior to the commencement of development, a finalised Construction Environmental Management Plan (CEMP) shall be submitted to and agreed in writing with the Planning Authority, based on the draft plan submitted to An Bord Pleanála on 10/11/2022. The plan, prepared by a qualified and experienced person, shall incorporate all ecological mitigation measures as set out in the EIAR and NIS, the Landscape & reinstatement plan, and the conditions set out herein, and shall include details and schedules of monitoring supervision and reporting to the Planning Authority. Details of intended construction practice for the development shall include: (a) Measures to prevent the spillage or deposit of clay, rubble or other debris on the public road network and for the cleaning of the same; (b) Containment of all construction-related fuel and oil within specially constructed bunds, to ensure that fuel spillages are fully contained. Such bunds shall be roofed to exclude rainwater; (c) Off-site disposal of construction / demolition waste and details of how it is proposed to manage excavated soil; (d) A surface water management plan including measures to ensure that surface water run-off is controlled such that no silt or other pollutants enter watercourses, groundwater or drains. (e) Measures to fully remediate the site in accordance with a Finalised Invasive Plant Species Management plan. (f) A dynamic dust risk and management plan. A record of daily checks that the works are being undertaken in accordance with the Construction Management Plan shall be kept for inspection by the planning authority. **Reason:** In the interest of amenities, public health and safety.

17.	The existing vehicular entrance to the railway from the L3004 at chainage 650, shall not be used for the purposes of construction access between the hours of 2200hrs and 0800hrs. **Reason**: In order to protect adjoining residential amenity
18.	Prior to the commencement of development, a finalised construction traffic management plan shall be submitted to and agreed in writing with the relevant local roads authorities and Transport Infrastructure Ireland, which plan shall: a) Include details of the timing and routing of construction traffic to and from the construction site and works areas, and associated directional signage, and in particular proposals to manage the delivery of abnormal loads including the routing and scheduling of such movements. b) Measures to obviate queuing of construction traffic on the adjoining road network. c) Address the potential effects of construction related traffic on the operation of national roads and associated junctions. d) Details of any temporary diversions and traffic management measures required in order to facilitate the proposed development, including signage. **Reason**: In the interests of traffic safety and convenience and to protect tot strategic function of the national roads network.
19.	Pre- and post-construction phase surveys of relevant public roads shall be carried out by the applicant. The location and extent of such surveys shall be agreed in writing with Cork County Council and TII where appropriate, prior to the commencement of works on the site, along with final details and specifications in respect of road reinstatement.

	Any works, including temporary or reinstatement works to national roads or associated junctions shall comply with the standards outlined in TII publications and shall be subject to road safety audit. **Reason**: In the interest of road safety and to ensure a satisfactory standard of development.
20.	Prior to the commencement of development, the developer or any agent acting on its behalf, shall prepare a Resource Waste Management Plan (RWMP) as set out in the EPA's Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects (2021) including demonstration of proposals to adhere to best practice and protocols. The RWMP shall include specific proposals as to how the RWMP will be measured and monitored for effectiveness; these details shall be placed on the file and retained as part of the public record. The RWMP must be submitted to Cork County Council for written agreement prior to the commencement of development. All records (including for waste and all resources) pursuant to the agreed RWMP shall be made available for inspection at the site office at all times. **Reason**: In the interest of sustainable waste management.
21.	Any modifications to the existing public sewer network extensions across the railway line shall be agreed with Cork County Council or Irish Water, as appropriate. **Reason**: In the interests of public health.
22.	Prior to the commencement of development, CIE shall make a financial contribution to Cork County Council toward the total cost of the rail overbridge at the Water Rock Urban Expansion Area, in accordance with section 44 of the Transport Railway Infrastructure Act 2001, as amended. The amount of the contribution and the arrangements for payment shall be agreed between the developer and the County Council or, in default of agreement, shall be determined by An Bord Pleanála. **Reason**: It is considered reasonable that the developer should contribute towards expenditure that is proposed to be incurred by the County Council

	in respect of works in the area in which the railway woks are to be constructed.

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.

Conor McGrath
Planning Inspector

28/08/2023

Appendix 1: Oral Hearing Report

Appendix 1
Oral Hearing Report
ABP-315087-22

Development	Upgrade and enhancement of the Glounthaune to Midleton rail line beginning in the townland of Johnstown to the east of Glountaune train station; and continuing along and parallel to the existing rail line for a distance of approximately 10km ending east of Midleton rail station in the townland of Broomfield East.
Location	The proposed development will traverse through the following townlands: Anngrove; Ballyadam, Ballyrichard More; Broomfield East; Broomfield West; Carrigane; Carrigtohill; Harpers Island; Johnstown; Killacloyne; Killahora; Knockgriffen (Barrymore); Knockgriffin (lmokilly); Terry's-Land; Townparks and Water-Rock.
Type of Application	Application pursuant to Section 37 of the Transport (Railway Infrastructure) Act 2001 (as amended and substituted)
Oral Hearing Participants	
Applicant	Córas Iompair Éireann (CIÉ)
Planning Authority	Cork County Council
Observer(s)	Sheenvale Limited Ms. Martina O'Connell

	Cllr. Oliver Moran Cllr. Alan O'Connor Carrigtowhill and District Historical Society Adrianna and Alan Watters Tom O'Donnell Myrtle Hill Residents Association (Pat O'Connell) Tim and Deirdre Murray
Date of Oral Hearing	26 & 27/06/2023, 03/07/2023
Inspector	Conor McGrath

This is not an official record of the proceedings of the hearing. The official recoding of proceedings is available on the file.

Day 1 26/06/2023

The hearing commenced at 10am on June 26th 2023.

Following introductory remarks from the presiding Inspector, revisions to the previously circulated order of proceedings were agreed with participants.

Module 1

Submissions to the hearing commenced with the applicant, Coras Iompair Eireann. Written statements / Brief of Evidence to the hearing were submitted and are attached for reference herewith.

