

Population and Land Use

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Table of Acronyms

Acronym	Meaning
AZ	Assessment Zone
CDP	County Development Plan
CRO	Community Relations Officers
CSO	Central Statistics Office
DANP	Dublin Airport North Portal
DASP	Dublin Airport South Portal
DCC	Dublin City Council
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMRA	Eastern and Midland Regional Assembly
EPA	Environmental Protection Agency
FCC	Fingal County Council
GIS	Geographic Information System
LAP	Local Area Plan
LAS	Land Acquisition Strategy
ME	Metro Economic
NFQ	National Framework of Qualifications
NPF	National Planning Framework
NTA	National Transport Authority
OCC	Operations Control Centre
POPS	Property Owner Protection Scheme
RSES	Regional Spatial Economic Strategy
SI	Statutory Instrument
STMP	Scheme Traffic Management Plan
TII	Transport Infrastructure Ireland

11. Population and Land Use

11.1 Introduction

This Chapter of the Environmental Impact Assessment Report (EIAR) assesses the impact of MetroLink Project (hereafter referred to as the proposed Project), on Population and Land Use during the Construction Phase and Operational Phase.

This chapter describes and assesses the likely direct and indirect significant effects of the proposed Project on Population and Land Use, in accordance with the requirements of Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (i.e. the EIA Directive) (European Union, 2014a).

This Chapter should be read in conjunction with the following Chapters, and their Appendices, which present related impacts arising from the proposed Project and proposed mitigation measures to ameliorate the predicted impacts:

- Chapter 9 (Traffic & Transport);
- Chapter 10 (Human Health);
- Chapter 13 (Airborne Noise & Vibration);
- Chapter 16 (Air Quality);
- Chapter 21 (Land Take);
- Chapter 22 (Infrastructure & Utilities); and
- Chapter 28 (Risk of Major Accidents & Disasters).

Limits of deviation have been set for the proposed Project and this is addressed in the Wider Effects Report annexed at Appendix A5.19.

The assessment is based on identifying and describing the likely significant effects arising from the proposed Project as described in Chapters 4 to 6 of this EIAR. The proposed Project description is based on the design prepared to inform the planning stage of the project and to allow for a robust assessment as part of the Environmental Impact Assessment (EIA) Process.

Where it is required to make assumptions as the basis of the assessment presented here, these assumptions are based on advice from competent project designers and are clearly outlined within the Chapter.

'Population', in this Chapter, refers to people who live, work in or visit the Study Area. This assessment on population considers attributes and characteristics associated with the demographics, community and residential settlement, economic activities and employment, community infrastructure, key economic sectors (such as transport, retail and tourism), along with connectivity and land use. 'Land Use' in this Chapter specifically relates to the character of land use on or around the proposed Project location and the potential for land use change. It considers the zoning type along with permitted use classes as per the relevant Development Plans along with actual functionality, productivity and change. It should be noted that the planning context with regards to Population and Land Use has been set out in the Planning Report for Railway Order submitted with this application.

This Chapter outlines the relevant legislation and policy, describes in detail the methodology together with the baseline information that has been utilised as part of the assessment on Population and Land Use. The likely significant effects of the proposed Project on Population and Land Use during construction and operation have been determined; mitigation and monitoring that will be implemented have been documented together with the residual and cumulative impacts that are likely to arise as a result of the construction and operation of the proposed Project.

11.2 Outline Project Description

A full description of the proposed Project is provided in the following Chapters of this EIAR:

- Chapter 4 (Description of the MetroLink Project);
- Chapter 5 (MetroLink Construction Phase); and
- Chapter 6 (MetroLink Operations & Maintenance).

Table 11.1 presents an outline description of the key proposed Project elements which are appraised in this Chapter. Diagram 11.1 presents an outline of the main elements of the proposed Construction Phase that are appraised in this Chapter and Diagram 11.2 presents an outline of the main elements of the Operational Phase of the proposed Chapter that are appraised in this Chapter.

Table 11.1: Outline Description of the Principal Project Elements

Project Elements	Outline Description
Permanent Project Elements	
Tunnels	<p>It is proposed to construct two geographically separate, single-bore tunnels, using a Tunnel Boring Machine (TBM). Each section of tunnel will have an 8.5m inside diameter and will contain both northbound and southbound rail lines within the same tunnel. These tunnels will be located as follows:</p> <ul style="list-style-type: none"> ▪ The Airport Tunnel: running south from Dublin Airport North Portal (DANP) under Dublin Airport and surfacing south of the airport at Dublin Airport South Portal (DASP) and will be approximately 2.3km in length; and ▪ The City Tunnel: running for 9.4km from Northwood Portal and terminating underground south of Charlemont Station.
Cut Sections	<p>The northern section of the alignment is characterised by a shallow excavated alignment whereby the alignment runs below the existing ground level. Part of the cut sections are open at the top, with fences along the alignment for safety and security. While other sections are 'cut and cover', whereby the alignment is covered.</p>
Tunnel Portals	<p>The openings at the end of the tunnel are referred to as portals. They are concrete and steel structures designed to provide the commencement or termination of a tunnelled section of route and provide a transition to adjacent lengths of the route which may be in retained structures or at the surface.</p> <p>There are three proposed portals, which are:</p> <ul style="list-style-type: none"> ▪ DANP; ▪ DASP; and ▪ Northwood Portal. <p>There will be no portal at the southern end of the proposed Project, as the southern termination and turnback would be underground.</p>
Stations	<p>There are three types of stations: surface stations, retained cut stations and underground stations:</p> <ul style="list-style-type: none"> ▪ Estuary Station will be built at surface level, known as a 'surface station'; ▪ Seatown, Swords Central, Fosterstown Stations and the proposed Dardistown Station will be in retained cutting, known as 'retained cut stations'; and ▪ Dublin Airport Station and all 10 stations along the City Tunnel will be 'underground stations'.
Intervention Shaft	<p>An intervention shaft will be required at Albert College Park to provide adequate emergency egress from the City Tunnel and to support tunnel ventilation. Following the European Standard for safety in railway tunnels TSI 1303/2014: Technical Specification for Interoperability relating to 'safety in railway tunnels' of the rail system of the European Union, it has been recommended that the maximum spacing between emergency exits is 1,000m.</p> <p>As the distance between Collins Avenue and Griffith Park is 1,494m, this intervention shaft is proposed to safely support evacuation/emergency service access in the event of an incident.</p>

Project Elements	Outline Description
	<p>This shaft will also function to provide ventilation to the tunnel. The shaft will require two 23m long connection tunnels extending from the shaft, connecting to the main tunnel.</p> <p>At other locations, emergency access will be incorporated into the stations and portals or intervention tunnels will be utilised at locations where there is no available space for a shaft to be constructed and located where required (see below).</p>
Intervention Tunnels	<p>In addition to the two main 'running' tunnels, there are three shorter, smaller diameter tunnels. These are the evacuation and ventilation tunnels (known as Intervention Tunnels):</p> <ul style="list-style-type: none"> ▪ Airport Intervention Tunnels: parallel to the Airport Tunnel, there will also be two smaller diameter tunnels; on the west side, an evacuation tunnel running northwards from DASP for about 315m, and on the east side, a ventilation tunnel connected to the main tunnel and extending about 600m from DASP underneath Dublin Airport Lands. In the event of an incident in the main tunnel, the evacuation tunnel will enable passengers to walk out to a safe location outside the Dublin Airport Lands. ▪ Charlemont Intervention Tunnel: The City Tunnel will extend 360m south of Charlemont Station. A parallel evacuation and ventilation tunnel is required from the end of the City Tunnel back to Charlemont Station to support emergency evacuation of maintenance staff and ventilation for this section of tunnel.
Park and Ride Facility	<p>The proposed Park and Ride Facility next to Estuary Station will include provision for up to 3,000 parking spaces.</p>
Broadmeadow and Ward River Viaduct	<p>A 260m long viaduct is proposed between Estuary and Seatown Stations, to cross the Broadmeadow and Ward Rivers and their floodplains.</p>
Proposed Grid Connections	<p>Grid connections will be provided via cable routes with the addition of new 110kV substations at DANP and Dardistown. (Approval for the proposed grid connections to be applied for separately, but are assessed in the EIAR).</p>
Dardistown Depot	<p>A maintenance depot will be located at Dardistown. It will include:</p> <ul style="list-style-type: none"> ▪ Vehicle stabling; ▪ Maintenance workshops and pits; ▪ Automatic vehicle wash facilities; ▪ A test track; ▪ Sanding system for rolling stock; ▪ The Operations Control Centre for the proposed Project; ▪ A substation; ▪ A mast; and ▪ Other staff facilities and a carpark.
Operations Control Centre	<p>The main Operations Control Centre (OCC) will be located at Dardistown Depot and a back-up OCC will be provided at Estuary.</p>
M50 Viaduct	<p>A 100m long viaduct to carry the proposed Project across the M50 between the Dardistown Depot and Northwood Station.</p>
Temporary Project Elements	
Construction Compounds	<p>There will be 34 Construction Compounds including 20 main Construction Compounds, 14 Satellite Construction Compounds required during the Construction Phase of the proposed Project. The main Construction Compounds will be located at each of the proposed station locations, the portal locations and the Dardistown Depot Location (also covering the Dardistown Station) with satellite compounds located at other locations along the alignment. Outside of the Construction Compounds there will be works areas and sites associated with the construction of all elements of the proposed Project, including an easement strip along the surface sections.</p>
Logistics Sites	<p>The main logistics sites will be located at Estuary, near Pinnock Hill east of the R132 Swords Bypass and north of Saint Margaret's Road at the Northwood Compound. (These areas are included within the 14 Satellite Construction Compounds).</p>

Project Elements	Outline Description
Tunnel Boring Machine Launch Site	There will be two main tunnel boring machine (TBM) launch sites. One will be located at DASP which will serve the TBM boring the Airport Tunnel and the second will be located at the Northwood Construction Compound which will serve the TBM boring the City Tunnel.

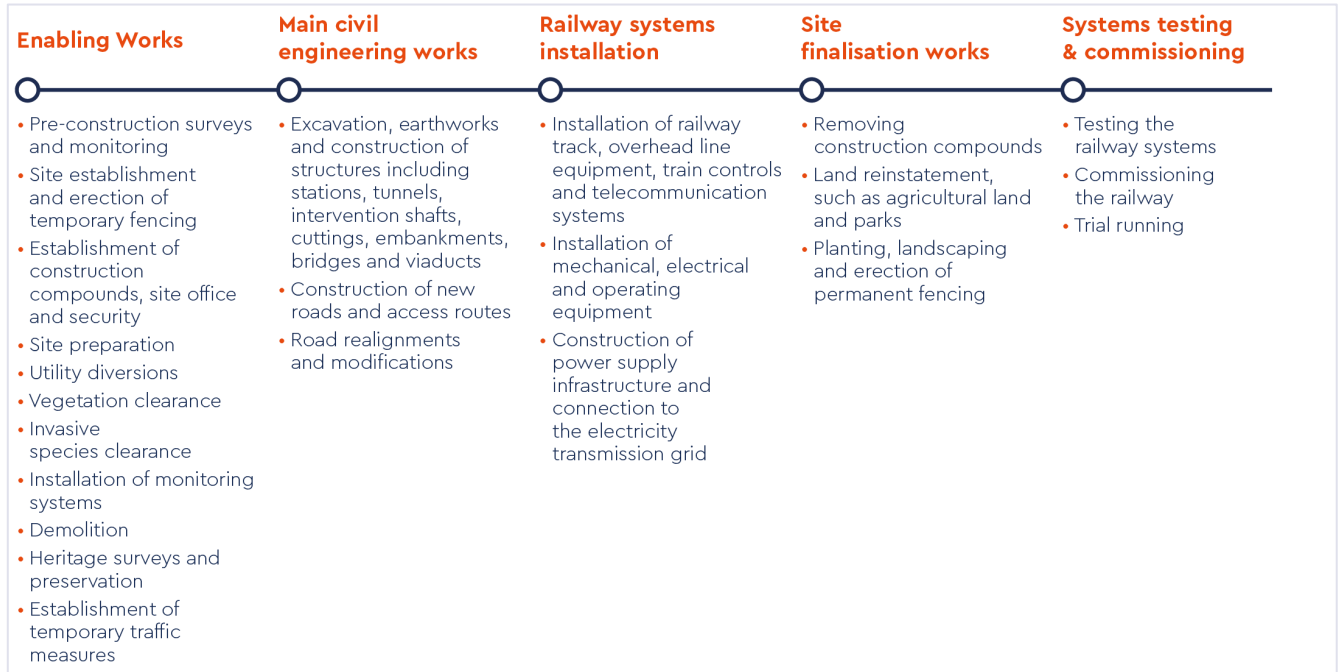


Diagram 11.1: Summary of Key Activities during the Construction Phase of the Proposed Project



Diagram 11.2: Summary of Key Activities during the Operation Phase of the Proposed Project

11.3 Methodology

Article 3(1) of the EIA Directive refers to Population as one of the factors the EIA should identify, describe and assess. This Section sets out the methodology that has been used to identify, describe and assess the likely and significant effects of the proposed Project on Population and Land Use. It should be noted that there are no specific definitions or guidance in place for the assessment on Population and Land Use in an EIAR.

This assessment of direct and indirect likely significant effects has therefore been based on established best practice and undertaken with due regard to overarching guidance on EIARs, including the Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA May Volume 3 – Book 1: Population and Human Health, Traffic, Noise and Vibration and EMI/EMC

2022) and Environmental Impact Assessment of Projects – Guidance on the Preparation of the Environmental Impact Assessment Report (EU Commission 2017).

Given the socio-economic and demographic characteristics along the route alignment, this assessment has examined five subsections within the defined Study Area, as illustrated in Figure 11.1. The assessment has been primarily a desk-based study that has used Geographic Information System (GIS) mapping software to analyse data in relation to the population within the Study Area which has also been supplemented by various site visits throughout 2018 - 2021. The existing environment was determined and verified through review of aerial photography and site walkovers to validate, witness and better understand site specifics within each community. An assessment was then undertaken to review the population (i.e. demography along with attributes and characteristics within the population), economic activity in the area, employment, community infrastructure, tourism and recreation amenities. The existing and projected transport and land use characteristics, such as accessibility of the catchment area, the existing nature of the area in terms of land use and density and the health of the local economy along with planning policies have also been taken into account, through consultation and reviews of relevant planning policies (refer to the Planning Report for Railway Order submitted with this application for further detail). GeoDirectory is a complete database of all buildings in the Republic of Ireland, their use and geolocation has also been used to inform and validate this assessment. Other publicly available statistics and databases have also been drawn upon where necessary to understand demographics, employment status, skill levels, economic activity, levels of deprivation, sectoral breakdown of the economy and the labour catchment area as shown by travel to work patterns.

This has facilitated the assessment of likely significant effects on the Population and Land Use which are attributable to the proposed Project. In summary, this assessment on Population and Land Use has addressed the significant direct and indirect effects likely to arise from the proposed Project, namely:

- **Characteristics of population(s)** - (i.e. resident, visiting, economic and recreational) and the potential for the proposed Project to affect those groups of people in terms of amenity and quality of life;
- **Access to employment, education, health and commercial facilities** - Travel times for communities considered within reach of the proposed Project have been assessed quantitatively and qualitatively in relation to employment, education, health and commercial accessibility. A composite index of multiple variables has been developed for the purpose of this assessment to understand any severance of facilities and communities;
- **Effects on employment** - Effects on employment in the local region will be assessed quantitatively along with the degree of leakage, displacement, substitution and employment multipliers to determine the additional jobs likely to result from construction and operation of the proposed Project;
- **Economic investment in the region from construction expenditure** - The quantitative assessment of investment in the region has been based on economic spend multipliers and the capacity of the local region to supply the requirements of the proposed Project. As such, the relevant information on local employment levels, labour mix, and educational qualification within the Study Area has been taken into account;
- **Strategic level benefits** - This relates to the qualitative consideration of regional competitiveness, international profile, rankings and reputation prior to, during the construction of and following implementation of the proposed Project;
- **Access to tourism and recreation** - The assessment of the effect on tourism and recreation has identified key attractions and derived usage figures where information is available in order to determine how the proposed Project may affect access to these facilities during construction and operation; and
- **Land Use** - Characteristics of existing land uses on or around the proposed Project location which could be affected; identification of any sensitive land uses which could be affected by the proposed Project (i.e. hospitals, schools, places of worship, community facilities); whether the proposed Project will affect permanent or temporary change in land use; and what the nature of that change is likely to be. This includes:

- Quantification and description of land use on or around the proposed Project location – primarily based upon statutory plans and land-use zoning designations, information on user groups and on development 'pipeline' projects;
- Consideration of potential for change in land use arising (for example in homes, private property, industry, commerce, recreation, public open space, community facilities, agriculture and tourism) from proximity to the proposed Project, changes in accessibility to a location; and whether any plans for future land uses on or around the location which could be affected by the proposed Project; and
- The potential impact on land use is also considered in the context of National Planning Framework's (NPF) objectives for sustainable development which targets significant infill/brownfield growth, especially in cities and large towns, with better linkage between zoning of land and the availability of infrastructure (NPO 71). The NPF seeks at least half (50%) is within the existing built-up footprint of the city (NPO 3b) with any relocated growth being in the form of compact development, such as infill or a sustainable urban extension; any relocated growth being served by high-capacity public transport and/or related to significant employment provision (NPO 68).

11.3.1 Study Area

The proposed Project is within the administrative boundaries of Fingal County Council (FCC) and Dublin City Council (DCC). Based on the length of the proposed Project and the diversity within the population along the route alignment, the Geographical Split (as defined in Chapter 2: Methodology in Preparation of the EIAR) has been adjusted for this assessment on population, as illustrated in Figure 11.1, to assess the likely significant effects on Population and Land Use at the local level. The route alignment has been divided into five separate sections for the purpose of this assessment (rather than the four assessment zones (AZs) considered in the rest of the EIAR), however these align with the overarching geographical splits as described below:

- Section 1 equates to the Northern Section i.e. AZ1;
- Sections 2 and 3 comprise the Airport Section and the Dardistown to Northwood Section i.e. AZ2 and AZ3;
- Section 4A comprises the northernmost end of the Northwood to Charlemont Section which is AZ4 (i.e. generally between the R104 Santry Avenue to the north and R103 Glasnevin Avenue/R103 Collins Avenue to the south);
- Section 4B comprises the central portion of the Northwood to Charlemont Section which is AZ4 (i.e. generally between R103 Glasnevin Avenue/R103 Collins Avenue to the north and Royal Canal to the south); and
- Section 4C comprises the southernmost end of the Northwood to Charlemont Section which is AZ4 (i.e. from the Royal Canal to the north).

The rationale for splitting the Study Area according to these sections rather than the AZs is based on the population characteristics (i.e. socio-economic and demographic) within the Study Area. This approach was set out in Section 6.1.1 of the MetroLink EIAR Scoping Report (Jacobs 2018) and the relevant Population and Land Use characteristics within these sections of the Study Area are described in detail in Section 11.4 of this Chapter.

Given the scale of the proposed Project, there is the potential to impact on the Population and Land Use at different spatial extents. The state and regional data has been considered for comparative analysis, where relevant. However, the assessment has focused on the local and neighbourhood areas in the vicinity of the proposed Project. Those areas of relevance to this Population and Land Use assessment are:

- State – Ireland;
- Regional – Dublin (i.e. Fingal, Dublin City, Dun Laoghaire-Rathdown and South Dublin councils);
- Local – The Small Areas within and adjacent to the stations and route alignment as described below; and
- Neighbourhood – This is the individual stations along the route alignment as described below.

The Study Area for the purpose of determining local and neighbourhood effects is illustrated in Figure 11.1 and comprises a 500m radius extending from the track alignment and a radius of up to 1km around each proposed station.¹

A radius of 500m is typically used in low level site catchment analysis to represent the average resident's walking speed, time and distance threshold that they deem to be in their 'locality'. By extending this radius to 1km around each of the 15 new stations, this reflects the general propensity of people to travel further to a transport hub by foot than they ordinarily would to other services. This also aligns with the Section 5.8 of 'Sustainable Residential Developments in Urban Areas: Guidelines for Planning Authorities' (Department of Environment, Heritage and Local Government 2009) in relation to walking distances from public transport nodes. Assuming walking speeds of 3km/h to 5km/h, the population living between 12 minutes and 20 minutes walking time from each station and the population that is between 6 minutes and 10 minutes walking time elsewhere along the route alignment has therefore been considered accordingly.

Specifically, the 665 Small Areas within the Study Area have been used as the basis for the establishing the baseline and undertaking the assessment of population at the local and neighbourhood level. Small Areas are zones of population comprising between 50 and 200 dwellings created by the National Institute of Regional and Spatial Analysis on behalf of the Ordnance Survey Ireland in consultation with the Central Statistics Office (CSO). Small Areas were designed as the lowest level of geography for the compilation of statistics in line with data protection and generally comprise either complete or part of townlands or neighbourhoods (within Electoral Division boundaries). Small Areas were used as the basis for the enumeration in 2016 Census (CSO 2017) and thus have been applied and considered herein for consistency.

11.3.2 Relevant Guidelines, Policy and Legislation

This assessment has been undertaken qualitatively and quantitatively in accordance with the requirements of the EIA Directive and transposing Irish legislation as noted in Section 11.1 of this Chapter. Specifically, in the absence of published standards or topic-specific guidance on the assessment on population, due regard has been given to the following guidelines which is industry accepted practice:

- Guidelines on the information to be contained in Environmental Impact Assessment Reports, May 2022 (EPA 2022) update and replacing the Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA 2017);
- Environmental Impact Assessment of Projects – Guidance on the Preparation of the Environmental Impact Assessment Report (EU Commission 2017);
- Environmental Impact Assessment of Projects – Guidance on Scoping (EU Commission 2017);
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment - August 2018 (Government of Ireland 2018);
- Key Issues Consultation Paper on the Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems (Department of Housing Planning and Local Government 2017);
- Circular PL 1/2017 - Implementation of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive): Advice on the Administrative Provisions in Advance of Transposition (Department of Housing, Planning and Local Government 2017);
- Circular PL 05/2018 -Transposition into Planning Law of Directive 2014/52/EU amending Directive 2011/92/EU on the effects of certain public and private projects on the environment (the EIA Directive) And Revised Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government 2018);
- Guidelines on the Treatment of Tourism in an Environmental Impact Statement (Fáilte Ireland 2011); and
- Sustainable Residential Developments in Urban Areas: Guidelines for Planning Authorities (Department of Environment, Heritage and Local Government 2009).

¹ Minor modifications have also been made to the Study Area to align with construction zones at Glasnevin; however, these do not materially affect baseline data.

11.3.3 Data Collection and Collation

The assessment initially involved desk-based research and analysis of existing documentation to build up profiles of the communities and understand the population within the Study Area. As described in detail in Appendix A11.1, this comprised the collation and review of the latest relevant information from the following principal data sources:

- CSO statistical databases on demographics and socioeconomics including the 2016 Census (CSO 2017);
- Pobal mapping including deprivation indices related to affluence and disadvantage (Pobal 2017);
- Land use zoning as set out by the relevant planning polices as described in detail in the Planning Report for Railway Order;
- GeoDirectory is a complete database of all buildings in the Republic of Ireland and their use and geolocation (refer to Section 11.4.3.6 of this Chapter for further detail); and
- Workplace Zone data related to travel patterns for students, workers and commuters (CSO 2017) – Refer to Appendix A11.2.

To further supplement the Planning Report for Railway Order, a review of relevant policy at state, regional, county and local level as well as statutory and strategic plans, has been undertaken for the following:

- Masterplans and Local Area Plans (LAPs) within the Study Area;
- Local economic community plans;
- FCC Fingal Development Plan 2017-2023 (FCC 2017), hereafter referred to as the CDP for Fingal and the draft Fingal Development Plan 2023- 2029;
- DCC's Dublin City Development Plan 2016-2022 (DCC 2016), hereafter referred to as the CDP for Dublin and the draft Dublin City Development Plan 2022 - 2028;
- Regional Spatial Economic Strategy (RSES) for the Eastern and Midland Region 2019 – 2031 (Eastern and Midlands Regional Assembly (EMRA) 2019);
- Project Ireland 2040 – National Planning Framework (NPF) (Government of Ireland 2017a); and,
- Climate Action Plan 2021: Securing Our Future (Government of Ireland 2021).

Observational information has also obtained through site visits to establish and validate the baseline conditions and the assessment of impacts.

11.3.4 Analysis Methods

Analysis for this assessment has been undertaken in a number of phases. The first phase comprised a data gathering exercise to collate relevant publicly available data. The assessment has been primarily a desk-based study that has used GIS mapping software; therefore, data were collated into a mapping database in the first instance. Additionally, GeoDirectory was used to inform and validate this assessment and other publicly available statistics and databases have also been drawn upon where necessary.

Additionally, site visits were undertaken along the route alignment of the proposed Project to validate, witness and better understand site specifics within each community. Where appropriate, consultation was also undertaken to corroborate the findings and analysis. The analysis has also been informed by the work undertaken as part of the other EIA Chapters, including baseline surveys, modelling and impact assessments.

11.3.5 Consultations

A full account of the consultation process undertaken for the proposed Project, including iterative design development consultation, scoping and consultation throughout the preparation of this EIA is provided in Chapter 8 (Consultation). The following describe aspects of the engagement process pertinent to this population assessment:

- The submissions of business and trade groups, retailers, sectional stakeholders (i.e. tourism organisations and transport operators) and socio-economic groups located along the alignment has been fully reviewed during the preparation of the EIAR;
- All submissions received in relation to the Scoping Report have been reviewed and amendments have been incorporated where relevant to reflect the information received as appropriate;
- Workshops have been attended by members of the EIA coordination team to gather feedback and assist members of the population with their individual queries in relation to this assessment; and
- Further, the assessment team attended site-specific workshops with stakeholders including the Department of Culture, Heritage and the Gaeltacht (now Department of Tourism, Culture, Arts, Gaeltacht, Sports and Media), the Office of Public Works, and the Department of Transport, Tourism and Sports.

Please refer to EIAR Appendices Appendix A8.19 Meetings Register for a full list of meetings and the dates on which they took place.

11.3.6 Appraisal Method for the Assessment of Impacts

There are no published EIAR specific, significance criteria for population and land-use, therefore the impact assessment methodology used is in alignment with the assessment of the likely significant effects as set out in '*Description of Effects*' Table 3.4 of the Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA May 2022) and the methodology outlined in Chapter 2 (Methodology Used in Preparation of the EIAR) of this EIAR. In accordance with the EPA Guidelines, the impact assessment focuses on likely, significant effects, as described below:

- Likely effects: To ensure that the EIA adds value to the consent process it is necessary to focus on those effects that are probable or likely to occur. However, to be prudent, the EIAR also attempts to identify a reasonably foreseeable worst-case scenario as a context for 'likely significant effects'.
- Significant effects: Significance of effects is usually understood to mean the importance of the outcome of the effects (the consequences of the change). Significance is determined by a combination of (objective) scientific and subjective (social) concerns.

The impact assessment is therefore focused on identifying the likely significant effects of the proposed Project, as categorised according to quality, significance and duration. The extent, context and frequency of effects has also been considered in the assessment process, where relevant. The relevant terms listed in Table 11.2 are used to describe specific effects under each category. This is based on Table 3.4 of the EPA Guidelines referred to above. As stated in the Guideline, all categories set out in Table 3.4 do not need to be used for every effect.

Table 11.2 Description of Effects

Quality of Effects	
Positive	A change which improves the quality of the environment.
Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Negative	A change which reduces the quality of the environment.
Significance of Effects	
Imperceptible	An effect capable of measurement but without significant consequences.
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Profound	An effect which obliterates sensitive characteristics.
Duration and Frequency of Effects	
Momentary Effects	Effects lasting from seconds to minutes.
Brief Effects	Effects lasting less than a day.
Temporary	Effects lasting less than a year.
Short-term	Effects lasting one to seven years.
Medium-term	Effects lasting seven to fifteen years.
Long-term	Effects lasting fifteen to sixty years.
Permanent	Effects lasting over sixty years.
Reversible	Effects than can be undone, for example through remediation or restoration

As stated, the EPA Guidelines note that the significance of effects is usually understood to mean the importance of the outcome of the effects (the consequences of the change). Significance is determined by a combination of (objective) scientific and subjective (social) concerns.

The assessment of likely significant effects has been based on professional analysis, assessment, judgement, experience. In so far as possible, the impact assessment describes the basis of these judgements so that the varying degrees of significance attributed to different factors can be understood. Significance ratings (terms set out in Table 11.2) are determined based on the value and sensitivity of the receptor (generally subjective/social) in terms of importance, size, the distance/proximity to the works (objective/scientific), and the in combination consideration of environmental effects and effects associated with loss or damage to property, severance, transport related disturbance, and other relevant effects identified in other chapters of this EIA (both objective/scientific and subjective/social) in terms of how they pertain to and impact on Population and Land Use.

Sensitive receptors are considered to include homes (houses as well as care homes and residential facilities) and social infrastructure including medical, educational, rehabilitation and recreational facilities (i.e. sports, leisure and recreation) along with tourism and economic facilities such as businesses and visitor attractions recognised for their cultural or historic significance and/or natural assets.

The significance and magnitude of effects are also described as follows and as relevant:

- **Direct effects** – these are directly lost, created and/or supported by the proposed Project (e.g. jobs);
- **Indirect effects** – these are effects which are dependent on, or result from, the direct effects of the project (e.g. employment impacts that arise from a business's expenditure with its suppliers); and
- **Induced effects** – those that arise from expenditure (e.g. from direct and indirect employees).

Potential cumulative, do-nothing, worst case, indeterminable, irreversible, residual, and synergistic effects of the Proposed Project are also described, where relevant.

The residual impacts (Section 11.7) set out the final effects which occur after the proposed mitigation measures (measures designed to avoid, prevent, reduce or, if possible, offset significant adverse effects) are implemented.

11.4 Baseline Environment

11.4.1 Overview

This Section outlines the current state of the baseline environment with regard to Population and Land Use. Information on demography and households, economic activity and employment, community and social infrastructure and connectivity and land use have been analysed and considered to ensure a robust understanding of the population within the Study Area with comparison to the regional (i.e. Dublin) and state (i.e. Ireland) context as appropriate.

As outlined in Section 11.3.3 of this Chapter, the Study Area has been divided into five distinct subsections for the purpose of this assessment to reflect the diversity of the population along the route alignment. Table 11.3 summarises the demographic and socio-economic characteristics within the Study Area as well as the regional and state context. Table 11.4 outlines stations and associated neighbourhoods within the Study Area. Overall, the sensitivity of the population (including demographic and housing characteristics) is considered low at the levels of the State, region, and entire Study Area due to the large scale of these areas, and medium at the level of individual subsections. However, individual residential properties, facilities and care homes and some social infrastructure facilities are considered to be of high sensitivity. As described in 11.3.6, sensitivity is implicitly considered in the assessment of impacts on the broad range of receptors set out in Section 11.5 Predicted Impacts.

Table 11.3: Summary of the Demographic and Socio-Economic Characteristics within the Study Area (Source: CSO 2017)

Area	Demographic Overview	Socio-Economic Overview
State	Average age of 36.8 years 65.5% of population is of working age (15-64 years)	Unemployment: 7.9% Higher level (Level 6+) Education: 39.3% Higher level professions: 34.2%
Regional (i.e. Dublin)	Average age of 36.3 years 68.5% of population is of working age (15-64 years)	Unemployment: 11.4% Higher level (Level 6+) Education: 45.3% Higher level professions: 41.2%
Entire Study Area	Total population: 165,836 Total households: 61,738 Average age of 36.3 years 76.9% of population is of working age (15-64 years)	Unemployment: 8.4% Higher level (Level 6+) Education: 46.4% Higher level professions: 36.9%
Section 1	Total population: 18,446 Total households: 6,317 Average age of 35.4 years 70.6% of population is of working age (15-64 years)	Unemployment: 6.1% Higher level (Level 6+) Education: 41.6% Higher level professions: 36.5%

Area	Demographic Overview	Socio-Economic Overview
Section 2 and 3	Total population: 3,422 Total households: 981 Average age of 34.6 years 75% of population is of working age (15-64 years)	Unemployment: 7.5% Higher level (Level 6+) Education: 44.9% Higher level professions: 35.1%
Section 4A	Total Population: 20,208 Total households: 7,112 Average age of 35.7 years 68.5% of population is of working age (15-64 years)	Unemployment: 14.0% Higher level (Level 6+) Education: 21.4% Higher level professions: 18.5%
Section 4B	Total Population: 21,429 Total households: 8,363 Average age of 39.5 years 69.5% of population is of working age (15-64 years)	Unemployment: 4.4% Higher level (Level 6+) Education: 52.8% Higher level professions: 49.8%
Section 4C	Total Population: 102,331 Total households: 38,965 Average age of 35.9 years 81.2% of population is of working age (15-64 years)	Unemployment: 8.6% Higher level (Level 6+) Education: 50.4% Higher level professions: 38.1%

Table 11.4: Overview of the Study Area Including Sections, Proposed Stations and Relevant Characteristics along the Alignment

Geographical Split	Proposed Station	Summary of Relevant Characteristics
Section 1	Estuary Station	Undeveloped area close to Swords Business campus and Balheary Industrial Park and adjoining green space.
	Seatown Station	This is a low density residential and commercial area adjacent to Swords Business Park and the R132.
	Swords Central Station	This is in proximity to the major Town Centre for Fingal area including the established Pavilions Shopping Centre with mixed use urban development potential and nearby residential areas.
	Fosterstown Station	This is a mixed-use environment serving suburban residential communities on southern side of Swords. This is a significant employment and commercial district given the range of businesses at Airside enterprise and business parks.
Section 2 and 3	Dublin Airport Station	This is a major transport and economic hub with significant employment, visitor and commercial centre. There are growing hotel and office sectors being developed within the airport campus.
	Dardistown Depot	This is an undeveloped area with low levels of socio-economic activity at present. There are sports facilities, airport car parking and commercial establishments in the vicinity as this is within the airport's zone of economic influence.
	Northwood Station	This is at the northern edge of Ballymun, adjacent to residential communities and retail parks
Section 4A	Ballymun Station	This is an urban centre for surrounding residential communities in the Ballymun area.
Section 4B	Collins Avenue Station	This is a residential area with established suburban character and a number of community and sports facilities as well as Dublin City University nearby.
	Griffith Park Station	This is primarily a residential area with established suburban character a number of community facilities and open space nearby.

Geographical Split	Proposed Station	Summary of Relevant Characteristics
Section 4C	Glasnevin Station	This is an established residential and mixed-use centre with regeneration potential due to the Royal Canal and associated railway line and cycleway.
	Mater Station	This is a healthcare hub on the northern edge of the city centre based around Mater Hospital. There is significant employment and residential land use in the area.
	O'Connell Street Station	This is a primary thoroughfare for northern city centre, retail street and tourist destination. There is significant employment and regeneration development projects owing to the intense daytime and night-time economy.
	Tara Station	This is a primary access point for the city centre and docklands via the Iarnród Éireann station. It constitutes a city centre hub for tourist, institutional, education, administrative, retail, commercial and residential functions given its location on the quays.
	St Stephen's Green Station	This is a primary access point for southern city centre, adjacent to the Grafton Street retail and leisure destination, hotels and offices. It is a significant employment and retail hub.
	Charlemont Station	This is on the southern edge of city centre proximate to the nearby office district and inner suburban residents that are located to the south of the Grand Canal.

11.4.2 Demography and Households

11.4.2.1 Overview

Information on demographics and households provides insight into the population that resides within the Study Area and this information has been compared against the state and regional comparators. A profile of the Study Area has been established based on the data from the 2016 Census (CSO 2017) as this is the most recent, robust dataset that can be analysed at the state, regional, local and neighbourhood level. The profile of demography and households has been based on the following characteristics:

- Population;
- Age Profile;
- Household Composition and Formation; and
- Household Tenure and Stock.

11.4.2.2 Population

11.4.2.2.1 State and Regional Context

Ireland's population increased by 3.8% since April 2011 to reach 4,761,865 persons in April 2016. Preliminary figures from Census 2022 identified that the population of Ireland had increased to 5,123,536 persons on Census night. While the population of all provinces grew, only Leinster grew faster than the State overall, increasing by 5.2% in the five years ending April 2016. Further to this, Leinster accounted for 55.3% of the state population in 2016 compared with 54.6% in 2011.

Within Leinster, Dublin is the primary economic and most populous region with 1,347,359 people living there in April 2016. However the rate of change varied within Dublin. Fingal grew by 8% over the five years (22,223 people), which was more than twice that of the State overall. Dublin City (4.8% or 25,553 people) grew less than Dun Laoghaire - Rathdown (5.7% or 11,013 people) and South Dublin (5.1% or 13,544 people). As the capital of Ireland, Dublin has experienced inward migration and there is a diversity of nationalities living within the Study Area as outlined in Diagram 11.3. Specifically, 32% of the population within the Study Area identified as non-Irish which is significantly higher than the state average (13%).

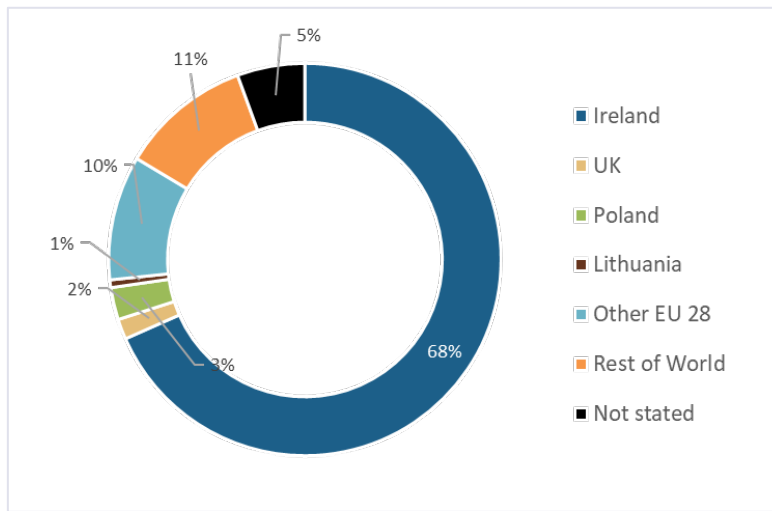


Diagram 11.3: Nationality of Residents across the Study Area (Source: CSO 2017)

The young population of Fingal (as described in detail in Section 11.4.2.3), along with high birth rates, drove population increase in the northern end of the Study Area. In contrast, Dublin City's population is slightly older, with relatively high levels of non-Irish nationals are evident towards the south of the Study Area. Inter-regional and international net inward migration played a significant role in population movement over this intercensal period and this is set to continue in the near to mid-term to 2040 as set out in the NPF and RSES.

As outlined in the Planning Report for Railway Order, the NPF sets out anticipated continuation of sprawling growth around the cities and larger towns with an ongoing shift in population and jobs towards the east, and the counties around Dublin in particular. The NPF targets a growth to Dublin City and suburbs to reach a total of 1.4 million by 2040, an increase of 235,000 to 290,000 people. 50% of new city housing is targeted within existing Dublin City and suburbs footprint which will require supporting services and economic development.

'Housing for All - a New Housing Plan for Ireland' is the government's housing plan to 2030 'delivering on average 33,000 new homes every year to 2030, built to a high standard, in the right place, offering a high quality of life and available to either purchase or rent. The actions in Housing for All are designed to support the targets and objectives of the National Planning Framework and the Climate Action Plan in promoting compact, sustainable and liveable settlements that are supported by high quality public transport. The overall project objective for the proposed Project 'to provide a sustainable, safe, efficient, integrated and accessible public transport service between Swords, Dublin Airport and Dublin City Centre' is hugely important to supporting the compact, sustainable growth of Dublin, as envisaged in Housing for All and the NPF.

The proposed Project has been identified in the NPF and defined as a key future growth enabler for Dublin through the RSES for the Eastern and Midlands Regional Assembly. This provision and operation of this infrastructure will enhance access to Dublin Airport and facilitate development across Dublin including in Swords which is identified as a key town in the relevant planning policy (refer to the Planning Report for Railway Order for further detail). Specifically, the CDP for Fingal notes that Swords, which had a population of 39,248 people in April 2016, is envisaged to grow up to a population of 100,000. More widely, the zoning objective Metro Economic (ME) Corridor has been established with the purpose to facilitate opportunities for high density mixed-use employment generating activity and commercial development and support the provision of an appropriate amount of residential development.

Overall, the historic population growth is anticipated to continue at state and regional level and across the Study Area going forward as set out in the population targets that have been published in the NPF and RSES.

The transport modelling (refer to Chapter 9 (Traffic & Transport) for further detail) reflects the strategic work undertaken between the National Transport Authority (NTA), the Regional Assemblies and Local Authorities in relation to the proposed alignment with policy and the associated inputs into the National Trip End Model. As such, population and housing growth in line with the NPF Implementation Roadmap has been assumed as the principal scenario with straight line interpolation of population growth between 2016 – 2040 and continuation of that straight line interpolation to forecast years as appropriate.

11.4.2.2.2 Local and Neighbourhood Context

The proposed Project lies within close proximity to a number of highly populated residential communities throughout Dublin City and Fingal. The resident population² within the Study Area is 165,836 people in 61,738 households. Section by section analysis has identified the neighbourhood specific characteristics within the Study Area to provide a profile of population at Small Area level in order to understand population density and other demographic indicators for assessment. Figure 11.2 provides an overview of population density throughout the Study Area.

Section 1

There are 18,466 people living in Section 1 of the Study Area, comprising 6,317 households across those communities in Swords. The population is most dense around the proposed Swords Central Station and lower density is evident to the north and outside of the settlement of Swords as illustrated in Figure 11.2.