These submissions comprised the following:

Presenter	Company	Brief of Evidence
Conleth Bradley SC		Outline of Railway Order Process
James Kenny	Iarnród Éireann	Opening Statement and Background
Tim Richards	CIÉ	Property Referencing

John McInerney	Mott MacDonald	Overview of Railway Order & Railway Works
Lara Gough	Mott MacDonald	Planning and Policy
Elaine Bennett	Mott MacDonald	Alternatives Considered
Elaine Bennett	Mott MacDonald	Population and Human Health
James Brookes	Mott MacDonald	Air Quality
Alex Greenwood	Mott MacDonald	Climate
Lindsay McMillan	Mott MacDonald	Land, soils, hydrogeology
Elaine Bennett	Mott MacDonald	Surface water
Laurence Cload	Mott MacDonald	Flood Risk
Elaine Bennett	Mott MacDonald	Biodiversity
Richard Barker	Macro Works	Landscape and visual
Enda O' Flaherty	Rubicon Heritage	Archaeology and Cultural Heritage
Emma Baume	Southgate Assoc	Architectural Heritage
John Dooley	Mott MacDonald	Roads and Traffic
Richard Perkins	Mott MacDonald	Noise and vibration
Elaine Bennett	Mott MacDonald	Material Assets
Elaine Bennett	Mott MacDonald	Major Accidents & or Disasters
Elaine Bennett	Mott MacDonald	AA Screening and NIS

It is not intended to repeat the content of these submissions here, however, I note in particular the following points from the submissions:

- Mr. Bradley outlined the legislative context for this application to the Board.
- Mr. Kenny confirmed that agreement had been reached with Cork County Council in respect of the 30 no. conditions recommended in their written submission on the application. The agreed responses to these conditions were read into the

record, and are as described in the submission of Cork County Council dated 22/06/2023.

- In response to Myrtle Hill level crossing it was stated that, notwithstanding, the remoteness of this level crossing from the works area, the requirement for an intervention has been identified to ensure continued access to Myrtle Hill Terrace with the proposed increase in service. The necessary intervention has not yet been developed, however, and service levels will not be increased beyond current infrastructure capacity until those necessary interventions at Myrtle Hill Level Crossing (XC238) are implemented.
- Ballyadam House Bridge is now to be retained as part of the proposed development. It was confirmed to the Inspector that this change did not necessitate any change to the submitted Book of Reference.
- As requested by Cork County Council, underpass UBY5B will be available to the Co. Co. in line with the development plan objectives.
- Mr. Tim Richards noted three amendments to the Book of Reference which was submitted with the application.
- Mr. John McInerney noted that no viable alternative design for the level crossing at Mill Road Midleton was available.
- In response to concerns raised by Cork County Council, Mr. McInerney described a correction to two errors in the submitted drainage drawings. In respect of the drainage design at Water Rock the indicated flows are incorrect and should flow east from Ch8610 and discharge at the existing outfall at Ch9840, on Dwg. C745-WP3_03-XX-XX-XXX-DR-MMD-DE-0023. Further, existing cut-off ditches at the toe of the embankment between CH9860 – 9950 will be maintained and were incorrectly shown as green lines (to be removed) rather than black lines (to be retained). These occur east of Owenacurra Bridge on Dwg. C745-WP3_03-XX-XX-XXX-DR-MMD-DE-0026.
- Ms. Lara Gough argued against condition no. 29 recommended by the planning authority, relating to the payment of a contribution toward a new overbridge at Water Rock. The existence of an existing S.49 Supplementary Development Contribution Scheme in respect of the suburban rail project was noted.
- In response to concerns raised by Cork County Council in respect of groundwater flooding, Dr. Lindsay McMillan advised that this would be adequately addressed

by the measures to protect karst features and flowpaths, particularly in the Water Rock area. There was no object to the conditions recommended by Cork County Council.

- Mr. Laurence Cload noted that the railway is currently subject to flooding and that this will not change as a result of the proposed development. Flooding will be managed, via the operational plan, rather than avoided. It was noted that the 2015 flood event did not result in flooding of the railway. No change to the flood risk is anticipated in the vicinity of Carrigtwohill and no modified culverts are proposed at Water Rock.
- In respect of Biodiversity, Ms. Elaine Bennett confirmed that there was no objection to conditions recommended by Cork County Council in respect of landscaping and reinstatement works, or to conditions recommended by IFI.
- Mr. Enda O'Flaherty confirmed that conditions recommended by Cork County Council in respect of archaeological monitoring was acceptable.
- Ms. Emma Baume (Architectural heritage) noted the submissions and recommendations of the Planning Authority and Observers in relation to structures along the railway and confirmed that Ballyadam Bridge is now proposed to be retained.
- Mr. John Dooley advised that the original project schedule had taken account of Irish Water's intention to complete construction of the pumping station at Midleton by Aug 2023. The EIAR otherwise provides for consultation with other developers to address potential cumulative construction impacts. The transport assessment concluded that Construction Compound no. 5 would not have significant traffic impacts. No viable alternative design to Mill Road level crossing is available. Further detail on the analysis of the traffic implications of increased frequency of level crossing closures on the road network was presented. The applicant is committed to working with Cork County Council to optimise train times and minimise impacts of more frequent closures.
- In respect of Noise and Vibration, Mr. Richard Perkins confirmed that conditions no. 7 – 11 recommended by Cork County Council were acceptable. Reference was made to the submission on behalf of Tim and Deirdre Murray. It was noted that the results of the observer's acoustic report were consistent with the 2019 survey and the predicted levels in the 2007 Rail order. In respect of vibration, it

was indicated that the VDV is the appropriate measure in respect of long-term exposure and that in this case no mitigation of vibration impacts was required. In response to a question of clarification from the inspector, Mr. Perkins confirmed that although note previously reference in the application documentation, the brief of evidence refers to Welsh TAN11 guidance, in order to support the previous findings and reliance on UK standards. There is no specific aim for the proposed mitigation measures where the thresholds criteria value or level are exceeded, other than to bring levels below those criteria values. The criteria are the WHO criteria of 50db plus a 10dB increase, or 68db with a 1dB increase, as a result of the scheme.

- Mr. Conleth Bradley confirmed that the conditions recommended by IFI, TII and OPW were acceptable to the applicants.

Module 2:

Cork County Council advised that they did not intend to make a submission to the hearing but referred to the response of the applicant to the conditions recommended by the Council to the Board.

- The Inspector advised that they would proceed with questions to the County Council and the , arising from matters raised in the County Council written submission on the Rail Order application.
- On behalf of Cork County Council, Ms. Alice Riordan advised that the Midleton FRS is nearing the end of Stage 1, Option Selection Stage – an emerging preferred option report will be published in coming weeks confirming the details of the scheme. It was confirmed that there had been engagement with CIE since December 2022 in relation to the flood risk assessment, and that Council was now satisfied with the development in broad terms and that there would be no increase in flood risk to the development or caused by the development to third party lands.
- The Inspector raised a point of clarification in relation to the relevant nodal point on the Owenacurra River to be used in modelling flood levels. The inspector also sought clarification with regard to the soffit level of UBY11, Owenacurra Railway

Bridge. Parties undertook to revert to the hearing the following day on these matters.