70.6% of the population are of working age (i.e. 15 to 64 years). Of households classed as families,³ 44.8% have children (comprising households classed as pre-school, early school, pre-adolescent, and adolescent family cycles) and there is a relatively high proportion of retired/empty nesters (16.8%). The family cycles within this population are identified in Diagram 11.4 and further information on household composition is provided in Section 11.4.2.4 of this Chapter.

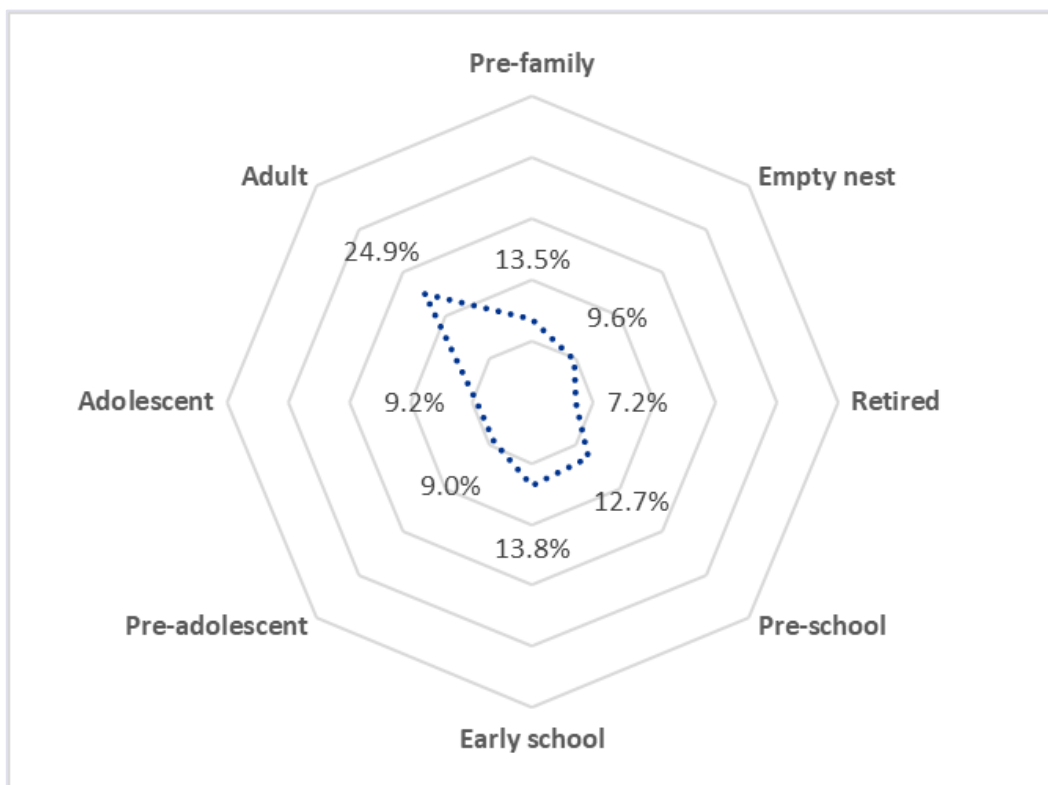


Diagram 11.4: Family Cycle of Households classed as Families within Section 1 of the Study Area (Source: CSO 2017)

² Resident population refers to the number of persons in private households, as opposed to the 165,836 persons that identified as being in the Study Area on the night of the 2016 Census.

³ This excludes one-person households and households comprised of non-family or non-related persons.

Section 2 and 3

There are 3,422 people living in Section 2 and 3 of the Study Area, comprising 981 households in the communities around Dublin Airport and Northwood. The population is denser around Northwood, however overall Section 2 and 3 of the Study Area has relatively low population density as illustrated in Figure 11.2.

75% of the population are of working age (i.e. 15 to 64 years) and the majority of families have children (57.6%) or are pre-family (32.4%). The family cycles of households in Section 2 and 3 of the Study Area are identified in Diagram 11.5 and further information on household composition is provided in Section 11.4.2.4 of this Chapter.

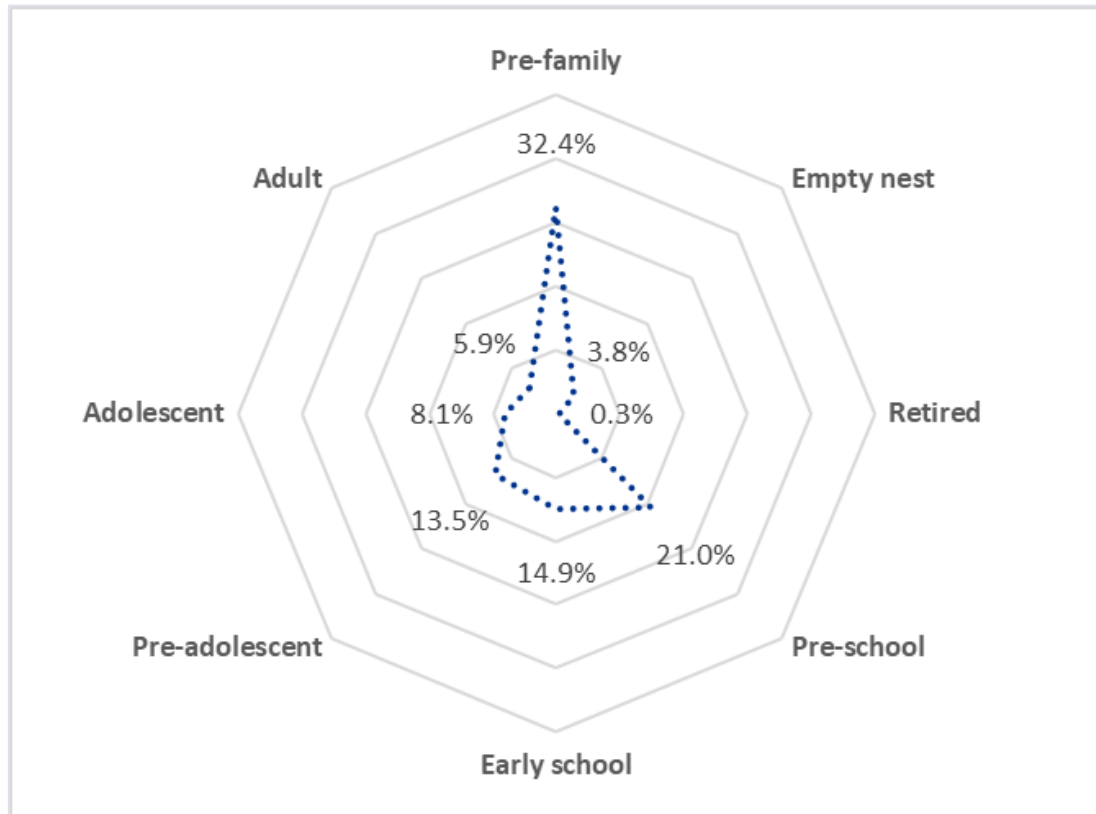


Diagram 11.5: Family Cycle of Households classed as Families within Section 2 and 3 of the Study Area (Source: CSO 2017)

Section 4A

There are 20,208 people living in Section 4A of the Study Area, comprising 7,122 households between Santry, Ballymun and Glasnevin North. The population is most dense around the outer portions of this section of the Study Area, and it is relatively high population density throughout as illustrated in Figure 11.2.

68.5% of the population are of working age (i.e. 15 to 64 years) and 41.8% of families have children with the family cycles identified in Diagram 11.6 and further information on household composition is provided in Section 11.4.2.4 of this Chapter.

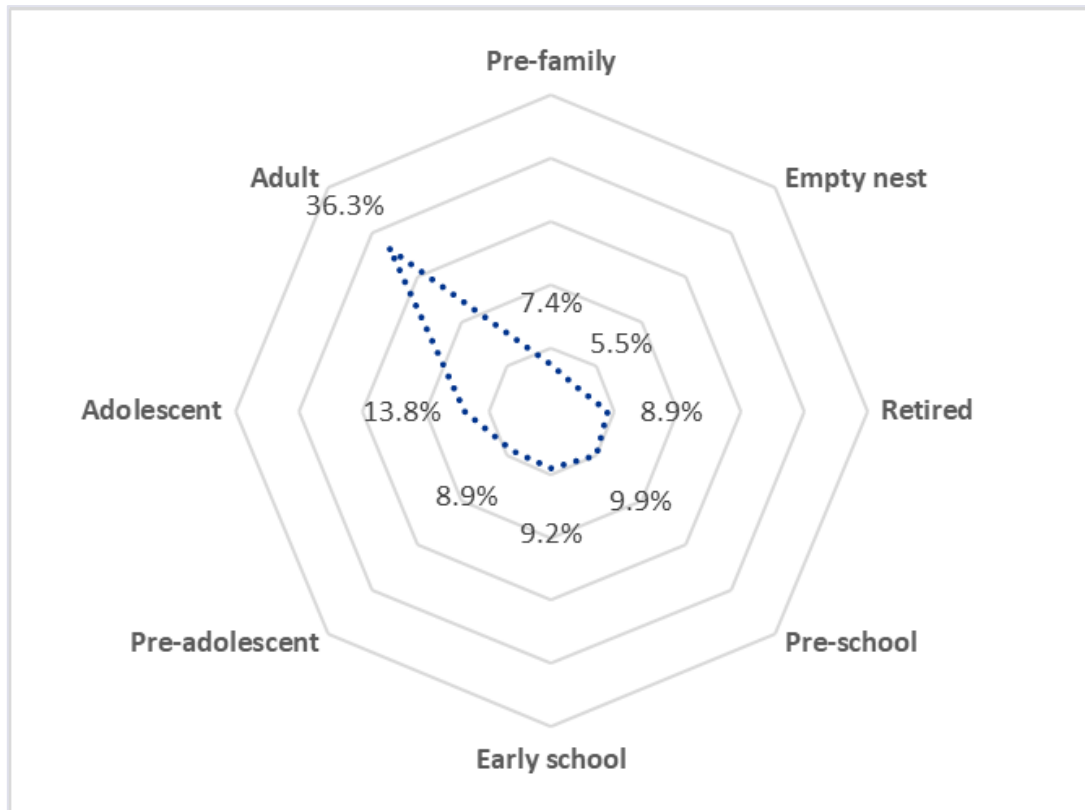


Diagram 11.6: Family Cycle of Households classed as Families within Section 4A of the Study Area (Source: CSO 2017)

Section 4B

There are 21,429 people living in Section 4B of the Study Area, comprising 8,363 households between Whitehall, Glasnevin and Drumcondra. With the exception of Albert College Park and the Dublin City University Sports Campus, the population density is relatively high throughout the Section 4B of the Study Area as illustrated in Figure 11.2.

69.5% of the population are of working age (i.e. 15 to 64 years), 36.3% of families have children and there is a relatively high proportion of retired/empty nesters within this area (23.9%). The family cycles are identified in Diagram 11.7 and further information on household composition is provided in Section 11.4.2.4 of this Chapter.

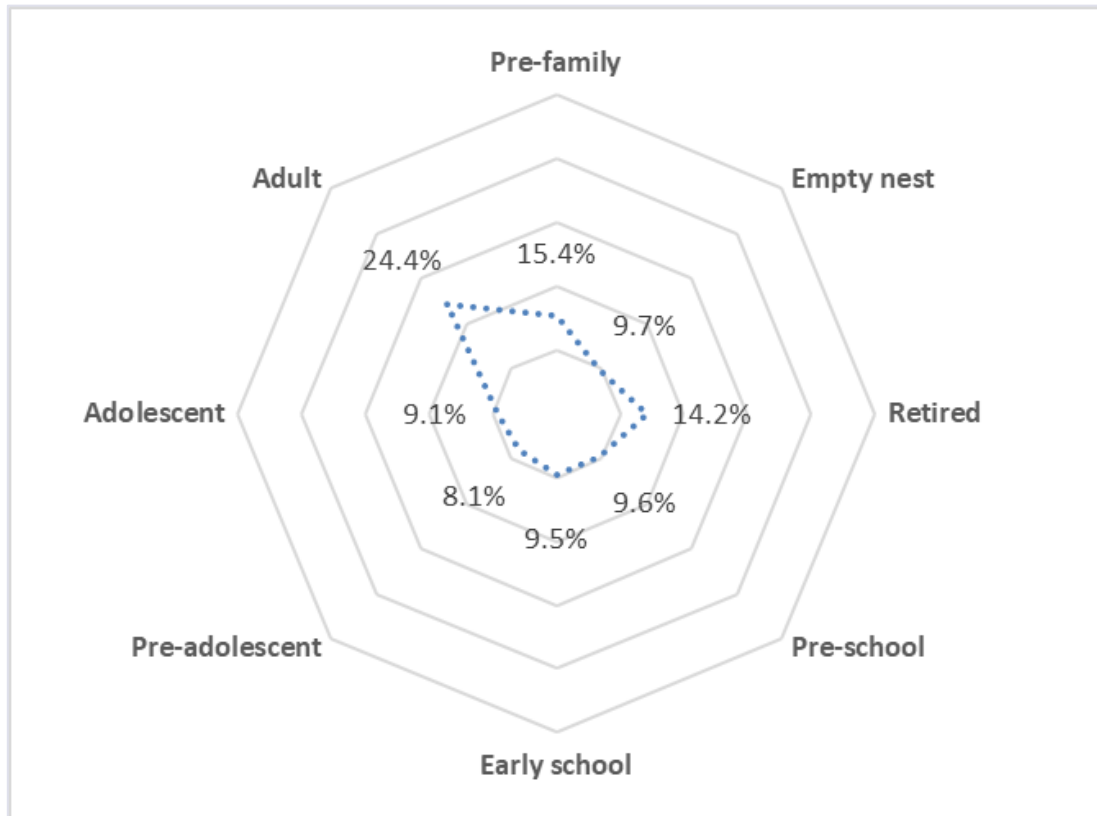


Diagram 11.7: Family Cycle of the Households classed as Families within Section 4B of the Study Area (Source: CSO 2017)

Section 4C

There are 102,331 people living in Section 4C of the Study Area, comprising 38,965 households across Dublin city between Phibsborough to the north and Ranelagh to Rathmines to the south. The population is very dense throughout Section 4C of the Study Area, although pockets of slightly lower population density are evident at Grangegorman, St Stephen's Green and at St Mary's College in Rathmines as outlined in Figure 11.2.

69.5% of the population are of working age (i.e. 15 to 64 years), 35.7% of families are pre-family, 35.1% of households have children and approximately 12% of the population are retired or empty nests. The family cycles are identified in Diagram 11.8 and further information on household composition is provided in Section 11.4.2.4 of this Chapter.

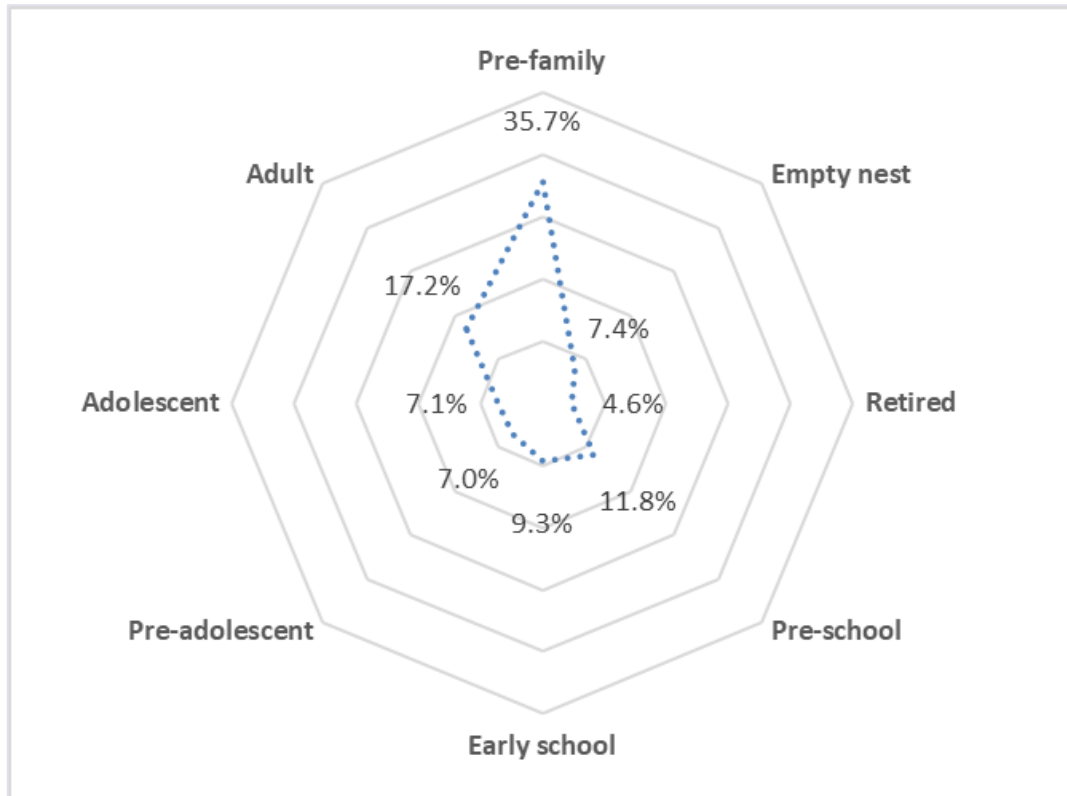


Diagram 11.8: Family Cycle of the Households classed as Families within Section 4C of the Study Area (Source: CSO 2017)

11.4.2.3 Age Profile

11.4.2.3.1 State and Regional Context

The average age within the Study Area was 36.3 years (35.8 years for males and 36.7 years for females), which was the same as County Dublin but slightly younger than the State average (36.8 years). However, the age profile of the population differed within the Study Area. The 2016 Census results identified that FCC had the youngest population in the country (at 33.8 years) whilst DCC had an average age of 37.4 years.

The age profile pyramid for the Study Area is presented in Diagram 11.9 and this illustrates that more than half (53.2%) of the population inside the Study Area are within the prime working age cohorts (defined as 25 to 64 years). As noted in Section 11.4.1 of this Chapter, 76.9% of population is of working age (15 to 64 years).

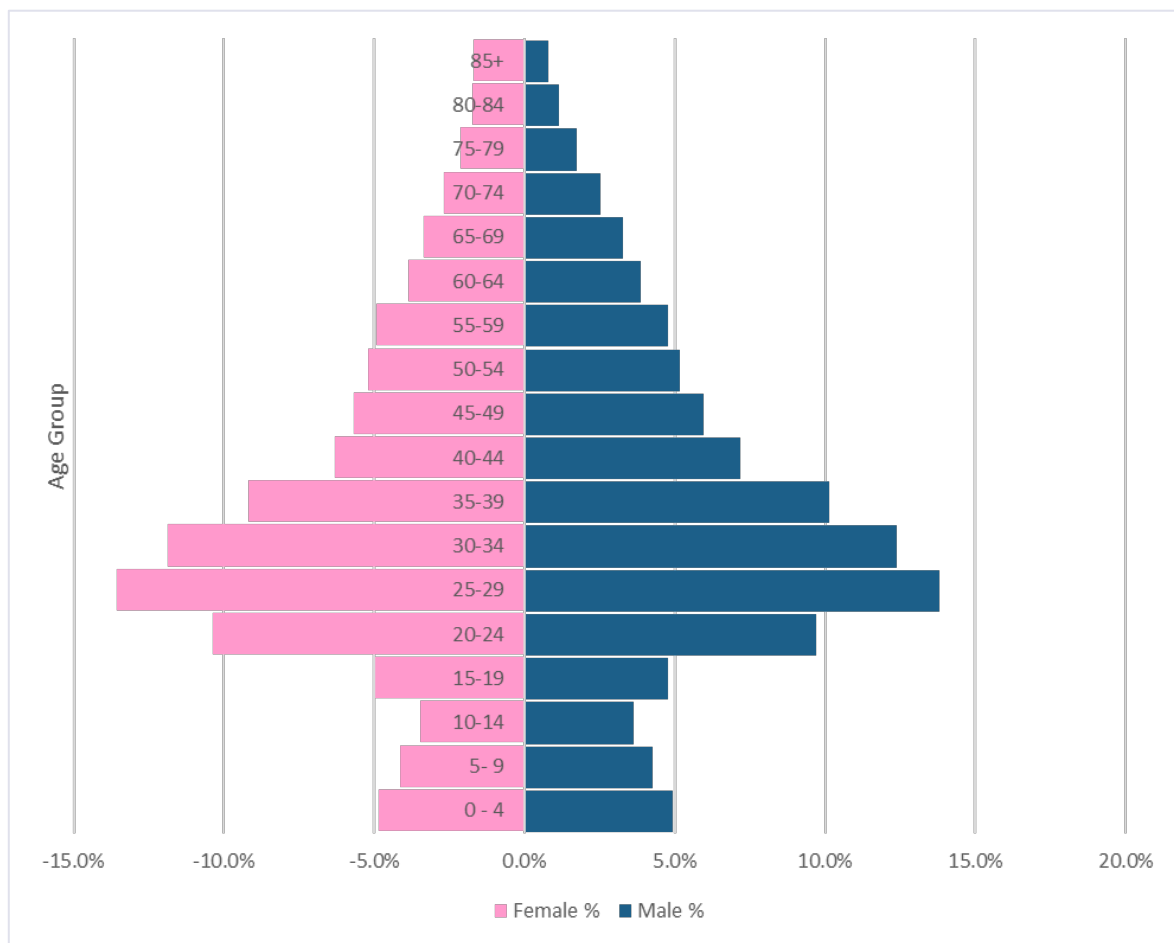


Diagram 11.9: Age Profile Pyramid of the Study Area (Source: CSO 2017)

Table 11.5 shows that a low proportion of the combined population are within the dependent years of 0 to 14 (12.6%) and 65 years old and above (10.5%). Specifically, when compared to the region and state, the Study Area has a higher proportion of the population of working age and a smaller portion of the population in the young and older age cohorts (Table 11.5).

Table 11.5: Population by Specific Age Cohorts in the Study Area, Dublin and State (Source: CSO 2017)

Age	Number of Persons Study Area	Percentage (%) Study Area	Percentage (%) Dublin	Percentage (%) State
0-14	20,942	12.6%	19.3%	21.1%
15-64	127,445	76.9%	68.5%	65.5%
65+	17,449	10.5%	12.2%	13.4%
Total	165,836	100%	100%	100%

11.4.2.3.2 Local and Neighbourhood Context

Section 1

The age profile pyramid for Section 1 of the Study Area is presented in Diagram 11.10. 70.6% of this population is working age (defined as the 15 to 64 age cohorts), whilst 19.9% of the population was under 15 years and just 3.1% of the population is older than 75 years of age. The most common age was between 30 and 39 years old, representing 20.9% of this population.

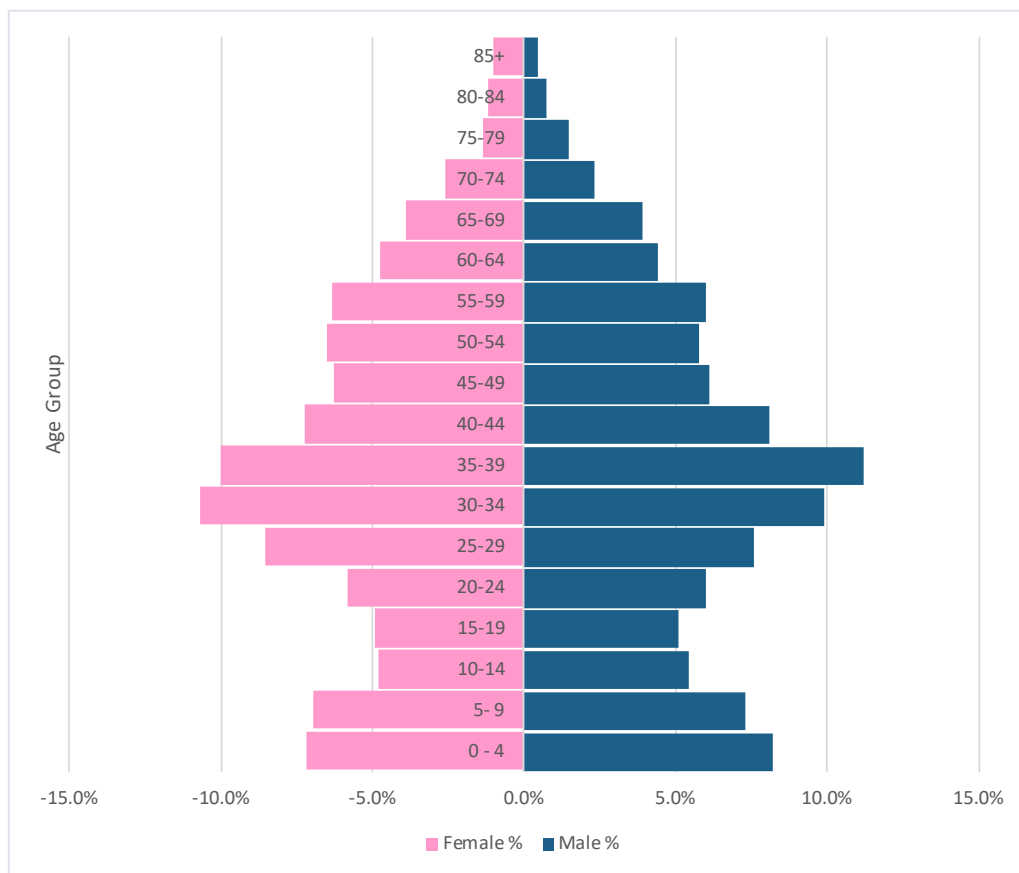


Diagram 11.10: Population Age Pyramid for Section 1 of the Study Area (Source: CSO 2017)

A breakdown of the total population within Section 1 of the Study Area is provided in Table 11.6 below.

Table 11.6: Population by Specific Age Cohorts for Section 1 (AZ1) of the Study Area (Source: CSO 2017)

Age	Number of Persons	Percentage (%)
0-14	3,672	19.9%
15-64	13,028	70.6%
65+	1,746	9.5%
Total	18,446	100%

Section 2 and 3

The age profile pyramid for the Section 2 and 3 of the Study Area is presented in Diagram 11.11. 75% of this population is of working age (defined as the 15 to 64 age cohorts), with 19% below 15 years and just 3.8% of the population is older than 75 years of age. In addition, the most common age group was 30 to 34 years (16% of the population).

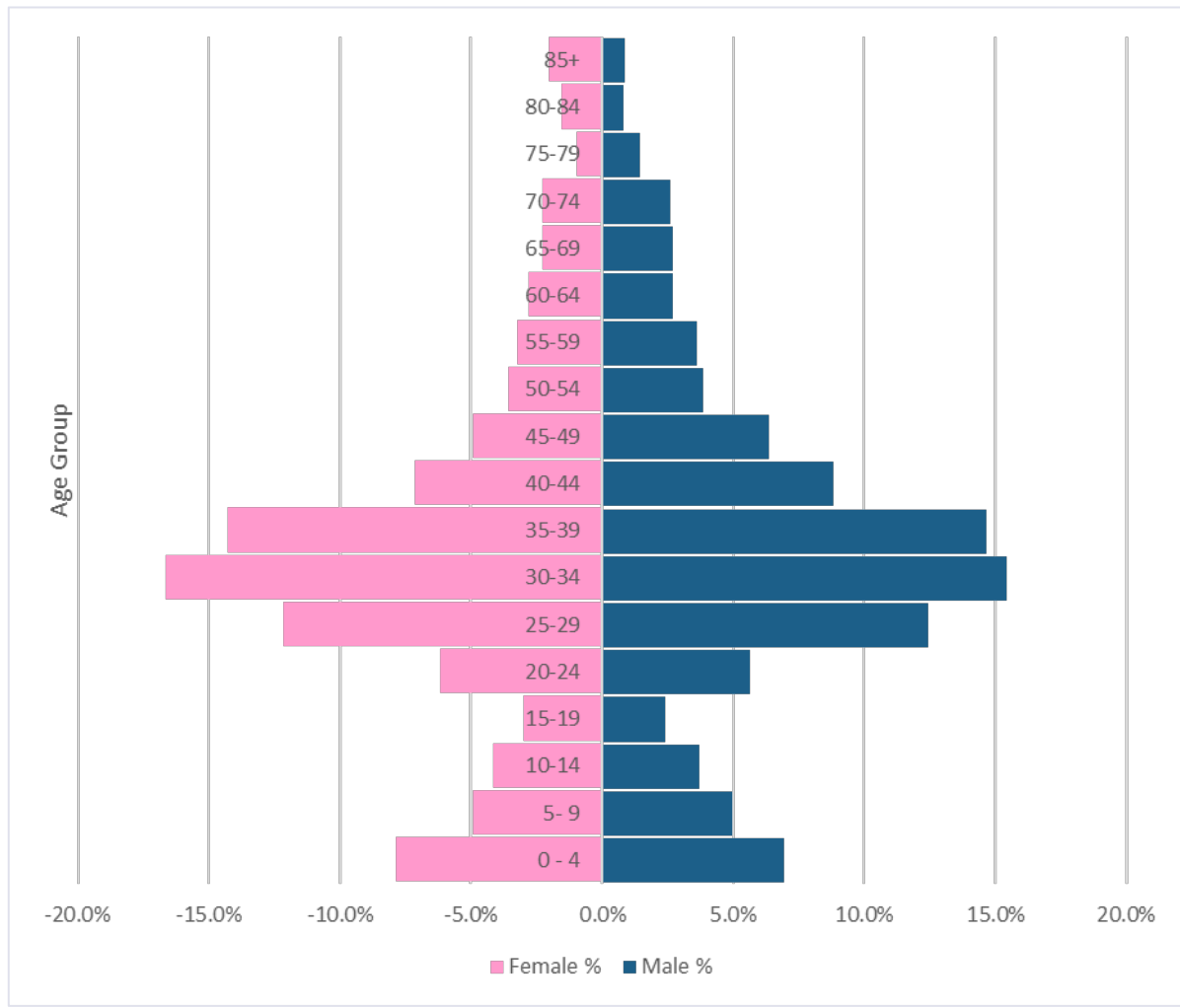


Diagram 11.11: Population Age Pyramid for Section 2 and 3 of the Study Area (Source: CSO 2017)

A breakdown of the total population within Section 2 and 3 of the Study Area is provided in Table 11.7.

Table 11.7: Population by Specific Age Cohorts for Section 2 and 3 of the Study Area (Source: CSO 2017)

Age	Number of Persons	Percentage (%)
0-14	558	16.3%
15-64	2,566	75%
65+	298	8.7%
Total	3,422	100%

Section 4A

The age profile pyramid for the Section 4A of the Study Area is presented in Diagram 11.12. 68.5% of this population is working age (i.e. 15 to 64 age cohorts), with 18.3% under 15 years and just 6.5% of the population is older than 75 years of age.

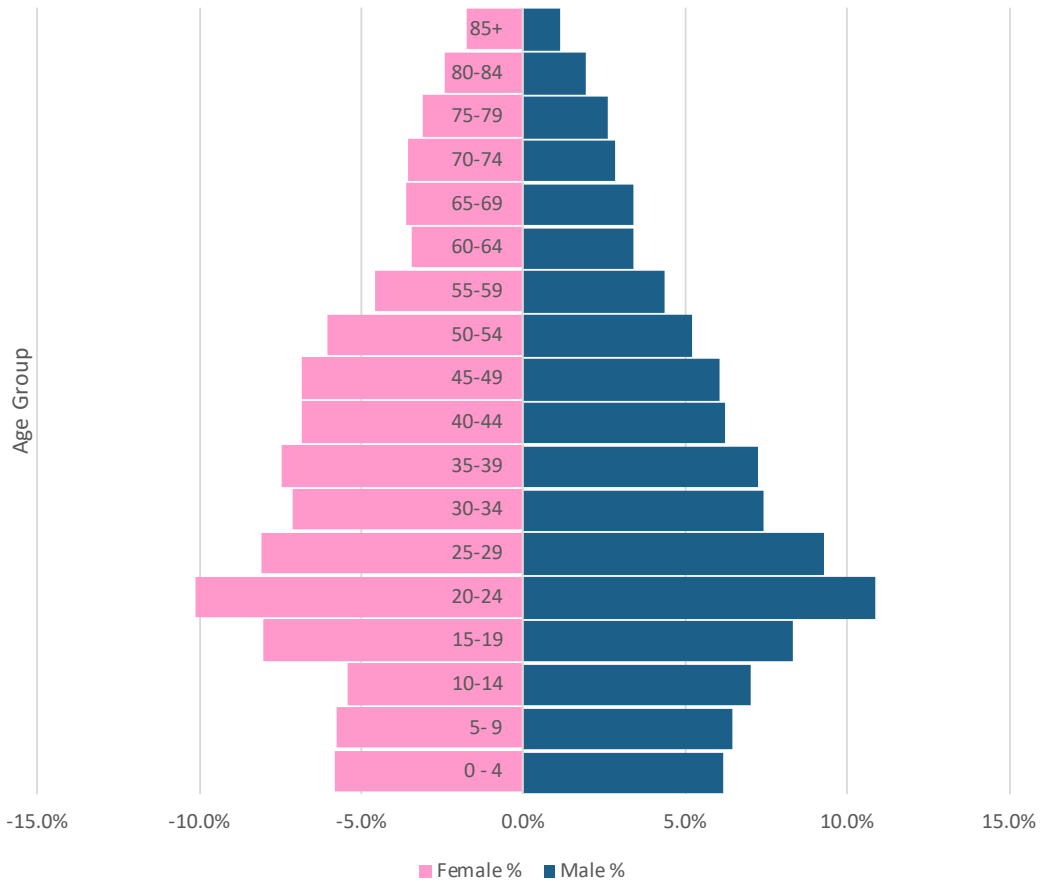


Diagram 11.12: Population Age Pyramid for Section 4A of the Study Area (Source: CSO 2017)

A breakdown of the total population within Section 4A of the Study Area is provided in Table 11.8. The most common age group was 20 to 29 years (19.2% of the population).

Table 11.8: Population by Specific Age Cohorts for Section 4A of the Study Area (Source: CSO 2017)

Age	Number of Persons	Percentage (%)
0-14	3,690	18.3%
15-64	13,847	68.5%
65+	2,671	13.2%
Total	20,208	100%

Section 4B

The age profile pyramid for the Section 4B of the Study Area is presented in Diagram 11.13. 69.5% of this population is working age (i.e. 15 to 64 age cohorts), 17% is under 15 years and 8.6% of the population is older than 75 years of age.

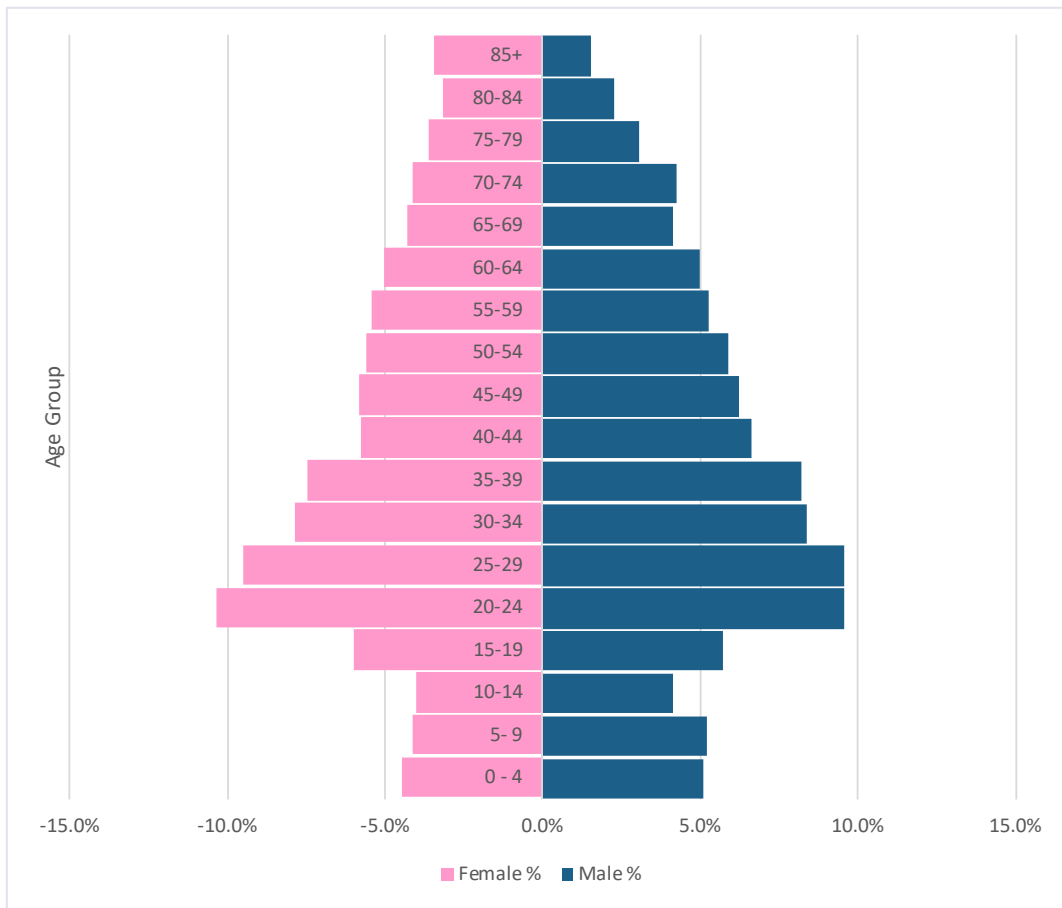


Diagram 11.13: Population Age Pyramid for Section 4B of the Study Area (Source: CSO 2017)

A breakdown of the total population within Section 4B of the Study Area is provided in Table 11.9. The most common age group was 20 to 29 years (19.5% of the population).

Table 11.9: Population by Specific Age Cohorts for Section 4B of the Study Area (Source: CSO 2017)

Age	Number of Persons	Percentage (%)
0-14	2,885	13.5%
15-64	14,900	69.5%
65+	3,644	17%
Total	21,429	100%

Section 4C

The age profile pyramid for the Section 4C of the Study Area is presented in Diagram 11.14. 82.3% of this population is working age (i.e. 15 to 64 age cohorts), 9.7% are below 15 years and 3.7% of the population is older than 75 years of age.

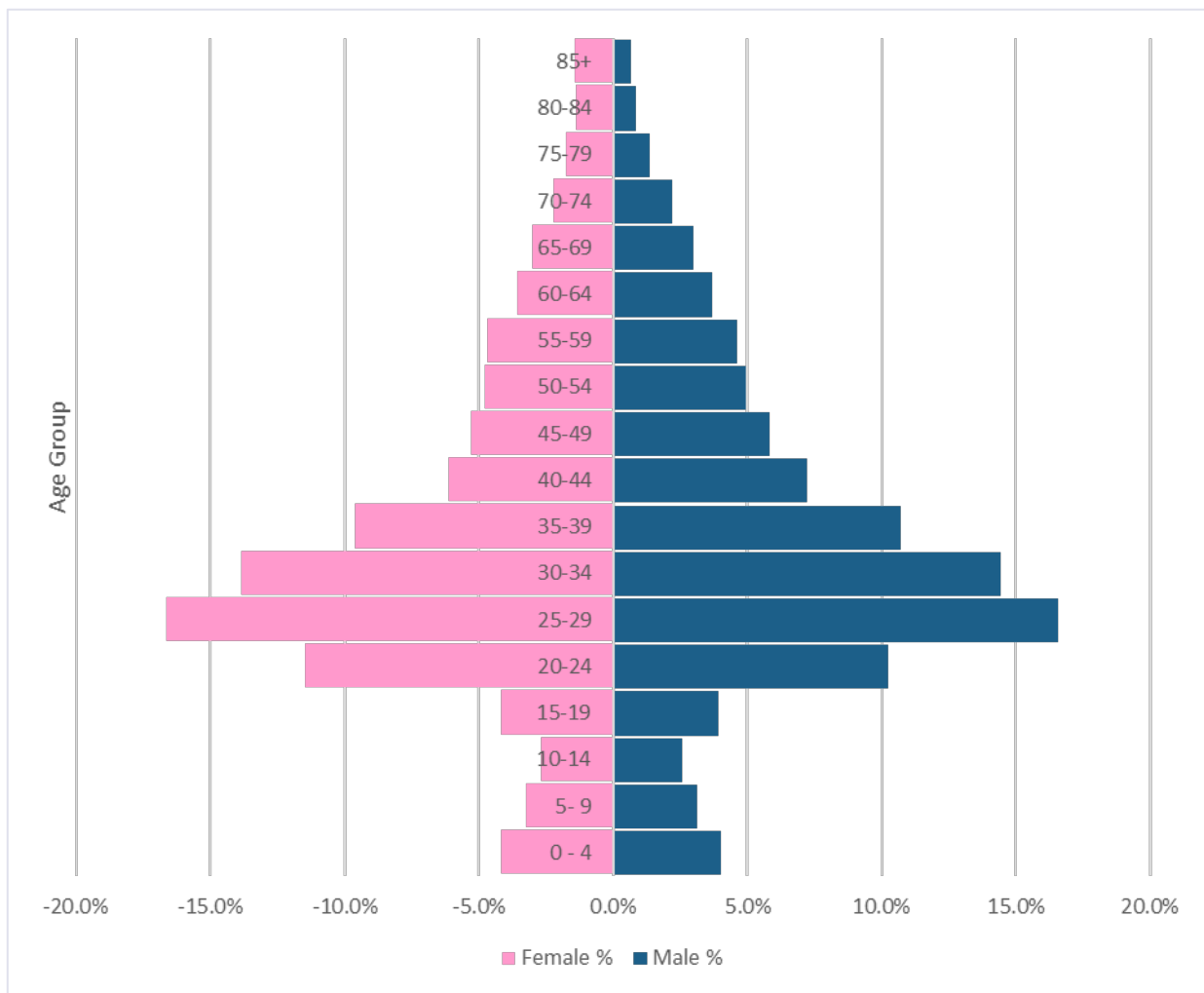


Diagram 11.14: Population Age Pyramid for Section 4C of the Study Area (Source: CSO 2017)

A breakdown of the total population within Section 4C of the Study Area is provided in Table 11.10. The most common age group was 20 to 29 years (27.4% of the population) followed by 30 to 34 years (14.1% of the population).

Table 11.10: Population by Specific age cohorts for Section 4C of the Study Area (Source: CSO 2017)

Age	Number of Persons	Percentage (%)
0-14	10,137	9.7%
15-64	83,104	82.3%
65+	9,090	8.0%
Total	102,331	100%

11.4.2.4 Household Composition and Families

11.4.2.4.1 State and Regional Context

The proportion of households that were occupied dwellings in the 2016 Census was 87.7% and 93.8% for the State and County Dublin respectively. At the state level, the average household size was 2.75 persons, however this was slightly less in Dublin (2.73 persons per household on average). The average household size for the Study Area was 2.37 persons per household, however this varied within the Study Area as described in detail in Section 11.4.2.4.2 of this Chapter.

In terms of household composition, the majority of households were one and two-person households (31.2% and 32.6% respectively). This may be considered reflective of the relatively young population as

described in Section 11.4.2.3 of this Chapter and the relatively high proportion of single persons living in the Study Area as outlined in Table 11.11.

Table 11.11: Private Households by Type in the Study Area, Dublin and State (Source: CSO 2017)

Type of Private Household	Number of Persons Study Area	Percentage (%) Study Area	Percentage (%) Dublin	Percentage (%) State
One Person	19,240	31.2%	22.6%	23.5%
Married or with Children	86,299	58.9%	78.0%	82.5%

Of those households, the composition varies greatly. However, there is a relatively low proportion of retired and empty nests and high proportion of pre family within the Study Area and the differences between the State, region and Study Area are outlined in Table 11.12.

Table 11.12: Household Composition in the Study Area, Dublin and State (Source: CSO 2017)

Composition	Number of persons Study Area	Percentage (%) Study Area	Percentage (%) Dublin	Percentage (%) State
Pre family	16,000	25%	13%	9.2%
Households with children	12,258	38.2%	43.9%	45.7%
Households with young children	9,457	29.5%	33.2%	33.3%
Retired households or empty nest	4,699	14.7%	17.6%	20%

11.4.2.4.2 Local and Neighbourhood Context

Section 1

In terms of household size within Section 1 of the Study Area, two-person households are the most common group (29.7%), followed by three-person households (21.2%), then four-person, one person and five plus person households (20%, 16.9% and 12.2% respectively). The average household size for this section of the Study Area was 2.86 persons per household.

Households' composition was dominated by those persons that were married or with children (83%) as illustrated in Table 11.13. Specifically, 44.8% of all households within Section 1 of the Study Area had children which is reflective of the relatively young population outlined in Section 11.4.2.3.2 of this Chapter and indicative of a demand for a range of childcare, recreational and community facilities.

Table 11.13: Private Households by Type in Section 1 of the Study Area (Source: CSO 2017)

Type of Private Household	Number of Persons	Percentage (%)
One Person	1,069	16.9%
Married or with Children	14,976	83%

Section 2 and 3

In terms of household size within Section 2 and 3 of the Study Area, two-person households are the most common group (37.2%), followed by three-person households (24.1%), then one-person, four-person and five plus person households (19.5%, 13.5% and 5.8% respectively). The average household size for this section of the Study Area was 2.51 persons per household.

The household composition was mostly those persons that were married or with children (65.7%) as illustrated in Table 11.14. Specifically, 57.6% of all households within Sections 2 and 3 of the Study Area had children.

Table 11.14: Private households by type in Section 2 and 3 of the Study Area (Source: CSO 2017)

Type of Private Household	Number of Persons	Percentage (%)
One Person	191	7.7%
Married or with Children	1,620	65.7%

Section 4A

In terms of household size within Section 4A of the Study Area, two-person households are the most common group (27.4%), followed by one person households (22.5%), then three-person, four-person and five plus person households (20%, 16.6% and 13.5% respectively). The average household size for this section of the Study Area was 2.81 persons per household.

The composition of households was mostly those married or with children (78.5%) as illustrated in Table 11.115 and specifically, 41.8% of all households in Section 4A of the Study Area had children.

Table 11.115: Private Households by Type in Section 4A of the Study Area (Source: CSO 2017)

Type of Private Household	Number of Persons	Percentage (%)
One Person	1,598	8%
Married or with Children	15,667	78.5%

Section 4B

In terms of household size within Section 4B of the Study Area, one person households are the most common group (31.4%), followed by two person households (28.9%), then three-person, four-person and five plus person households (15.5%, 14% and 10.1% respectively). The average household size for this section of the Study Area was 2.46 persons per household.

The composition of households' composition was mostly those with married or with children (78.5%) as illustrated in Table 11.16 and specifically, 36.3% of all households in Section 4B of the Study Area had children.

Table 11.16: Private Households by Type in Section 4B of the Study Area (Source: CSO 2017)

Type of Private Household	Number of Persons	Percentage (%)
One Person	2,625	12.7%
Married or with Children	13,287	64.5%

Section 4C

In terms of household size within Section 4C of the Study Area, one person households are the most common group (35.3%), closely followed by two person households (34.6%), then three-person, four-person and five plus person households (14.8%, 9.1% and 6.1% respectively). The average household size for this section of the Study Area was 2.19 persons per household which is the smallest across the Study Area.

The composition of households differs from the rest of the Study Area with 47.6% of the population married or with children as illustrated in Table 11.17. Specifically, 35.1% of the households within Section 4C of the Study Area had children in their households. This may be considered reflective of the relatively high proportion of households that are pre-family and with children as outlined in Diagram 11.8, higher

proportion of single person private households and smaller household sizes within this section of the Study Area.

Table 11.17: Private Households by Type in Section 4C of the Study Area (Source: CSO 2017)

Type of Private Household	Number of persons	Percentage (%)
One Person	13,757	16.1%
Married or with Children	40,749	47.6%

11.4.2.5 Household Tenure and Stock

11.4.2.5.1 State and Regional Context

Across the State, family houses are the most common type of accommodation within private households (86.5%), however this proportion reduces when you examine the region (73.1%) and Study Area (48%). Within the Study Area, family houses and apartment living were balanced as shown in Diagram 11.15. The remaining 4.1% relates to those living in bed sits, caravans or mobile homes and those who did not state their accommodation type. It should be noted that the type of accommodation varies within the Study Area, particularly along the route alignment which is described in detail in Section 11.4.2.5.2 of this Chapter.

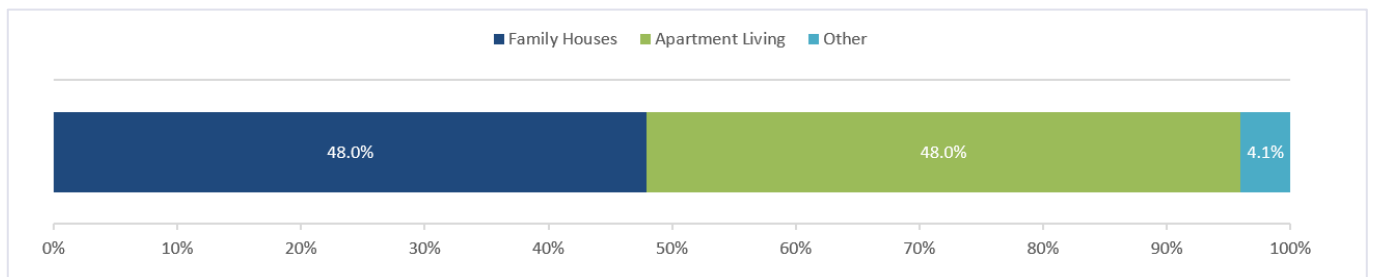


Diagram 11.15: Private Households by Type of Accommodation in Study Area (Source: CSO 2017)

Differences in household tenure were also evident at the State, regional and local levels. Specifically, owner occupation is much lower in the Study Area when compared to the State (34.7% and 67.6% of households respectively) whilst private rental is much higher in the Study Area (40.3%) when compared to households across Ireland (18.2%). The proportion of households in social housing is also relatively high in the Study Area (15.3%) when compared to the State (9.4%). This is despite the relatively old housing stock in the Study Area when compared to the region and State, the average year when the housing stock was built are 1964, 1975 and 1978 respectively. There are also notable differences evident throughout the Study Area as described in the following sections with relatively older housing identified towards the city centre.

11.4.2.5.2 Local and Neighbourhood Context

Section 1

The tenure of households within Section 1 of the Study Area is dominated by owner occupation (65.5%) with private rental comprising just over a quarter of households (25.6%) and 5% social housing. This prevalence of owner occupation is relatively close to the state average when compared to the region, Study Area or other sections within the Study Area. Housing is relatively new throughout Section 1 (The average year of the construction of the housing stock is 1989) and as outlined in Diagram 11.16, houses make up the majority of accommodation.

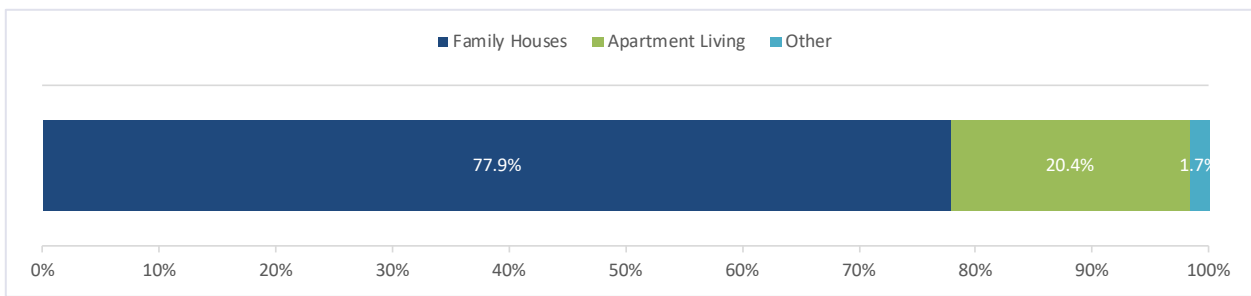


Diagram 11.16: Private Households by Type of Accommodation in Section 1 of the Study Area (Source: CSO 2017)

Section 2 and 3

The tenure of households within Section 2 and 3 of the Study Area is mostly private rental (48.1%) which reflects a younger population who may not be able to afford to buy a home presently, with owner occupation rental comprising almost a third of households (28.7%), along with a relatively high proportion of social housing (13.5%). Housing stock is the newest across the Study Area (the average year of the housing stock construction is 2004) and as outlined in Diagram 11.17, apartments make up the majority of accommodation types.

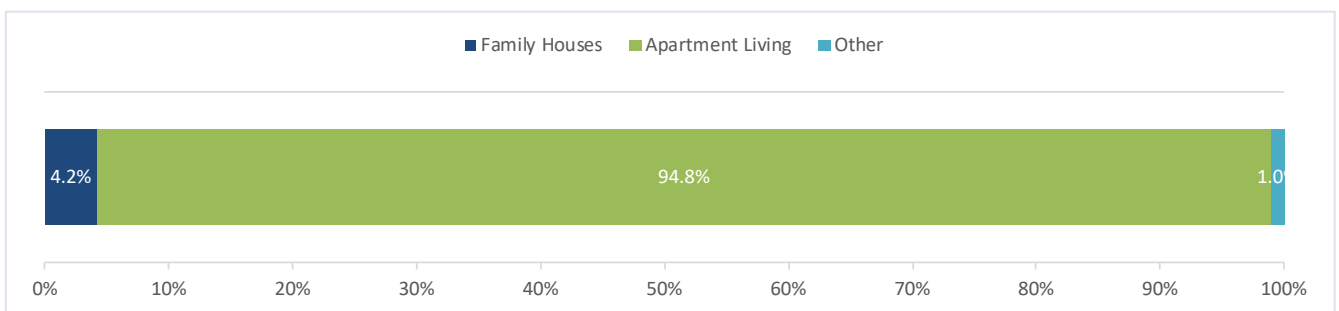


Diagram 11.17: Private Households by Accommodation Type in Section 2 and 3 of the Study Area (Source: CSO 2017)

Section 4A

The tenure of households within Section 4A of the Study Area is split between owner occupation and social housing (39.7% and 36% of households respectively). Private rental is relatively low (17.1%) and housing stock is relatively new (the average year of the housing stock construction is 1984). As outlined in Diagram 11.18, houses make up the majority of accommodation.

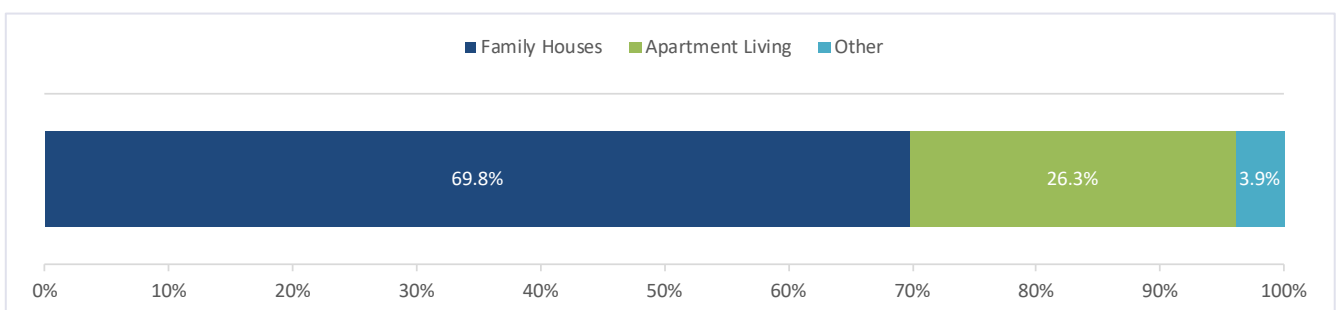


Diagram 11.18: Private Households by Type of Accommodation in Section 4A of the Study Area (Source: CSO 2017)

Section 4B

The tenure of households within Section 4B of the Study Area is dominated by owner occupation (62.7%), with private rental comprising just over a quarter of households (26.5%) and 4.1% social housing.

Housing stock is the oldest throughout the Study Area (the average year of the housing stock construction is 1950) and as outlined in Diagram 11.19, houses make up the majority of accommodation.

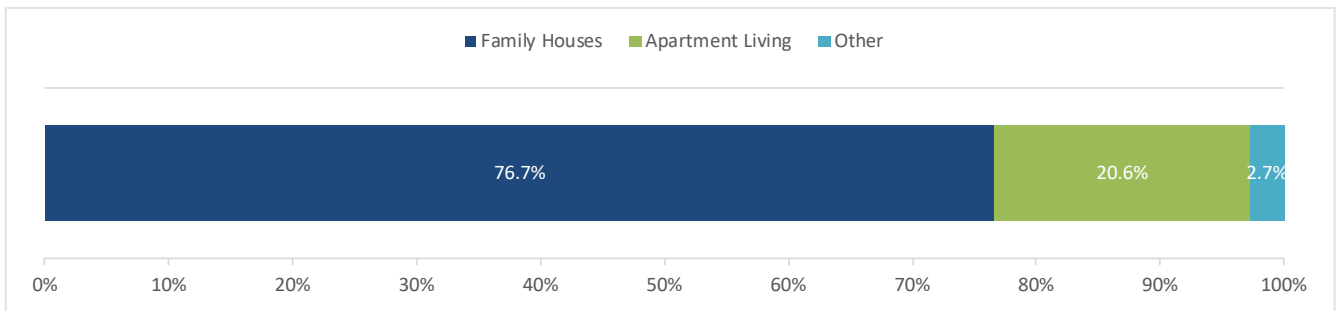


Diagram 11.19: Private Households by Type of Accommodation in Section 4B of the Study Area (Source: CSO 2017)

Section 4C

The tenure of households within Section 4C of the Study Area is mostly private rental (49.6%) with owner occupation comprising almost a quarter of households (23%) and relatively high proportion of social housing (15.7%). Housing stock is relatively old (the average year of the housing stock construction is 1957) and as outlined in Diagram 11.20, apartments make up the majority of accommodation.

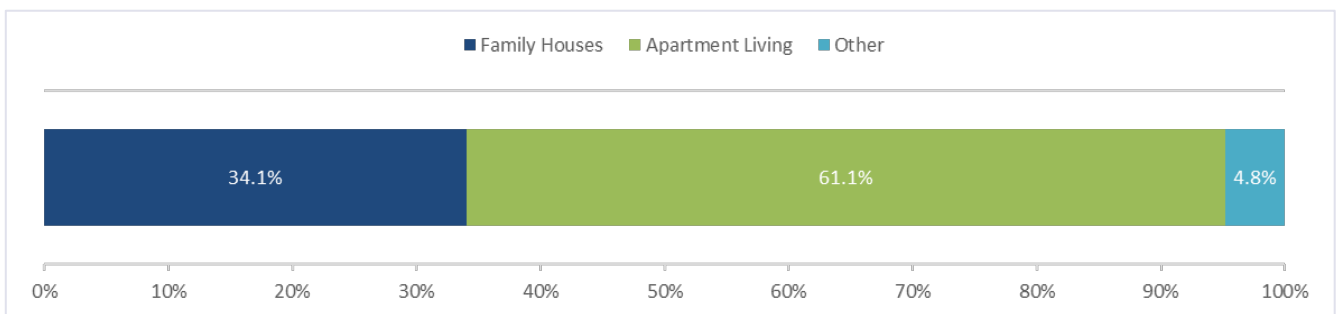


Diagram 11.20: Private Households by Type of Accommodation in Section 4C of the Study Area (Source: CSO 2017)

11.4.3 Economic Activity and Employment

11.4.3.1 Overview

Information on economic activity and employment is useful in providing an understanding of land use, industries and socio-economic circumstances within the Study Area and the surrounding region that can be directly or indirectly influenced by the proposed Project.

An assessment of economic status covering unemployment, labour force and participation rates has been undertaken as part of this baseline assessment as the development of critical infrastructure such as this proposed Project, can have a marked impact on the opportunity potential for employment within Dublin and beyond. Transport infrastructure of this nature and scale can play a role as a strategic enabler for business growth and economic development and this section provides an overview of the existing economy at the state, regional, local and neighbourhood level based on the following characteristics:

- Employment;
- Economic Activity and Status;
- Education;
- Workplace Zones;
- Commercial Enterprises – GeoDirectory; and
- Key Sectors.

Overall, the sensitivity of the economy is considered low at the levels of the State, region, and entire Study Area due to the large scale of these areas.

11.4.3.2 Employment

11.4.3.2.1 State and Regional Context

Employment levels were generally high at the State, Regional and local level in April 2016 (53.4%, 56.5% and 59.1% respectively). As illustrated in Diagram 11.21, there were differences evident between Ireland, Dublin and within the Study Area. Approximately 85,696 people within the Study Area were in employment in April 2016.

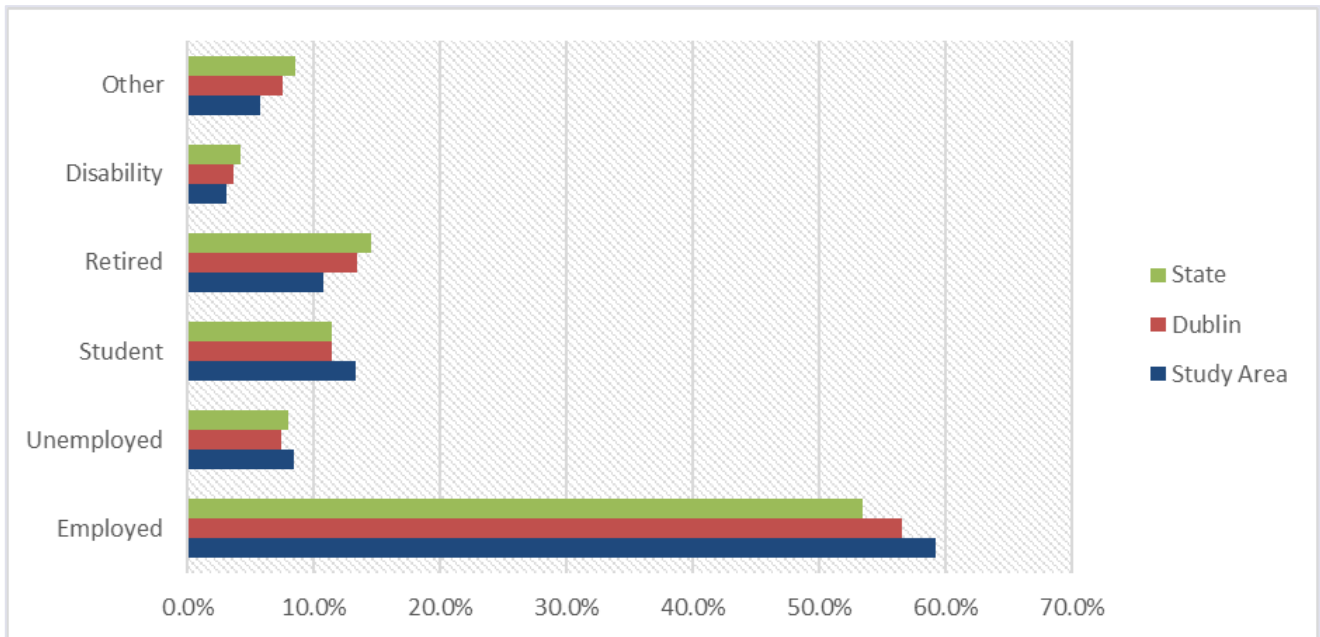


Diagram 11.21: Population Aged 15 Years and Over by Principal Economic Status (Source: CSO 2017)

Diagram 11.21 identifies that the proportion of students within the Study Area is relatively high (13.3%) when compared to the State and Dublin (11.4%), which may be attributable to the presence of Dublin City University, Trinity College Dublin and Technological University Dublin campuses within Section 4 of the Study Area. Further, the proportion of the population that were retired is relatively low within the Study Area (10.7%) when compared to the State and Dublin (14.5% and 13.4% respectively).

Notwithstanding this, it should be noted that the catchment area for employment extends far beyond these areas deemed to be within the Study Area. For example, Dublin Airport is a major employer for people all over Dublin and indeed Leinster and it indirectly facilitates many other industries as discussed further in Section 11.4.3.7 of this Chapter. Hence, the information in this section should be read in tandem with Section 11.4.3.5 of this Chapter.

In April 2016, there were approximately 615,000 people at work and 70,000 people unemployed across Dublin and this has fluctuated extensively since then. For context, the state unemployment rate (for 15-74 years) in the second quarter of 2016 was 9.1% and this has decreased to 4.5% by the end of 2019 (CSO 2021). Additionally, the number of people in employment has increased from 2,126,700 to 2,361,200 during the same period (CSO 2019b). Thereafter, the impacts of COVID-19 became evident and impactful as unemployment gradually rose throughout 2020 (to 7.1% by the third quarter). Specifically, persons on the live register varied as the COVID-19 pandemic evolved as illustrated in Diagram 11.22, but it should be noted that there was some overlap between those who met the criteria to be included on the Live Register and those who benefited from either of the two COVID-19 income support schemes.

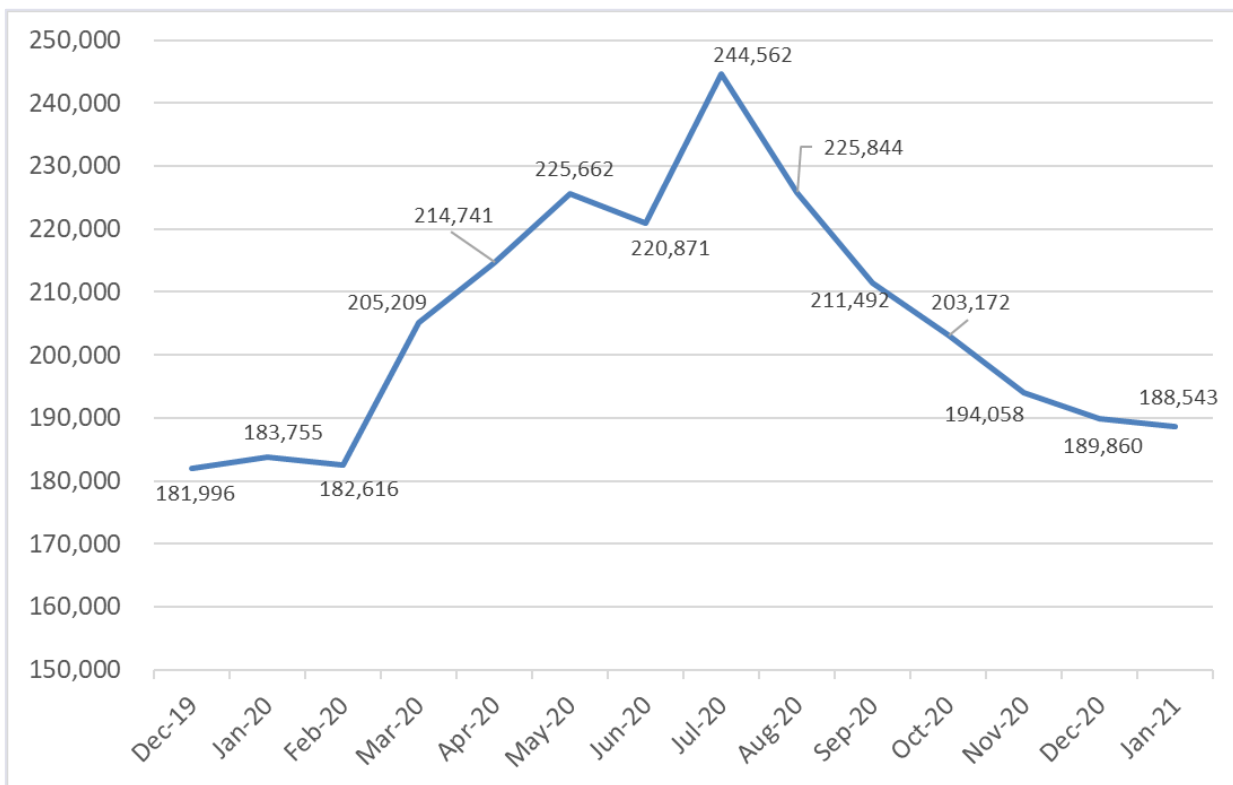


Diagram 11.22: Persons on the Live Register Dec 2019 – January 2021 (Source: CSO 2021b)

The long-term impact of COVID-19 on employment and economy at the state and local level is unknown and still a fluid situation despite much research which has been undertaken since the onset of the COVID-19 pandemic in early 2020. As set out in the latest bulletins from the Central Bank, Economic and Social Research Institute, the EU and the International Monetary Fund, the Irish economy experienced a robust recovery from COVID-19 in 2021 and is expected to continue to grow in 2022. Improvements in the labour market are ongoing with unemployment continuing to fall and likely to decline to 5% by the end of 2022. However, concerns remain regarding the trajectory of the COVID-19 pandemic as the emergence of certain variants and differences across countries in the policy responses will continue to have implications for the global economy. Also, the Russian invasion of Ukraine will have a negative impact on global economic activity and further exacerbate inflationary pressures, which had already been accumulating.

In the Dublin region, the analysis in the Dublin Economic Monitor by the Dublin local authorities noted a sharp rate of recovery of business activities with the fading of the COVID-19 Omicron wave and lifting of restrictions. Employment levels in the Dublin economy rose again in Q1 2022 but at a declining rate of job postings remaining at high levels in May 2022. However, inflation has been increasing in recent months with concerns about further supply chain disruption due to both Russia's invasion of Ukraine and COVID-19 developments in China. These issues all add up to a more downbeat assessment in the outlook for world and Irish growth.

Overall, the post-pandemic economic recovery is expected to continue in the short-term with growing employment opportunities and reductions in unemployment. Given the uncertainty around the current geopolitical and economic environment, while the outlook remains for growth, the underlying drivers are faltering. Further escalation of the hostilities in Ukraine could lead to a lower growth outlook, further increases in domestic inflation and a significant additional burden on the public finances.

11.4.3.2.2 Local and Neighbourhood Context

Section 1

Employment levels were relatively high within Section 1 of the Study Area. 64.7% employment and 6.1% unemployment were evident as illustrated in Diagram 11.23 whilst 10.9% of the residents in Section 1 of the Study Area were retired and 7.9% of the population were students.

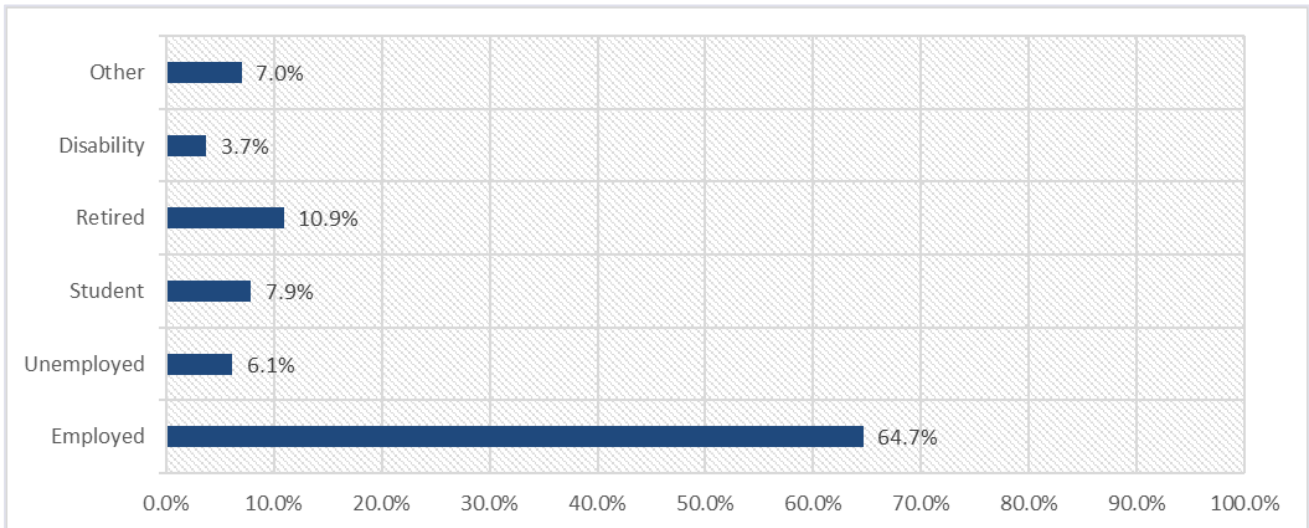


Diagram 11.23: Population Aged 15 Years and Over by Principal Economic Status in Section 1 of the Study Area (Source: CSO 2017)

Section 2 and 3

The rate of employment within Sections 2 and 3 of the Study Area was the highest in the Study Area (71.3%) and unemployment was relatively low (7.5%) as illustrated in Diagram 11.24. Notably, 9.5% of the residents in Section 2 and 3 of the Study Area were retired whilst students constituted approximately 6% of the population in this section; both of which are much lower than other sections in the Study Area.

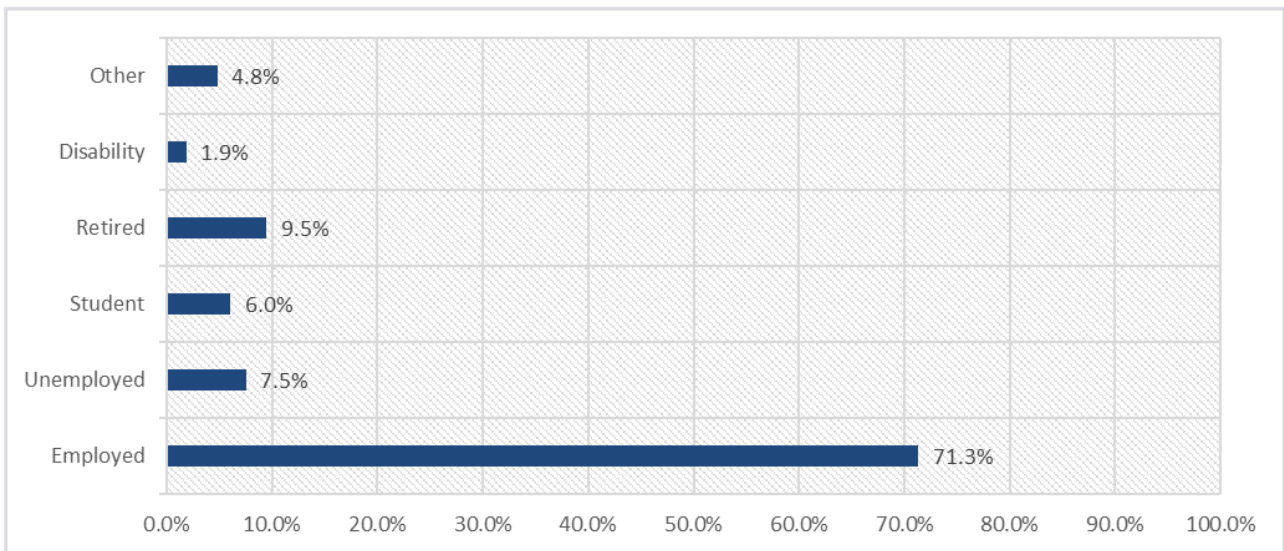


Diagram 11.24: Population Aged 15 Years and Over by Principal Economic Status in Section 2 and 3 of the Study Area (Source: CSO 2017)

Section 4A

Employment levels were relatively low within Section 4A of the Study Area and the unemployment rate is the highest within the Study Area (at 14%) as illustrated in Diagram 11.25. 14.3% of the residents in Section 4A of the Study Area were students, most likely due to proximity to Dublin City University whilst approximately 13.4% of the population were retired.

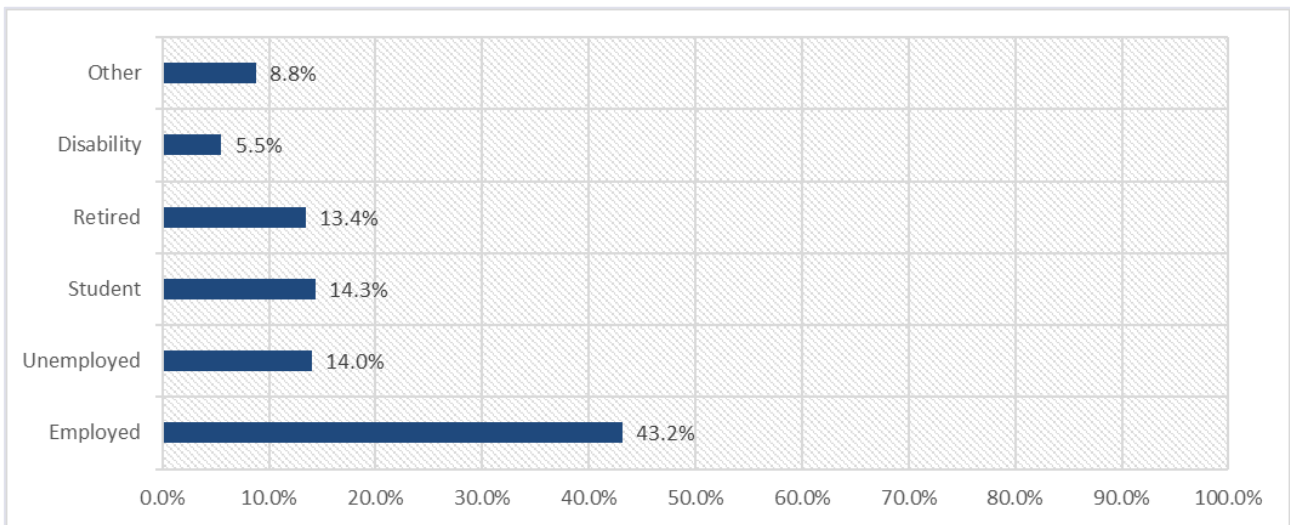


Diagram 11.25: Population Aged 15 Years and Over by Principal Economic Status in Section 4A of the Study Area (Source: CSO 2017)

Section 4B

Employment within Section 4B of the Study Area was 53.4% and just 4.4% of the residents stated they were unemployed as illustrated in Diagram 11.26. A relatively high proportion of the population identified as retired (17.9%) and students (16.5%) in Section 4B of the Study Area, which has likely influenced the relatively low proportion of the population in employment when compared to other sections in the Study Area. The high proportion of students may be attributable to proximity to Dublin City University and Technological University Dublin.

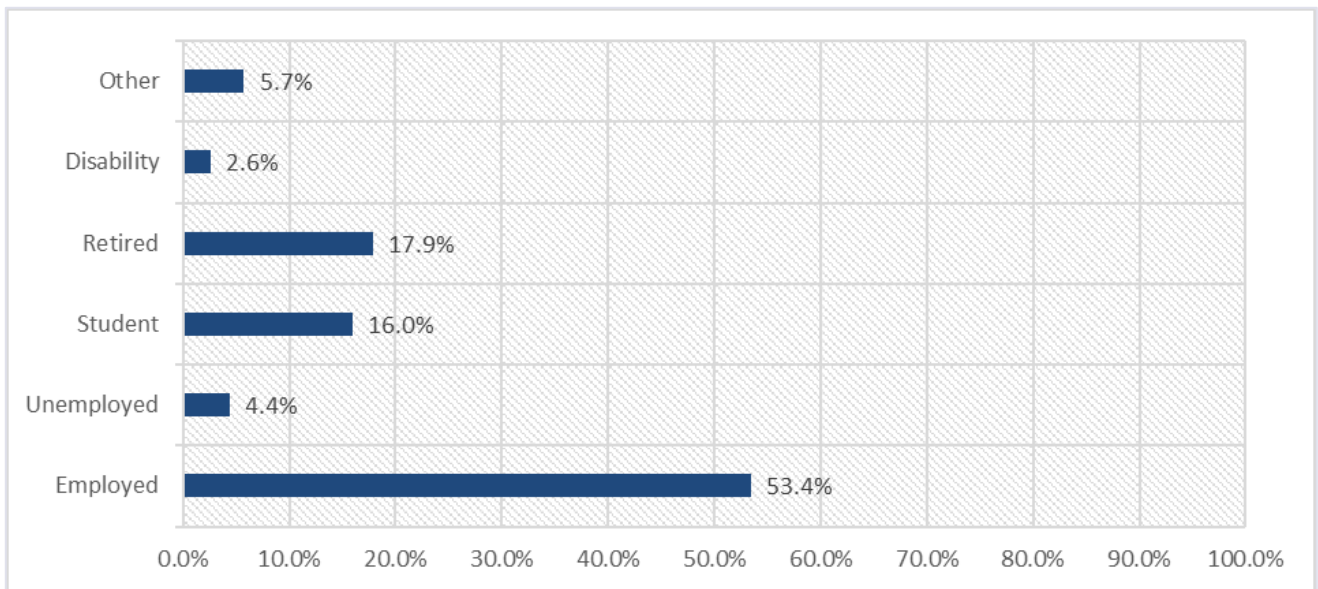


Diagram 11.26: Population Aged 15 Years and Over by Principal Economic Status in Section 4B of the Study Area (Source: CSO 2017)

Section 4C

Employment levels were relatively high in Section 4C of the Study Area (61.9%) and unemployment rate is the relatively low (8.6%) as illustrated in Diagram 11.27. 13.7% of the residents in Section 4C of the Study Area were students, most likely due to proximity to Trinity College Dublin, the Royal College of Surgeons, the National College of Ireland and Technological University Dublin whilst approximately 8.8% of the population in this section were retired.

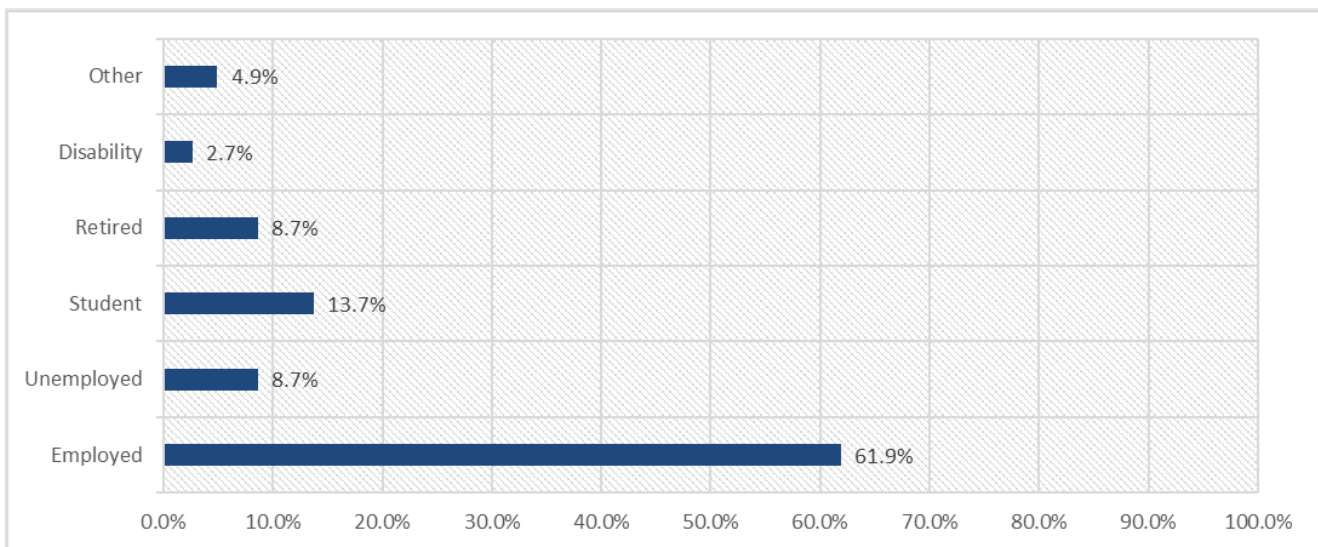


Diagram 11.27: Population Aged 15 Years and Over by Principal Economic Status in Section 4C of the Study Area (Source: CSO 2017)

11.4.3.3 Economic Activity and Status

11.4.3.3.1 State and Regional Context

An overview of the persons at work by occupation in April 2016 is provided in Diagram 11.28. With the exception of 'not stated', the proportional splits by occupation are relatively comparable between the national, regional and local context.