- It was confirmed that Cork County Council were satisfied that there would be no material reduction in flood storage on the Owenacurra River as a result of the proposed development.
- Cork County Council confirmed their satisfaction with the identified errors and amendments to drainage drawings highlighted in the Applicants statements to the hearing.
- Cork County Council confirmed their satisfaction at this time with the flood risk implications at Water Rock.
- In response to a query from the inspector, the County Council (Ms. Riordan) confirmed that the suggested provision by the applicant of a "*flood diversion channel alongside the proposed widening works, to reduce flood risk to the Water Rock area*", was not a requirement at this time and was not sought by the Council.
- Ms. Riordan advised that the County Council were generally satisfied with the response of the applicant in respect of culvert UBY1A and 1B, however, confirmation of the design capacity might be appropriate.
- Ms. Riordan noted the appropriateness of consultation with the FRS design team and that account should be taken of longer-term operational and maintenance access requirements for flood relief scheme and rail elements.
- In respect of Traffic and Transportation, Mr. James Rigney S.E. for Cork County Council confirmed that following further discussions with the applicants, the Council was now satisfied with the proposed development and the operation of Mill Road level crossing. The level of analysis carried out by the applicants was considered to be satisfactory.
- Mr. Donald Cronin (Cork Co. Co. HIIT Team) confirmed that the Water Rock infrastructure Part 8 approval included network improvements, including works at the signalised junction at Knockgriffen. It also included the Irish Water Pumping Station and new bridge over the railway. It was confirmed to the hearing that the road upgrades planned for the area followed from the findings of the 2018 Water Rock Strategic Transportation Assessment.

- Cork County Council noted that previous concerns regarding possible conflicts between the land-take and with proposed greenway developments appeared to have been resolved.
- Parties were requested to confirm the siting of the underpass, west of UBY11, which was approved as part of the Ballinacurra – Midleton Pedestrian and Cycle Route. Cork County Council advised that detailed design completed on this area had not been completed to date and that the location shown in application drawings appeared to be accurate. James Kenny for CIE confirmed that implementation of that Part 8 project, which is still subject to detailed design, had no structural implications for the current rail order project.
- In respect of the proposed Water Rock station, approved as part of the Water Rock UEA Part 8, Mr. Donald Cronin confirmed that the Council was satisfied with CIE proposals to implement the station as soon as practical. It was the confirmed intention always that it would be implemented by Irish Rail.
- With regard to the proposed railway overbridge, Mr. Cronin confirmed that the Water Rock Development Contribution Scheme (2021) does not include such works and that it was intended that it would be funded by Special Development Contributions. The rationale for seeking a contribution from the rail order development toward the provision of this bridge is that the railway is currently an obstacle to lands to the south and that the rail order proposes the closure of an existing level crossing. Provision of the bridge will also facilitate safe access across the railway.

The inspector then put questions to the Applicants in relation to the assessment of effects on Wintering birds. In response to the questions, the applicants noted the following:

- A second year of wintering bird surveys had been undertaken (Oct 2022 – March 2023) and the applicant confirmed that these would be circulated to the hearing. It was advised that the results were broadly in line with the previous survey results, with no material change observed.
- It was advised that at the closest point, some roosting activity does occur within 20m of the railway. Noise levels from construction activity are expected to fall to

below 65dB after 54m separation from the works area, however, and the area affected by disturbance will be limited.

- Clarification was sought in relation to the nature of construction works referenced in the NIS and the duration of activity along the SPA boundary.
- The inspector sought further detail in respect of the relationship between the predicted noise contours and the roost areas identified in the winter bird surveys.
- Ms. Elaine Bennett advised that where any works do occur within the wintering bird season along the SPA, the use of hoarding (to specification) will provide noise and visual screening, such that no adverse effects on the qualifying interests of the SPA are likely.

Day 2 (27/06/2023):

The hearing recommenced on day 2 (27/06/2023) at 10am, with clarification on a number of items raised in the previous session, relating to issues of Flood Risk and Transportation.

- With regard to the relevant nodal point on the Owenacurra River for modelling of flows, Mr. Cload for CIE confirmed their modelling was based on node 3407 although Cork Co. Co. confirmed that node 3380 related to the railway bridge (UBY11). Notwithstanding this, the applicants confirmed that use of node 3380 would not alter their conclusions as the soffit of the bridge was not being altered as a part of the development. Cork County Council confirmed that this was a reasonable conclusion and noted that the works would be subject to S.50 consent from the OPW.
- With regard to confirmation of the bridge soffit level, Cork. Co. Co. confirmed that the maximum sofit level (over river bed) at UBY11 is 7.46m OD recorded in 2007 (as per the Structure Sheets for the Midleton FRS Hydraulics Report) but that this varies across the bridge. The applicants confirmed that their surveys had initially identified a (minimum) soffit level of 7.119m OD, although subsequent surveys (March 2023) had provided an updated value of 7.28m OD for the bridge soffit level. The existing soffit level will not be altered by the proposed development.

- Cork County Council confirmed that the location of the underpass identified on the Rail Order Plans and drawings, at CH 9775, reflected that approved as part of the Ballinacurra – Midleton Part 8.
- With regard to Wintering Bird surveys, the applicants confirmed that the winter survey report for 2022-2023 was submitted to the Board. It was confirmed to the hearing that the results of the monitoring were consistent with the findings of the 2022 winter survey, while also providing a longer survey period (6 months). A Noise Contour map was also provided which displayed identified roosting sites and works noise contours.
- It was confirmed that the 2013 Cutts report had been reviewed and the findings of the assessment were found to be consistent therewith.
- The NIS was reviewed and found to be consistent with Ch. 16 of the EIAR with regard to the duration of works. Between Ch.1 and ch. 850, the EIAR predicts 1 week of Track formation works. This was conservatively assessed as two weeks in the NIS.
- It was confirmed that works giving rise to noise emissions >55dB will not be undertaken during the wintering bird season.

Module 4

Observers Submissions:

Sheenvale Ltd.

Mr. Tom Philips on behalf of Sheenvale Ltd. made a submission to the hearing, which reflected the written statement on the application but which generally raised the following points:

- The Rail Order documentation incorrectly describes the observers lands as agricultural, while they comprise brownfield industrial lands.
- The observers are not opposed to the development, and in fact support it.
- The application lacks detail in relation to effects on the observers lands and further consultation with the application in relation to those effects was requested.

- The lands have development potential. The actions of two public bodies, Irish Waer and CIE, are obstructing its development such that the site is now subject to the Residential Zoned Land Tax.
- The effects of the works are not temporary, being greater than 12 months.
- The EIAR is deficient in consideration of alternatives for construction Compound no. 5, while details of works proposed within the site are not identified.
- The basis for the extent of land-take is unclear and coordination with Irish Water should be sought to reduce effects on this landholding.
- The level of consultation with the landowner was inadequate.
- The lands are of archaeological potential which is not addressed.
- The location and operation of two separate adjacent construction entrances has not been adequately addressed, or the traffic implications thereof.

In response to questions from the observers:

- The applicants expressed their willingness to engage with the observers to address their concerns.
- The entrance location was chosen on the basis of it comprising an existing entrance and its separation from the level crossing.
- Development in compound no. 5 will comprise storage, accommodation and site office, with use for lifting crane for bridge construction. It will also facilitate works to adjust the existing points on the railway.
- There are no plans for level changes within the compound.
- Compound no. 4 is more constrained in terms of flood risk.
- At date of application, the IW construction timeline was not aligned with the subject development and provision of a separate access avoided any constraint on the project.
- The applicants identified a number of meetings held with the landowner.
- It was confirmed that reference to agricultural use of these lands in the book of reference was an error.
- It was indicated that further consultations were to between the parties would take place.

Ms. Martina O'Connell:

A submission was made on behalf of Ms. O'Connell by Mr. Anthony Murphy. This submission (written copy attached) set out the understood access rights of the observer across the railway line. A lack of consultation with the observer was cited.

It was advised that there was no objection in principle to the proposed development, however, Mr. Murphy indicated that there is no legal precedent for the removal of the observer's access rights. Reference was made to the obiter comments of Lafoy J. in Kavanagh v CIE.

In response to a question from the Inspector, the observer confirmed that there was no error identified in the Book of Reference.

In response to the submission, Counsel for the applicants indicated that they would issue a written response to the observer's submission which may be subject to discussion later in the hearing.

Cllr. Oliver Moran

- Cllr. Moran expressed the view that the issues raised in his written submission could be addressed. Retention of Ballyadam House Bridge was welcomed.
- While the location at a remove from the development works was noted, however, residences of Myrtle Hill, Lwr. Glanmire Road would be affected by rail services, which was now acknowledged by CIE.
- The commitment given to engage with residents with regard to changes to access arrangements was welcome.
- The development is urgently needed and delay should be avoided, as it is a critical action in climate action for Cork City. There are pressures in terms of funding and timelines for delivery.

There were no questions to the applicants from the observer.

Cllr. Alan O'Connor

- Cllr. O'Connor expressed support for the project.

- The retention of Ballyadam Bridge was welcomed and the process to provide for such modifications was commended.
- The response to the concerns raised in respect of Myrtle Hill was satisfactory.
- The need for the project in terms of public transport provision and climate action was emphasised. There are pressures in terms of funding and timelines for delivery.

There were no questions to the applicants from the observer.

Carrigtwohill and District Historical Society

- Mr. Andre Souble on behalf of the Historical Society welcomed the retention of Ballyadam bridge which is of historic interest to this local area.
- Future use of Ballyadam bridge will contribute to local active travel routes in the area.

There were no questions to the applicants from the observer.

The following three observations, and discussion of the issues raised, were taken together.

Adrianna and Alan Watters:

- Mr Alan Watters expressed concerns regard potential structural impacts of vibrations from increased frequency of trains on their property, described as a protected heritage building, which adjoins Kent Station on Lower Glanmire Road.
- Despite correspondence, no inspections of their property were undertaken in relation to the previously proposed platform extension.
- Existing diesel trains are kept running for hours on end during the night, leading to unnecessary noise and air pollution.
- A number of adjoining house houses are protected structures which prohibits any alterations to mitigate noise or air pollution.

There were no questions to the applicants from the observer.

Mr. Tom O'Donnell:

- Mr. O'Donnell acknowledged that he was aware of the proximity to Kent Station on purchasing the property on the Lower Glanmire Road.
- There has been no consultation with residents on the effects of noise and air quality impacts arising from the increased frequency of train services.
- The increased use and frequency of diesel trains raises climate and emissions issues.
- The assessment of noise and air quality in the EIAR is deficient and does not consider effects closer to Kent Station.
- Para 8.3.2.1 of the EIAR notes that stationary diesel trains can give rise to high short-term NO2 and SO2 concentrations near railway stations or depots, but does not consider idling trains, which often occur during the night-time period.
- No baseline air quality of noise monitoring data for Kent Station environs is provided.
- There was no consultation in respect of PA ref. 22/41299, platform extension at Kent Station, which was not subject to EIA.
- That application acknowledged the potential effect of increased frequencies of trains under the CARC.
- The failure to assess the in-combination effects of increased train frequency arising from this project comprises project splitting.
- Increased train frequency will also result in associated noise increases from station infrastructure and announcements etc.

Myrtle Hill Residents Association

- Mr. Pat O'Connell on behalf of the resident's association noted the effect that increased frequency of rail journeys and level crossing closure would have on Myrtle Hill properties, including pedestrian access thereto.
- Criticism was expressed with regard to the level of consultation undertaken with residents.
- Undertakings had been given previously with regard to the level of service at this location.
- There were also concerns with regard to increased noise, vibration and air quality impacts from increased rail frequency.

Applicants Response

- Mr. Kenny for CIE commented that most matters raised had been addressed in their submissions to the hearing on Day 1.
- Areas on Lower Glanmire Road are remote from the development area which is being implemented as part of a wider programme of works which is in the early stage of development.
- These areas at Lower Glanmire Road were not assessed for noise or air quality.
- Other interventions in the wider programme are being identified to deliver the increased journey frequencies and this twin track project is one element. Potential effects at Myrtle Hill are acknowledged and further intervention is required but has not been developed to date. Consent will be required for such works.
- Mr. Kenny confirmed that service levels would not be increased beyond current infrastructure capacity until necessary interventions are implemented.
- At Kent Station, operations remain within the capacity of existing infrastructure. While there has been some engagement with third parties on noise and effects from announcements etc, certain operational requirements remained. All trains are shut down at night once out of service. The through-platform has been permitted by Cork City Council.
- Mr. O'Donnell refuted the comment that trains are shut down when out of service after midnight). There was disagreement with observers regarding the level of engagement to date on the issues raised.

Observers Questions:

In response to questions from Mr. O'Donnell, Mr. Kenny advised that there was no development proposed at Kent Station under this project so there was no baseline noise or air quality undertaken assessment in this area.