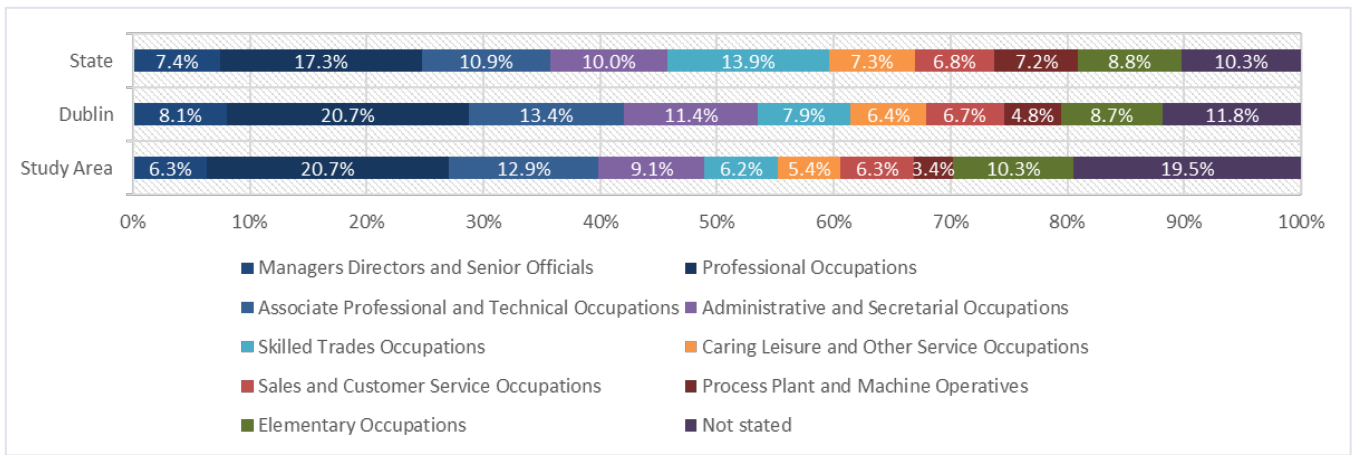


Diagram 11.28: Persons at Work or Unemployed by Occupation in the Study Area, Dublin and State (Source: CSO 2017)

There were 85,696 persons employed in the Study Area and they held a broad range of roles as illustrated in Diagram 11.28. The most common role was 'Professional Occupations' (20.7%), followed by 'Associate Professional and Technical Occupations' (12.9%) and this was generally comparable to the state (17.3% and 13.9% respectively) and regional comparisons (20.7% and 13.4% respectively). Within the Study Area 1,622 of the 12,144 people that were classified as unemployed were actually individuals looking for their first-time job whilst 6,193 people within the Study Area were classified as unskilled. Further detail on employment within the relevant sections of the Study Area is provided in Section 11.4.3.3.2 of this Chapter.

Analysis of the socio-economic grouping of the reference person in a household has also been undertaken to understand the economic status of households in the Study Area. The CSO classifies household reference persons into one of ten socio-economic groups based on the level of skill and educational attainment of their occupation (including of those at work, unemployed or retired). It should be noted that the reference person in each private household is the first person identified as a parent, spouse or cohabiting partner in the first family in the household. Where no person in the household satisfies these criteria, the first usually resident person is used as the reference person.

The proportion employed in the three highest professional socio-economic groups (i.e. as employers, managers and/or professionals – Categories A, B and C as identified in Diagram 11.29) was relatively high in the Study Area (36.9%) when compared to the State (34.2%), however it is less than Dublin overall (41.2%). Further, the proportion of semi-skilled and unskilled workers is higher in the Study Area (11%) than Dublin (10.1%), however it is less than the State average (12.2%). This may be associated with relatively high levels of education which are further described in Section 11.4.3.4 of this Chapter. The higher proportion in these three groups is also generally indicative of affluence which is discussed in further detail in Section 11.4.4.2 of this Chapter.

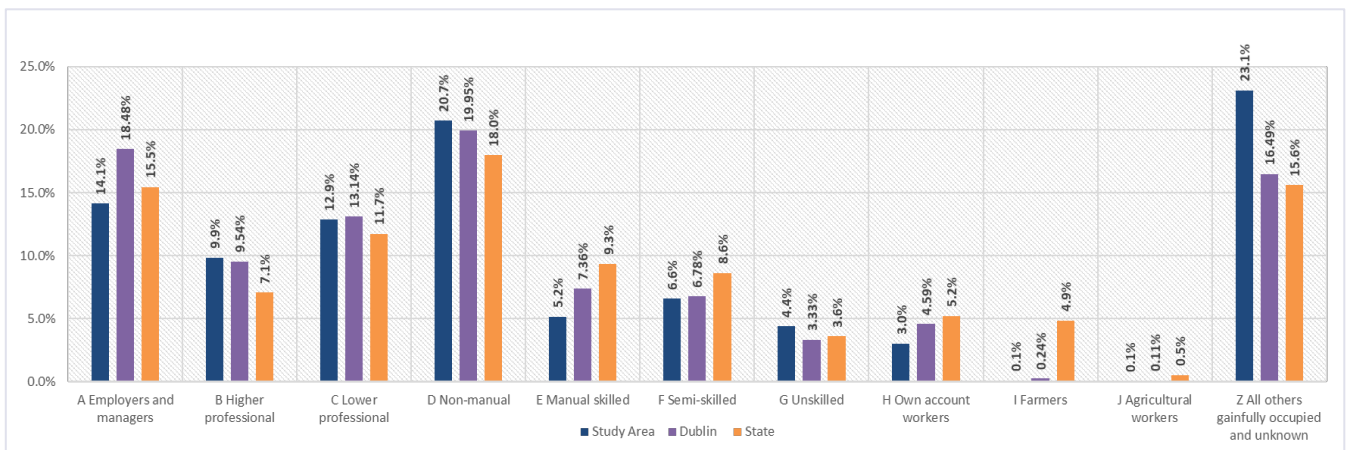


Diagram 11.29: Socio-Economic Groups by Reference Person in the in the Study Area, Dublin and State (Source: CSO 2017)

11.4.3.3.2 Local and Neighbourhood Context

Section 1

The most common occupation in Section 1 of the Study Area was Professional Occupations (14.0%), followed by Administrative and Secretarial Occupations (12.9%) and Associate Professional and Technical Occupations (12.3%), as shown in Diagram 11.30.

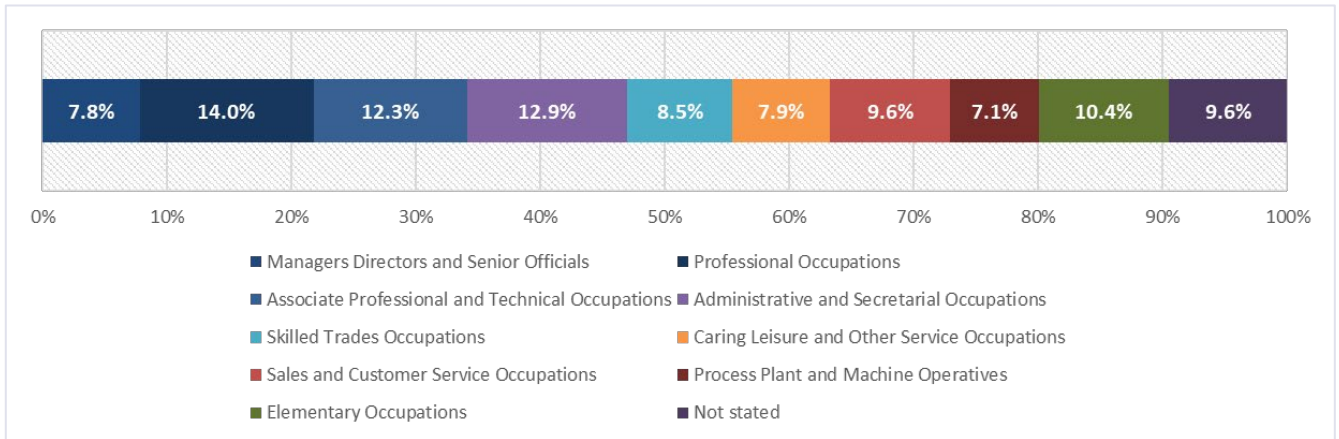


Diagram 11.30: Persons at Work or Unemployed by Occupation in Section 1 of the Study Area (Source: CSO 2017)

The proportion considered to be in the three highest professional socio-economic groups (i.e. management and/or professional occupations - categories A+B+C as shown in Diagram 11.31) was 36.5% in Section 1 of the Study Area. This is relatively high when considered across the Study Area, and the proportion of semi-skilled and unskilled workers is slightly higher than other sections (11.9%).

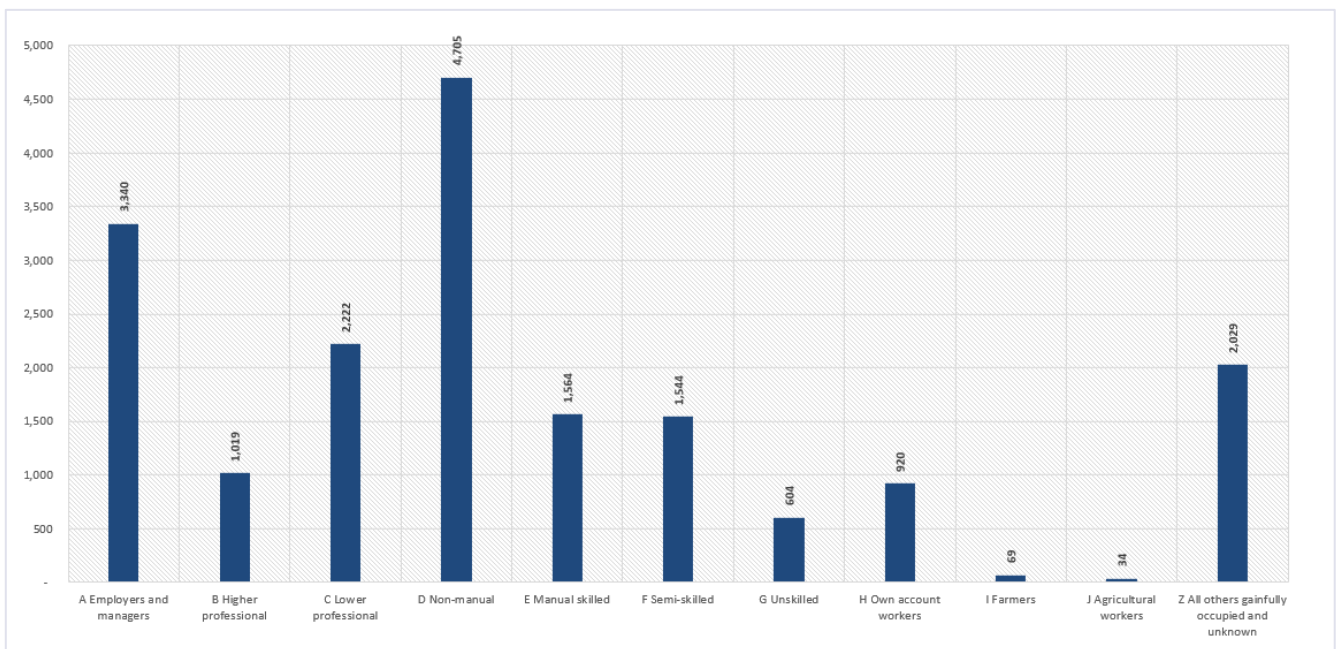


Diagram 11.31: Socio-Economic Groups by Reference Person in Section 1 of the Study Area (Source: CSO 2017)

Section 2 and 3

The most common occupation in Section 2 and 3 of the Study Area was Professional Occupations (16.6%), followed by Administrative and Secretarial Occupations (8.8%) and Associate Professional and Technical Occupations (16.6%), as shown in Diagram 11.32.

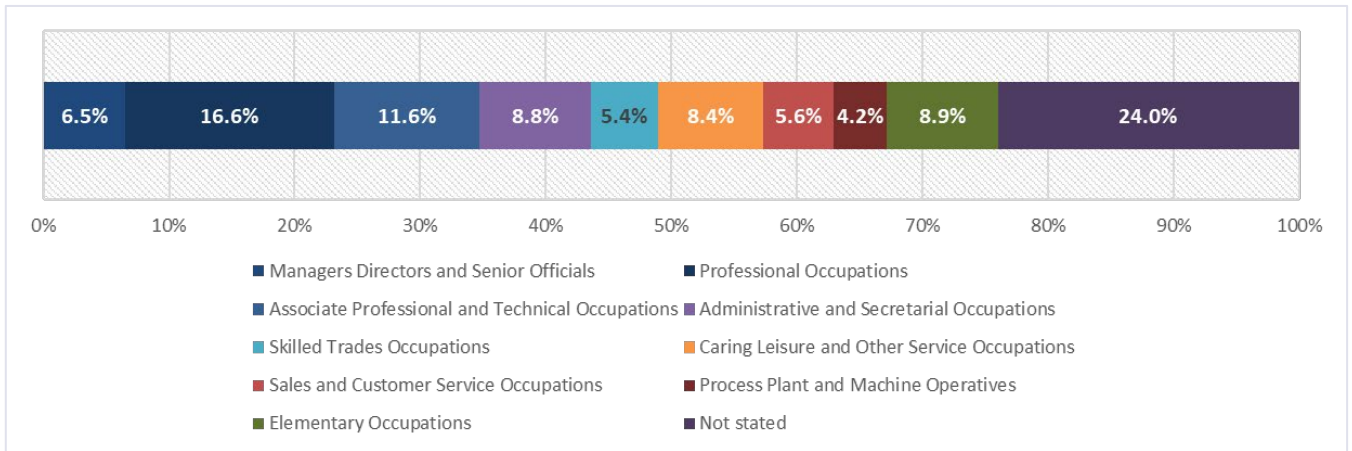


Diagram 11.32: Persons at Work or Unemployed by Occupation in Section 2 and 3 of the Study Area (Source: CSO 2017)

The three highest professional socio-economic groups (i.e. management and/or professional occupations - categories A+B+C as shown in Diagram 11.33) made up 35.1% of the population in Section 2 and 3 of the Study Area. This is relatively low when considered across the Study Area, however it is higher than the State average. Further, the proportion of semi-skilled and unskilled workers is slightly lower relative to other sections (10.8%).

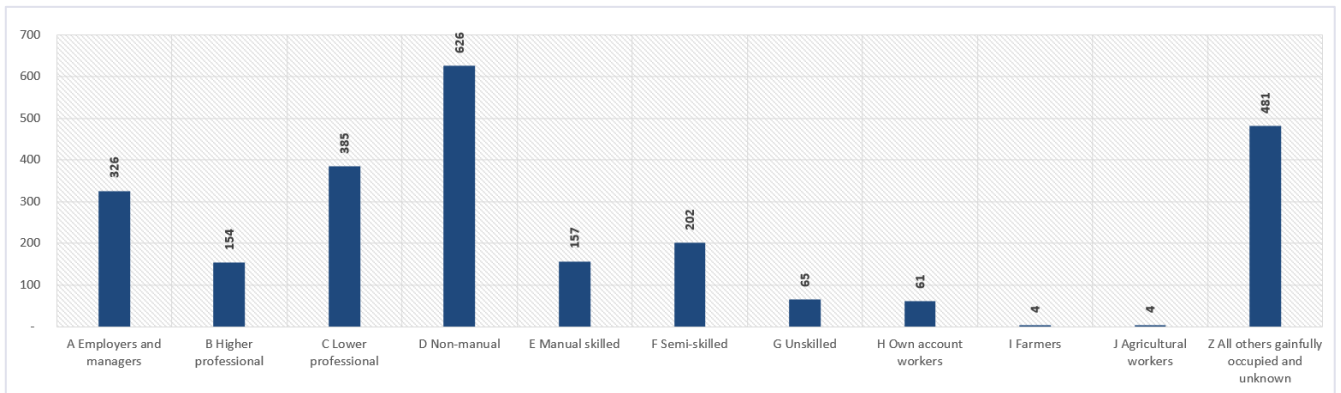


Diagram 11.33: Socio-Economic Group of Reference Person in Section 2 and 3 of the Study Area (Source: CSO 2017)

Section 4A

In relation to occupations, 'Not Stated' was the most frequent answer (24%) in Section 4A of the Study Area as illustrated in Diagram 11.34. Where occupation was stated, Elementary Occupations were the most common (15.3%) followed by Administrative and Secretarial Occupations (9.1%) and Caring Leisure and Other Service Occupations along with Sales and Customer Service Occupations (both at 8.3%).

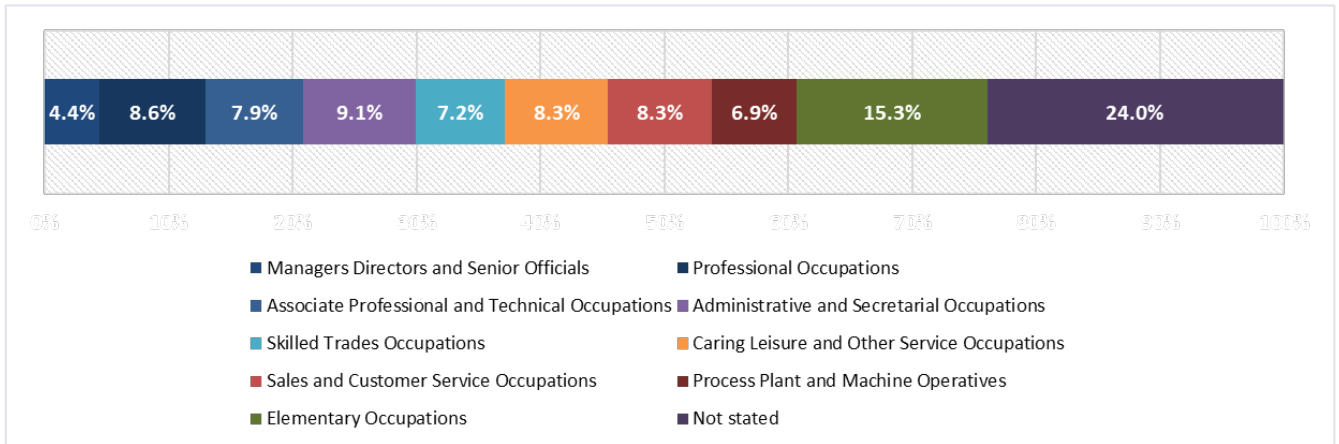


Diagram 11.34: Persons at Work or Unemployed by Occupation in Section 4A of the Study Area (Source: CSO 2017)

The highest level of professional workers (total proportion of A, B and C categories as shown in Diagram 11.35) was 18.5% which was relatively low when compared to other sections within the Study Area. Non-manual workers were the largest group (21.2%) whilst semi-skilled and unskilled workers comprised 16.8% which is relatively high when compared to the other sections of the Study Area.

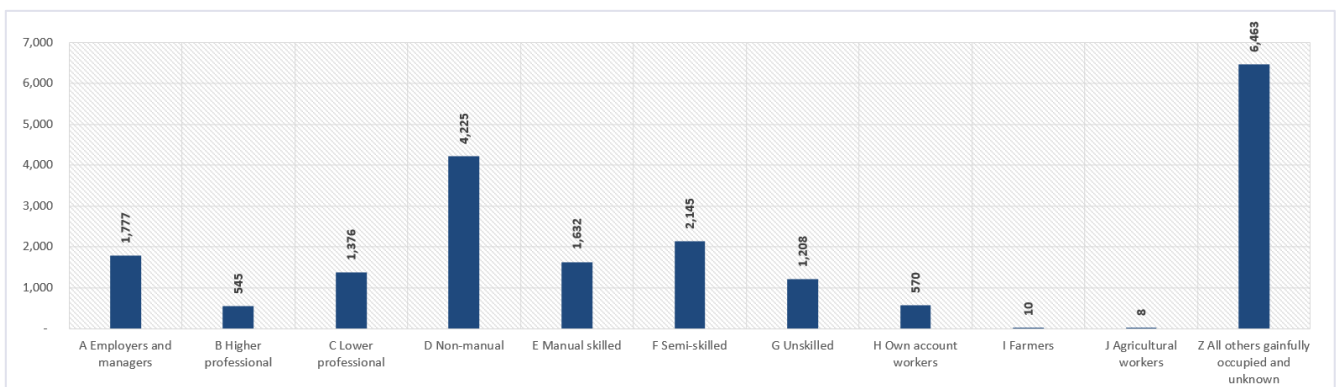


Diagram 11.35: Socio-Economic Group by Reference Person in Section 4A of the Study Area (Source: CSO 2017)

Section 4B

The most prevailing occupation in Section 4B of the Study Area (as shown in Diagram 11.36) was Professional Occupations (31%), followed by Associate Professional and Technical Occupations (14.8%) and Administrative and Secretarial Occupations (12.2%).

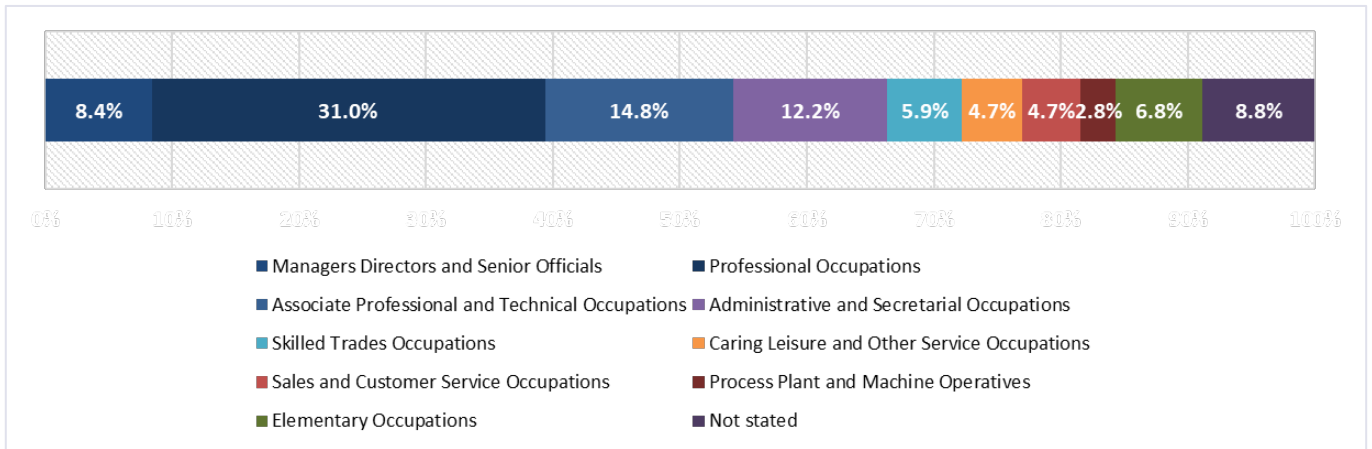


Diagram 11.36: Persons at Work or Unemployed by Occupation in Section 4B of the Study Area (Source: CSO 2017)

The three highest professional socio-economic groups (i.e. management and/or professional occupations - categories A+B+C as shown in Diagram 11.37) made up 49.8% of the population in Section 4B of the Study Area. This is the highest when considered across the Study Area, and the proportion of semi-skilled and unskilled workers is the lowest relative to other sections (6.6%).

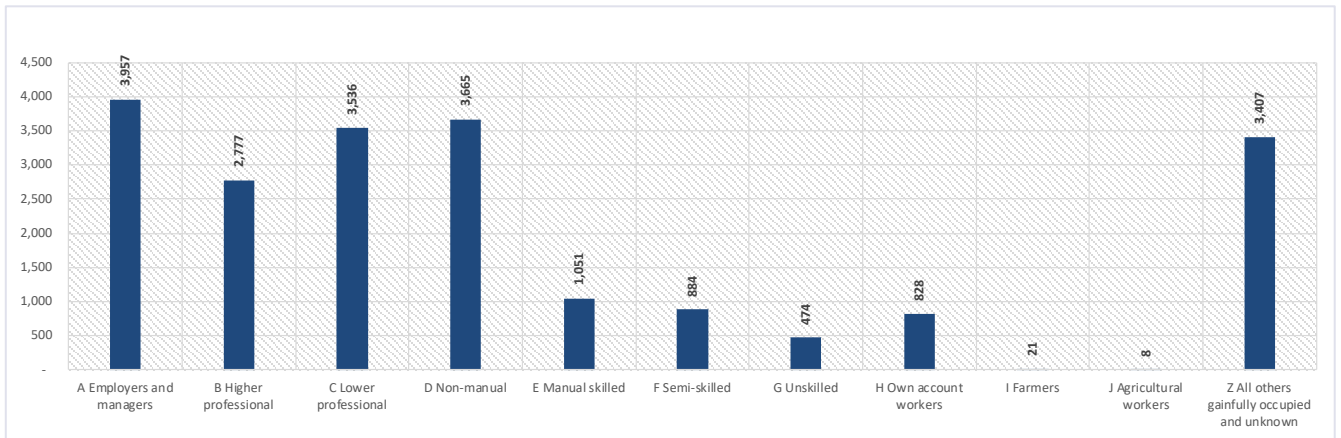


Diagram 11.37: Socio-Economic Groups by Reference Person (Source: CSO 2017)

Section 4C

In relation to occupations, 'Not Stated' was the most frequent answer (22%) in Section 4C of the Study Area. The most prevailing occupation in Section 4C of the Study Area was Professional Occupations (22%), followed by Associate Professional and Technical Occupations (13.4%) as shown in Diagram 11.38.

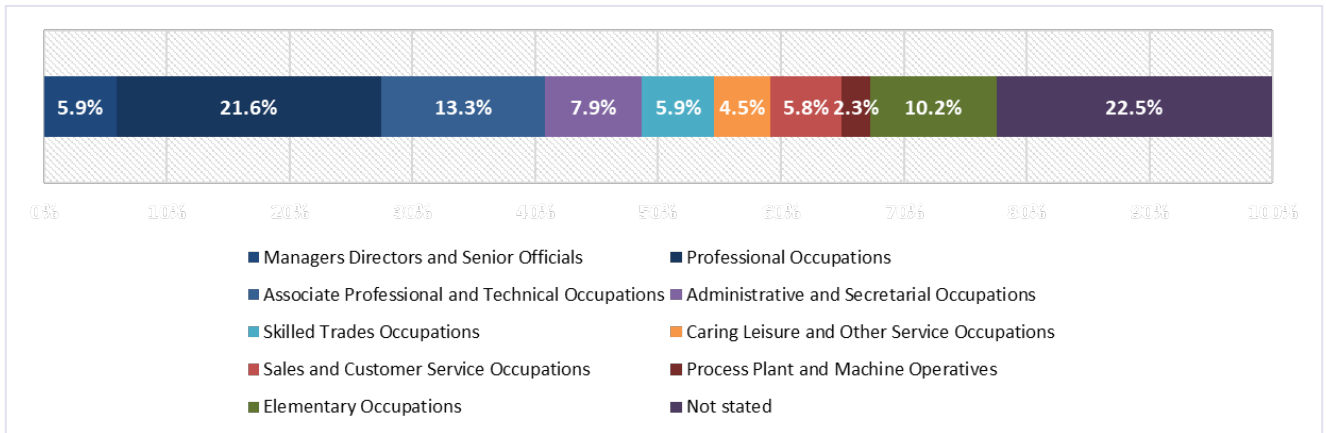


Diagram 11.38: Persons at Work or Unemployed by Occupation in Section 4C of the Study Area (Source: CSO 2017)

The three highest professional socio-economic groups (i.e. management and/or professional occupations - categories A+B+C as shown in Diagram 11.39) made up 38.1% of the population in Section 4C of the Study Area. This is relatively high when considered across the Study Area, and the proportion of semi-skilled and unskilled workers is slightly lower relative to other sections (10.5%).

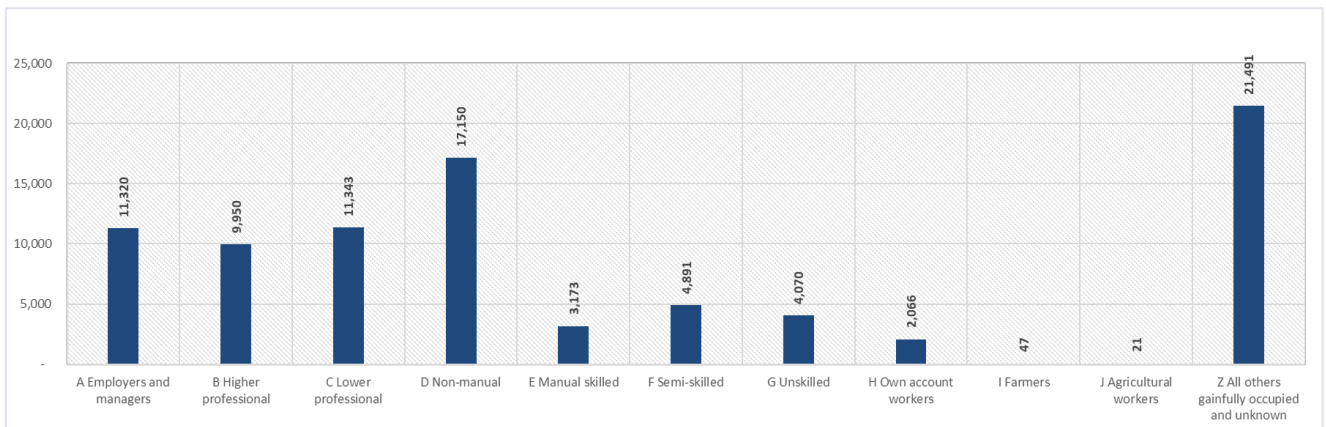


Diagram 11.39: Socio-Economic Group of Reference Person in Section 4C of the Study Area (Source: CSO 2017)

11.4.3.4 Education

11.4.3.4.1 State and Regional Context

The population over 15 years of age within the Study Area is well educated when compared to the state and regional comparisons as outlined in Table 11.18. Specifically, the proportion of the population above 15 years that has completed their second and third level education is much higher than the state and regional comparisons and the proportion of the population educated to primary level or less is relatively low in the Study Area.

Table 11.18: Education by Highest Level Achieved within the Study Area, Region and State (Source: CSO 2017)

Proportion	Number of persons Study Area	Percentage (%) Study Area	Percentage (%) Dublin County	Percentage (%) State
Masters or Higher	19,205	17.1%	14.7%	10.1%
Third Level (Level 7+)	43,922	39.1%	36.2%	28.5%
Third Level (Level 6+)	52,065	46.4%	45.3%	39.3%
Up to Leaving Cert	35,043	31.2%	39.1%	45.5%
Primary or Less	10,014	8.9%	10.6%	12.5%

Specifically, 66,535 persons living within the Study Area were educated third level or above, i.e. completed Level 6 (Higher Certificate) or higher as per the National Framework of Qualifications (NFQ). A breakdown of the educational attainment within the Study Area is provided in Diagram 11.40.

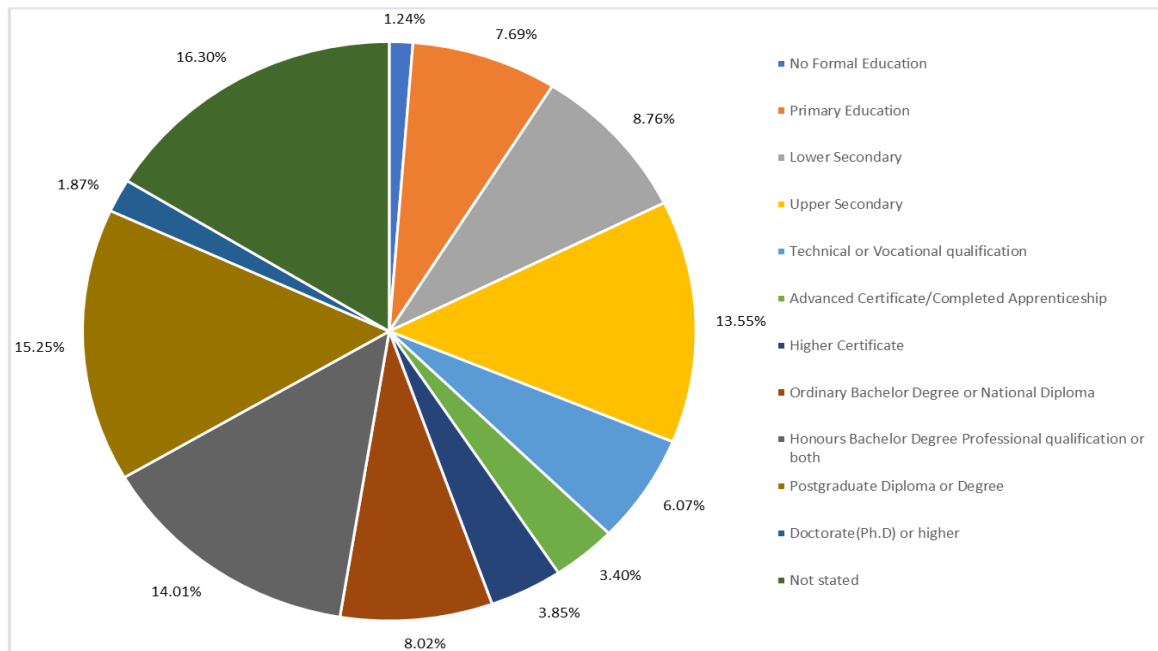


Diagram 11.40: Population aged 15 years and over by highest level of education completed in the Study Area (Source: CSO 2017)

11.4.3.4.2 Local and Neighbourhood Context

Section 1

Educational attainment for those aged over 15 years is relatively high in Section 1 of the Study Area as presented in Table 11.19. 41.6% of the population (above 15 years of age) have completed the NFQ Level 6 (Higher Certificate) or above which is slightly above the state average.

Table 11.19: Education by Highest Level Achieved within Section 1 of the Study Area (Source: CSO 2017)

Educational Level	Number of Persons	Percentage (%)
Third Level (Level 7+)	3,537	29.1%
Third Level (Level 6+)	5,058	41.6%
Up to Leaving Cert	5,028	41.3%
Primary or Less	839	6.9%
Masters of Higher	1,108	9.1%

The breakdown of the highest level of educational attainment within Section 1 of the Study Area is illustrated in Diagram 11.41.

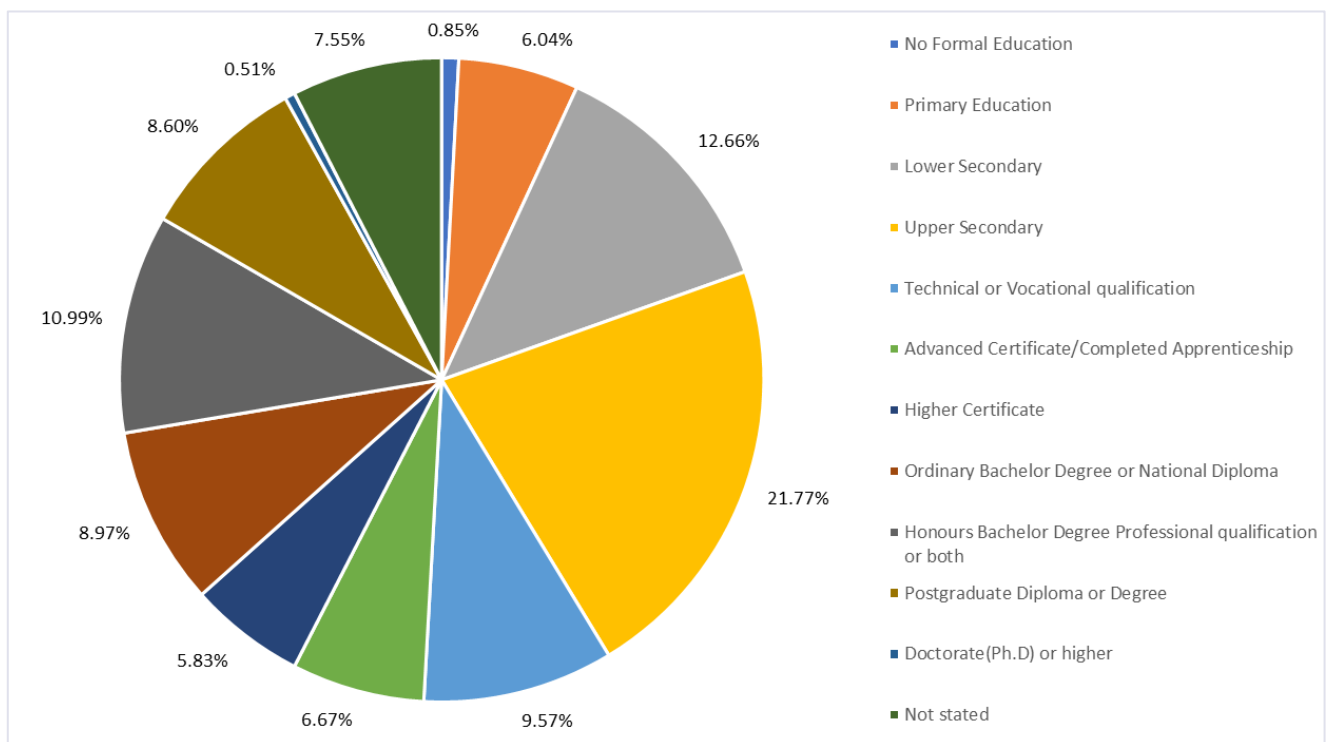


Diagram 11.41: Population Aged 15 Years and Over by Highest Level of Education Completed in Section 1 of the Study Area (Source: CSO 2017)

Section 2 and 3

Educational attainment for those aged over 15 years is relatively high in Section 2 and 3 of the Study Area (Table 11.20). 44.9% of the population (above 15 years of age) have completed the NFQ Level 6 (Higher Certificate) or above which is above the state average and comparable to the regional proportion. Further, the proportion of the population educated to just Leaving Certificate level is relatively low.

Table 11.20: Education by Highest Level Achieved in Section 2 and 3 of the Study Area (Source: CSO 2017)

Proportion	Number of Persons	Percentage (%)
Third Level (Level 7+)	819	35.2%
Third Level (Level 6+)	1,045	44.9%
Up to Leaving Cert	427	18.4%
Primary or Less	54	2.3%
Masters of Higher	355	15.3%

The breakdown of the highest level of educational attainment within Section 2 and 3 of the Study Area is illustrated in Diagram 11.42.

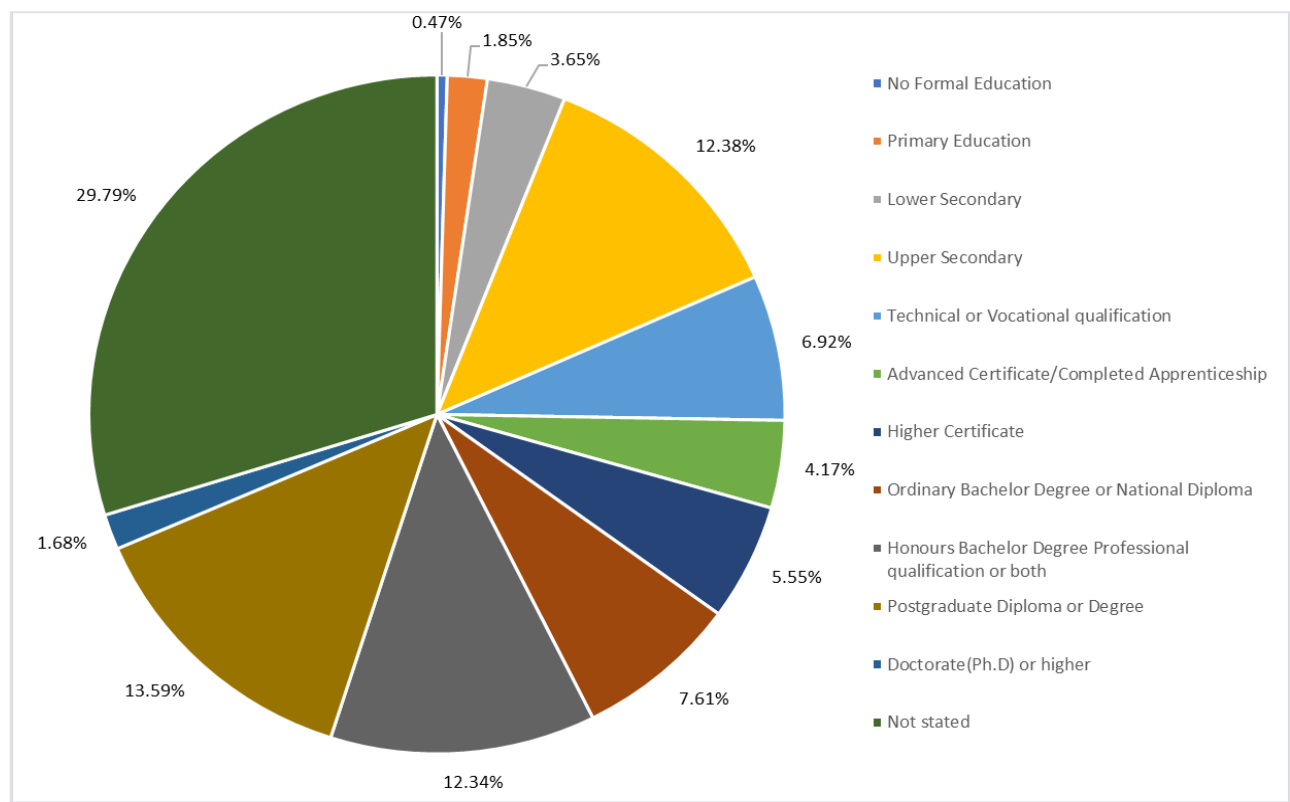


Diagram 11.42: Population Aged 15 Years and Over by Highest Level of Education Completed in Section 2 and 3 of the Study Area (Source: CSO 2017)

Section 4A

Educational attainment for those aged over 15 years is relatively low in Section 4A of the Study Area (Table 11.21). 21.4% of the population (above 15 years of age) have completed the NFQ_Level 6 (Higher Certificate) or above which is significantly lower than the rest of the Study Area and the regional and state averages.