Mr. O'Donnell questioned, if increasing frequency of trains is the intent of this project as part of the CACR programme and neither this nor previous planning applications examined noise or air quality at Kent Station, when will the effects of the CARC programme be assessed?

The planning status of temporary and permanent structures on CIE lands at Kent Station adjoining Mr. O'Donnell's property was queried, and the ability of the project to deliver noise mitigation measures to address residents' concerns.

In response to the submission, Mr. Richard Perkins for CIE acknowledged that there was no assessment of observers' properties or mitigation proposed along the Lower Glanmire Road. Mr. Kenny confirmed again that no increased frequency of service is proposed as part of this development.

Interventions required to deliver the overall CARC are being examined but that process is not complete. Engagement and consultation will be undertaken with adjoining residents will be undertaken before consent for such interventions is sought.

Mr. O'Donnell queried what future element will trigger the assessment of effects of intensification of services to Kent station, if such intensification isn't linked to the permitted through-platform application nor this twin track project. Mr. Kenny advised that this will be ultimately triggered by the electrification of the network.

It was confirmed that no assessment of the increased use of diesel trains on the network would be undertaken, until they are replaced. Mr. Kenny advised that the EIAR in this case assumed continued use of diesel trains, as a worst-case scenario. The intent of the programme to electrify the network and this will be the trigger for further increase in intensity of services.

Mr. O'Donnell considered that the assessment of the effects of the development in respect of this application and wider in-combination effects. The EIAR is deficient in the assessment of noise and air quality at Lower Glanmire Road and that this is an example of project splitting.

Mr. Pat O'Connell for Myrtle Hill Residents Association disputed the level of consultation undertaken with residents.

Mr. Pat O'Connell queried the statement of CIE that there would be no increase in train frequency beyond current infrastructural capacity. In response Mr. Kenny clarified that the current level crossing at Myrtle Hill was installed as part of the 2007 Rail Order and this is the constraint in terms of infrastructural capacity. An

assessment as part of that Order set out the maximum proposed services across the crossing.

Mr. Kenny advised that there are no current proposals for alternative access arrangements. There would be consultation on commencement of examination of design options in this regard, to facilitate the proposed service levels.

There was further discussion regarding the level of consultation which was undertaken with local residents.

Day 2 of the hearing adjourned at 12.35pm.

Day 3 03/07/2023

Day 3 of the hearing commenced at 10am on 3rd July. Prior to commencement of submissions from the remaining observers, the Inspector offered parties the opportunity to comment on documents submitted by the applicants and which had been circulated for review, comprising:

- Winter Bird Survey 2022 -2023
- Works Noise Contour and High Tide Roost Concentration map.

The hearing was advised by the Inspector of the withdrawal of the observation by Ms. Martina O'Connell.

Clarification was sought from representatives of the applicants and of Sheenvale Ltd. of any update on discussions which the hearing had been advised were to take place between the parties. Mr. Bradley (CIE) and Mr. Philips (Sheenvale Ltd.) confirmed that while there had been discussions there was no change to the position set out in the earlier written submissions or submissions to the oral hearing.

The final Observer's submission to the hearing was then heard.

Tim and Deirdre Murray

- Mr. Charles Daly outlined the experience of the observers with the operation of the railway since its reopening in 2009 and their concerns with the future twin track development.
- Previous development activity on the railway had suffered from a lack of supervision and oversight, with negative impacts on this household.
- A 2019 noise survey validated the observer's concerns regarding the effects of the railway, which confirmed noise levels of 63dB, which levels will be increased by the proposed development.
- The effects of railway noise and vibration on the observers, particularly at night, was described for the hearing. Reference was made to a descriptive video in this regard which was submitted to the hearing and which had been previously circulated to participants.
- The observers have not come to this nuisance, which has been created by CIE.
- The observers raised concerns with the applicant's description of "*possible* mitigation" measures, and the proposed mitigation rather than elimination of the noise effects. The beneficial effects of the proposed mitigation measures are not specifically identified. Vibration and air quality effects are also overlooked.
- It was noted that Cork Co. Co. will not have capacity to monitor or enforce any noise conditions, and a requirement for oversight of the development was identified.
- There is no detail with regard to the undertaking of night-time works or its supervision. Previous Rail Order works caused significant nuisance to the observers. There should not be any use of the access adjacent to the observer's property as a construction compound.
- Any change to property prices in the wider area will not be of any benefit to this property given the increased in rail frequency.
- No noise or vibration mitigation for construction is identified, while the response to concerns regarding visual impacts misunderstands the issues raised by the observers, relating to the effect of train movements rather than the second track.
- There has been no engagement with the observers and the applicants have shown a lack of respect to them, while there is no faith in the effects of mitigation measures proposed.

Eoghan Tyrell (i-Acoustics) made the following points on behalf of the observers:

- Four previous noise impact and vibration reports were reviewed which all failed to adequately describe the noise impact on the Murray property to any suitable level.
- Description of long-term average noise levels does not adequately reflect the effects of train passing movements, with high peak levels.
- These peak values will increase from 60 times per day to 140 times per day.
- The conclusion of the EIAR that the Murrays will be subject to negligible to minor increases in daytime railway noise is outrageous. The use of average values to reflect the effect of 140 no. trains at 85-90dB peak levels does not represent the effects of this development.
- In relation to vibration, the conclusions of the EIAR with regard to the transmission of vibration into the Murray's dwelling does not reflect reality and the amplification effects of a building are not considered.
- It is not known what the vibration levels inside the house will be, however, current experience is that internal vibration levels are significant and will increase with the development. They are perceptible and may constitute a nuisance.
- Notwithstanding the referenced levels for adverse comment, there is already adverse comment and effects in this case.
- In the 2006 Rail Order application an average criteria value for adverse effects of 60dB was taken, however, criteria values in this application have been increased to 68dB.
- The means through which noise is measured and assessed, while perhaps technically correct, is not detailed enough to fully describe the effects the observers are subject to.
- The observers are currently subject to noise levels in excess of WHO recommended limits and these will be further exceeded, with potential adverse health effects. The selected criteria are far above these values.
- Construction noise criteria values are more onerous than those for operational noise.
- Mitigation measures proposed will not have significant effect given the levels and frequency of peak noise levels arising. There is little that can be done to mitigate these noise effects.

Applicant's response:

In response to the observer's submission, CIE (John McInerney) confirmed that the video from the observers had been viewed by the applicants.