Table 11.21: Education by Highest Level Achieved in Section 4A of the Study Area (Source: CSO 2017)

Proportion	Number of Persons	Percentage (%)
Third Level (Level 7+)	1,845	14.7%
Third Level (Level 6+)	2,682	21.4%
Up to Leaving Cert	7,153	57.1%
Primary or Less	2,420	19.3%
Masters of Higher	601	4.8%

The breakdown of the highest level of educational attainment within Section 4A of the Study Area is illustrated in Diagram 11.43.

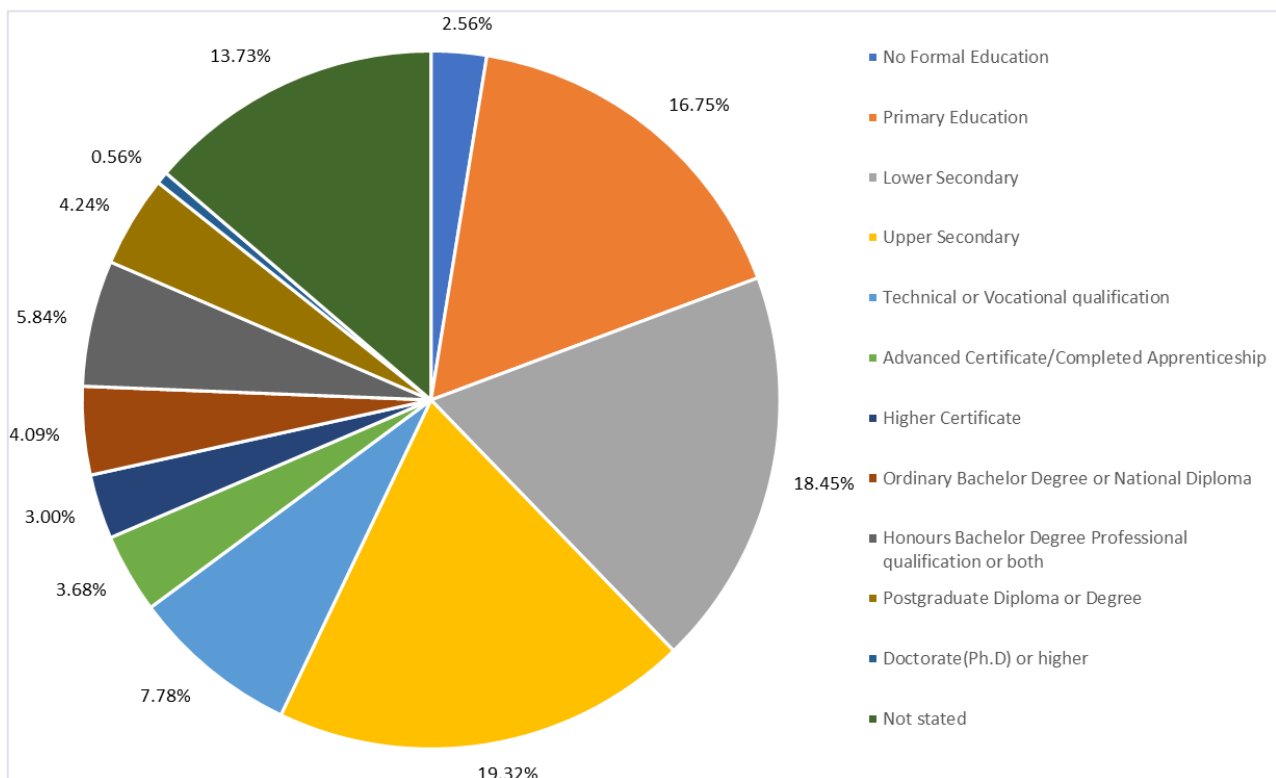


Diagram 11.43: Population Aged 15 Years and Over by Highest Level of Education Completed in Section 4A of the Study Area (Source: CSO 2017)

Section 4B

Educational attainment for those aged over 15 years in Section 4B of the Study Area (Table 11.22) is high. 52.8% of the population (above 15 years of age) have completed the NFQ_Level 6 (Higher Certificate) or above and over 20% have been educated to postgraduate level (i.e. Masters or higher). This is significantly higher than the state average and represents the highest levels of education across the Study Area.

Table 11.22: Education by Highest Level Achieved in Section 4B of the Study Area (Source: CSO 2017)

Proportion	Number of Persons	Percentage (%)
Third Level (Level 7+)	6,711	45.9%
Third Level (Level 6+)	7,713	52.8%
Up to Leaving Cert	4,965	34%
Primary or Less	1,317	9%
Masters of Higher	2,969	20.3%

The breakdown of the highest level of educational attainment within Section 4B of the Study Area is illustrated in Diagram 11.44.

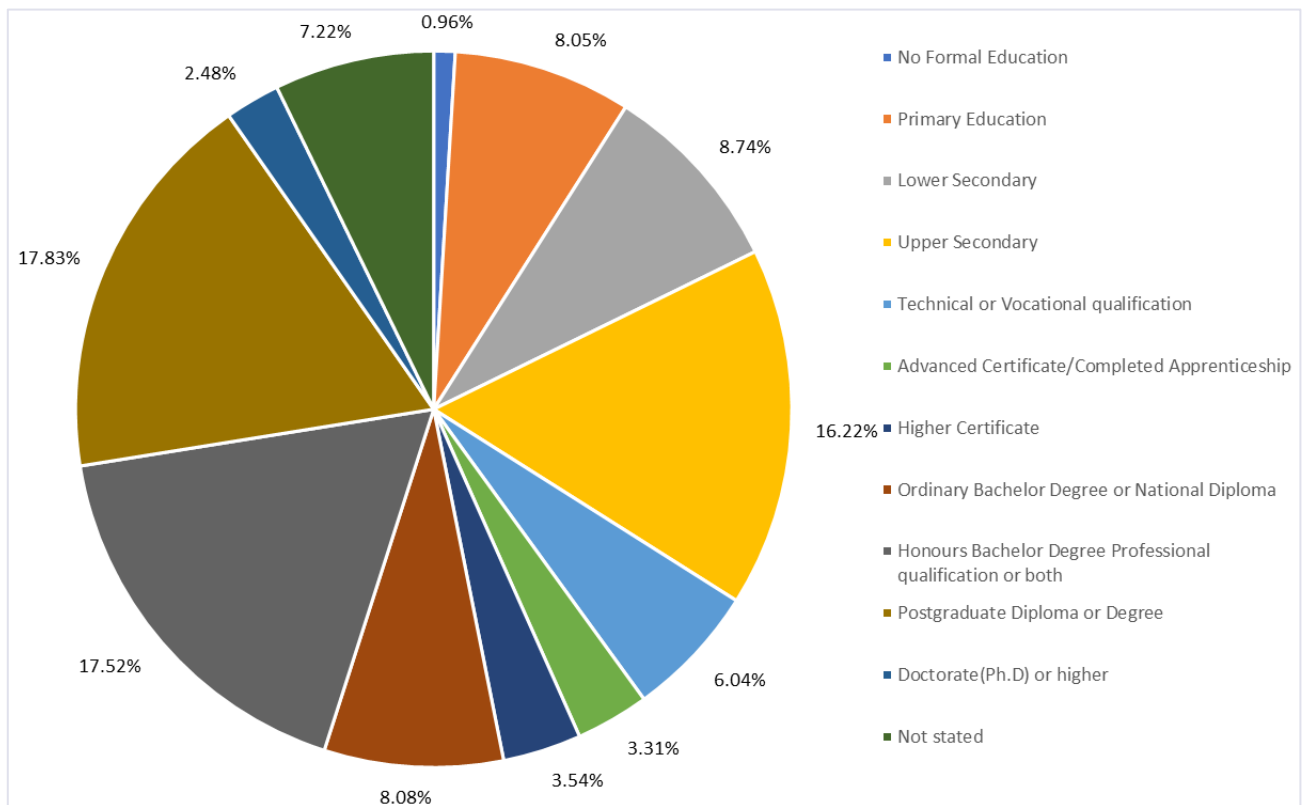


Diagram 11.44: Population Aged 15 Years and Over by Highest Level of Education Completed in Section 4B of the Study Area (Source: CSO 2017)

Section 4C

Educational attainment for those aged over 15 years in Section 4B of the Study Area (Table 11.23) is high. 50.4% of the population (above 15 years of age) have completed the NFQ_Level 6 (Higher Certificate) or above and over 20% have been educated to postgraduate level (i.e. Masters or higher). This is significantly higher than the state average and represents relatively high levels of education when compared to the rest of the Study Area and Dublin region.

Table 11.23: Education by Highest Level Achieved in Section 4C of the Study Area (Source: CSO 2017)

Proportion	Number of Persons	Percentage (%)
Third Level (Level 7+)	31,010	43.9%
Third Level (Level 6+)	35,567	50.4%
Up to Leaving Cert	17,470	24.8%
Primary or Less	5,384	7.6%
Masters of Higher	14,172	20.1%

The breakdown of the highest level of educational attainment within Section 4B of the Study Area is illustrated in Diagram 11.45.

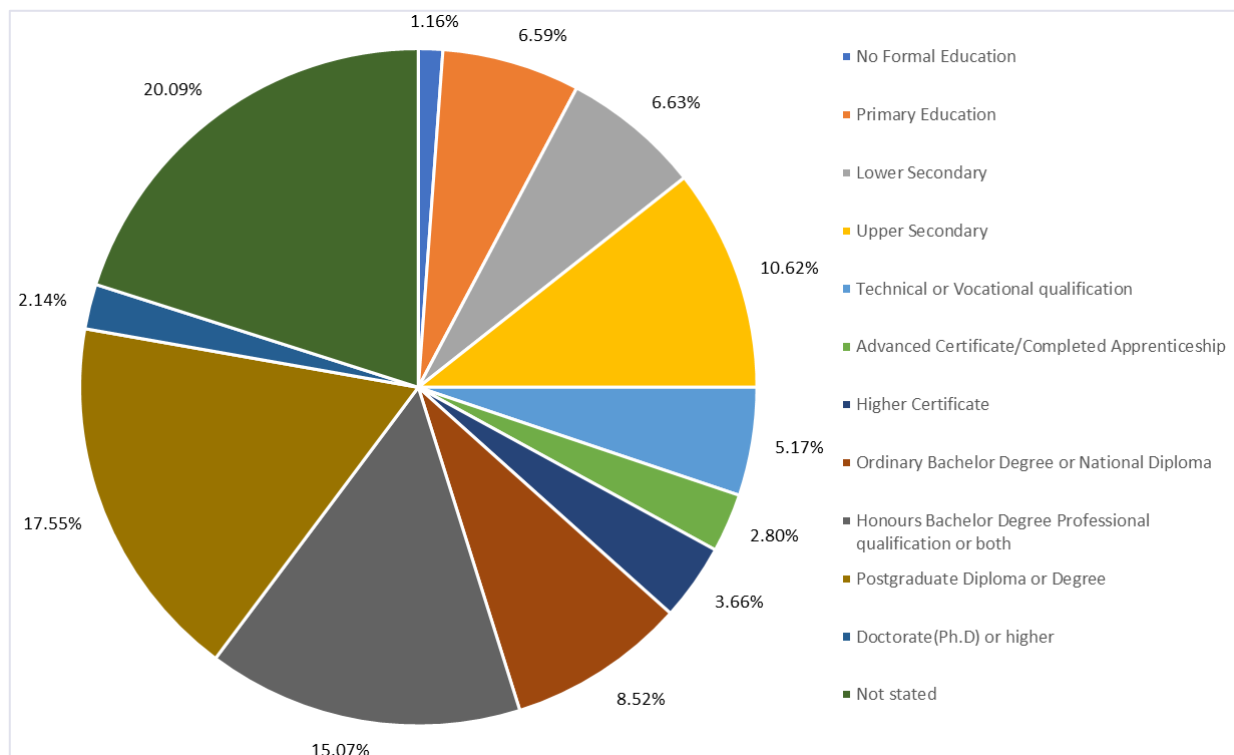


Diagram 11.45: Population Aged 15 Years and Over by Highest Level of Education Completed in Section 4C of the Study Area (Source: CSO 2017)

11.4.3.5 Workplace Zones

11.4.3.5.1 State and Regional Context

Workplace Zones have been identified as part of the 2016 Census to reflect areas with significant daytime populations. The daytime population includes everybody who indicated they worked or studied in the area, along with persons in that area who do not work or study (and so are there during

the day). Workplace Zones are geographically distinct areas based on specific data merged using the relevant Small Areas and Electoral Districts related to the Study Area. Each Workplace Zone generally has the following characteristics:

- Where possible all zones to have a range of between 100 to 400 workers;
- Each Workplace Zone contains a minimum of three workplaces;
- Workplace Zones nest within county boundaries; and
- No more than 90% of employees in any one Workplace Zone can work in one organisation.

A map of the Workplace Zones in the Study Area has been created (Figure 11.3) and the detailed baseline data for Workplace Zones has been provided in Appendix A11.2.

This provides a breakdown of the type of workers residing within the Study Area and the type of industries present by way of the daytime population that is located therein. The total number of workers (identified in those Workplace Zones) within the Study Area was 225,237 people and the total daytime population of the Study Area was 357,294 people. Section 4C had the largest number of workers of all sections in the Study Area (182,200 workers and a daytime population of 264,744 people), which is to be expected as it is the largest area and it includes Dublin City Centre.

The most common type of workers in the Workplace Zones within the Study Area were 'Non-manual workers' which made up 25%, the second most common group was 'Employers and managers' (19%), followed by 'Higher professionals' (12%) and 'Lower professionals' (14%). The most common industries which the daytime population in the Workplace Zones in the Study Area work in are information, communications and financial (38.37%), followed by wholesale, retail and trade (22.28%) and education, human health and social work activities (14.77%).

11.4.3.5.2 Local and Neighbourhood Context

Section 1

The total number of workers identified in those Workplace Zones in Section 1 of the Study Area was 16,541 people and the total daytime population was 27,747 people. This is likely indicative of a large daily inward movement of employees into this area to work.

The most common type of workers in Section 1 of the Study Area were 'Non-manual workers' (29.4%), the second most common group was 'Employers and managers' (18.4%), followed by 'Lower professionals' (12.15%). Approximately 21% of the daytime population in Section 1 of the Study Area are in the wholesale, retail and trade industry with another 15.5% in information, communications and finance industry.

Section 2 and 3

The total number of workers identified in those Workplace Zones in Section 2 and 3 of the Study Area was 12,385 people and the total daytime population was 13,827 people.

The most common type of workers in Section 2 and 3 of the Study Area were 'Non-manual workers' (36%), the second most common group was 'Employers and managers' (13%), closely followed by 'Manual' and 'Semi-skilled' workers (11.6% and 10.2% respectively). Approximately 72% of the daytime population in Section 2 and 3 of the Study Area are in the wholesale, retail and trade industry which is likely attributable to the presence of Dublin Airport. The information, communications and finance industry is the second largest industry in Section 2 and 3 of the Study Area (approximately 10%), followed by Manufacturing, Mining and Quarrying (6%).

Section 4A

The total number of workers identified in those Workplace Zones in Section 4A of the Study Area was 5,411 people and the total daytime population was 18,310 people. This is illustrative of a large daily inward movement of employees and students into this area to work.

With the exception of 'Other' (36.99%), the most common type of workers in Section 4A of the Study Area were 'Non-manual workers' (20.5%), followed by 'Employers and Managers' (approximately 9%). With the exception of Other (25%), Education, human health and social work activities (24%) is the most common industry in the Workplace Zones in Section 4A of the Study Area, followed by Wholesale, retail and trade (Approximately 20% of the daytime population are working in this industry).

Section 4B

The total number of workers identified in those Workplace Zones in Section 4B of the Study Area was 8,700 people and the total daytime population was 32,666 people. This is illustrative of a large daily inward movement of employees and students into this area to work, particularly in the vicinity of DCU and St Patrick's Campus which increases to approximately 11,700 persons and 3,330 persons respectively during the daytime.

The most common type of workers in Section 4B of the Study Area were 'Non-manual workers' (20.6%), the second most common group was 'Employers and managers' (18%), closely followed by 'Other' workers (20.5%). Approximately 65% of the daytime population in Section 4B of the Study Area are in the education, human health and social work activities industry which is likely attributable to the presence of Dublin City University and Technological University Dublin. The information, communications and finance industry is the second largest industry in Section 4B of the Study Area (approximately 13% of the daytime population are working in this industry).

Section 4C

The total number of workers identified in those Workplace Zones in Section 4C of the Study Area was 182,200 people and the total daytime population was 264,744 people. Section 4C has the highest number of workers and the greatest daytime population of all sections within the Study Area, which is to be expected as it covers a large portion of the city, including Dublin City Centre.

The most common type of workers in Section 4C of the Study Area were 'Non-manual workers' (24.3%), the second most common group was 'Employers and managers' (20.26%), followed by 'Other' workers (16.13%). Approximately 43.5% of the daytime population in Section 4C of the Study Area are in the information, communications and finance industry with a further 18.36% working in the wholesale, retail and trade industry.

11.4.3.6 Commercial Properties (Geodirectory)

11.4.3.6.1 State and Regional Context

GeoDirectory has been analysed to understand commercial properties within the Study Area. This analysis has considered the NACE⁴ Code for individual premises to understand business operations within individual offices across the Study Area, as this is an EU-wide classification method defined by the European Commission and used by the CSO. The GeoDirectory used for this assessment is based on data from the final quarter of 2020 – this represents a specific snapshot of the commercial environment of the Study Area. While the baseline assessment has sought to identify all major, sensitive economic receptors situated within the Study Area, it is important to note that urban areas undergo constant processes of change with an ever-evolving range of uses.

As shown in Figure 11.4 and summarised in Table 11.24, there was a total of 11,231 commercial properties identified within the Study Area and the most frequent type, based on their NACE Code were:

- Restaurants and mobile food service activities (1,184 properties);
 - Other activities auxiliary to financial services, except insurance and pension funding (686 properties);
 - Legal activities (531 properties);
 - Hairdressing and other beauty treatments (438 properties); and
 - Other human health activities (395 properties).
- Overall, commercial premises at all levels are considered to be of medium sensitivity. Of those within the Study Area, there are just 42 commercial properties within the Project Boundary, one in Section 1, five within Section 4B and the remainder within Section 4C of the Study Area.

Table 11.24: GeoDirectory Data of the Number of Commercial Properties in Each Section of the Study Area

Section in the Study Area	Commercial Properties
1	722
2 and 3	321
4A	169
4B	427
4C	9,592
Total	11,231

11.4.3.6.2 Local and Neighbourhood Context

Section 1

Section 1 of the Study Area has a wide range of businesses and GeoDirectory shows that there were 722 commercial properties within this area, mostly concentrated in and around Swords Town Centre.

The most frequent commercial properties in Section 1 of the Study Area are associated with restaurants and food services which are mostly concentrated around Main Street on Swords and Airside Business Park. This is followed by hairdressers and beauty, other human health along with retail and dental as outlined in Table 11.25.

⁴ *Nomenclature statistique des activités économiques dans la Communauté européenne* / Statistical Classification of Economic Activities in the European Community

Table 11.25: GeoDirectory Data of the Five Most Frequent Commercial Property Types in Section 1 of the Study Area

NACE Code	Number of Properties
Restaurants and Mobile Food Service Activities	70
Hairdressing and Other Beauty Treatment	41
Other Human Health Activities	30
Retail Sale of Clothing In Specialised Stores	28
Dental Practice Activities	21

Section 2 and 3

Section 2 and 3 of the Study Area has a wide range of businesses and analysis of GeoDirectory data show that there are 321 commercial properties within this area mostly concentrated around Dublin Airport and Northwood as outlined in Table 11.26.

Commercial properties relating to general medical and restaurants and food services are the most common in Section 2 and 3 of the Study Area. The former is particularly common in Northwood (due to the presence of the Sports Surgery Clinic and Santry GP) whilst the latter are particularly prevalent at the airport and at Northwood. The renting and leasing of cars as well as air transport is attributable to the presence of Dublin Airport within Section 2 and 3 of the Study Area.

Table 11.26: GeoDirectory Data of the Five Most Frequent Commercial Property Types in Section 2 and 3 of the Study Area

NACE Code	Number of Properties
General Medical Practice Activities	47
Restaurants and Mobile Food Service Activities	26
Renting and Leasing of Cars and Light Motor Vehicles	15
Air Transport	13
Other Activities Auxiliary to Financial Services, Except Insurance and Pension Funding	13

Section 4A

There were 169 commercial properties identified in Section 4A of the Study Area, mostly concentrated around Ballymun Town Centre with a few properties at Omni Shopping Centre and along Shanowen Road (including the Shanowen Business Centre).

Table 11.27 shows that the most frequent type of business in Section 4A of the Study Area were similar in quantum and that the majority are located mostly along Ballymun Road, particularly in the vicinity of the Town Centre.

Table 11.27: GeoDirectory data of the five most frequent commercial property types in Section 4A of the Study Area.

NACE Code	Number of Properties
Restaurants and Mobile Food Service Activities	13
Activities of Other Membership Organisations	10
Hairdressing and Other Beauty Treatment	10
Other Social Work Activities Without Accommodation	10
Other Human Health Activities	8

Section 4B

There were 427 commercial properties identified in Section 4B of the Study Area, with particular concentrations evident along the main thoroughfares to Dublin City Centre (i.e. the R132 and R108).

The most common commercial property type is related to restaurants and food services (mostly along the key thoroughfares), followed by hairdressing and beauty and then medical (mostly in and around Drumcondra and Glasnevin) as shown in Table 11.28.

Table 11.28: GeoDirectory data of the Five Most Frequent Commercial Property Types in Section 4B of the Study Area.

NACE Code	Number of Properties
Restaurants and Mobile Food Service Activities	46
Hairdressing and Other Beauty Treatment	27
General Medical Practice Activities	25
Other Human Health Activities	23
Other Accommodation	18

Section 4C

There were 9,582 commercial properties identified in Section 4C of the Study Area which is the highest quantum of all sections within the Study Area. The commercial properties are well distributed with the number of businesses generally increasing towards Dublin City Centre, as would be expected given the commercial nature of the city core.

Commercial properties featuring restaurants and food services are common in Section 4C of the Study Area as shown in Table 11.29, with relatively high proportion of these premises in the shopping districts of O'Connell Street to Henry Street and St Stephen's Green to Grafton Street, albeit they are distributed across the entire area. The second most common was auxiliary financial services, followed by legal activities which were particularly concentrated along the quays and around Temple Bar and in area between Merrion Square and the Grand Canal. Overall, there is a very high concentration and large distribution of commercial properties across Section 4C of the Study Area as would be expected given the city centre location.

Table 11.29: GeoDirectory Data of the Five Most Frequent Commercial Property Types in Section 4C of the Study Area.

NACE Code	Number of Properties
Restaurants and Mobile Food Service Activities	1029
Other Activities Auxiliary to Financial Services, Except Insurance and Pension Funding	650
Legal Activities	510
Hairdressing and Other Beauty Treatment	358
Beverage Serving Activities	355

11.4.3.7 Key Sectors

11.4.3.7.1 State and Regional Context

Overview

There are a range of industries present throughout the Study Area that support the local, regional and state economy. Diagram 11.46 illustrates the industries that people are employed in and Professional Services and Commerce and Trade are the dominant industries at the state, regional and local level. However, as previously noted, employees that live within the Study Area may not necessarily work within their immediate vicinity or indeed the Study Area, hence the information in this section should be read in tandem with Section 11.4.3.5 of this Chapter. As for the overall economy, the sensitivity of key sectors is considered to be low at State, regional, and Study Area level due to their large scale and the porous and regional nature of economic sectors.

Transport and communications and other industries are more evident in Dublin and within the Study Area, whilst manufacturing and agriculture, forestry and fishing are less dominant when compared to the State. This may be associated with the urban nature and high reliance on tertiary industries in the Study Area and across the Dublin region. Specifically, within the Study Area there is less reliance on public administration and agriculture, forestry and fishing industries which may be associated within the urbanised character and relatively high levels of education.

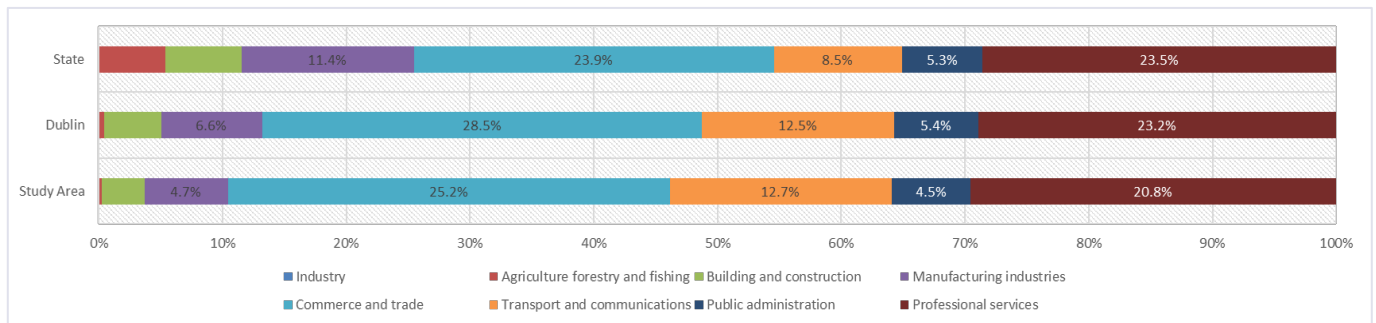


Diagram 11.46: Persons at Work by Industry in the Study Area and at the Regional and State Level (Source: CSO 2017)

Transport and Communications Industry

The transport and communications industry was and continues to be important for the Dublin region as the commercial and administrative capital of the country. The Irish economy depends on exports, trade and foreign direct investment and economic growth has been evident in recent years, particularly in Dublin where multinationals continue to significantly invest and expand their workforce and office space.

The Annual Employment Survey (Department of Jobs, Enterprise and Innovation 2017) estimated that in 2016, almost 55% of employees working in Dublin were working in foreign owned companies (which is slightly more than the state average of 50% at that time) and that around 20,000 new jobs were created in 2016. Multinational communications companies including Facebook and Google have continued to expand their workforce in the interim period with an estimated 1,500 and 8,000 employees respectively employed in Dublin (Irish Times 2020; IDA 2020).

Dublin Airport, which is within the Section 2 and 3 of the Study Area, is considered a major contributor to and employer within the transport industry. During 2019 Dublin Airport welcomed 32.9 million passengers, supported 19,200 full time equivalent (FTE) jobs and contributed €1.7 billion Gross Value Added. Indirectly, Dublin Airport is estimated to facilitate 129,700 jobs and contribute €9.8billion Gross Value Added nationally in total which is equivalent to 3.1% of national Gross Domestic Product (InterVistas 2019). The number of passengers handled declined to 7,267,303 in 2020. More than half of all those who travelled through Dublin Airport in 2020 did so in January and February, as passenger numbers increased by 2% to 4.1 million passengers the first two months of the year. However, between

March and the end of December, passenger numbers fell by 89% to 3.3 million due to COVID-19 and travel restrictions (CSO, 2021c).

Commerce and Trade Industry

Commerce and trade is a relatively large industry at the regional and local level, particularly when compared to the State. As Dublin is the administrative and commercial capital of the country, it is a hub for employment in commerce and trade, particularly for national and in some cases multinational headquarters for commerce and trade establishments.

Generally, more affluent urban areas have higher proportions of the population working in commerce and trade, particularly in the pockets of Swords, Drumcondra and Glasnevin and those southern suburbs of Ranelagh, Rathmines and Rathgar. This is likely due to presence of commerce and trade establishments within those areas (for example Swords and Glasnevin) and due to the proximity to Dublin City Centre which is home to many multinational commercial and trade establishments.

Specific consideration has been given to the retail, hospitality, services and associated establishments that contribute to the local, regional and state economy in accordance with the requirements of the guidelines (Fáilte Ireland 2011). Dublin is Ireland’s most important tourist entry point and a key destination in terms of national and international hospitality and retail. Prior to COVID-19, activity in the retail, hospitality and the services sector was in high demand across Dublin and within the Study Area which is considered reflective of the state growth in this industry.

Nationally, there was an annual increase of 4.6% in retail sales when compared with December 2018 (CSO 2020a) and there was 0.9% annual increase in the Consumer Price Index in January 2020 (CSO 2020b). By January 2021, the Consumer Price Index had fallen 0.2% in the year (CSO, 2021d) whilst a 14.1% decrease in retail sales by volume was evident (CSO, 2021e). Specifically, retail sales in January 2021 were 13.6% lower than in February 2020 before the onset of COVID-19 and 19.8% lower than December 2020 (CSO, 2021e).

During 2020, the travel restrictions meant that international visitors and associated spending reduced in the hospitality and tourism sectors. Fáilte Ireland reported that domestically 60% of consumers took less trips in Ireland whilst only 9% claimed to have taken more trips. An overview of the top activities on trips (including comparison to 2019 for short and long breaks is provided in Diagram 11.47 for context.



Diagram 11.47: Top 10 Activities on most recent trips – i.e. from 2020 (Source: Fáilte Ireland 2021)

The latest tourism barometer released by Fáilte Ireland in May 2022 indicates the following:

- Visitor volumes are not yet back to pre-covid levels – especially overseas visitors with 67% of businesses indicating that overseas visitors' levels are down so far, as of May 2022, compared to normal.

- The domestic market is performing well for hotels – 50% of hotels are up on domestic visitors, as of May 2022, and 30% have the same level compared to pre-covid years.

As outlined in Table 11.30, 151 tourist accommodation establishments have been identified within the Study Area, the majority of which are within Section 4C of the Study Area. Figure 11.5 identifies the location of each establishment and the rating for all hotels and asset information is provided in Appendix A11.3.

Table 11.30: Tourist Accommodation within the Study Area (Source: Fáilte Ireland 2020)

Accommodation Type	Section 1	Section 2 and 3	Section 4A	Section 4B	Section 4C	Total
Hotel	4	3	2	3	78	90
Guest House	0	0	0	1	14	15
Apartment / Welcome Standard	0	0	0	4	12	16
Holiday Hostel	1	0	0	0	8	9
B and B	6	0	0	3	12	21
Total	11	3	2	11	124	151

Consideration has also been given to any establishments that are considered a destination in themselves and those that support tourism activities. The following tourist attractions have been identified in the Study Area and are within close proximity to the route alignment and/or proposed stations:

- The National Botanic Gardens and adjoining Glasnevin Cemetery are located approximately 250m west of the proposed Griffith Park Station. The National Botanic Gardens attracted 684,561 visitors in 2019 (Fáilte Ireland 2020);
- The Hugh Lane Gallery and Garden of Remembrance are located adjacent to the route alignment and approximately 400m north of the proposed O'Connell Street Station. The Hugh Lane Gallery attracted more than 180,000 visitors in 2016 (DCC 2017b) and 171,647 visitors in 2018 despite ongoing refurbishment works (Fáilte Ireland 2019);
- The General Post Office (GPO), including the relatively new GPO: Witness History is located adjacent to the route alignment and approximately 200m south of the proposed O'Connell Street Station, however there is no information available in relation to visitor numbers;
- Trinity College Dublin is adjacent to the route alignment and approximately 200m south of the proposed Tara Station. This campus accommodates the Book of Kells which attracted 1,144,410 visitors in 2019 whilst the Science Gallery attracted a further 340,059 visitors in 2019 (Fáilte Ireland 2020);
- The route alignment will traverse under the National Gallery of Ireland and the National Museum of Ireland. The National Gallery of Ireland attracted 761,469 visitors in 2019 whilst the National Museum of Ireland attracted 505,420 visitors in 2019 (Fáilte Ireland 2020);
- The Little Museum of Dublin is on the northern side of St Stephen's Green and it attracted 118,000 visitors in 2019 (Fáilte Ireland 2020); and
- St Stephen's Green, the Royal Canal and Grand Canal also regularly attract tourists, however the quantum of visitors has not been identified.

These tourist attractions support jobs and revenue and incentivise the preservation of cultural heritage whilst facilitating the exchange of ideas and inspiration. It should be noted that where visitor numbers have been identified for those attractions, they are considered to be of national importance as they are within the top fifty national visitor attractions (either fee charging or free) during 2018. Where no visitor numbers have been identified, the attractions are considered to be of regional importance as they represent permanently established destinations in Dublin that are recognised for their unique character. It should also be noted that churches and libraries have been separately discussed in Section 11.4.4.4 of this Chapter and mapped accordingly in Figure 11.6.

Other tourist attractions of national importance that have been identified within the wider Study Area include:

- Dublin Castle attracted approximately 430,700 visitors in 2019 (Fáilte Ireland 2020);
- Christchurch Cathedral attracted approximately 260,000 visitors in 2019 (Fáilte Ireland 2020);
- Dublinia attracted approximately 188,500 visitors in 2019 (Fáilte Ireland 2020);
- EPIC The Irish Immigration Museum attracted approximately 272,000 visitors in 2019 (Fáilte Ireland 2020);
- The Irish Whiskey Museum attracted 118,000 visitors in 2018 (Fáilte Ireland 2019);
- The National Wax Museum Plus attracted approximately 105,000 visitors in 2018 (Fáilte Ireland 2019);
- The Chester Beatty Library attracted 371,000 visitors in 2019 (Fáilte Ireland 2020);
- Dublin City Hall attracted approximately 159,500 visitors in 2018 (Fáilte Ireland 2019);
- The Whitefriar Street Church attracted 110,000 visitors in 2018 (Fáilte Ireland 2019); and
- The Gallery of Photography attracted 80,000 visitors in 2018 (Fáilte Ireland 2019).

There are also attractions in the broader city such as the Guinness Storehouse, Phoenix Park and Dublin Zoo and indeed the regional area such as relevant attractions along the DART/Commuter lines that are of relevance given proximity to and accessibility from those existing transport nodes in the Study Area.

Retail properties have been described in Section 11.4.3.6 of this Chapter, however further information is provided to understand the range of retail establishments and location of key shopping centres and retail districts in the Study Area.

Major shopping centres including the Pavilions in Swords (Section 1 of the Study Area, adjacent to the proposed Swords Central Station, i.e. car park adjoining and the building is within 60m of the Project Boundary at the nearest point) and Omni Park (in Section 4A of the Study Area) and there are major retail districts in Dublin City Centre (i.e. Section 4C of the Study Area) including O’Connell Street to Henry Street and St Stephen’s Green to Grafton Street.

120 supermarket/convenience stores have been identified as outlined in Table 11.31 and shown in Figure 11.7. Further detail at the asset level is also available in Appendix A11.4. As seen in Table 11.31, two thirds of these shops are located within Section 4C (i.e. Dublin City Centre), whilst there are also clusters of these facilities within Section 1 and Section 4B of the Study Area. This is indicative of the existing high demand from residents and visitors in the area surrounding the Town Centres of Glasnevin, Ballymun and Swords.

Table 11.31: Supermarket / Convenience Shops in Study Area

Section within the Study Area	Supermarkets/Convenience Stores Identified
Section 1	12
Section 2	4
Section 4A	8
Section 4B	13
Section 4C	83
Total	120

Professional Services

The proportion of those working in professional services was comparable at the state, regional and local level. However, slightly higher proportions were evident towards the northern inner suburbs in proximity to educational institutions (i.e. Dublin City University, St Patrick’s Teacher Training College, Whitehall College of Further Education and Technological University Dublin at Grangegorman) and generally towards those inner suburbs.

As outlined in Section 11.4.3.6 of this Chapter, more than 90% of the commercial properties providing ‘Professional, scientific and technical activities’ are located within Section 4C of the Study Area with relatively high quantum of these in the southern city centre.

Building and Construction Industry

The building and construction industry is important for Ireland and particularly in the context of the proposed Project, as it facilitates development. This industry bore the brunt of the economic recession mostly between the years of 2008 – 2012, however recovery was evident during the 2016 Census and the sector has continued to grow since then. Sufficient supply of building and construction workers is critical to facilitate a development of this scale and therefore workers from other parts of Dublin, or indeed the country will likely be required to support the construction of the proposed Project.

According to the 2016 Census (and as illustrated in Diagram 11.46), there was almost 102,000 people employed in the building and construction sector nationally, of which almost 23,000 were within the Dublin region. This was estimated to have increased to 143,300 people by the second quarter of 2019 (CSO 2019c), however skills gaps and shortages are currently evident at the state and regional level despite the forecast of further growth (CIF 2019). The proportion of those in the Study Area employed in building and construction is relatively low, and spatial differences are evident within the Study Area. For example, within one Small Area of Ballymun almost 11.4% of the population were working in the industry, however this was just 1.2% in the adjacent Small Area immediately to the south.

Manufacturing Industry

Manufacturing is a relatively important industry to the north of the Study Area as many companies have established in proximity to Dublin Airport to leverage off economies of scale and the numerous logistics and distribution companies in the area. As outlined in Section 11.4.3.6 of this Chapter, there is a relatively high number of properties classified as 'Manufacturing' in Section 1 and in Section 4C of the Study Area.

Whilst the overall proportion of the population in the Study Area working in this industry is relatively low, slightly higher proportions are evident in proximity to Dublin Airport and nearby suburbs such as Swords and Ballymun.

11.4.3.7.2 Local and Neighbourhood Context

Section 1

Commerce and trade was the largest industry in Section 1 of the Study Area with almost 26% of the total people at work employed in this industry. This was followed by Professional Services (22%), Other (19.8%) and Transport and Communications (16.7%) as illustrated in Diagram 11.48. This may be associated with the large number of businesses within Swords and in the various industrial estates adjoining the M1 corridor.

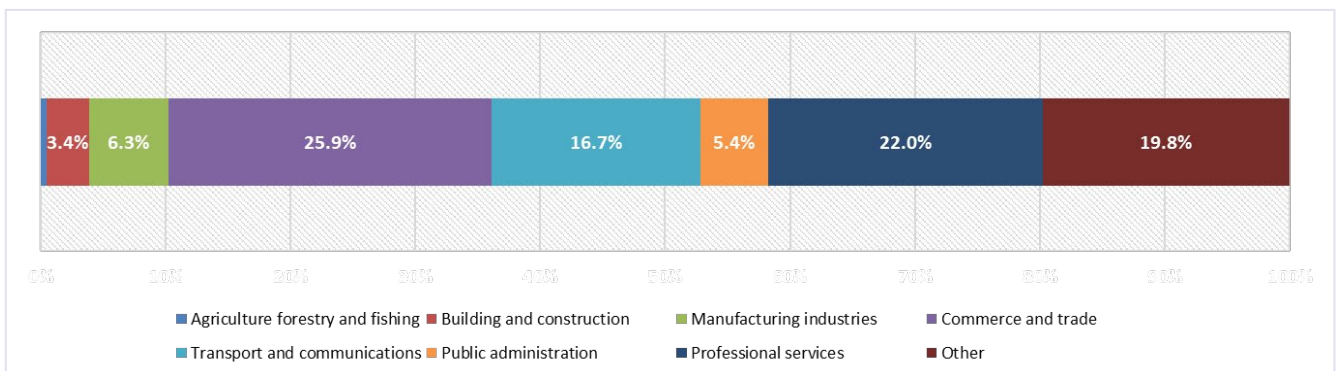


Diagram 11.48: Persons at Work by Industry in Section 1 of the Study Area (Source: CSO 2017)

Section 2 and 3

Other (32.1%) was identified as the largest industry in Section 2 and 3 of the Study Area. Commerce and trade was the second largest industry with almost 20% of the total people at work employed in this industry, followed by Transport and Communications (17.8%), Professional Services (17.6%), and

Manufacturing Services as illustrated in Diagram 11.49. This may be associated with the extensive number of businesses operating in and around Dublin Airport and within the Northwood area.