Mr. Perkins noted the following:

- The alternative references cited were rejected:
  - WHO guidance sets out the on-set of health effects but many locations in built-up areas already exceed these guidelines and cannot be adopted across the board. They are referenced in the EIAR, however.
  - ProPG and BS8223, only deal with new residential development close to an existing railway and are not relevant in this case.
  - BS4142 states specifically that it is not intended for use at railway.
  - TII Environmental Noise Monitoring Procedures for Operational Systems guidance (2015) is consistent with the EPA guidance 2022 as applied in the EIAR.

  There is therefore no rationale to depart from the standards used in the EIAR. The applied guidance takes account of the special nature of railway noise. Mr. Tyrell's noise measurement results are typical for properties adjoining a railway.
- The observers noise monitoring results also show Lmax events which are not attributed to the railway. If measured at the front of the property, similar Lmax values would be recorded from traffic on the adjoining road.
- Railway noise is assessed, in published standards and guidance, taking account of the nature of railway noise events (variable but predictable). Short-term averages are not appropriate for the quantification of railway noise.
- Train horn use is needed for warning purposes and is not a permanent operational instruction for this part of the line.
- Construction noise activity, reported in the submitted video, is described in the EIAR and it was acknowledged that there is potential for impact at this property, which will be dealt with in the Construction Noise Management Plan.

Mr. McInerney noted the following:

- As described in the EIAR, no exceedances of the air quality standards are anticipated.
- With regard to operational mitigation, Mr. McInerney advised that mitigation had been offered to the observers but was not agreed yet. CIE remain open to implement such measures if accepted. The intent is serious rather than a "possibility" and these measures would include:
    - An upgrade to the acoustic screen to increase the mass / strength and its height to achieve up to a 6dB reduction in noise values. Final design is still to be confirmed.
    - Mechanical ventilation for habitable rooms facing the railway, acoustically treated, with a potential reduction of 10dB, due to the ability to retain window closed.
- In addition, some embedded design measures within the proposed development have the potential to reduce rail noise, including:
    - The use of continuously welded track passing the house.
    - The removal of existing points which are located below the adjoining overbridge, will reduce noise and also remove the requirement for points maintenance works at this location, which is currently undertaken at night.
    - An existing track expansion joint adjoining this property will be removed with the resulting removal of the audible noise of trains passing this point.
- Mitigation would be by agreement and therefore cannot be defined. The targets cited are achievable.
- The difficulties highlighted by the observers are noted, however, the need for the scheme is set out in the EIAR. The slight increase in noise at the property is acknowledged and the applicant is committed to mitigation such effects as much as possible.
- The nearest construction compound is located 500m to the east of the property and works will be subject to supervision and monitoring.
- Of the three properties at this location, it is the first-floor windows of the Murray's property which are of most concern, which will be addressed by increasing the height of the barrier.
- Long-term average is the manner in which these projects are assessed, in line with relevant standards.

- Mr. Bradley also noted para 30 of the judgement of Smyth v RPA in respect of the application of WHO guidelines. Oversight of conditions has been addressed under SI743 of 2021, amending the 2001 Act, introduces the Minister in a supervisory capacity and sanctions in respect of environmental conditions in the Ralil Order. Environmental conditions are defined in S. 43A of the 2001 act and including monitoring of effects.

Response and Questioning by the Observers:

- Mr. Daly noted that the N25 dual carriageway has taken traffic off the adjacent roadway.
- Mr. Tyrell accepted that the assessments were undertaken in line with guidance documents, but this is no comfort to the observers. Traffic noise is acknowledged but living rooms are sited to the rear of the property, with lower noise levels.
- The level of consultation with the observers was disputed.
- In response to a question from Mr. Tyrell, Mr. Perkins confirmed the intention BS5228 criteria will be adopted and use to form the basis of conditions and of the construction noise monitoring plan. If monitoring is deemed to be required, this would be expected at residences most at risk of construction impacts such as the Murray's.

In response to questions from the Inspector, the applicants advised of the following points:

- The breakdown of construction noise emissions into the constituent activities in Tables 16.15 & 16.16 of the EIAR reflects the linear and sequential nature of works and is intended to reflect the worst-case noise levels during works.
- Activities are described by area or section of the line and the worst-case level that could happen close to any receptor along during that period of works is reported. E.g. Earthworks are scheduled to take two weeks along an area / section. The worst-case level is predicted to be 77dB for 1/2 days adjacent to each property. While this is reported as 77dB for two weeks, the reality is that noise levels will reduce after 1/2 days as works move away from that property and will not be

77dB at each receptor for the entire two weeks.
There may be weeks / months between activities.

- In terms of the sequential nature of the works, this is not yet defined. Earthworks will likely happen in sequence. Mr. Perkins noted that the values reported in the EIAR are all unmitigated values, as a worst case.
- Mr. Perkins noted that the significance of construction noise effects are assessed having regard to the duration of works but that the degree of exceedance of the night-time criteria is not a factor in this determination.
- In terms of cumulative effects, works on retaining walls including Wall no. 1, have not been factored into the assessment but the potential effects was acknowledged. The construction plan did not have these activities programmed cumulatively but this would require mitigation is this were to occur.
- Mr. Perkins advised that certain activities will have potential for differing mitigation measures, depending on the nature of that activities. As these are undefined at this time, the EIAR reports unmitigated construction noise levels to identify areas of potential effects.
- No absolute values are available at this time. The timetabling of construction activity and constraints on railway possession may preclude the application of certain mitigation measures. The Construction Management Plan will have the flexibility to manage these elements. It does not currently specify measures to be implemented.
- In respect of “Active Mitigation” described in the EIAR, Mr. Perkins confirmed that this is intended to refer to the measures which the developers are able to apply. There will be impacts on residential receptors and they will do their best to mitigate those effects but if those levels are still unacceptable the other mitigation will be offered, such as temporary rehousing.

- Mr. Tyrell queried what “night-time” means in relation to construction works, whether it is sustained throughout the night or a number of hours in the night after 11pm? Mr. Perkins confirmed that depending on the activity it could be throughout the night and would be reflected in the management plan.
- Mr. Tyrell queried what trigger or criteria would determine whether additional mitigation would be offered during construction and whether there would be on-

going engagement with the Murray household. In response Mr. Perkins advised that the limits would be set by condition, and it would be for Irish rail to manage the contractor. The offer would be made where the thresholds are predicted to be exceeded. If the expectations are different it would be determined by agreement with Irish Rail.

- In response to a question from the Inspector, Mr. Perkins confirmed that the trigger for the offer of additional measures such as rehousing would be 10dB above the threshold (i.e. 45dB night plus 10db = 55dB).
- Mr. Daly queried the time applicable for night-time construction noise. Mr. Perkins confirmed it as 2300 – 0700. Mr. Daly advised that current train operations exceed this threshold value highlighted that construction noise emission standards exceed the standards for operational noise, where 55dB triggers an offer for rehousing during construction.
- In response to comments from Mr. Daly, Mr. McInerney advised that the construction management plan will involve an ECOW and if monitoring is required, monitoring at the Murray house would be expected. Mr. Tyrell advised that the data of any noise monitoring should be directly available to the residents.

- In response to questions from the inspector, Mr. Perkins clarified his opinion that the criteria value of 60dB applied in the EIA for the 2007 Rail Order, failed to take account of the threshold for behavioural change. There has been no change in policy or standard since that time so that they referred to the EPA guidelines 2022 and determined two thresholds:
    - WHO guidelines refer to the on-site of health effects and are too low, and relate to the on-set of health effects, therefore it was adopted with a high increase above this value to determine the trigger, i.e. +10dB.
    - The upper end of the range, which is the value that they would seek to avoid, which is 68dB at day time and 63dB at night, which value is supported by a lot of standards and background studies.

  This is understood to be consistent with the EPA Guidelines in determining a mitigation threshold for the scheme.

- Mr. Perkins confirmed that the values for existing noise identified in Table 16.27 refers purely to operational railway noise at the closest façade. These are reported for first floor level and are based on modelled noise levels, which is benchmarked against all of the measurements and survey data available. The worst-case increase in noise for increased rail activity is then identified.
- While ambient traffic noise is also reported in the assessment, Mr. Perkins confirmed that the rear façade is the relevant façade for assessment.
- The modelled values take account of existing noise barriers but such barriers provide little mitigation at first floor level. NSL 2 is advised to have more than a 1dB increase but are just below the 68dB threshold in the future scenario.
- The effectiveness of the existing noise barrier is not clear from the data available.
- In response to a question from Mr. Daly, Mr. McInerney advised that works are likely to commence after midnight – 1am.
- Mr. Tyrell queried Table 16.27 and advised that his measured ambient levels at the rear of the house were lower such that the increase in noise would be greater than 1dB. The house is set below road level and road traffic noise impact may be lower than modelled.
- Mr. Perkins noted that Mr. Tyrell's noise data suggests that the ambient noise levels are >60dB from road and other sources. This was agreed by Mr. Tyrell.
- Mr. McInerney and Mr. Kenny responded to an inspector query on the use of horns on the railway, noting that it was generally used as a warning to operatives on the line. It is a driver's decision on safety grounds but that there is no specific requirement at this location. Mr. Daly noted that use of the horn is constant at this location.
- In relation to vibration, Mr. Perkins outlined the relevant standard for the assessment of vibration effects, indicating that Vibration Dose Value (VDV) is the appropriate standard / measurement. It was accepted that the PPV threshold for perception is exceeded at this location.
- In considering the long-term exposure value (VDV), the levels of adverse comment are not exceeded. Transmission from outside to the inside of the property has not been assessed or measured.

- The acceptability of levels of 1mm/sec has been adopted in many other cases and data suggests that levels are currently well below this standard. No requirement for mitigation is identified.
- Mr. Tyrell noted that the use of long averages is not reflective of the effect on this property. The Murray experience is not wrong. There is current nuisance and there is currently adverse comment generated.
- In response to a query from the Inspector to both parties, it was confirmed that the average noise values recorded between 2006, 2019, 2022 are broadly aligned. The difference between the parties arises in relation to the treatment of the peak or LA_{Max} values being experienced. Mr. Tyrell indicated that his survey data reflects the experienced noise at this location.
- In response to a query, Mr. Tyrell indicated that the location of the second line at an additional remove from the observer's property boundary would not have a significant effect and the further remove from the noise barrier would reduce its effect. Mr. Perkins indicated that the L_{max} would be somewhat lower by 2/3dB possibly, although the effect of the barrier would be reduced.
- Mr. Bradley indicated that the applicants did not intend to present a proposal or suggested condition or arrangement to achieve the implementation of the identified mitigation measures. It was advised as being open to the Board to apply appropriate conditions which go beyond the usual planning code. Environmental conditions do allow for monitoring.
- The inspector queried the desired outcome of the Observers from the process. Mr. Daly responded that the applicants were requested to take the observers out of this situation and their experience with noise. With regard to the proposed mitigation, no proposal for mitigation has been presented and no mitigated values have been presented.
- Mr. McInerney noted that a more detailed offer was made last week and are open to further discussion. The noise benefits are realistically achievable. Some measures to reduce the use of train horns could be implemented. No further mitigation is available at this point. The longer-term electrification of the network will result in reduction in noise and there will be no immediate increase in rail services.

- Mr. Daly queried the level of engagement undertaken to date and the offer of "further discussion". Mr. Bradley advised that while there was an e-mail exchange but there was not agreement on the level of communication undertaken.
- The use of the railway access adjacent to the Murray property was clarified by Mr. McInerney. It is not a main compound but may be used for some limited localised works, for a short period. There are no major plans for use of this access point, aside from possible future maintenance.

Module 5: Closing Statements

Closing statements were made to the hearing form the following parties.

Observers:

Mr. Tom O'Donnell:

Mr. O'Donnell reiterated his opinion that the proposal represented project splitting due to the failure to assess noise and air quality effects from increased frequency of services to Kent Station. The scope of the project is queried. Ch. 6 of the EIAR describes the scheme but does not describe the frequency of services with or without the permitted Through-Platform at Kent Station. Service increases are not stated to be dependent on electrification. The EIAR confirms that the project, along with the platform and signalling projects, will facilitate the tripling of service frequency.

The project will immediately facilitate the increased use of diesel trains on the network, without reliance on electrification, with noise and air quality effects which are not assessed. There is no other process for the assessment and consenting of the increase frequency of services.

The NIS confirms that the increased frequency of trains will have local noise levels increases. There is no assessment of effects on the River Blackwater SAC. AA screening in respect of the Through-Platform at Kent station did not assess operational effects and there has been no AA of Midleton – Mallow project.

There will be negative impacts on residents in the vicinity of Kent Station. The application is not complete, precise or definitive and the AA and EIA process is

deficient. The applications should be refused or appropriate conditions attached to address the issues raised, as follows:

- Limiting current train frequency between Midleton and Kent Station to the current level of use as set out in section 6.3 of the EIAR.
- Physically block twin track until the EIA and AA of the increased frequency of services has been addressed under.