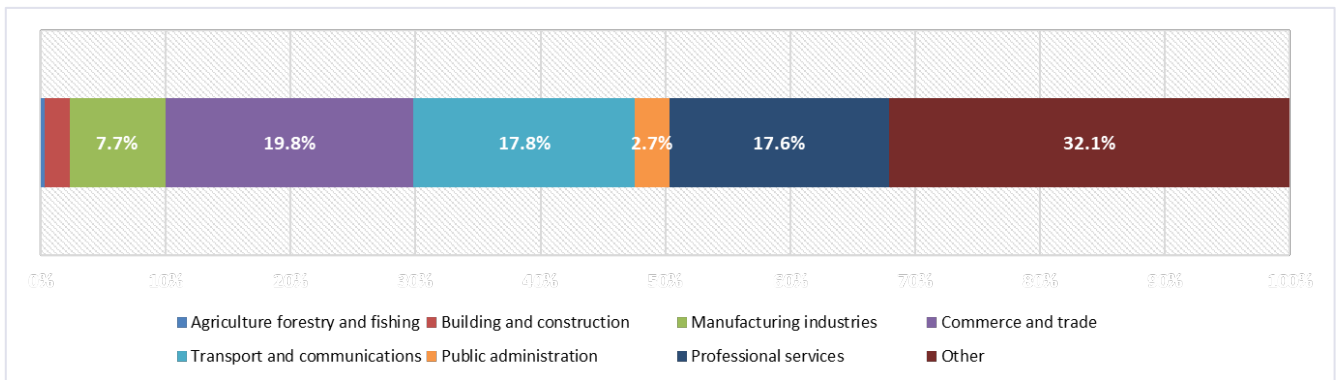


Diagram 11.49: Persons at Work by Industry in Section 2 and 3 of the Study Area (Source: CSO 2017)

Section 4A

Other (27.6%) was identified as the largest industry in Section 4A of the Study Area, followed by Professional services (25.2%), Commerce and Trade (21.6%) and Transport and Communications (11.8%) as illustrated in Diagram 11.50. This is likely associated with the businesses operating in Ballymun and in those industrial estates to the east between Santry and Ballymun.

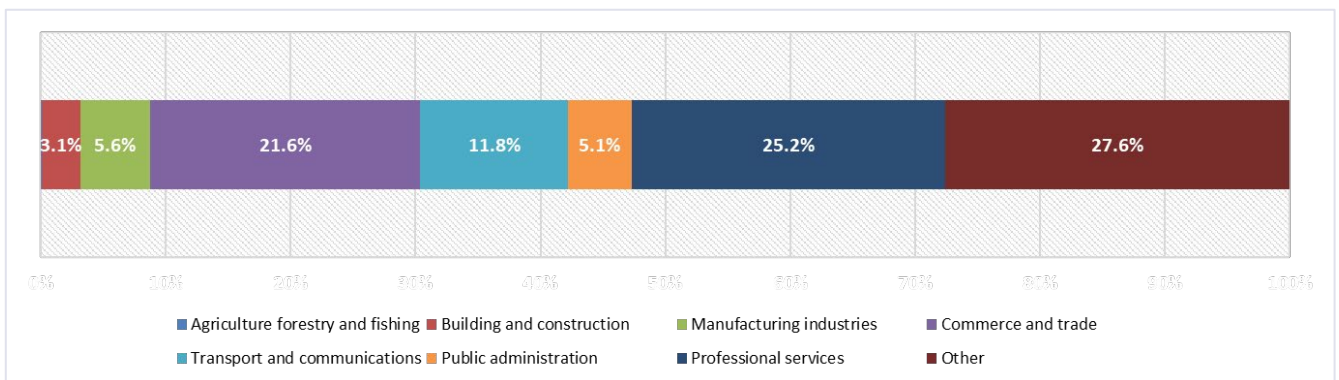


Diagram 11.50: Persons at Work by Industry in Section 4A of the Study Area (Source: CSO 2017)

Section 4B

Professional Services was the largest industry in Section 4B of the Study Area with over 28% of the total people at work employed in this industry. This was followed by Commerce and Trade (25.6%), Other (18.1%) and Transport and Communications (11.5%) as illustrated in Diagram 11.51. This is likely to be associated with the extensive number of businesses operating in and around Dublin City University and the transport corridors through Drumcondra and Glasnevin accessing Dublin City Centre.

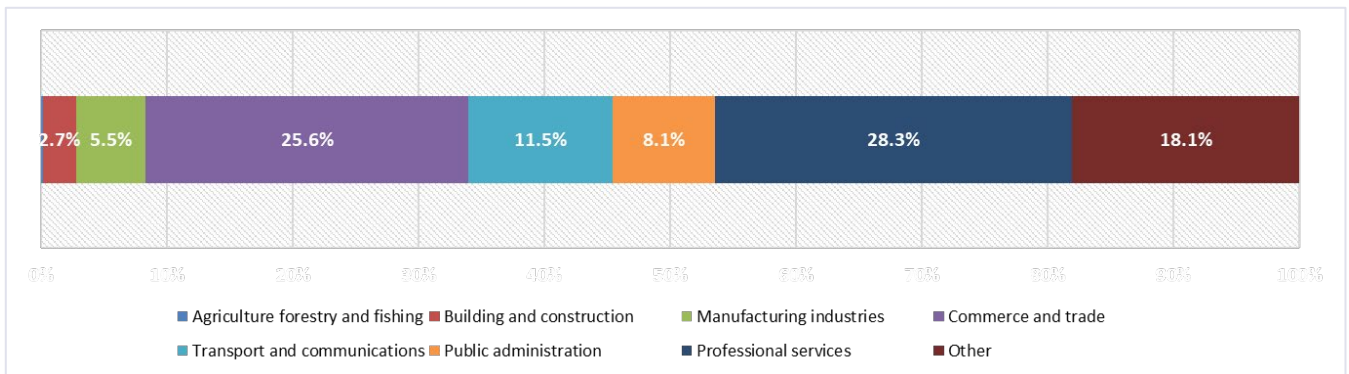


Diagram 11.51: Persons at Work by Industry in Section 4B of the Study Area (Source: CSO 2017)

Section 4C

Other (33.3%) was identified as the largest industry in Section 4C of the Study Area, followed by Commerce and Trade (25.3%), Professional Services (18.8%) and Transport and Communications (12.1%) as illustrated in Diagram 11.52. This is likely attributable to the large number of diverse businesses within and around Phibsborough, Dublin City Centre and Ranelagh.

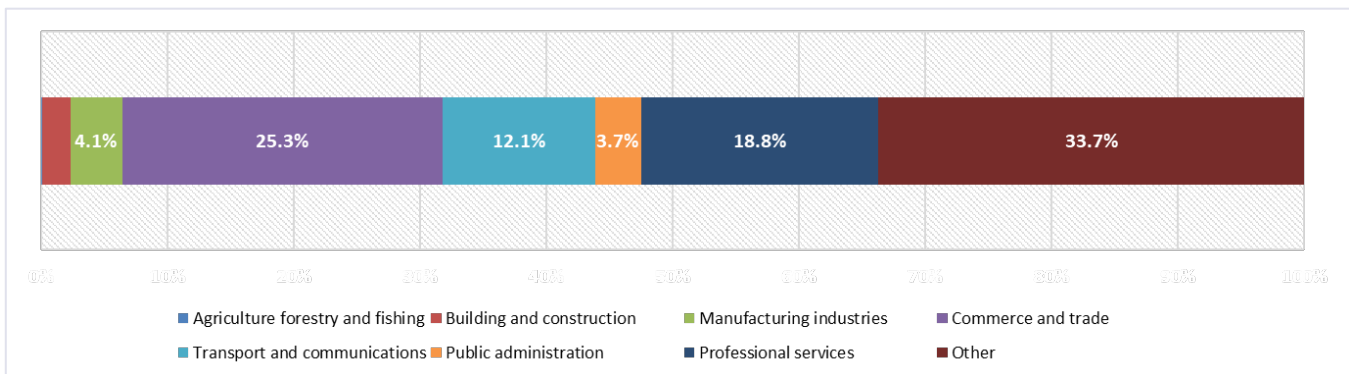


Diagram 11.52: Persons at Work by Industry in Section 4C of the Study Area (Source: CSO 2017)

11.4.4 Community and Social Infrastructure

11.4.4.1 Overview

Community and social infrastructure are important facets that facilitate vibrant neighbourhoods and contribute to social cohesion and inclusivity within a population. Information on community and social infrastructure is useful in providing an understanding of the functionality and sensitivity within a population and hence the existing environment has been compared against the state and regional context for the following:

- Affluence and Deprivation; and
- Health Status.

Additionally, individual facilities have been identified at the local and neighbourhood level for the following:

- Social Infrastructure; and
- Open Space, Leisure, Recreation and Sports Facilities.

11.4.4.2 Affluence and Deprivation

The Pobal Index provides a method of measuring the relative affluence or disadvantage of a particular geographical area using data compiled from various Censuses (Pobal 2017). It is a recognised resource

for identifying affluence and disadvantage, by providing local analysis of relevant metrics (i.e. the proportion of skilled professionals, education levels, employment levels, and single-parent households found in an area).

Figure 11.8 illustrates deprivation levels from the Pobal Index (by Small Area) within the Study Area and indicates that the affluence and deprivation is highly variable throughout the different sections of the Study Area. Generally, parts of Section 1 and 4A (i.e. around Estuary Station and Ballymun Station respectively) are more disadvantaged whilst Section 2 and 3 and Section 4C (particularly at the southern end of the route alignment) are more affluent when compared to the state average that has been considered as part of this index. As with broader population characteristics, the sensitivity of the affluence and deprivation of the population is considered low at State, regional, and overall Study Area levels, and medium at local/subsection levels.

11.4.4.3 Health Status

According to the 2016 Census, 80.3% of the population within the overall Study Area considered themselves to be in Good Health and 1.8% considered themselves to be in Bad Health, which is slightly lower than the state comparisons (87% and 1.6% respectively) and the regional figures (86.1% and 1.6% respectively). It should be noted that this is specifically how the population considered their health status rather than a medical diagnosis in relation to their health. 12.5% of the population of the Study Area reported having a disability, which is slightly lower than the State average (13.5%).

Figure 11.9 illustrates the proportion of the population (by Small Area) that identified as having Very Good Health which varies greatly throughout the Study Area. In summary, parts of Sections 2 and 3 (particularly around Dublin Airport) and Section 4C (around the southern city centre) have slightly lower proportion of the population identifying as having Very Good Health. Generally, those areas that are more affluent have a higher proportion of the population identifying as having Very Good Health whilst more deprived areas tended to have a higher proportion that identified themselves as being in Bad or Very Bad Health.

Further relevant information in relation to human health is provided in Chapter 10 (Human Health). As with broader population characteristics, the sensitivity of the health of the population is considered low at State, regional, and overall Study Area levels, and medium at local/subsection levels.

11.4.4.4 Social Infrastructure

11.4.4.4.1 Healthcare Facilities

Healthcare facilities provide a range of health and in some cases social care services to the population within the overall Study Area and beyond. 555 healthcare facilities have been identified within the Study Area, including 27 Health Centres, 11 Hospitals and 520 individual GPs. The individual facilities are illustrated in Figure 11.21 and described in detail in Appendix A11.5. These facilities are considered to be of high sensitivity.

As outlined in Table 11.32, the majority of the healthcare facilities are located in Section 4C of the Study Area which comprises Dublin City Centre and the most built-up section which creates a higher demand for services. GPs are the most numerous category of healthcare facilities as the information provided in Table 11.32 represents an individual GP and in some cases, many GPs work from the same establishment, which in some cases is the health centres that have been identified.

Table 11.32: Healthcare Facilities in the Study Area

Sections	Health Centres per Section	Hospitals per Section	GPs per section
1	4	0	44
2 and 3	0	1	19
4A	2	0	30
4B	4	1	64

Sections	Health Centres per Section	Hospitals per Section	GPs per section
4C	17	9	363
Total	27	11	520

11.4.4.4.2 Educational Facilities

Educational facilities are a key service for residential areas as they can provide an understanding of the residential character and density of the locales within the Study Area. Further, given the population density as outlined in Section 11.4.2 of the Chapter, it is recognised that there is a large number of primary, post-primary and third level educational institutions across Dublin City and County and Fingal County. Primary and post-primary facilities are considered to be of high sensitivity (due to the younger nature of their users and their higher vulnerability to environmental impacts), while third level institutions are considered to be of medium sensitivity.

103 education facilities have been identified within the Study Area comprising 45 Primary Schools, 17 Secondary Schools and 41 Third Level Establishments. The individual facilities are illustrated in Figure 11.10 and described in detail in Appendix A11.5. No educational facilities are located in Section 2 and 3 of the Study Area, which is likely reflective of the industrial land uses herein when compared to the residential character of other sections within the Study Area.

Table 11.33: Educational Facilities within the Study Area

Sections	Primary Schools per Section	Secondary Schools per Section	Third Level Education Establishments per Section
1	3	1	0
2 and 3	0	0	0
4A	9	1	0
4B	10	4	3
4C	23	11	38
Total	45	17	41

It is noted that the largest number of primary schools (23) is situated in Section 4C of the Study Area, followed by 10 primary schools in Section 4B of the Study Area as shown in Table 11.33. As noted in Table 11.33, Section 4C of the Study Area contains the highest number of secondary schools (11) which reflects the high demand for this level of educational facilities in the city centre. As also noted in Table 11.33, the majority of third-level education facilities are located in Section 4C of the Study Area. It should be noted that this includes universities, institutes of technology, private higher education institutions and language schools.

11.4.4.4.3 Essential Services

Essential services facilities include Garda and Fire Stations that provide emergency services to the population with the Study Area and beyond. 11 Garda Stations and 3 Fire Stations have been identified within the Study Area as outlined in Table 11.34. Additionally, it should be noted that Dublin Fire Brigade supports the ambulance service in many cases. It should be noted that there is an Airport Police and Fire Service at Dublin Airport which are not specifically included below. The individual facilities are illustrated in Figures 11.20 and described in detail in Appendix A11.5. Due to the potentially time-sensitive nature of these services, they are considered to be of high sensitivity.

Table 11.34: Garda Stations and Fire Stations within the Study Area

Sections	Garda Stations per Section	Fire Services per Section
1	1	1
2 and 3	1	0
4A	2	0
4B	0	1
4C	6	1
Total	10	3

11.4.4.4 Other Community Facilities

Other community facilities that contribute to culture, the social cohesion and wellbeing of the population in the Study Area have also been analysed. This includes childcare facilities, places of worship and libraries. The individual facilities are illustrated in Figures 11.6 and described in detail in Appendix A11.5. These facilities are considered to be of high sensitivity due to their vulnerability to environmental impacts, particularly noise.

176 childcare facilities have been identified within the Study Area as outlined in Table 11.35. Similar to the schools, the largest quantum is located in Section 4C, followed by Section 1 and 4B of the Study Area. These three sections represent areas with a high residential density and generally younger age profiles as described in detail in Section 11.4.2 of this Chapter.

40 places of worship have been identified within the Study Area as outlined in the table below. The largest quantum is located in Section 4C, followed by Section 1 and 4B of the Study Area. 11 libraries have been identified within the Study Area as outlined the table below. The largest quantum is located in Section 4C, followed by Section 4B of the Study Area.

Table 11.35: Childcare Facilities within the Study Area

Sections	Childcare Facilities per Section	Places of Worship per Section	Libraries per Section
1	27	1	0
2 and 3	2	1	0
4A	8	3	1
4B	21	6	4
4C	118	29	6
Total	176	40	11

11.4.4.5 Open Space, Leisure, Recreation and Sports Facilities

11.4.4.5.1 State and Regional Context

Table 11.36 shows that approximately 557ha in the Study Area is designated for conservation and/or open space whilst Figure 11.11 illustrates the location of these spaces. Further, Appendix A11.6 describes in detail the individual facilities whilst Appendix A11.7 provides a detailed description of land use zoning within the Study Area. Figure 11.12 illustrates the location of sports and recreation facilities in the Study Area. Overall, open space, leisure, and sports facilities are considered to be of medium sensitivity.

Given the lower density of development and more rural character in Fingal, it is noted that approximately half of this open space is located within Section 1 of the Study Area and that the quantum of open space generally decreases towards Dublin City Centre.

Table 11.36: Land Use Zoning (Hectare) for Open Space and/or Conservation within the Study Area

Section	G3 - Conservation, amenity or buffer space, corridor/belt, landscape	G4 - Active open space	G5 - Mixed/general 'green'/recreation/conservation, other	Total
Section 1	197.3	62.8	0.00	260
Section 2 and 3	0.3	69	3.2	72.5
Section 4A	0.00	0.3	14.2	14.5
Section 4B	5	0.00	111.6	116.6
Section 4C	23.1	0.00	70.1	93.2
Total	225.7	132.1	199.1	556.8

11.4.4.5.2 Local and Neighbourhood Context

Section 1

The majority of the land designated for conservation and/or open space within Section 1 of the Study Area is mostly located in the greenfield to the north and south of the settlement of Swords, with some pockets evident throughout the remainder of this area. As illustrated in Figure 11.11, there is 16.1ha of land designated for conservation and/or open space within the Project Boundary in Section 1, particularly adjacent to the R132, around the Seatown, Pavilions and south Swords roundabouts and in those greenfield locations outside of the settlement.

The following sports and recreation facilities are located immediately adjacent to and/or within the proposed Project Boundary in Section 1 of the Study Area:

- Fingallians and Swords Rovers pitches are within the Project Boundary at Balheary Park;
- The playground at Balheary Park is approximately 70m west of the Project Boundary; and
- Fingallians GAA (i.e. clubhouse, all weather and main pitch) and Swords Boxing Club abut the Project Boundary at the Fingallians roundabout.

Section 2 and 3

The majority of the land designated for conservation and/or open space within Section 2 and 3 of the Study Area is located towards the south, particularly towards the north-west of Junction 4 at the M50 and adjacent to Northwood. As illustrated in Figure 11.11, there is 0.33ha of land designated for conservation and/or open space within the Project Boundary, adjacent to Gulliver's Retail Park.

The following sports and recreation facilities are located immediately adjacent to and/or within the Project Boundary in Section 2 and 3 of the Study Area:

- GAA pitches for Starlights GAA and Na Fianna GAA clubs are within the Project Boundary at Dardistown;
- Soccer pitches for Whitehall rangers are within the Project Boundary at Dardistown;
- Ballymun Kickhams GAA pitches abut the Project Boundary at Dardistown; and
- Sillogue Park Golf Course abuts the Project Boundary at Dardistown.

Section 4A

The land designated as per the relevant zoning objectives for conservation and/or open space in Section 4A of the Study Area is located to the south of Balbutcher Lane and around Coultry Park with some further pockets evident throughout the residential areas in Ballymun and Santry. As illustrated in Figure 11.11, there is 0.22ha of land designated for conservation and/or open space within the Project Boundary at the very north of Section 4A of the Study Area.

The only sports and recreation facilities that is located immediately adjacent to and/or within the Project Boundary in Section 4A of the Study Area is Sports and Fitness Ballymun which abuts the Project Boundary at Ballymun Station.

Section 4B

The majority of the land designated for conservation and/or open space within Section 4B of the Study Area is located around Albert College Park, St Clare's, the National Botanic Garden, Griffith Park and to the north-west of the Royal Canal. As illustrated in Figure 11.11, there is 5ha of land designated for conservation and/or open space within the Project Boundary in Section 4B, the majority of which is at Albert College Park.

The following sports and recreation facilities are located immediately adjacent to and/or within the Project Boundary in Section 4B of the Study Area:

- A section of Albert College Park is within the Project Boundary with further pitches abutting the Project Boundary;
- Home Farm FC soccer pitches are within the Project Boundary at Griffith Park;
- Glasnevin Lawn Tennis Club is approximately 60m to the east of the Project Boundary at Albert College Park;
- Glasnevin Football Club and pitches used by Drumcondra Football Club abut the Project Boundary at Albert College Park;
- Na Fianna GAA (club and pitches) abut the Project Boundary at Griffith Park; and
- Charleville Lawn Tennis Club is approximately 60m to the east of the Project Boundary at Glasnevin Station.

Section 4C

Within Section 4C, there are various pockets of land designated for conservation and/or open space, including relatively large areas around Blessington Street Basin and adjacent Royal Canal, King's Inn Park, College Green along the River Liffey and the adjacent Docklands. There are also various squares across Dublin City Centre including Mountjoy Square, Gardiner Street Park, Eileen McLoughlin Park on Foley Street, Merrion Square, St Stephen's Green, Fitzwilliam Square as well as Mount Pleasant Tennis Club and Leinster Cricket Club towards the south.

As illustrated in Figure 11.11, there is 1.9ha of land designated for conservation and/or open space within the Project Boundary in Section 4C, including the Mater Plot and St Stephen's Green.

The following sports and recreation facilities are located immediately adjacent to a proposed station and/or within the Project Boundary in Section 4C of the Study Area:

- Ned Kelly's Sports Club is within the Project Boundary at O'Connell Street;
- Fantom Gym is within the Project Boundary at O'Connell Street;
- Markievicz Leisure Centre is within the Project Boundary at Tara Street;
- Cross Guns Snooker Club is approximately 30m east of the Project Boundary at Glasnevin;
- Club Living Phibsborough is adjacent to the Project Boundary at Glasnevin;
- F45 Fitness Facilities abut the Project Boundary at Tara Street; and
- The Health Club at the Shelbourne Hotel is approximately 20m west of the Project Boundary at St Stephen's Green.

11.4.5 Connectivity and Land Use

11.4.5.1 Overview

Connectivity and land use are important factors for the population as they can support inclusivity, equitability and accessibility and enable larger proportions of the population to access specific establishments that contribute to quality of life for example those that provide public services, education, and employment. Given the nature of the proposed Project, existing connectivity and land

use are particularly important to understand as the ability of the population to access places and development potential for land is likely to change through this new transport mode. Information on connectivity and land use has been therefore analysed in the context of the region, however the focus has been on understanding the following characteristics at the local and neighbourhood level:

- Access and Connectivity;
- Land Use Zoning; and
- Residential Lands.

11.4.5.2 Access and Connectivity

11.4.5.2.1 State and Regional Context

Overview of Transport Network

The overall road network consists of a network of strategic roads such as motorways (i.e. M50, M1) and national primary roads (i.e. N2, N4, N3) which provide high-capacity connections between the key regional centres and larger towns. The strategic network is served by regional (i.e. R132, R118) and local roads (i.e. L2305, L2300), providing access to smaller towns and centres. The road network in the Study Area is illustrated in Figure 11.14.

The road network is supported by an extensive public transport network within Dublin and extending nationally through various spurs. Generally, the public transport network in Dublin consists of the rail services, the light rail network (Luas) and the bus network. The rail services comprise DART trains, which run along the coastline, serving the city centre and coastal suburbs such as Malahide and Howth southwards to Greystones in County Wicklow, and Commuter services by Irish Rail which serve suburbs in the north, west and south of the city. The light rail network consists of Luas trams, with the Red Line service running from east to west (and return) through the centre, and the Green Line service running north to south (and return) through Dublin City Centre. These trams serve many areas of the city centre and some residential areas in the surrounding area. The bus network is served by multiple operators at present such as Dublin Bus, Bus Éireann and Go-Ahead, as well as private operators. The public transport network in the Study Area is illustrated in Figure 11.13.

There is also a cycle network with the Greater Dublin Area Cycle Network identified as follows:

- The Urban Cycle Network at the Primary, Secondary and Feeder level,
- The Inter-Urban Cycle Network linking the relevant sections of the Urban Network and including the elements of the National Cycle Network, including linkages to key transport locations outside of urban areas such as airports and ports,
- The Green Route Network being cycle routes developed predominantly for tourist, recreational and leisure purposes.

There is a growing demand for connectivity within Dublin and an intention to shift reliance from private cars towards more sustainable modes (i.e. active and public transport) which has been well recognised and reflected in the relevant planning policy as described in detail in the Planning Report for Railway Order. Further relevant information in relation to the transport network (including site-specific analysis) is provided in Section 9.4 of Chapter 9 (Traffic & Transport).

Overall, given their scale, transport networks at the State and regional levels are considered to be of low sensitivity.

Commuting

The modal split for travelling differs within and across the Study Area as described in detail in Chapter 9 (Traffic & Transport). Figure 11.16 sets out the drive times from stations across the Study Area.

As outlined in Table 11.37, a large proportion of households within the Study Area had no car which differs significantly when compared to county, regional and state figures.

Table 11.37: Car ownership in the Study Area, Dublin County and State (Source: CSO 2017)

Number of Cars	Number of Households Study Area	Percentage (%) Study Area	Percentage (%) Dublin County	Percentage (%) State
No Cars	26,184	42.4%	21.4%	15.2%
1 Car	21,040	34.1%	42.1%	41%
2 Cars or More	9,601	15.6%	32.3%	40.8%

According to the 2016 Census, the average commuting time for persons living within the Study Area was 29.3 minutes, similar to County Dublin average commuting of 30.8 minutes and EMRA of 30.5 minutes, however this is marginally higher than the State average of 27.4 minutes. The use of sustainable transport modes (i.e. walk, cycle, bus, DART or Luas) within the Study Area was 61.6%. Specifically within the Study Area, green transportation was used by 56.5% of the population to travel to work, while 75.2% travelled to school or college using green transportation as illustrated in Table 11.38. The usage of green transport modes is relatively high when compared to national average (as described in detail below), most likely due to the extensive public transport network in the Dublin region.

Table 11.38: Means of Travel to Work, School or College of Study Area, Dublin County and State (Source: CSO 2017)

Activity	Work			School or College			Total		
	Study Area	Dublin County	State	Study Area	Dublin County	State	Study Area	Dublin County	State
Green Transport*	56.9%	39.2%	20.6%	75.2%	60.9%	45.7%	61.6%	46.3%	29.6%
Car (or passenger)	26.2%	48.4%	62.4%	16.4%	33.9%	49.9%	23.6%	43.7%	58.0%
Other**	16.9%	12.4%	17.0%	8.0%	5.2%	4.4%	14.5%	10.1%	12.5%

*Green Transport includes means of travel on foot, bicycle, bus, minibus or coach, train, DART or Luas.

**Other comprises travel by motorcycle/scooter, van, or lorry; those mainly working at or from home; and those classed as 'not stated.'

11.4.5.2.2 Local and Neighbourhood Context

It should be noted that car ownership and commuting patterns have been described herein only. Any further relevant information in relation to the transport network at the local and neighbourhood level is provided in Section 9.4 of Chapter 9 (Traffic & Transport). Overall, transport networks and connectivity at the local/subsection level are considered to be of medium sensitivity.

Section 1

Within Section 1 of the Study Area, 79% of households owned one or more cars whilst 39.7% of households owned at least two cars or more as illustrated in Table 11.39. This is relatively high level of car ownership when compared to the rest of the Study Area and the proportion of those with no cars in Section 1 of the Study Area is particularly low.

Table 11.39: Car Ownership in Section 1 of the Study Area (Source: CSO 2017)

Number of Households with Cars	Number of Households	Percentage (%)
No Cars	745	12.2%
1 Car	2,940	48.1%
2 Cars or More	2,424	39.7%

The average commute time for the population living within Section 1 of the Study Area is 29.5 minutes, which is similar to the rest of the Study Area. This high proportion of car ownership is reflected in commuting patterns to work, school or college of those living in Section 1 of the Study Area. 51.2% of the population were recorded as using a car to travel to work, school or college as identified in Table 11.40. The majority (58.4%) of the trips to school or college were made by green transport while most of the trips to work were made by car (57.0%).

Table 11.40: Means of Travel to Work, School or College in Section 1 of the Study Area (Source: CSO 2017)

Means of Travel	Work	School or College	Percentage (%) of Total
Green transport*	32.8%	58.4%	39.7%
Car (or passenger)	57.0%	35.5%	51.2%
Other **	10.2%	6.1%	9.1%

*Green transport includes means of travel on foot, bicycle, bus, minibus or coach, train, DART or Luas.

**Other comprises travel by motorcycle/scooter, van, or lorry; those mainly working at or from home; and those classed as 'not stated.'

Section 2 and 3

Within Section 2 and 3 of the Study Area, 19.7% of households did not own a car, 58.3% owned one car whilst 14.5% of households owned at least two cars or more as illustrated in Table 11.41. This is relatively high level of car ownership when compared to the region.

Table 11.41: Car Ownership in Section 2 and 3 of the Study Area (Source: CSO 2017)

Number of Cars	Number of Households	Percentage (%)
No Cars	192	19.7%
1 Car	567	58.3%
2 Cars or More	141	14.5%

The average commute time for the population living within Section 2 and 3 of the Study Area is 35 minutes which is the highest in the Study Area. This high proportion of car ownership is reflected in commuting patterns to work, school or college of those living in Section 2 and 3 of the Study Area. Overall, 40.6% of the population were recorded as using a car to travel to work, and 44.1% as using a car to travel to school or college as identified in Table 11.42. Trips to school or college were almost evenly split between green transport and Car, while most of the trips to work were made by car (41.3%).

Table 11.42: Means of Travel to Work, School or College in Section 2 and 3 of the Study Area (Source: CSO 2017)

Means of Travel	Work	School or College	Percentage (%) of Total
Green transport*	36.5%	45.2%	38.2%
Car	40.6%	44.1%	41.3%
Other**	22.9%	10.6%	20.6%

*Green transport includes means of travel on foot, bicycle, bus, minibus or coach, train, DART or Luas.

**Other comprises travel by motorcycle/scooter, van, or lorry; those mainly working at or from home; and those classed as 'not stated.'

Section 4A

Car ownership in Section 4A is slightly lower relative to other sections within the Study Area and particularly in the context of the region. 37.2% of the total population in Section 4A did not own a car, 39.7% owned one car, and 17% of the population owned at least two cars as outlined in Table 11.43.

Table 11.43: Car Ownership in Section 4A of the Study Area (Source: CSO 2017)

Number of Cars	Number of Households	Percentage (%)
No Cars	2,636	37.2%
1 Car	2,811	39.7%
2 Cars or More	1,180	17%

The average commute time for the population living within Section 4A of the Study Area is 29.2 minutes which is marginally lower than in the rest of the Study Area. The level of car ownership is reflected in the means of travelling to work, school or college within Section 4A of the Study Area. As outlined in Table 11.44, 53.6% the population travelled via green transport and 70.7% of all trips to school or college were made by this mode of traffic. Trips to work were almost evenly split between green transport and Car.

Table 11.44: Means of Travel to Work, School or College in Section 4A of the Study Area (Source: CSO 2017)

Means of Travel	Work	School or College	Percentage (%) of Total
Sustainable transport modes*	42.0%	70.7%	53.6%
Car (or passenger)	43%	21%	34%
Other**	15.0%	8.3%	12.3%

*Sustainable transport modes includes means of travel on foot, bicycle, bus, minibus or coach, train, DART or Luas.

**Other comprises travel by motorcycle/scooter, van, or lorry; those mainly working at or from home; and those classed as 'not stated.'

Section 4B

Within Section 4B of the Study Area, 24.9% did not own a car, 43.4% owned one car, whilst 27% of households owned at least two cars or more as illustrated in Table 11.45. This is relatively high level of car ownership when compared to the rest of the Study Area and it is generally comparable to the regional context.

Table 11.45: Car Ownership in Section 4B of the Study Area (Source: CSO 2017)

Number of Cars	Number of Households	Percentage (%)
No Cars	2,079	24.9%
1 Car	3,629	43.4%
2 Cars or More	2,229	27%

The average commute time for the population living within Section 4B of the Study Area is 30.3 minutes, which is similar to the rest of the Study Area. This high proportion of car ownership is not reflected in commuting patterns to work, school or college of those living in Section 4B of the Study Area, most likely due to the extensive public transport network in the area. 32.3% of the population were recorded as using a car to travel to work, school or college as identified in Table 11.46. The majority of the trips to school or college (78.1%) and work (49.9%) were made by green transport while car usage was relatively low.

Table 11.46: Means of Travel to Work, School or College in Section 4B of the Study Area (Source: CSO 2017)

Means of Travel	Work	School or College	Percentage (%) of Total
Green transport*	49.9%	78.1%	58.9%
Car (or passenger)	38.8%	18.7%	32.3%
Other**	11.4%	3.2%	8.7%

*Green transport includes means of travel on foot, bicycle, bus, minibus or coach, train, DART or Luas.

**Other comprises travel by motorcycle/scooter, van, or lorry; those mainly working at or from home; and those classed as 'not stated.'

Section 4C

Within Section 4C of the Study Area, 52.7% of households did not own a car which is particularly high when compared across the Study Area and in the context of the region and state figures. As outlined in Table 11.47, 37.8% of households owned at least one car, of which the large majority owned just one car. This is likely associated with the proximity to Dublin City Centre, lower availability of car parking, and extensive public transport network within Section 4C of the Study Area.

Table 11.47: Car Ownership in Section 4C of the Study Area (Source: CSO 2017)

Number of Cars	Number of Households	Percentage (%)
No Cars	20,532	52.7%
1 Car	11,093	28.5%
2 Cars or More	3,267	9.3%

The average commute time for the population living within Section 4C of the Study Area is 28.8 minutes which is relatively low when compared to the rest of the Study Area. Section 4C of the Study Area has an extensive public transport network and this is reflected in the commuting patterns outlined in Table 11.48. Car usage is the lowest within the Study Area and the majority of the trips to school or college (80.6%) and work (65.3%) were made by green transport.

Table 11.48: Means of Travel to Work, School or College in Section 4C of the Study Area (Source: CSO 2017)

Means of Travel	Work	School or College	Percentage (%) of Total
Green transport*	65.3%	80.6%	69.1%
Car (or passenger)	15.0%	9.3%	13.7%
Other**	19.5%	9.9%	17.2%

*Green transport includes means of travel on foot, bicycle, bus, minibus or coach, train, DART or Luas.

**Other comprises travel by motorcycle/scooter, van, or lorry; those mainly working at or from home; and those classed as 'not stated.'

11.4.5.3 Land Use Zoning

11.4.5.3.1 State and Regional Context

There are a broad range of different land uses within the Study Area that are defined by way of the relevant planning policy (refer to the Planning Report for Railway Order further detail). These mostly comprise residential and commercial lands, but some have specific transport, service, amenity, employment or sectoral functions as designated by FCC and DCC through the CDP for Fingal and CDP for Dublin respectively.

An illustration of all permitted land use zones within the Study Area is provided in Figure 11.17 and identified in Table 11.49. As can be seen, the most common designations within the Study Area are as follows:

- Residential;
 - Mixed, general community services and facilities;
 - Conservation, amenity or buffer for open space, green corridor/belt, landscape; and
 - City/town/village centre.
- Land uses are considered to be of low sensitivity at State, regional, and Study Area levels considering the scale and availability of land use zoning.

Table 11.49: Land Use Zoning (Hectares) by Section in the Study Area

Location	Section 1	Section 2 and 3	Section 4A	Section 4B	Section 4C
C1.2 - Retail warehouse	20.91	9.22	0.00	0.00	0.00
C2.1 - Industrial, enterprise, employment	0.00	7.42	8.36	4.52	22.16
C3 - Office, business/technology park and related	68.63	93.12	0.00	0.00	0.00
C6 - Mixed/general commercial/industrial/enterprise uses	41.29	107.68	0.00	0.00	0.00
G3 - Conservation, amenity or buffer space, corridor/belt, landscape	197.28	0.33	0.00	4.98	23.09
G4 - Active open space	62.76	68.95	0.34	0.00	0.00
G5 - Mixed/general 'green'/recreation/conservation, other	0.00	3.22	14.17	111.60	70.06
M1 - Mixed Use, general development, opportunity/proposal site	217.49	54.39	0.71	0.64	24.85
M2 - City/Town/village Centre, central area	39.51	0.00	0.00	0.00	161.07
M3 - District, neighbourhood centre	2.86	0.00	0.98	5.92	2.65
M5 - Other mix of uses	0.00	0.00	25.09	2.84	36.69
N1.3 - Airport	6.08	322.57	0.00	0.00	0.00
O2 - General	0.00	0.00	0.00	50.70	267.97
R1 - New/proposed residential	11.48	0.00	0.00	0.00	0.00
R2 - Existing residential	142.19	17.57	188.00	180.63	145.70
R4 - Strategic Residential Reserve	0.00	0.00	0.00	0.00	30.43
S5 - Mixed/general community services/facilities uses	10.12	0.19	19.60	78.77	43.61
Total	820.60	684.66	257.24	440.61	828.26

Additionally, there is an extensive area zoned for Airport to the north of the Study Area (in FCC) to which the Dublin Airport Local Area Plan (LAP) 2020 relates, whilst there is a large area designated as City Core to the south of the Study Area (in DCC). It should be noted that further information regarding lands zoned for open space and residential is provided in Sections 11.4.4.5 and 11.4.5.4 of this Chapter respectively. More specifically, the land use zoning within the Project Boundary is noted in Table 11.50.

Table 11.50: Land Use Zoning (Hectares) within the Project Boundary by Section in the Project Boundary

Land Use Zoning	Section 1	Section 2 and 3	Section 4A	Section 4B	Section 4C
C1.2 - Retail warehouse	2.58	0.00	0.00	0.00	0.00
C2.1 - Industrial, enterprise, employment	0.00	0.14	0.00	0.00	0.52

Land Use Zoning	Section 1	Section 2 and 3	Section 4A	Section 4B	Section 4C
C3 - Office, business/technology park and related	5.86	21.73	0.00	0.00	0.00
C6 - Mixed/general commercial/industrial/enterprise uses	0.02	39.39	0.00	0.00	0.00
G3 - Conservation, amenity or buffer space, corridor/belt, landscape	11.26	0.00	0.00	0.44	0.08
G4 - Active open space	4.81	0.33	0.00	0.00	0.00
G5 - Mixed/general 'green'/recreation/conservation, other	0.00	0.00	0.22	4.55	1.78
M1 - Mixed Use, general development, opportunity/proposal site	30.07	10.49	0.01	0.00	0.00
M2 - City/Town/village Centre, central area	1.92	0.00	0.00	0.00	2.23
M3 - District, neighbourhood centre	0.00	0.00	0.00	1.48	0.00
M5 - Other mix of uses	0.00	0.00	2.98	0.00	0.00
N1.3 - Airport	2.39	1.13	0.00	0.00	0.00
O2 - General	0.00	0.00	0.00	0.01	0.17
R1 - New/proposed residential	0.00	1.00	2.00	3.00	4.00
R2 - Existing residential	0.70	0.12	0.53	0.42	0.10
S5 - Mixed/general community services/facilities uses	0.00	0.00	0.00	1.78	0.29
Total	59.62	74.32	5.74	11.67	9.16

11.4.5.3.2 Local and Neighbourhood Context

Section 1

Section 1 of the Study Area is within the administrative boundary of FCC and there is a range of land use zonings designated by way of the CDP for Fingal (FCC 2017) and a number of LAPs and Masterplans in Section 1.

The land adjoining the proposed stations (i.e. Estuary, Seatown, Swords Central and Fosterstown) comprises a mix of zoning objectives including 'Existing residential', 'Conservation, amenity or buffer space, corridor/belt, landscape' and 'Mixed Use, general development, opportunity/proposal site' and 'High Technology' as described on a station-by-station basis in the following subsections. All of the stations within Section 1 of the Study Area will be at surface level or in retained cut.

Estuary Station

The lands to north, east and west of the proposed Estuary Station is zoned 'Metro Economic Corridor' which has the objective to:

'Facilitate opportunities for high-density mixed-use employment generating activity and commercial development and support the provision of an appropriate quantum of residential development within the Metro Economic Corridor'.

The Swords Business Campus is located approximately 25m from the Project Boundary at the nearest point and approximately 300m to the southwest of the proposed station within the lands zoned as 'Metro Economic Corridor'. The route alignment will also traverse designated 'High Amenity' and 'Open Space' lands to the south of the proposed Estuary Station (i.e. north of Balheary at the Broadmeadow River) as well as 'Residential' and 'Open Space' lands along and adjacent to the R132.

There is also extensive land to the north in Lissenhall zoned as 'Metro Economic Corridor'. As such, this area has been identified as a key future development area with a significant mixed use urban district providing for a significant level of employment in the future. Within the northern part of Swords settlement there is land designated for 'Residential', 'Open Space', 'Major Town Centre', 'Community Infrastructure' and 'General Employment' as well the 'High Amenity' lands adjacent to the estuary itself.

Part D of the Swords Masterplans (FCC 2019) identifies a future residential area as part of Estuary West on 19.4ha of greenfield land between Glen Ellan Road to the south, Jugback Lane to the west, Balheary Road to the east and the Broadmeadow River to the north. The phased development will accommodate a central civic square and recreation area with surrounding areas of differing residential density as the overall vision for Estuary West is that:

'Estuary West will become a vibrant residential and mixed-use community, with active and friendly streetscapes. The aim is to produce an exemplary environment; a place that is desirable to live and one which balances usable private space within an overall structure of high-quality public spaces. The community will be prioritised, with parks, open space and public plazas filtered throughout.'

Seatown Station

The lands surrounding the proposed Seatown Station, to the east of the R132 are classified as 'Metro Economic Corridor', with the surrounding area characterised by residential, community and economic uses. Additionally, FCC has identified two Masterplan for Seatown (North and South) as part of the CDP for Fingal.

The CDP for Fingal (FCC 2017) outlined the long-term development vision for Swords is to:

'promote and facilitate the sustainable development of Swords Town as a vibrant consolidated major town with a thriving economy; an integrated public transport network; an attractive and highly accessible built environment with the highest standards of housing, employment, services, recreational amenities and community facilities'.

There are a number of existing businesses and industrial parks in this area. The North Dublin Corporate Park also abuts the Project Boundary and it is comprised of varied economic activity and retail organisations including DB Schenker, Fischer & Paykel and Realt. Swords Business Park is located to the north and west of the North Dublin Corporate Park, also abutting the Project Boundary and it includes several businesses including Hertz and Eason's on the western edge adjacent to the R132 Swords Road and a number of retail facilities including Woodie's which is adjacent to the roundabout. To the east, 'High Amenity' lands are present adjacent to the estuary. To the west of the R132 Swords Road, the lands are mostly 'Residential' with pockets of 'Open Space' and 'Community Infrastructure' and 'Major Town Centre' further to the west around Swords Town Centre.