Sheenvale Ltd. (Mr. Tom Philips)

The closing statement reiterated the following key points:

- There has been no evidence of collaboration between two public bodies, Irish Water and Irish Rail in respect of their adjacent works.
- The effect of these two public projects has inhibited the bringing these zoned lands forward for development and results in a possible liability for RZLT.
- The County Council has not explained its revised position in relation to the issues raised with regard to this application.
- The examination of alternative in the EIAR was inadequate particularly in respect of construction compound no. 5 and its effects on the observer's lands. There is no scope for alternative access to these lands from adjoining roads.
- The Book of Reference incorrectly identifies these as agricultural lands.
- The effects of the siting of the construction compound on these lands remains of indeterminate duration.

Tim and Deirdre Murray

- The rationale for allowable operational noise limits being in excess of noise emissions from construction activity remains unclear and raises questions about the appropriateness of the design criteria selected.
- There remains uncertainty regarding the achievement of the mitigation levels identified. The applicants should advise how they are going to avoid and mitigate significant effects.
- While mitigation may be accepted, the peak noise values are such that such measures will never deliver reasonable noise levels at the residence.

- Relocating the family from the noise problem is the only viable solution.
- There is no record of engagement with the observers since last week.

Cork County Council

Mr. Thomas Watt reiterated their support for the scheme and its essential role in strategic terms and had no further comment to add to previous written submissions.

Applicant: Coras Iompair Éireann

Mr. Bradley confirmed the wording of an agreement with Cork Council in respect of condition no. 29 as recommended by the council, as follows:

> "*In accordance with section 44 of the Transport Railway Infrastructure Act 2001, as amended, CIÉ agrees to a condition in the Railway Order providing that prior to the commencement of development, CIE shall make a financial contribution agreed with Cork County Council, toward the total cost of the rail overbridge at the Water Rock Urban Expansion Area*".

It was also noted that in the event of a decision to grant the railway order, in serving the notice to treat, CIE does not have include all lands identified in the railway Order. It may take some or all of the land identified.

Mr. McInerney addressed the interaction with the Irish Water pumping station development and noted consultations with the affected parties. Appeal in relation to the RZLT may address any liability arising due to the prevailing circumstances.

There is a community need for the development. The need for a construction compound adjacent to the bridge extension works was outlined. Compound no. 5 was assessed as suitable to meet the construction requirements. The landtake will be temporary in nature and would not preclude the lodgement of a planning application in the short-term for the redevelopment of the site.

With regard to the Murray property, it was acknowledged that there was some possible miscommunication in earlier days but the intention has been to describe

proposed mitigation in detail. The applicants remain open to discussions in this regard.

The project relates to the twin tracking of this section of line and there is no case of project splitting or effort to avoid undertaking EIA. The proposed development has been subject to a full mandatory EIAR.

With regard to Mytle Hill level crossing, the issues raised are outside the scope of this application. The requirement for an intervention at this level crossing is acknowledged, however, this will be subject to a separate design and consent process. Service levels will not increase beyond current infrastructural capacity.

The Oral Hearing closed at 3.12pm no July 3rd 2003.

Documents received at Oral Hearing

No.	Submitted by	Presenter	Topic
1.	**Iarnród Éireann/ Córas Impair Éireann**	James Kenny	Opening Statement and Background
2.		Conleth Bradley SC	Outline submission on behalf of Córas Impair Éireann
3.		Tim Richards	Property Referencing – Brief of Evidence
3A.		Tim Richards	Property Referencing - Brief of Evidence - Appendix 1 – Corrigenda
4.		John McInerney	Overview of Railway Order & Railway Works
5.		Lara Gough	Brief of Evidence - Planning
6.		Dr Elaine Bennett	Brief of Evidence – Alternatives Considered
7.		Dr Elaine Bennett	Brief of Evidence – Population and Human Health
8.		James Brookes	Brief of Evidence – Air Quality
9.		Alex Greenwood	Brief of Evidence – Climate
10.		Dr. Lindsay Mc Millan	Brief of Evidence – Land, Soils and Hydrogeology
11.		Dr. Elaine Bennett	Brief of Evidence – Surface Water
12.		Laurence Cload	Brief of Evidence – Flood Risk
13.		Dr Elaine Bennett	Brief of Evidence – Biodiversity
14.		Richard Barker	Brief of Evidence – Landscape and Visual
15.		Emma Baume	Brief of Evidence – Architectural Heritage

No.	Submitted by	Presenter	Topic
16.		Enda O'Flaherty	Brief of Evidence – Archaeology
17.		John Dooley	Brief of Evidence – Roads and Traffic
18.		Richard Perkins	Brief of Evidence – Noise and Vibration
19.		Dr. Elaine Bennett	Brief of Evidence – Material Assets
20.		Dr. Elaine Bennett	Brief of Evidence – Major Accidents and or Disasters
21.		Dr. Elaine Bennett	Brief of Evidence – Appropriate Assessment Screening and Natura Impact Statement
22.	**Cork County Council**	Cork County Council	Cork County Council letter dated 20th June, as referenced in the oral hearing
23.		Cork County Council	Cork County Council letter dated 22nd June, as referenced in the oral hearing
24.		Cork County Council	Draft Table of proposed Agreement on conditions between Cork County Council and Iarnród Éireann/ Córas Impair Éireann as referenced in the oral hearing
25.			
26.	**Sheenvale Limited (Observer)**	Tom Philips	Brief of Evidence – Powerpoint Presentation
27.	**Martina O'Connell (Observer)**	Anthony Murphy	Letter from Regan Mc Entee & Partners (26th June) to

No.	Submitted by	Presenter	Topic
			confirm attendance at Hearing
28.	**Martina O'Connell (Observer)**		Legal Submission on behalf of Martina O'Connell
29.	**Oliver Moran (Observer)**	**Oliver Moran**	Brief of Evidence
30.	**Carrigtwohill & District Historical Society (Observer)**	**André Saubolle**	Brief of Evidence
31.	**Tom O'Donnell**	**Tom O'Donnell**	Brief of Evidence
31.	**Iarnród Éireann/ Córas Impair Éireann**	**Iarnród Éireann/ Córas Impair Éireann**	Email (27th June) with explanation of attached diagram/figure of high tide roost areas
32.		**Lara Gough**	Winter Bird Survey Report – 2022-2023
33.	**Tim and Deidre Murray (Observer)**	**Eoghan Tyrrell - IAcoustics**	Railway Traffic Noise Assessment
34.		**Eoghan Tyrrell - IAcoustics**	Acoustics Report
35.		Mr. Charles Daly	Video of effects of railway noise upon home of Tim and Deidre Murray
36.	**Tom O'Donnell (Observer)**	Tom O'Donnell	Additional statement