The Masterplans for Seatown North and Seatown seek to facilitate future development that provides for a strong urban edge with attractive elements that can accommodate the development of MetroLink. Specifically, lower and higher density family houses are proposed in different areas as part of Seatown North and South Masterplans along with additional educational facilities, pedestrian and cycling routes that would ultimately link Seatown to the proposed Project, Swords Town Centre, Seatown Road and the Malahide Estuary.

Swords Central Station

The lands surrounding the proposed Swords Central Station are classified as 'Metro Economic Corridor', with 'Major Town Centre' lands also present to the west of the R132 Swords Road and 'High Technology' lands further to the south. The proposed Swords Central Station is in close proximity to Swords Town Centre and within the settlement boundary of the town which is classified as a Key Town in the RSES. Swords provides strong economic and service functions for its catchment and is recognised as the administrative capital of Fingal. The retail sector in Swords is recognised in the CDP for Fingal (FCC 2017) to be an important source of employment for the region.

Part A of the Swords Masterplans (FCC 2019) set out the existing economic context of Swords and highlighted that it is as a highly functioning employment centre for a wide range of sectors. The economic assessment undertaken as part of the Swords Masterplans show that retail, servicing, industries, tourism and a growing evening economy are important for Swords and that they have the potential to grow further subject to sufficient infrastructure (for example, through the proposed Project). There are also pockets of lands designated for 'Community Infrastructure' particularly around schools, and 'Open Space' throughout the residential areas.

There are substantial residential areas around the proposed Swords Central Station, including Foxwood to the west, Carlton Court to the south-west and St Colmcille's area to the north-west. There are a number of established important community facilities around the Swords Central Station as described in detail in Section 11.4.4.3 of this Chapter.

There are two major, well-established retail centres; the Pavilions Shopping Centre and Airside Retail Park. The Pavilions Shopping Centre and adjoining car parking comprises 44,000sq.m, with 480,000sq.ft. retail area which includes over 100 retail establishments (84 shops, 7 restaurants, and 12 kiosks) and a multiplex cinema. The shopping centre is a major employment hub within the 'Major Town Centre' designated lands with an estimated 12 million visitors per annum and the site also proposed for further development (Chartered Land 2020). In contrast, Airside Retail Park is more industrial hub of outdoor units adjacent to the proposed Fosterstown Station that is discussed in further detail below.

Part D of the Swords Masterplans (FCC 2019) identifies a future mixed-use development as part of Barrysparks and Crowcastle on 35ha of greenfield land to the southeast of Swords between Holywell, Drynam and the R132. The area is designated as 'Metro Economic Corridor' to the north (i.e. Barrysparks) and 'High Technology' towards the south (i.e. Crowcastle). The overall vision for Barrysparks and Crowcastle is that:

'The lands at Barrysparks & Crowcastle will accommodate a mixed-use commercial and residential development that will grow into a key economic cluster both for Swords and the Greater Dublin Area. The vision for the Masterplan lands is the creation of a unique business campus with complimentary residential development, capable of attracting top-tier employers, set in a high-quality green environment. Strong transport connections from MetroLink and BusConnects, coupled with the nature and scale of development envisaged, will enable the lands to play a key role in the economic life of the region'.

Fosterstown Station

The existing land use zoning in the vicinity of the proposed Fosterstown Station is 'High Technology' to the north, 'Retail Warehousing' to the east and 'Residential' to the west.

Airside Retail Park, Airside Business Park and Airside Enterprise Centre comprise a significant economic activity immediately to the east of Fosterstown Station in lands designated for 'Retail Warehousing' and 'General Employment'. The Airside campus contains a range of retail units to the north, car dealers to the south-east, along with offices at the northern end and a hotel (Premier Inn) to the south-west. The area to the north of Airside is designated for 'High Technology'. The area located to the west of the R132 Swords Road is an extensive residential area known as Boroimhe, and it is situated close to a green landscaped area and a number of community facilities further to the west.

Part C of the Swords Masterplans (FCC 2019) sets out a 13.14ha greenfield development to the west of the R132 (and proposed Fosterstown Station) between Forest Road, the Pinnock Hill roundabout and Boroimhe Willows. The Fosterstown Masterplan has set out the following vision:

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

This masterplan anticipates that the phased future development will provide a strong urban edge, improved conditions of existing roads and provide additional vehicular connections to the lands zoned 'Metro Economic Corridor'. The future development of a hotel is also outlined as well as public open space and a new school and transport links.

Section 2 and 3

Section 2 and 3 of the Study Area is also within the administrative boundary of FCC and there is a range of land use zonings designated by way of the CDP for Fingal (FCC 2017). There is also a LAP for Dublin Airport (FCC 2020) and Dardistown (FCC 2013) along with a Masterplan for Dublin Airport Central (FCC 2016) within Section 2 and 3 of the Study Area.

The land adjoining the proposed stations (i.e. Dublin Airport, Dardistown (Future Station) and Northwood) comprise a mix of zoning objectives including 'Airport', 'High Technology' and 'Metro Economic Corridor' as described on a station-by-station basis in the following subsections. Both of the stations within Section 2 and 3 of the Study Area will be underground whilst the future Dardistown Station will be above ground.

Dublin Airport Station

The existing land use zoning in the vicinity of the proposed Dublin Airport Station is 'Dublin Airport' with some 'High Technology' lands located to the east. The LAP for Dublin Airport (FCC 2020) applies within and the Public Safety Zones associated with Dublin Airport also intersect the area. The Dublin Airport Central development is currently progressing in those lands zoned for 'High Technology' in accordance with the provisions of the Masterplan (FCC 2016) that has been published.

The vision for the 'Airport' zoning is to:

'Facilitate air transport infrastructure and airport related activity/uses only (i.e. those uses that need to be located at or near the airport). All development within the Airport Area should be of a high standard reflecting the status of an international airport and its role as a gateway to the country and region. Minor extensions or alterations to existing properties located within the Airport Area which are not essential to the operational efficiency and amenity of the airport may be permitted, where it can be demonstrated that these works will not result in material intensification of land use. Air Transport Infrastructure includes: aircraft areas, air traffic control/tower, ancillary health, safety and security uses, aprons, cargo handling, maintenance hangers, meteorology, retail – airside/duty free, runways, taxiways, terminals and piers'.

An overview of Dublin Airport has been provided in Section 11.4.3.7.2 of this Chapter with sets the context for its importance as a significant international gateway for the country, region and locality and is a major employer and economic asset. The most recent Capital Investment Plan (DAA 2019) outlines the extensive range of forthcoming investment and development that is anticipated with the overall objective of enabling Dublin Airport to development in a sustainable manner to potentially accommodate up to 55 million passengers per annum.

The proposed Project has been identified in this Capital Investment Plan and lands have been set aside within the airport boundary to accommodate the proposed Dublin Airport Station so that there will be an effective linkage between the existing Ground Transportation Centre. Section 8.3.2 of the LAP for Dublin Airport (FCC 2020) sets out the need and benefits associated with implementation of the proposed Project for the airport as well as the wider region.

It should be noted that aside from the operational airport, there is a significant number of other service providers in the zoned lands including retail, public transport, restaurants, pubs, hotels as well as surrounding community facilities such as Our Lady Queen of Heaven Church and ALSAA sports campus. There are also a range of car parking establishments around the airport boundary.

Dardistown (Future Station)

The existing land use zoning in the vicinity of the Dardistown (Future Station) is 'General Employment' to the north and 'High Technology' lands to the south. The LAP for Dardistown (FCC 2013) applies within this area and it has set out the following vision:

'To provide for a strategic employment node, comprising inter alia, office, research and development and high technology manufacturing, maximising opportunities presented by the lands strategic location well served by air, existing and planned high-capacity public transport and the national road network, and all within a high-quality sustainable environment'.

The Dardistown LAP (FCC 2013) which has been extended until 2022, identifies that the 154ha land parcel is an important strategic development landbank between Dublin City Centre and Dublin Airport that is accessible from the M50 Motorway. Given the facilitation of an 'Airport Commercial and Logistics Park' therein, it can be inferred that employment would be expected to be general enterprise/employment and office, research and high technology development. The LAP for Dardistown (FCC 2013) also sets out a footprint for lands to accommodate the 'Metro Depot' and adjacent station whilst identifying opportunities to integrate mixed-use development including hotels, retail, business park, technology campus and residential development along with greenway and public realm design.

Notwithstanding the land use zoning and development proposals, the existing lands developed industrial, commercial and sports and recreation uses, through the meat processing plant at St Anne's Business Park, airport car parks to the south of the Old Airport Road and the M50 Motorway which lays to the south. There are several recreational facilities for sports clubs between the M50 Motorway and Old Airport Road including Na Fianna, Ballymun Kickhams and Whitehall Rangers Football Club as described in detail in Section 11.4.4.5.2 of this Chapter. A significant proportion of the lands in the surrounding area are currently used for agriculture and there is a golf course designated as 'Open Space' to the west of the Naul Road.

Northwood Station

The lands surrounding the proposed Northwood Station is zoned 'Metro Economic Corridor' with some pockets of 'Open Space', 'High Technology' and 'Residential Lands' also present in the area. Additionally, there is a key District Centre designated for Ballymun as described in the following section.

There is an established employment base in the vicinity of the proposed Northwood Station that has developed in recent years as IKEA was established, Northwood and Gulliver's Retail Park have developed and expanded as part of the 'Metro Economic Corridor'. Gulliver's Retail Park contains a wide range of retail, convenience stores, businesses, fast food restaurants and cafés and it is accessible from both Santry and Ballymun. Further south lies Northwood Business Campus which hosts of businesses established around Swift Square and Northwood (across a range of industries) which contribute to the provision of associated uses and infrastructure, which makes up the employment base in the area. There is also a Tesco Distribution Centre strategically located adjacent to the M50 Motorway (i.e. to the north-west of the station and west of the M50 Viaduct), with a number of adjoining distribution centres. An established residential area and community facilities are situated to the west of the station as is Ikea.

Section 4A

Section 4A of the Study Area is within the administrative boundary of DCC and there is a range of land use zonings designated by way of the CDP for Dublin (DCC 2016). There is just one station proposed in Section 4A of the Study Area which will be underground.

Ballymun Station

The location of the proposed Ballymun Station is zoned 'District Centre' which has the objective to: 'provide for and improve mixed services facilities'.

Ballymun is identified as one of eight Key District Centres, where the applicable guiding principles include densification of development capable of sustaining public transport system and supporting local services and activities as well as extended transportation provision, expanded employment provision and regeneration of the built environment. Ballymun comprises an established and densely built-up environment that therefore has the potential for further development and regeneration.

Notwithstanding the above, the area surrounding the proposed Ballymun Station is primarily residential in character and land use zoning, with services and facilities that cater for the local needs including some pockets of 'Community and Institutional Resource Lands (Education, Recreation, Community, Green Infrastructure and Health)' and 'Amenity/Open Space Lands/Green Network'. The residents therefore benefit from a number of community facilities, recreational areas and open spaces in the locale and within Section 4A of the Study Area.

Section 4B

Section 4B of the Study Area is within the administrative boundary of DCC and there is a range of land use zonings designated by way of the CDP for Dublin (DCC 2016). The land adjoining the proposed stations (i.e. Collins Avenue, Griffith Park and Glasnevin) comprise a mix of zoning including residential, open space, community infrastructure and a district centre as described on a station-by-station basis in the following subsections. All of the stations within Section 4B of the Study Area will be underground.

Collins Avenue Station

The location of the proposed Collins Avenue Station is zoned for 'Community and Institutional Resource Lands (Education, Recreation, Community, Green Infrastructure and Health)' to the north and 'Amenity/Open Space Lands/Green Network' to the south. It is surrounded by residential zoned land with pockets of 'Amenity/Open Space Lands/Green Network' lands throughout the established urban area.

There is a wide range of community facilities including Our Lady of Victories Church and associated Boys National School, both in close proximity to the proposed station. Dublin City University (and associated facilities) is an important educational and employment provider at the local and regional level with an estimated enrolment of 16,000 students (DCU 2020). Albert College Park and St Clare's are the university's sport campuses which are located either side of the Ballymun Road.

Scoil Chiaráin is another educational facility in the area and there are several community facilities nearby as described in detail in Section 11.4.4.3 of this Chapter. There is also land designated as a 'Neighbourhood Centre' at the junction of the Ballymun Road and St Pappin's Road.

Griffith Park Station

Griffith Park Station is also primarily residential with an established suburban character and zoning for 'Community and Institutional Resource Lands (Education, Recreation, Community, Green Infrastructure and Health)' at the station location.

This land use zoning is associated with the adjacent educational facilities (Scoil Mobhí primary school, Scoil Chaitríona secondary school, the third level education centre at Whitehall College of Further Education and Tír na nÓg Naonrí as described in detail in Section 11.4.4.3 of this Chapter). Additionally, sports grounds for Na Fianna GAA and Home Farm FC in this area serve the local community and beyond. The Na Fianna clubhouse is adjacent to the proposed Griffith Park Station and further information on these facilities are provided in Section 11.4.4.4 of this Chapter.

The station is surrounded by residential zoned land with pockets of 'Amenity/Open Space Lands/Green Network' and a corridor designated for 'Waterways Protection' along the Tolka River. This corridor extends east to Griffith Park and west to the National Botanic Gardens and Glasnevin Cemetery which are tourist attractions that are discussed in further detail in Section 11.4.3.3.1 of this Chapter.

Glasnevin Station

The location of the proposed Glasnevin Station is also zoned 'District Centre' with surrounding residential zoned land and pockets of 'Amenity/Open Space Lands/Green Network' and a corridor designated for 'Waterways Protection' along the Royal Canal.

The existing Midland Great Western Railway (Maynooth Line/Western Commuter Line) and Great Southern and Western Railway (Kildare/ South-Western Commuter Line) railway lines pass adjacent to the Royal Canal. A railway station will also be constructed here to provide an interchange between these networks (as described in detail in Chapter 4 (Description of the MetroLink Project) as this is an urbanised area with a mixture of uses including retail, commercial, offices, residential and amenity. There are tennis courts to the east and a high-quality cycle path between the Royal Canal and Whitworth Road. The cycle lane is used by the community in the immediate area and beyond.

Section 4C

Section 4C of the Study Area is within the administrative boundary of DCC and there is a range of land use zonings designated by way of the CDP for Dublin (DCC 2016).

The land adjoining the proposed stations (i.e. Mater Hospital, O'Connell Street, Tara, St Stephen's Green and Charlemont) comprise a mix of zoning including residential, open space, community infrastructure and city/district centre as described on a station-by-station basis in the following subsections. All of the stations within Section 4C of the Study Area will be underground.

Mater Hospital Station

The location of the proposed Mater Hospital Station is 'Amenity/Open Space Lands/Green Network' and it is surrounded by 'Residential Neighbourhoods (Conservation Areas)' with 'Community and Institutional Resource Lands (Education, Recreation, Community, Green Infrastructure and Health)' to the north around the hospital itself.

This area is a health care hub on the northern edge of Dublin City Centre based around Mater Hospital and associated economic activities in the immediate locality. The Mater Hospital is a significant economic activity hub and employer which comprised 3,082 full time employees (HSE 2019). The surrounding area is mostly residential with associated services and facilities including restaurants, retail and pubs and a number of green areas and community facilities present including the Blessington Street Park, Royal Canal Bank along with the Four Masters Memorial Park itself and St Joseph's Church (on the southwest corner of the park). Additionally, there are some lands zoned as 'Inner Suburban (Sustainable Mixed-Use)' further to the west along with the 'Strategic Development and Regeneration Area' around Grangegorman and 'District Centre' around Phibsborough.

O'Connell Street Station

The location of the proposed O'Connell Station is zoned 'City Centre' which has the objective:

'To consolidate and facilitate the development of the central area, and to identify, reinforce, strengthen and protect its civic design character and dignity'.

O'Connell Street itself is recognised as a primary thoroughfare for the northern city centre and hub for economic activity as it is a significant employment hub with numerous regeneration development projects in this area. This section of Dublin City Centre supports tourism, institutional, education, administrative, retail, commercial and residential functions. O'Connell Street has an extensive mixed-use, comprising prime retail streets, offices, hotels, restaurants, pubs and residential buildings whilst nearby Henry Street functions as a primary retail street in northern city centre, serving the surrounding area and beyond. As such, there is a significant day and night-time economy in the area. Further, the catchment extends outside the Dublin region due to the various tourist attractions and public transport connections that traverse through the area (including a large number of city and regional bus routes and the Luas Red

Line services that connect to Connolly Station and Heuston Station which have national rail connections).

Tara Station

The location of the proposed Tara Station is zoned 'City Centre'.

The area is a primary access point and an intensive city centre hub for tourist, institutional, education, administrative, retail, commercial and residential uses given its strategic location on the banks of the River Liffey close to Custom House Quay, the employment hub of the IFSC and close to Trinity College Dublin. The existing Tara Station is located to the north-east of the proposed Tara Station and it is intended that there will be an interchange between the DART, Iarnród Éireann and MetroLink networks.

The surrounding land generally comprises residential houses and mixed uses including sport and fitness (such as the Markievicz Leisure Centre), offices, restaurants, pubs and other recreational uses. As such there is a strong day and night-time economy. The campus for Trinity College Dublin is in close vicinity and this provides residential, educational and recreational uses as many tourists visit the campus. The latest figures from Fáilte Ireland lists the Book of Kells in the top five tourist attractions in Ireland during 2018 with 1,057,642 visitors, which represented an increase of 7.5% since the previous year (Fáilte Ireland 2019).

St Stephen's Green Station

The location of the proposed St Stephen's Green Station is zoned 'Georgian Conservation Area' to the east and is 'Amenity/Open Space Lands/Green Network' to the west with 'City Centre' zoning further to the north and north-west.

This area is another primary access point for the southern city centre given the existing Luas stop to the west and the numerous bus routes that traverse the area. The Shelbourne Hotel and Loreto College are two established historic buildings adjacent to the proposed station and there are various State, semi-State and major offices along the eastern side of St Stephen's Green, under which the station will be located.

Grafton Street to the north-west is a primary retail and leisure destination and there are numerous hotels and offices located around St Stephen's Green. Further, the surrounding area contains a large number of tourist attractions including the National Gallery, National History Museum, Royal Hibernian Academy whilst St Stephen's Green Park is located directly adjacent to the proposed station which is a significant tourist and recreational facility for the area. There are also numerous clubs, historic establishments and community facilities in and around St Stephen's Green including the Newman University Church, Dublin Unitarian Church, St Stephen's Green Club and Boston College Ireland.

Charlemont Station

The lands surrounding the proposed Charlemont Station are classified as 'Employment/Enterprise' and residential. There is also a liner corridor of 'Amenity/Open Space Lands/Green Network' and 'Waterways Protection' along the Grand Canal and part of Charlemont Place to the north is designated as a 'District Centre'

This area is on the southern edge of city centre and proximate to an established mixed-use office district and inner suburban residential districts to the south. Given the relatively high density of residential, workplaces and commercial uses in the area, this locale functions as a strong employment base. The Luas Green Line serves the area along with several Dublin bus routes and there is a high-quality cycling lane along the Grand Canal that is used by the community in the immediate area and beyond as it functions as a significant commuter corridor with high amenity value for recreational and tourism uses.

11.4.5.4 Residential Lands

11.4.5.4.1 State and Regional Context

Table 11.51 shows that 716ha of land in the Study Area is designated for residential use and Figure 11.18 illustrates the location of these spaces. This residential land is relatively apportioned between the various sections within the Study Area, with the exception of Section 4A which is much smaller than the others.

Table 11.51: Land Use Zoning (Hectares) for Residential within the Study Area

Section	R1 – New / Proposed Residential	R2 – Existing Residential	R4 - Strategic Residential Reserve	Total
Section 1	11.48	142.19	0.00	153.66
Section 2 and 3	0.00	17.57	0.00	17.57
Section 4A	0.00	188.00	0.00	188.00
Section 4B	0.00	180.63	0.00	180.63
Section 4C	0.00	145.70	30.43	176.12
Total	11.48	674.09	30.43	715.99

Residential land availability relates to residential lands that have been regarded by the Department of Housing, Local Government and Heritage and local authorities as being undeveloped and available for primarily residential development purposes. 58 hectares of residential land availability has been identified in the Study Area mostly within Section 1 and Section 4A of the Study Area (19.9 and 24.6ha respectively) as illustrated in Figure 11.18. Considering its value in terms of planning for and providing new homes, this land is considered to be of medium sensitivity. However, as stated in Section 11.4.1, occupied residential properties are considered to be of high sensitivity.

11.4.5.4.2 Local and Neighbourhood Context

Section 1

The majority of the land designated for residential in Section 1 of the Study Area is located in the settlement of Swords, with some pockets evident around Drynam Road and Holywell to the east. As illustrated in Figure 11.18, there is 0.70ha of land designated for residential within the Project Boundary in Section 1, particularly adjacent to the R132 Swords Road.

Section 2 and 3

The majority of the land designated for residential in Section 2 and 3 of the Study Area is located to the south around Ballymun and Northwood. As illustrated in Figure 11.18, there is 1.12ha of land designated for residential within the Project Boundary in Section 2 and 3, which is relatively low and all of this land is undeveloped.

Section 4A

The majority of the land in Section 4A of the Study Area is designated for residential with extensive area present throughout Ballymun and Santry. As illustrated in Figure 11.18, there is 2.53ha of land designated for residential within the Project Boundary in Section 4A, which is located at the southernmost and northernmost locations.

Section 4B

A large portion of land in Section 4A of the Study Area is designated for residential with extensive area present throughout Glasnevin and Drumcondra. As illustrated in Figure 11.18, there is 3.42ha of land designated for residential within the Project Boundary in Section 4B.

Section 4C

Within Section 4C, there are various pockets of land designated for residential, particularly in the northern and southern suburbs of Cabra, Phibsborough, Broadstone, Portobello, Ranelagh and Rathmines. As illustrated in Figure 11.18, there is 4.1ha of land designated for residential within the Project Boundary in Section 4C adjacent to the proposed Charlemont Station.

11.5 Predicted Impacts

As detailed in Section 11.3.6, this section identifies, describes and presents an assessment of the likely significant effects of the proposed Project on Population and Land Use. The assessment focuses on effects that are likely and significant, accurate and credible. The impacts identified are associated with direct effects i.e. those effects directly arising from the proposed Project, unless otherwise stated.

For the purposes of the analysis, impacts are assessed at a range of geographic levels (i.e. local, regional and national) which overlap. For example, the impacts at a local and regional level are included (and are thus a subset) of the impact at that state level. Impacts arising as a result of the proposed Project that are related to factors such as Airborne Noise and Vibration, Groundborne Noise and Vibration, air climate and traffic, and that have the potential to generate Population and Land Use effects are dealt with in detail in the relevant chapter, as set out below:

- Impacts relating to Traffic and Roads are addressed in Chapter 9 (Traffic & Transport);
- Impacts relating to Noise and Vibration are addressed in Chapter 13 (Airborne Noise & Vibration) and Chapter 14 (Groundborne Noise & Vibration).
- Impacts relating to Air Quality are addressed in Chapter 16 (Air Quality); and
- Impacts relating to Human Health which relate to those factors under which human health effects might occur e.g. air, water and soil are set out in Chapter 10 (Human Health)
- Impacts relating to Landscape and Visual are addressed in Chapter 27 (Landscape & Visual).

This impact assessment has considered the value and sensitivity of the receptor (subjective/social) in terms of importance, size, the distance/ proximity to the works (objective/scientific). Where relevant, predicted environmental effects and effects associated with loss or damage to property, severance, transport related disturbance and other relevant effects identified in relevant chapters of this EIAR which have the potential to impact on residential, commercial and community amenity, are considered on a collective basis in terms of how they pertain to and impact on Population and Land Use. The impacts ratings assigned in Section 11.5 are based on unmitigated effects (effects arising in the absence of measures designed to avoid, prevent, reduce or, if possible, offset significant adverse effects). For final effects, please refer to Section 11.7 Residual Impacts.

11.5.1 Do Nothing

The baseline environment is constantly changing, and it is anticipated that population growth and land use change would occur at the local, regional and state level irrespective of whether or not the proposed Project occurs. The principal population growth and land use scenarios have been considered in accordance with the assumptions as set out in Chapter 9 (Traffic & Transport). Specifically, Planning Datasheets have been provided by the National Transport Authority for the forecast years 2035, 2050 and 2065 and using these data, population and jobs projections along the alignment have been incorporated within model forecasts and should be considered reflective of the do-nothing scenario. An overview of the assumed growth which has been approximated based on the Electoral Districts in the Study Area (i.e. rather than Small Areas as used elsewhere) is provided in Table 11.52.

Table 11.52: Approximation of population and employment in the Study Area (based on the Traffic & Transport modelling assumptions)

Section	2030 population	2030 employment	2060 population	2060 employment
Section 1	24,039	13,173	33,281	18,326
Section 2 and 3	10,147	5,286	16,781	8,470
Section 4A	26,737	10,858	42,145	17,498
Section 4B	22,445	10,952	24,743	12,141
Section 4C	114,367	67,735	134,393	78,712
Total	197,735	108,004	251,343	135,147

**The analysis was conducted prior to the adjustment of the Opening Year.*

As such in the event that the proposed Project does not proceed, whilst population and employment continue to grow, the absence of the proposed Project is likely to be a constraint on the economic and physical growth of the region and at the local level for the following reasons:

- Significant areas of land have designated land use zoning to support this public transport system, particularly in Fingal and any land identified as Metro Economic Corridor would require redesignation if the proposed Project does not proceed.
- As outlined in the Transport Strategy for the Greater Dublin Area 2016 – 2035 and the Draft Greater Dublin Area Transport Strategy 2022-2042, the proposed Project is necessary to enhance airport-related economic development and overall capacity of sustainable transport across Dublin. Specifically as described in Section 3.4 of Chapter 3 (Background to the MetroLink Project), the three major public transport projects proposed under these regional transport strategies (i.e. MetroLink, BusConnects and DART+) together with other public transport projects, and the existing public transport network, are complementary and supportive of one another, designed to provide a transport system that is fully integrated, affordable, and that will support the economy, help Ireland reduce its carbon emissions and to actively participate in the transition towards a climate neutral economy by 2050 and make Dublin a more liveable and sustainable city. Connectivity and accessibility are likely to deteriorate within the Study Area and wider Dublin region in the absence of the proposed Project given the anticipated population growth within the Study Area and capacity constraints on the existing transport infrastructure network. Restrictions could therefore be placed on residential, commercial and industrial development in the absence of the proposed Project.
- As described in detail in Chapter 3 (Background to the MetroLink Project), sprawling growth patterns, the stagnation of inner cities and older suburban areas, greater distances between where people live and work along with increased inequalities, particularly where there is limited public transport, could arise if current development patterns continue. Based on demand modelling, the proposed Project will provide a reliable fixed public transport option to an estimated 360,000 people that will live within 2km of the alignment in 2030, as well as millions of visitors to Dublin and Ireland each year.
- It should be noted that in the absence of the proposed Project, those buildings that need to be acquired would remain in their current ownership and those likely significant effects on amenity of the local population would not arise.

11.5.2 Construction Phase

11.5.2.1 Overview

This section examines the likely significant effects of the proposed Project that are likely to arise during the construction phase. This assessment has been undertaken based on the approach to construction as described in detail in Chapter 5 (MetroLink Construction Phase). It should be noted that the reasonable 'worst case scenario' has been identified and assessed where the detailed design or construction methodology was not fully known. This 'worst case scenario' has been described herein including the reasons why it considered to be the worst-case for the purpose of this assessment on population.

There is potential for disruption to social and commercial activity arising from the Construction Phase of the Proposed Project, primarily from the disturbance to the local road network near the works during the Construction Phase but also arising from environmental effects arising from air and Groundborne Noise and Vibration, as detailed in relevant chapters of this EIAR. These effects can impact on Population and Land Use in multiple ways including residential, worker and visitor amenity, accessibility and viability as described in Section 11.3.

The Construction Phase is also likely to have positive impacts on social and commercial activity, for example in the creation of new employment opportunities, the increase in demands for materials and services and the economic benefits that will consequently arise.

Overall, impacts from construction works will be more prevalent in Section 1 of the Study Area due to the extensive above ground works required, particularly along the R132 due to construction methods and the proximity of local communities. There are also construction works above ground within Section 3, particularly to the north of Ballymun Station however the population in the immediate area is relatively lower when compared to other parts of the Study Area. In contrast within Section 2, 4A, 4B and 4C tunnelling will reduce the extent of above ground works and there will be more localised effects on Population and Land Use around stations and the Project Boundary as described in detail on a site-specific basis in Chapter 5 (MetroLink Construction Phase).

A general overview of impacts likely to arise as a result of construction works at each Study Area section is provided below followed by a more detailed assessment of impacts by category: Demography and households, Economic Activity and Employment, Community and Social Infrastructure and Connectivity and Land-Use.

Section 1

Lands in the vicinity of the proposed Estuary Station (including the associated Park and Ride Facility) are relatively contained with local agricultural and institutional activity. Construction activity will have a significant impact on Land Use in this area with the permanent change from agricultural to transport related activity. This is considered a permanent, significant, negative impact. Undeveloped lands in this area which are currently in agricultural use are designated various land use zoning objectives including 'ME-Metro Economic Corridor', as set out in detail in the Planning Report for Railway Order. Therefore, the nature of land in this area is likely to change as part of the sustainable development of the area. The impact on population is assessed as short-term, moderate and negative. Construction works will give rise to local disturbance during the construction phase in the vicinity of the R132 and Seatown Station, Swords Central Station and Fosterstown Station which are subject to construction mitigation measures. This include the extensive linear construction works along R132 especially at Estuary Roundabout, R132 Swords Bypass, Chapel Lane and Malahide Roundabout where the footbridges that traverse the R132 will be demolished. The closure of the Ennis Lane / R132 priority junction will result in an approximate 2.6km diversion via Estuary Junction. This closure will be in place during the full duration of station construction and will be subject to an alternative diversion. Sports facilities will also be affected due to construction works and loss of pitches in some cases. Other disturbances are associated with environmental impacts such as noise and dust from works including demolition, as assessed in relevant topic assessments of this EIAR and in Section 11.5.2.2 (residential properties to be demolished), which will bring about varying degrees of impact on residential amenity and local communities. The impact on population is generally assessed as negative, ranging from significant to not significant depending on the topic (e.g. demography and households) and receptor (specific residential area) and short-term in duration. The impact on Land Use is generally considered to be negative, slight, and medium-term.

Section 2 and 3

Both Dublin Airport Station and Northwood Station within Sections 2 and 3 of the Study Area will be underground whilst Dardistown Station will be in a retained cut. There will be disturbance associated with noise and dust impacts arising from TBM passage works at the North Portal and South Portal either side of the Dublin Airport Tunnel and at the northern portal of the City Tunnel at Northwood. These are detailed in the relevant chapters of this EIAR.

An overview of Dublin Airport has been provided in Section 11.4.3.7 of this Chapter. In addition to the significant economic activity associated with terminals and associated aviation businesses, there are a significant number of other services including retail, public transport and hospitality.

The construction site is relatively constrained on an existing carpark within the airport campus, on lands designated for metro station use. In terms of Population the pre-mitigation impact is assessed as being negative, significant, and medium-term. In terms of Land Use the impact is considered positive, significant, and permanent.

Dardistown Depot and associated buildings would be located on the lands to the west of the rail line at Dardistown. There are several recreational facilities for sports clubs between the M50 Motorway and Old Airport Road described in detail in Section 11.4.4.5.2 of this Chapter. A significant proportion of the lands in the surrounding area are currently used for agriculture and for the Forrest Little Golf Club (designated as 'Open Space') to the west of the Naul Road. Construction activity will have a significant impact on Land Use in this area with the permanent change from agricultural and recreation to transport related activity. This is considered a negative, significant, and permanent impact. However, some lands in this area are assigned General Employment and High Technology zoning designations and this area is also subject to Dardistown Local Area Plan, as set out in detail in the Planning Report on Railway Order. Development applications brought forward for zoned land are considered as cumulative impacts under Chapter 30 (Cumulative Impacts of Interaction Between Other Projects and MetroLink). The impact on population is considered to be negative, slight, and medium-term.

Construction of the alignment between Dardistown Station and Northwood Station including construction compounds and the bridge over the M50 Motorway will give rise to local inconvenience and disturbance in movement patterns. Land use at this location is predominately open space (land not in current use) along with four residential properties. Construction activity will have a negative, significant, medium-term impact. The impact on population is considered to be negative, moderate, and medium-term. Construction will require the demolition of existing structures including a number of residential properties and a commercial warehouse as detailed in Section 11.5.2.2.

In addition, electricity grid connections will be provided for the proposed Project by way of new underground cable routes from existing substations in the area. The cables will be installed by ESB Networks through public roads or public lands as far as possible. These cable route connections do not form part of the proposed Project; however, they have been assessed in this EIAR. This will entail temporary roadworks and diversions to enable trenching and cable laying, including on the R139, R107 Malahide Road, Baskin Lane, Stockhole Lane, Naul Road, R108, R132, and the Old Airport Road. Cable laying will also occur on internal roads within Clonsaugh Business Park and within the Quick Park Dublin Airport long-term car park site. The use of horizontal drilling and utilities tunnels will prevent impacts on the M1 and M50 Motorway. The grid connection routes are set out in Chapter 4 (Background to the MetroLink Project) proposed Project description and the construction methods used for laying cables are set out in Section 5.5.9 of Chapter 5 (MetroLink Construction Phase). These works will result in temporary road or lane closures, traffic diversions, and environmental impacts such as noise and dust along the cabling routes (as assessed in relevant topic assessments of this EIAR) which may in turn impact on residential amenity and local communities. However, these impacts would be for a limited time at any one place as the cable-laying progresses. In the absence of mitigation, the impact on Population is considered to be negative, significant, and temporary.

Section 4A and 4B

All stations in Section 4 will be underground, which could give rise to potential noise and vibration impacts from construction activities as detailed in Chapter 13 (Airborne Noise & Vibration) and Chapter 14 (Groundborne Noise & Vibration). The proposed station will be underground at Ballymun. During the construction phase there will be localised disturbance and inconvenience arising from temporary road or lane closures, traffic diversions, and environmental impacts such as noise and dust as detailed in the relevant chapters of this EIAR. The impact on Population in terms of the effect on residential social and commercial amenity, is considered negative, ranging from not significant to significant depending on the topic and receptor and on a medium-term duration. The site of the old shopping centre on which Ballymun Station is proposed is currently vacant, and the proposed Project will facilitate the zoning and

land-use objectives for the site as detailed in the Ballymun LAP, therefore, the impact on Land Use during construction is considered neutral.

The proposed station will be underground at Collins Avenue. During construction there will be localised disturbance and inconvenience, particularly impacting residents at Albert College Court assisted living/senior citizens accommodation, residents of Albert College Drive and Ballymun Road, and users of Our Lady of Victories National Schools and Church. Existing garden/open space at Our Lady of Victories Church and adjacent to Albert College Court will be required for construction. The impact on Population and Land Use is considered negative, ranging from significant to not significant depending on topic and medium term.

The construction of the intervention shaft at Albert College Park and underground Griffith Park Station requires the displacement of the playing pitch, displacement of activities and use as a construction site for the construction phase at these locations. Educational facilities described in detail in Section 11.4.4.3 and sports facilities in 11.4.4.4 of this Chapter. The impact on Population and Land Use is considered negative, significant, and short-term.

The Glasnevin Station is located in an urbanised area with mixture of uses including retail, commercial, offices, residential as well as amenity. Construction here is to provide an interchange between main line and suburban rail networks. The works include demolition of two retaining walls along the Irish Rail lines including a two storey building associated with the southern retaining wall and a tunnel; earthworks to lower the vertical alignment of Irish Rail lines; and reconstruction of the retaining walls including displacement of the northern retaining wall affecting Brian Boru pub car park. Works will also require temporary closures and diversions affecting main line rail services and local roads as detailed in Chapter 9 (Traffic & Transport). During construction there will be localised disturbance and inconvenience arising from environmental effects considered in the relevant chapters of this EIAR, particularly impacting residents at Dalcassian Downs and Cross Gun Quay Apartments and schools in the area. The impact on Population and Land Use is considered negative, significant and medium.

Section 4C

The land adjoining the proposed stations (i.e. Mater Hospital, O'Connell Street, Tara, St Stephen's Green and Charlemont) comprises a mix of zoning including residential, open space, community infrastructure and city/district centre as described on a station-by-station basis in the following subsections. All of the stations within Section 4C of the Study Area will be underground.

The area around the proposed underground Mater Station is a busy city centre health care hub anchored by the Mater Hospital. The surrounding area is mostly residential with associated services and facilities including restaurants, retail and pubs and a number of green areas and community facilities including St Joseph's Church. The construction site will be located in Four Masters Park. This will give rise to inconveniences and disturbances affecting activities and services at a localised level and Berkeley Street in particular. This includes potential noise and vibration impacts from construction activities as detailed in Chapter 13 (Airborne Noise & Vibration) and Chapter 14 (Groundborne Noise & Vibration), disturbances to the local road network as detailed in Chapter 9 (Traffic & Transport), dust risk as detailed in Chapter 16 (Air Quality), with corresponding negative impacts on the local population, community infrastructure and on patients of the Mater Hospital. In the absence of mitigation, the impact on Population is considered negative, significant to not significant depending on topic and receptor, and medium-term. The impact on Land Use is considered medium-term, moderate and negative.

The proposed O'Connell Street Station is located to the west of the primary thoroughfare for the northern city centre. The subject site is currently subject to redevelopment proposals for mixed use development in co-ordination with the proposed Project. This will give rise to inconveniences and disturbances associated with roads as detailed in Chapter 9 (Traffic & Transport), dust as detailed in Chapter 16 (Air Quality), Airborne and Groundborne Noise and Vibration as detailed in Chapter 13 (Airborne Noise & Vibration) and Chapter 14 (Groundborne Noise & Vibration) which will affect residential, community and commercial activities and services at a localised level. The impact on Land Use is considered negative, significant to not significant depending on topic and receptor, and medium-term. The impact on Population is considered to be negative, significant, and medium-term. Several

commercial properties on O'Connell Street will be demolished or partially demolished as set out in Chapter 5 (MetroLink Construction Phase) – resulting in a negative, significant and permanent impact.

The proposed Tara Street underground station is situated in a highly accessible city centre location to the south of George's Quay. The proposed Project provides the demolition of a commercial (including sports and leisure) facility and residential buildings to facilitate works in this area. There will also be inconveniences and disturbance to activities and services at a localised level which will impact adversely on residential, community and commercial amenity and activity – these are set out in relevant chapters including Chapter 14 (Groundborne Noise & Vibration), Chapter 16 (Air Quality), Chapter 9 (Traffic & Transport) and others. The impact on individual receptors due to the demolition of both residential and commercial buildings has been assessed separately in relevant sections. Collectively, the impact on Population is considered to be negative, significant to not significant depending on the topic and receptor, and on a medium-term basis.

The impact on Land Use is considered a negative, significant and medium-term. The loss of property means that the impact on Population is considered to be negative, significant and permanent.

The proposed St Stephen's Green underground station is situated on the eastern side of the historic square. The proposed Project requires the construction works on the site of the park itself, affecting access to the amenities and facilities, and disrupting normal traffic movements. The impact on Land Use is considered to be negative, Slight, and medium. The impact on Population is considered to be negative, significant to not significant depending on the topic and receptor, and medium-term.

The proposed underground Charlemont Station is situated between Grand Parade and Dartmouth Road, with the Luas Green Line along the western edge. The proposed Project is designed to be consistent with redevelopment proposals for the area affecting access and local traffic movements. The impact on Land Use is considered a negative, slight, and medium-term. As a result of a range of environmental effects set out in relevant chapters of this EIA (Chapter 14: Groundborne Noise & Vibration, Chapter 16: Air Quality, Chapter 9: Traffic & Transport and others), the impact on Population is considered to be negative, significant to not significant depending on the topic and receptor and medium-term.

In addition to those impacts associated with the construction of new stations, residents adjacent to and along the line of the route may also be impacted by groundborne noise and vibration associated with tunnel-boring activity, as described in Chapter 14 (Groundborne Noise & Vibration). This may lead to sleep disturbance and impact on residential amenity, for a period of several days at any one location as tunnel boring activities progress along the line of the route. As a result, the impact on Population is considered to be negative, significant and medium-term.

Groundborne noise and vibration as a result of tunnelling activities may also impact noise/vibration-sensitive cultural institutions along the route, such as Trinity College Dublin, the National Gallery, National Museum of Ireland (Archaeology/Natural History), the Houses of the Oireachtas, and the National Concert Hall. These impacts are assessed in detail in Chapter 14 (Groundborne Noise & Vibration). Further impacts on cultural institutions as pertain to Population and Land Use related effects are described in Section 11.5.2.3.3.

11.5.2.2 Demography and Households

A number of residential properties within the Study Area, particularly adjacent to the proposed stations and construction compounds will be affected during the construction of the proposed Project. Residential properties in general are considered to be of high sensitivity to the changes brought about by the construction phase of the proposed Project. It is considered that in most cases residents may experience disturbance which will be negative in nature, will range in significance depending on the proximity to the works and will vary in duration according to the position along the route and in line with the duration of construction works. In general, residents living in closer proximity to haul routes and construction compounds will experience more significant impacts on amenity and quality of life than those who reside further away from the works. Construction sector effects include severance / disruption to local roads, pedestrian and cyclist infrastructure resulting in general inconvenience, longer travel / journey times and environmental nuisance associated with noise, dust arising from the

construction works and impacts on visual amenity. These effects have been assessed separately in Chapter 9 (Traffic & Transport), Chapter 16 (Air Quality), Chapter 13 (Airborne Noise & Vibration) and Chapter 14 (Groundborne Noise & Vibration). Any utility diversions and/or enabling works that may affect the supply of services to residents are assessed in Section 22.5.2 of Chapter 22 (Infrastructure & Utilities) and will be planned, agreed and undertaken in cooperation with the relevant utility stakeholders (and relevant agencies) as described in Section 5.4.7 of Chapter 5 (MetroLink Construction Phase).

Whilst Chapter 21 (Land Take) assesses the loss of residential properties in detail, it has been determined that 14 occupied residential buildings will be acquired and demolished, excluding unoccupied/derelict properties (see Table 11.53). This will not have a significant effect on Population and/or Land Use at the regional level, albeit the residents will experience effects at the local level associated with property loss as described in Section 21.4.2 of Chapter 21 (Land Take). For those residential properties that will need to be acquired permanently, suitable measures will be proposed for residents under the provisions of the Railway Order. In particular, a Land Acquisition Strategy and a Property Owner Protection Scheme (POPS) has been prepared to provide information to residents and set out the arrangements in place for affected property owners, as described in the Mitigation Section (13.6). In the absence of mitigation measures, the impact on Population is considered to be negative, significant, and medium-term.

Table 11.53: Occupied residential buildings in the Study Area that will be demolished During Construction of the Proposed Project

Section of the Study Area	Residential Buildings	Location
Section 1	Seaview Bungalow - single storey	Estuary Station
	Seaview West Bungalow – single storey	Estuary Station
	Lissenhall Great - residential building off Ennis Lane	Estuary Station
	Nevinstown Lodge – single storey bungalow	Fosterstown Station
	East of Nevinstown Lane – residential single storey building	Fosterstown Station
Section 2 and 3	North of Santry Lodge– 2 storey residential building	Northwood Station
	Santry Lodge Gatehouse (bungalow) – single storey bungalow	Northwood Station
	Old Ballymun Road opposite Gulliver's Retail Park - Redundant single storey residential building	Northwood Station
Section 4A	No residential properties identified, therefore no significant effects.	
Section 4B		
Section 4C	Ashford House – large 8-storey building	Tara Station
	Poolbeg Street - large 4-storey building	Tara Station
	College Gate Apartment Complex (70 units) - 7-storey building	Tara Station
	22 Luke Street - 4 storey building	Tara Station
	24 Townsend Street – 4 storey building	Tara Station
	25-32 Townsend Street (seven units) - 3 storey building	Tara Station

11.5.2.3 Economic Activity and Employment

11.5.2.3.1 Expenditure

The proposed Project is a large capital investment identified in the National Development Plan (Government of Ireland 2017b). There will be a range of contracts put in place to facilitate the construction of the proposed Project as described in detail in Chapter 5 (MetroLink Construction Phase). This will facilitate direct and indirect expenditure at the local, regional and state level.

The capital expenditure (CAPEX) for the construction of the proposed Project is estimated to be €6.7 billion and in keeping with good practice, the estimates of effects have considered this value which is considered to include professional fees but excludes contingencies and risk. This will be a direct, positive impact for the local and regional economy during the construction of the proposed Project; considering the high magnitude of investment relative to the regional economy, this will represent a positive, moderate and medium-term effect.

There will also be indirect expenditure and economic activity associated with the supply chain (e.g. material suppliers) and related sectors (e.g. communications and energy providers) as well as an increased demand for local services (e.g. transport and retail) during the Construction Phase. These are multiplier (i.e. induced and indirect) effects that are typically measured through input-output analysis of the economy. The Leontief Inverse Coefficients are economic multipliers that reflect the interdependencies (i.e. implications of change in demand) of one sector on another within the economy. An output multiplier of 1.582 has been identified for the construction industry (CSO 2015) and on the basis the CAPEX identified above, it has been estimated that multiplier effects will equate to approximately €10.6 billion expenditure over the approximate nine-year Construction Phase. This is equivalent to an average annual expenditure of €1.325 billion, however it should be noted that this will not be evenly distributed due to the construction scheduling and differences in the supply, demand and economic factors that will occur year on year throughout the construction programme. This will be an indirect, positive, moderate, medium-term impact for the local and regional economy during the construction of the proposed Project.

11.5.2.3.2 Employment

Construction of the proposed Project will generate employment opportunities as there will be a range of personnel employed directly to support the construction activities. The construction of the proposed Project will require a workforce that will peak at 4,300 FTE employees directly employed on a daily basis as set out in Section 5.2.3 of Chapter 5 (MetroLink Construction Phase). The provision of these employment opportunities within the construction industry over the course of the Construction Phase will have a direct positive, moderate, medium-term impact for the local and regional economy.

Notwithstanding the above, it is important to identify and distinguish between differing levels of employment impacts spatially, which is referred to as leakage. Leakage measures the extent of benefits within and beyond the proposed Project area. Given the comparatively complex and sizeable nature of the construction requirements for the proposed Project, it is assumed that local construction firms are less likely to secure major contracts and it is expected that overseas construction expertise would be required to support the proposed Project. However, given the quantum of employees in the construction sector at the regional and local level, it is expected that approximately three quarters of the construction employment effects will be from the Dublin region and beyond this, it is assumed that the majority of the remaining construction workforce will come from Ireland mostly likely those living within a reasonable distance, for example the commuter belt. As such, leakage is expected to be 10% nationally and 25% at the regional level. Employment is therefore considered to have a direct positive, moderate, medium-term impact for the regional and national economy.

It is anticipated that the majority of these employees will be resident in Dublin and that the wages of those employees would likely be spent within the Dublin region throughout the nine-year Construction Phase. The most recent estimate of average earnings per employee in the construction sector was €37,829 (i.e. Average Regular Earnings for all construction employees in 2018 [CSO 2019d]) and even if a portion of this was spent locally per employee, this would benefit the local and regional economy. As

such, this will generate an induced, positive, moderate, medium-term impact for the local and regional economy.

As previously noted, organisations within the supply chain (e.g. material suppliers) and related sectors (e.g. communications and energy providers) will also benefit through an increase in expenditure during the Construction Phase. This increase in expenditure would therefore improve economic activity in those multiplier sectors and thus potentially generate employment opportunities in other sectors. The Preliminary Business Case has determined that 2,750 indirect jobs are anticipated per annum during the construction of the proposed Project. This is considered to be an indirect, positive, slight, medium-term impact for the local and regional economy.

11.5.2.3.3 Key Sectors

Building and Construction

Given the level of activity within the building and construction sector over recent years (notwithstanding COVID-19 disruptions which shut down the sector entirely in 2020-21), it is important to consider the potential for the proposed Project to 'crowd out employment' through displacement in the building and construction industry. In terms of the construction sector and labour demands, development projects are typically not displaced (i.e. cancelled, or replaced by or replacing anything else) due to a lack of construction labour. Overall, it is more realistic that competing demands for construction labour is factored into the scheduling of competing construction works. As such, it is unlikely that a project does not proceed because construction staff are engaged elsewhere (for example on those projects identified as part of the cumulative assessment in Chapter 30 (Cumulative Impacts of Interaction Between Other Projects and MetroLink). Rather, the proposed Project will 'wait its turn' and avail of those construction staff when they are next available and thus a delay to specific scheduling is more likely rather than prevention or cancellation of the proposed Project. The proposed Project is of such a scale that it will also be able to attract some workers from outside the State, reducing potential for displacement within the State.

As such, no construction displacement has been assumed and the construction programme as outlined in Section 5.2.2 of Chapter 5 (MetroLink Construction Phase) is considered appropriate to accommodate any minor delays owing to a temporary lack of workers during the construction phase. The proposed Project is not likely to directly delay or impede the development of other strategic infrastructure projects. In view of the lower probability of effect and the low sensitivity of the regional and State construction labour markets, displacement is therefore considered to be a negative, Slight, medium-term effect on the construction industry during construction of the proposed Project.

The direct jobs as well as the indirect and induced benefits to the construction industry have been addressed in Section 11.5.2.3.2.

Retail, Hospitality and Tourism

It is anticipated that the retail industry may be affected during construction of the proposed Project. Specifically, the analysis of the isochrones (i.e. walking distance from stations in Figure 11.15) illustrates that that some retail hubs (i.e. clusters of shops and shopping centres) will be within a reasonable walking distance of construction compounds and haul routes and thus sensitive. As identified in Table 11.54, retail outlets may become less attractive to consumers whilst construction is ongoing (due to the presence of hoarding, traffic diversions and closure of footpath) in the immediate vicinity as assessed in Section 9.5.1.2 of Chapter 9 (Traffic & Transport). In some cases, this effect will be balanced by increased spending by construction workers in retail and hospitality businesses. Additionally, Smyths Toy Store in Airside Retail Park and the Brian Boru pub, Des Kelly interiors and some offices at Glasnevin will be demolished to accommodate Fosterstown and Glasnevin stations.

Overall, this is considered to be direct, negative, significant, medium-term effect in the absence of mitigation measures for the local and regional economy during construction of the proposed Project and effects at the neighbourhood level have been identified per asset in Table 11.54.

Table 11.54: Effects on the Retail Sector During the Construction of the Proposed Project

Section	Shopping Centre / Retail Cluster	Location	Walking Distance	Relevant construction activities	Effects
Section 1	Pavilions Shopping Centre	Swords Central Station	Within 10 minutes	Construction of Swords Central Station is programmed for a duration of 60 months. The nearby activities of relevance will comprise site establishment around the Malahide Road roundabout, temporary closure of the R106 (east), removal of bus stops and the footbridge at Chapel Lane and closure of the informal walking route on the R132.	Potential severance and disruption resulting in reduced footfall and/or spending. It is predicted to have negative, moderate, short-term effect. However, mitigation measures such as diversions, alternative routes and advance notice will be in place to reduce the impacts to negative, slight, short-term.
	Airside Retail Park	Fosterstown Station	Within 5 minutes	Construction of Fosterstown Station is programmed for the duration of 63 months. The nearby activities of relevance will comprise establishment of the adjacent compound, demolition of the communications mast and Smyths Toy Store along with closure of the R125 arm on the Pinnockhill roundabout, diversion of buses using the R125 (i.e. Swords Express and Go Ahead services) and temporary closure of footpaths and cycle lanes on the R132.	Potential severance and disruption and environmental impacts (e.g. noise, air quality - dust) resulting in reduced footfall and/or spending. It is predicted to have negative, significant, short-term effect. However, mitigation measures such as diversions, alternative routes and advance notice will be in place to reduce the impacts to negative, slight, short-term.
	Smyths Toy Store at Airside			In addition to the above, this premises will be demolished as part of the construction and permanently removed from this location.	Loss of business premises. It is predicted to have negative, significant, permanent effect. However, compensation will be in place to reduce the impacts to negative, slight and permanent.
Section 2 and 3	Gulliver's Retail Park	Northwood Station	Within 5 minutes	Construction of Northwood Station is programmed for the duration of 66 months. The nearby activities of relevance will comprise establishment of the adjacent compound, tunnel boring machine (TBM) launch portal and soil sifting site, launch of the city tunnel from the portal, local traffic management measures including realignment of Ballymun Road to maintain commercial access and diversion of buses on Ballymun Road (i.e. Dublin Bus and the Dublin – Kells service).	Potential accessibility disruption and environmental impacts (e.g. noise, air quality - dust) resulting in reduced footfall and/or spending. It is predicted to have negative, significant, short-term effect. However, mitigation measures such as diversions, alternative routes and advance notice will be in place to reduce the impacts to negative, slight, short-term.

Section	Shopping Centre / Retail Cluster	Location	Walking Distance	Relevant construction activities	Effects
	IKEA and Decathlon at Northwood	Northwood Station	Within 15 minutes	Construction of Northwood Station is programmed for the duration of 66 months. The nearby activities of relevance will include local traffic management measures including realignment of Ballymun Road (south of St Margaret's junction), the redesign of Balbutcher's Lane and diversion of the 109A bus route.	Potential accessibility disruption. It is predicted to have negative, slight, short-term effect.
Section 4A				No properties identified, therefore no significant effects.	
Section 4B	Glasnevin Town Centre shops	Glasnevin Station	Within 5 minutes	Construction of Glasnevin Station is programmed for the duration of 102 months. The nearby activities of relevance will include site clearance (invasive plant species and demolition of the Brian Boru public house, Des Kelly interiors and adjacent offices), establishment and construction of temporary structures (i.e. bridge, cofferdam and access roads) and complex construction of the station and realignment of the existing Iarnród Éireann rail services. The APCOA car park and part of the cycleway along the Royal Canal will be closed whilst the footpath on Prospect Road adjacent to the site will be reduced in width. It should also be noted that construction hours may differ and 24/7 working will be required on occasion at this location due to the interface with the live railway and the need to obtain possession of these lines (usually at night) to work safely.	Potential severance, disruption and environmental impacts (e.g. noise, air quality - dust) resulting in reduced footfall and/or spending for retail businesses, with effects generally greater closer to Project Boundary. It is predicted to have negative, significant, medium-term effect. However, mitigation measures such as diversions, alternative routes and advance notices will be in place to reduce the impacts to negative, slight, medium-term.
	Brian Boru pub, Des Kelly interiors and adjacent offices			In addition to the above, these premises will be demolished as part of the construction and permanently removed from this location.	Direct loss of businesses listed. It is predicted to have negative, significant, permanent effect. However, compensation will be in place to reduce the impacts to negative, slight, permanent term.

Section	Shopping Centre / Retail Cluster	Location	Walking Distance	Relevant construction activities	Effects
Section 4C	Phibsborough Town Centre shops	Glasnevin Station / Mater Station	Within 10 minutes	Other than the broader activities at Glasnevin and Mater stations and potential passing through of construction traffic, there is no specific direct effects likely to arise at Phibsborough Town Centre during construction.	No impact determined.
	O'Connell Street – Henry Street shopping district	O'Connell Street Station	Within 5 minutes	Construction of O'Connell Street Station is programmed for the duration of 99 months. The nearby activities of relevance will include site establishment, local traffic management measures, top-down station construction and potential oversite development. It should be noted that the layout of the site may vary throughout the Construction Phase due to the potential oversite development and no rerouting of public transport will occur, however pedestrian/cyclists may be re-routed at Parnell Street junctions.	Potential severance and accessibility disruption and environmental impacts such as noise/air quality effects resulting in reduced footfall and/or spending for retail businesses, with effects generally greater closer to Project Boundary. It is predicted to have negative, significant, medium-term effect. However, mitigations measures such as diversions, alternative routes and advance notices will be in place to reduce the impacts to negative, slight, medium-term.
	Temple Bar shopping district	Tara Station	Within 10 minutes	Other than the broader activities at O'Connell Street and Tara stations, no specific direct effects are likely to arise at Temple Bar during construction.	No impact determined.
	St Stephen's Green – Grafton Street shopping district	St Stephen's Green Station	Within 5 minutes	Construction of St Stephen's Green Station is programmed for the duration of 105 months. The nearby activities of relevance will include site establishment (including vegetation clearance and utility diversions) and local traffic management measures including pedestrian diversions, relocation of the bus stops along with the closure of one lane on Hume Street and the loss of cycle and car parking (40 stands and 15 on-street parking spaces respectively). The top-down construction of the station will occur and reinstatement and all other construction activities will be in line with best practice given the archaeological and heritage	Potential accessibility disruption, and environmental impacts such as noise/air quality effects resulting in reduced footfall and/or spending for retail businesses, with effects on retail units generally greater the closer they are to Project Boundary and the construction works. It is predicted to have negative, significant, medium-term effect. However, mitigation measures such as diversions, alternative routes and advance notices will be in place to reduce the impacts to negative, slight, medium-term.

Section	Shopping Centre / Retail Cluster	Location	Walking Distance	Relevant construction activities	Effects
				significance of St Stephen's Green as described in detail in Section 5.4.6 of Chapter 5 (MetroLink Construction Phase).	
	City centre core	Various	Within 5-15 minutes	Other than the broader activities at Mater, O'Connell Street, Tara, St Stephen's Green and Charlemont stations, there is no specific direct effects likely to arise across the city centre core during construction.	No impact determined.

Consideration has been given to those tourist accommodation and attractions that have been identified in Section 11.4.3.7 and are considered to be receptors that may be affected directly and indirectly as a result of the construction of the proposed Project. The potential to impact on transient populations (i.e. tourists), commercial tourism activity and the significance of each of the assets likely to be affected has been considered as outlined in Table 11.55. As with other commercial premises, these businesses are considered to be of medium sensitivity. Where specific establishments have not been identified, imperceptible effects will occur during construction of the proposed Project.

Overall, this is considered to be a negative, significant, medium-term effect in the absence of mitigation measures for the local and regional economy during construction of the proposed Project and effects at the neighbourhood level have been identified per asset in Table 11.55.

Table 11.55: Effects on the Hospitality and Tourism Sector During the Construction of the proposed Project

Section	Name	Significance of Asset	Location	Relevant construction activities	Effects
Section 1	Emmaus Centre – Note that this asset is presently closed, but we appreciate that it may reopen at some point in the future and hence have included herein	Approved Holiday Hostel	Balheary Demense – Within five minutes walking distance and 50m of the Project Boundary at Estuary Station	Construction of Estuary Station and Park and Ride is programmed for the duration of 33 months. The nearby activities of relevance will comprise site establishment, construction of embankments and the viaduct in Balheary Park, along with removal of the Fingallians footbridge and relocation of some nearby bus stops and diversion of services (Dublin Bus, Bus Éireann, Go Ahead).	If this asset reopens, it may experience severance, disruption, and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, short-term effect. However, mitigation measures such as diversions, alternative routes and advance notices will be in place to reduce the impacts to negative, slight, short-term.
	Dublin Airport Travelodge	3-star hotel	Airside Business Park – Within 15m of the Project Boundary at Pinnockhill roundabout	Construction of Fosterstown Station is programmed for the duration of 63 months. The nearby activities of relevance will comprise establishment of the nearby compound, along with closure of the R125 arm on the Pinnockhill roundabout and closure of the informal walking route on the R132 and cessation of the bus service to the airport.	Severance, disruption, and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, short-term effect. However, mitigation measures such as diversions, alternative routes and advance notices will be in place to reduce the impacts to negative, slight, short-term.
	Premier Inn Dublin Airport	3-star hotel	Airside Enterprise Centre – Within five minutes walking distance and 20m of the Project Boundary at Fosterstown Station	Construction of Fosterstown Station is programmed for the duration of 63 months. The nearby activities of relevance will comprise establishment of the nearby compounds (Fosterstown and Nevinstown) and closure of the informal walking route on the R132.	Severance, disruption, and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, short-term effect. However, mitigation measures such as diversions, alternative routes and advance notices will be in place to reduce the impacts to negative, slight, short-term.
No tourist attractions identified, therefore no significant effects					

Section	Name	Significance of Asset	Location	Relevant construction activities	Effects
Section 2 and 3	Maldron Hotel - Dublin Airport	4-star hotel	Dublin Airport – Approximately 400m from the Project Boundary at Dublin Airport Station	Construction of the Dublin Airport Station is programmed for the duration of 99 months. The nearby activities of relevance will comprise site establishment on the existing Terminal 2 short-term surface car park and top-down construction of the station.	Potential disruption if construction activities impact on local connections, particularly to/from Dublin Airport. However, impacts will be limited by distance to Dublin Airport Station site resulting in negative, not significant, medium-term effect.
	Radisson Blu Hotel - Dublin Airport	4-star hotel	Dublin Airport – Approximately 550m from the Project Boundary at Dublin Airport Station		Potential disruption if construction activities impact on local connections, particularly to/from Dublin Airport. However, impacts will be limited by distance to Dublin Airport Station site resulting in negative, not significant, medium-term effect.
	No tourist attractions identified, therefore no significant effects				
Section 4A	Metro Hotel Dublin Airport	3-star hotel	Ballymun– Within 10m of the Project Boundary at Santry Avenue – R108 junction	Construction of Northwood Station is programmed for the duration of 66 months. The nearby activities of relevance will comprise establishment of the adjacent compound, tunnel boring machine (TBM) launch portal and soil sifting site, launch of the city tunnel from the portal, local traffic management measures including realignment of Ballymun Road to maintain commercial access and diversion of buses on Ballymun Road (i.e. Dublin Bus and the Dublin – Kells service) along with top-down construction of the station.	Potential disruption/severance if construction activities impact on local connections and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, medium-term effect. However, mitigation measures such as diversions, alternative routes and advance notices will be in place to reduce the impacts to negative, moderate, medium-term.

Section	Name	Significance of Asset	Location	Relevant construction activities	Effects
	Travelodge Dublin Airport South	3-star hotel	Ballymun – Within 10m of the Project Boundary at Shangan Road – R108 junction	Construction of Ballymun Station is programmed for the duration of 99 months. The nearby activities of relevance will comprise establishment of the adjacent site, utility and traffic diversions, small reduction in the width of the northbound footpath opposite the Civic centre and Slight northern movement of the bus stop along with and top-down construction of the station	Potential disruption/severance if construction activities impact on local connections and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, medium-term effect. However, mitigation measures such as diversions, alternative routes and advance notices will be in place to reduce the impacts to negative, moderate, medium-term.
	No tourist attractions identified, therefore no significant effects				
Section 4B	Egans Guest House	3-star hotel	Phibsborough / Drumcondra – Within 10 minutes walking distance and approximately 230m of the Project Boundary on Iona Park	Other than the broader activities at Glasnevin Station, there is no specific direct effects likely to arise during construction.	No impact determined.
	Maples House Hotel	3-star hotel	Phibsborough / Drumcondra – Within 10 minutes walking distance and approximately 230m of the Project Boundary on Iona Road		No impact determined.
	The Royal Canal	Regionally and locally important tourism asset	Glasnevin/Phibsborough – Within the Project Boundary at Glasnevin Station	Construction of Glasnevin Station is programmed for the duration of 102 months. The nearby activities of relevance will include site clearance (invasive plant species and demolition of the Brian Boru public house, Des Kelly interiors and adjacent offices), establishment and construction of temporary	Severance of route caused by closure of northern tow path during construction and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, medium-term effect. However, mitigation measures such as diversions, alternative routes and advance notices will be in place to

Section	Name	Significance of Asset	Location	Relevant construction activities	Effects
	The National Botanic Gardens	Nationally important tourism asset	Glasnevin – Within 10 minutes walking distance and approximately 300m of the Project Boundary at Glasnevin Station	structures (i.e. bridge, cofferdam and access roads) and complex construction of the station and realignment of the existing Iarnród Éireann rail services. The APCOA car park and part of the cycleway/walkway along the Royal Canal will be closed whilst the footpath on Prospect Road adjacent to the site will be reduced in width. It should also be noted that construction hours may differ and 24/7 working will be required on occasion at this location due to the interface with live railway.	reduce the impacts to negative, moderate, medium-term.
	Glasnevin Cemetery		Glasnevin – Within 10 minutes walking distance and approximately 400m of the Project Boundary at Glasnevin Station		Severance/disruption to transport. However, impacts will be limited by distance to Glasnevin Station resulting in negative, not significant, medium-term effect.
Section 4C	The Hugh Lane Gallery and Garden of Remembrance	Nationally important tourism asset	Parnell Square – Within five minutes walking distance and approximately 230m of the Project Boundary at O'Connell Street	Other than the broader activities at the Mater and O'Connell Street stations, there is no specific direct effects likely to arise during construction.	Severance/disruption to transport and environmental impacts (e.g. noise, air quality - dust) resulting in negative, moderate, medium-term effect. However, impacts will be limited by distance to O'Connell St./Mater sites and mitigation measures such as alternative routes will be in place to reduce the impacts to negative, not significant, medium-term.
	The GPO	Nationally important tourism asset	O'Connell Street – Within five minutes walking distance and approximately 50m from the Project Boundary	Construction of O'Connell Street Station is programmed for the duration of 99 months. The nearby activities of relevance will include site establishment, local traffic management measures, top-down station construction and potential oversite development. It should be noted	Potential disruption/severance where construction activities impact on local connections and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, medium-term effect. However, mitigation measures such as alternative routes and advance notices will

Section	Name	Significance of Asset	Location	Relevant construction activities	Effects
	O'Connell Street and surrounds hotels	Various (Mostly 3-star but two 4-star and some 2-star and guesthouses)	O'Connell Street and surrounds – 14 within five minutes walking distance of the station	that the layout of the site may vary throughout the Construction Phase due to the potential oversite development and no rerouting of public transport will occur, however pedestrian/cyclists may be re-routed at Parnell Street junctions.	be in place to reduce the impacts to negative, slight, medium-term. Potential disruption/severance where construction activities impact on local connections and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, medium-term effect. However, mitigation measures such as alternative routes and advance notices will be in place to reduce the impacts to negative, slight, medium-term.
	Trinity City Hotel	4-star hotel	Pearse Street – Within five minutes walking distance and approximately 70m of the Project Boundary at Tara Station	Construction of Tara Station is programmed for the duration of 105 months. The nearby activities of relevance will include site establishment, demolition of some nearby buildings, utility diversions and top-down construction of the station along with closure of Luke Street and some sections of Poolbeg Street, loss of the footpath on Townsend Street and relocation of some Dublin Bus termini on Poolbeg Street. The Irish Times office is adjacent to but not within the Project Boundary and Tara Street will remain fully operational throughout.	Potential disruption/severance where construction activities impact on local connections and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, medium-term effect. However, mitigation measures such as alternative routes and advance notices will be in place to reduce the impacts to negative, slight, medium-term.
	The Westin Dublin	5-star hotel	College Street/Westmoreland Street – Within five minutes walking distance and approximately 230m of the Project Boundary at Tara Station		Severance/disruption to transport and environmental impacts (e.g. noise, air quality - dust) resulting in negative, not significant, medium-term effect. However, impacts will be limited by distance to Tara Station site and mitigation measures such as alternative

Section	Name	Significance of Asset	Location	Relevant construction activities	Effects
	Temple Bar (including hotels)	Nationally important tourism asset	Temple Bar - Within five-ten minutes walking distance and approximately 250m of the Project Boundary at Tara Station		<p>routes and advance notices will be in place.</p> <p>Severance/disruption to transport and environmental impacts (e.g. noise, air quality - dust) resulting in negative, not significant, medium-term effect. However, impacts will be limited by distance to Tara Station site and mitigation measures such as alternative routes and advance notices will be in place.</p>
	Trinity College Dublin	Nationally important tourism asset	Trinity College Dublin – Within five minutes walking distance and approximately 100m from the Project Boundary at Tara Station	Other than the broader activities at Tara and St Stephen's Green stations, there is no specific direct effects likely to arise during construction.	Severance/disruption to transport and environmental impacts (e.g. noise, air quality - dust) resulting in negative, moderate, medium-term effect. However, mitigation measures such as alternative routes and advance notices will be in place to reduce the impacts to negative, not significant, medium-term.
	National Gallery of Ireland and National Museum of Ireland	Nationally important tourism asset	Merrion Street/Kildare Street – Within five minutes walking distance and approximately 100m from the Project Boundary at Tara Station		Severance/disruption to transport and environmental impacts (e.g. noise, air quality - dust) resulting in negative, moderate, medium-term effect. However, mitigation measures such as alternative routes and advance notices will be in place to reduce the impacts to negative, not significant, medium-term.

Section	Name	Significance of Asset	Location	Relevant construction activities	Effects
	St Stephen's Green	Nationally important tourism asset	St Stephen's Green Within the Project Boundary at St Stephen's Green Station	Construction of St Stephen's Green Station is programmed for the duration of 105 months. The nearby activities of relevance will include site establishment (including vegetation clearance and utility diversions) and local traffic management measures including pedestrian diversions, relocation of the bus stops along with the closure of one lane on Hume Street and the loss of cycle and car parking (40 stands and 15 on-street parking spaces respectively). The top-down construction of the station will occur and reinstatement and all other construction activities will be in line with best practice given the archaeological and heritage significance of St Stephen's Green as described in detail in Section 5.4.6 of Chapter 5 (MetroLink Construction Phase).	Direct loss of portion of St Stephen's Green during construction. Construction activities will impact on visitor amenity for remainder of the Green. It is predicted to have negative, very significant, medium-term effect. However, mitigation measures such as alternative routes and reinstating loss land will be in place to reduce the impacts to negative, moderate, medium-term,
	St Stephen's Green hotels	Various (Four 5-star, three 3-star and one 4-star)	St Stephen's Green and surrounds – 8 within five minutes walking distance of the station		Potential disruption and severance where construction activities impact on local connections and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, medium-term effect. However, mitigation measures such as alternative routes and advance notices will be in place to reduce the impacts to negative, slight, medium-term.
	Grand Canal	Regionally and locally important tourism asset	Charlemont – Within the Project Boundary at Charlemont Station	Construction of Charlemont Station is programmed for the duration of 102 months. The nearby activities of relevance will include site establishment, utility diversions (not already completed by the preceding development), top-down construction of the station along with drill and blast tunnelling.	Potential severance on south bank of canal due to construction traffic and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, medium-term effect. However, mitigation measures such as alternative routes and advance notices will be in place to reduce the

Section	Name	Significance of Asset	Location	Relevant construction activities	Effects
	Hilton Dublin at Charlemont	4-star hotel	Charlemont Place - Within five minutes walking distance and approximately 40m from the Project Boundary at Charlemont Station	Local traffic management measures will include closure of Dartmouth Road, diversions for vehicles, pedestrians and cyclists along with loss of on-street parking on Dartmouth Road.	impacts to negative, moderate, medium-term.
	Clayton Hotel at Charlemont	4-star hotel	Charlemont Street - Within five minutes walking distance and approximately 150m from the Project Boundary at Charlemont Station		Environmental impacts (e.g. noise, air quality - dust) resulting in negative, moderate, significant, medium-term effect. However, mitigation measures such as alternative routes and advance notices will be in place to reduce the impacts to negative, slight, medium-term.
					Severance/disruption to transport and environmental impacts (e.g. noise, air quality - dust) resulting in negative, moderate, medium-term effect. However, impacts will be limited by distance to Charlemont Station site mitigations measures such as alternative routes will reduce the impacts to negative, not significant, medium-term.

It should be noted that the indirect and induced benefits to the retail, hospitality and tourism industry have been addressed separately under expenditure. The impacts on journey amenity and connectivity at the neighbourhood level has been separately considered in Section 11.5.2.4 of this Chapter with further detail provided in Chapter 9 (Traffic & Transport).

Transport and Communications

Given the importance of the transport and communications industry at the regional and local level, specific consideration has been given to those critical employment hubs and key premises within the Study Area. Specifically, any establishments in the transport and communication industry that represent a regional office and/or major transport hub have been considered as outlined in Table 11.56. It is noted that impacts on traffic and transport (i.e. public transport, general traffic and pedestrians) have been assessed in detail in Chapter 9 (Traffic & Transport).

Table 11.56: Effects on the Transport and Communications Sector During the Construction of the Proposed Project

Section	Premises	Location	Relevant construction activities	Effect
Section 1	City Jet office	Swords Business Campus	Construction of Estuary Station and Park and Ride is programmed for the duration of 33 months. Extensive and linear arrangement of construction works along the R132 and nearby activities of relevance will comprise site establishment. Road closures on R132 along Seatown Road, Malahide Road and Pinnock Hill Roundabouts. Footbridges that traverse the R132 will be demolished during construction together with the construction of embankments and the viaduct in Balheary Park and relocation of some nearby bus stops and diversion of services (Dublin Bus, Bus Éireann, Go Ahead).	Disruption/severance to the road network locally as a result of construction activity may impact accessibility and environmental impacts (e.g. noise, air quality - dust) resulting in negative, moderate, short-term effect. However, mitigation measures such as alternative routes and advance notices will be in place to reduce the impacts to negative, slight, short-term.
	An Post Distribution Centre	Swords Business Park	Construction of Seatown Station is programmed for the duration of 66 months. Extensive and linear arrangement of construction works along the R132 and nearby activities of relevance will comprise site establishment. Road closures on R132 along Seatown Road, Malahide Road and Pinnock Hill Roundabouts. Realignment of the roundabout, moving the bus stop to the south of the Dublin North Corporate Park and closure of the informal walking route on the R132.	Disruption/severance to the road network locally as a result of construction activity resulting in negative, moderate, short-term effect. However, diversions and alternative routes will be in place to reduce impacts to negative, slight, short-term.
	Transend Logistics			Disruption/severance to the road network locally as a result of construction activity resulting in negative, moderate, short-term effect. However, diversions and alternative routes will be in place to reduce impacts to negative, slight, short-term.
	Nightline International			Disruption/severance to the road network locally as a result of construction activity resulting in negative, moderate, short-term effect. However, diversions and alternative routes will be in place to reduce impacts to negative, slight, short-term.
	Hertz office			Severance/disruption to the road network locally and environmental impacts (e.g. noise, air quality - dust) affecting services such as call centres, resulting in negative, significant, short-term effect. However, mitigation measures such as alternative routes and building consultation to relocate sensitive activities will be in place to reduce the impacts to negative, moderate, short-term.

Section	Premises	Location	Relevant construction activities	Effect
	Ryanair office	Airside Business Park	Construction of Fosterstown Station is programmed for the duration of 63 months. Extensive and linear arrangement of construction works along the R132 and nearby activities of relevance will comprise site establishment. Road closures on R132 along Seatown Road, Malahide Road and Pinnock Hill Roundabouts. Closure of the R125 arm on the Pinnockhill roundabout and closure of the informal walking route on the R132 and diversion of buses using the R125 (i.e. Swords Express and Go Ahead services).	Severance/disruption to the road network locally and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, short-term effect. However, mitigation measures such as alternative routes and advance notices will be in place to reduce the impacts to negative, moderate, short-term.
	Numerous car dealerships	Airside Enterprise/Business Park	Construction of Fosterstown Station is programmed for the duration of 63 months. Extensive and linear arrangement of construction works along the R132 and nearby activities of relevance will comprise site establishment. Demolition of the communications mast and Smyths Toy Store. Road closures on R132 along Seatown Road, Malahide Road and Pinnock Hill Roundabouts. Closure of the R125 arm on the Pinnockhill roundabout, diversion of buses using the R125 (i.e. Swords Express and Go Ahead services) and closure of the informal walking route on the R132.	Severance/disruption to the road network locally and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, short-term effect. However, mitigation measures such as alternative routes and advance notices will be in place to reduce the impacts to negative, slight, short-term.
Section 2 and 3	Dublin Airport campus	Dublin Airport	Construction of the Dublin Airport Station is programmed for the duration of 99 months. The nearby activities of relevance will comprise site establishment on the existing Terminal 2 short-term surface car park and top-down construction of the station. Approximately 270 car parking spaces will be lost, but otherwise the campus will continue to operate a one-way access/egress system with no impact on public transport, pedestrians and/or cyclists.	Loss of parking space, severance/disruption and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, medium-term effect. However, mitigation measures such as alternative access arrangement and advance notices will be in place to reduce the impacts to negative, slight, medium-term.

Section	Premises	Location	Relevant construction activities	Effect
	Stateline Transport and Tesco Distribution Depot	Compass Distribution Park	Construction of the M50 Viaduct is programmed for the duration of 69 months.	Disruption/severance to the road network locally as a result of construction activity may impact logistics movements, resulting in disruption to business activities. In view of the lack of alternative routes, a negative, moderate, short-term effect is assessed. However, mitigation measures such as advance notices will be in place to reduce the impacts to negative, slight, medium-term.
	NCT Test Centre - Northside	M50 Junction 4	Construction of the Dardistown depot is programmed for the duration of 57 months. The nearby activities of relevance will comprise site establishment, provision of a new access road and associated closure of Ballystraun Lane during those works however access will be maintained and no impact on public transport, pedestrians and/or cyclists will occur.	Disruption/severance to the road network locally and environmental impacts (e.g. noise, air quality - dust) resulting in negative, moderate, short-term effect. However, mitigation measures including alternative access and advance notices are available reducing the impacts to negative, slight, short-term.
	Europcar head office	Northwood Business Campus	Construction of Northwood Station is programmed for the duration of 66 months. The nearby activities of relevance will comprise establishment of the adjacent compound, tunnel boring machine (TBM) launch portal and soil sifting site, launch of the city tunnel from the portal, local traffic management measures including realignment of Ballymun Road to maintain commercial access and diversion of buses on Ballymun Road (i.e. Dublin Bus and the Dublin – Kells service).	Disruption/severance to the road network locally and environmental impacts (e.g. noise, air quality - dust) resulting in negative, moderate, short-term effect. However, the distance from the Project Boundary and mitigation measures including alternative access and advance notices are available reducing the impacts to negative, not significant, short-term.
Section 4A	No properties identified, therefore no significant effects.			
Section 4B	Commuter railway	Proposed Glasnevin Station	Construction of Glasnevin Station is programmed for the duration of 102 months. The nearby activities of relevance will include site clearance (invasive plant species and demolition of the Brian Boru public house, Des Kelly interiors and adjacent offices), establishment and construction of	Parts of the Western Commuter railway line will be temporarily closed for the duration of 26 months and Kildare Line will be closed for the duration of 5 months in total to enable construction of Glasnevin Station. However, the railway layout at this site will allow diversions and maintenance of Connolly/Docklands to Maynooth/M3 Parkway services resulting in negative, slight, short-term effects.

Section	Premises	Location	Relevant construction activities	Effect
			temporary structures (i.e. bridge, cofferdam and access roads) and complex construction of the station and realignment of the existing Iarnród Éireann rail services. The APCOA car park and part of the cycleway along the Royal Canal will be closed whilst the footpath on Prospect Road adjacent to the site will be reduced in width. It should also be noted that construction hours may differ and 24/7 working will be required on occasion at this location due to the interface with live railway which is within the Project Boundary and will remain functional throughout.	
Section 4C	Dublin Bus office	O'Connell Street	Construction of O'Connell Street Station is programmed for the duration of 99 months. The nearby activities of relevance will include site establishment, local traffic management measures, top-down station construction and potential oversite development. It should be noted that the layout of the site may vary depending on the planning decision of the potential oversite development. The service operation of the Luas red line should not be impacted by the construction phase whilst the Dublin Bus office is within the Project Boundary.	Severance/disruption due to road/ closures and environmental impacts (e.g. noise, air quality - dust) resulting in negative, significant, medium-term effect. However, mitigation measures including alternative access and advance notices will be in place reducing impacts to negative, slight, medium-term.
	Luas – red line	O'Connell Street		No impact determined.
	Irish Times office	Tara Street	Construction of Tara Station is programmed to occur for the duration of 105 months. The nearby activities of relevance will include site establishment, demolition of some nearby buildings, utility diversions and top-down construction of the station along with closure of Luke Street and some sections of Poolbeg Street, loss of the footpath on Townsend Street and relocation of some Dublin Bus termini on Poolbeg Street. Due to the nature	Severance/disruption due to road/footpath closures and environmental impacts (e.g. noise, air quality - dust) resulting in negative, moderate, medium-term effect. However, mitigation measures including alternative access and advance notices will be in place reducing impacts to negative, slight, medium-term.
	Tara Street Rail Station	George's Quay		Users of the rail station at Tara Street may experience temporary inconvenience in terms of accessibility of local access streets to the station – negative, slight, medium-term impact.

Section	Premises	Location	Relevant construction activities	Effect
			of the proposed layout at Tara Station, the eastern side of the station box is positioned in close proximity of the existing Tara Street Railway. The Irish Times office is adjacent to but not within the Project Boundary and Tara Street will remain fully operational throughout with no significant impact on service from the construction phase.	
	Luas – Green Line	St Stephen's Green	Construction of St Stephen's Green Station is programmed for the duration of 105 months. The nearby activities of relevance will include site establishment (including vegetation clearance and utility diversions) and local traffic management measures including pedestrian diversions, partial loss of bus lane impacting on bus journey times, relocation of the bus stops along with the closure of one lane on Hume Street and the loss of cycle and car parking (40 stands and 15 on-street parking spaces respectively). The top-down construction of the station will occur and reinstatement and all other construction activities will be in line with best practice given the archaeological and heritage significance of St Stephen's Green as described in detail in Section 5.4.6 of Chapter 5 (MetroLink Construction Phase). The Luas Green line is on the opposite (western) side, away from the construction activities and will remain fully operational throughout with no significant impact on its service operation.	No impact determined due to distance from proposed works.
	Department of Transport, Tourism and Sport	Leeson Lane	Construction of St Stephen's Green Station is programmed for the duration of 105 months. The nearby activities of relevance will include site establishment (including vegetation clearance and utility diversions)	Disruption/severance to the road network locally and environmental impacts (e.g. noise, air quality - dust) resulting in negative, moderate, medium-term effect. However, mitigation measures including alternative routes and advance notices are

Section	Premises	Location	Relevant construction activities	Effect
			and local traffic management measures including pedestrian diversions, relocation of the bus stops along with the closure of one lane on Hume Street and the loss of cycle and car parking (40 stands and 15 on-street parking spaces respectively). The top-down construction of the station will occur and reinstatement and all other construction activities will be in line with best practice given the archaeological and heritage significance of St Stephen's Green as described in detail in Section 5.4.6 of Chapter 5 (MetroLink Construction Phase).	available reducing the impacts to negative, slight, medium-term.
	National Transport Authority	Harcourt Lane – Adelaide Road	Construction of Charlemont Station is programmed for the duration of 102 months. The nearby activities of relevance will include site establishment, utility diversions (not already completed by the preceding development), top-down construction of the station along with drill and blast tunnelling. Local traffic management measures will include closure of Dartmouth Road, diversions for vehicles, pedestrians and cyclists along with loss of on-street parking on Dartmouth Road.	Disruption/severance to the road network locally and environmental impacts (e.g. noise, air quality - dust) resulting in negative, moderate, medium-term effect. However, mitigation measures including alternative routes and advance notices are available reducing the impacts to negative, not significant, medium-term.
	Luas – Green Line	Charlemont	Construction of Charlemont Station is programmed for the duration of 102 months. The nearby activities of relevance will include site establishment, utility diversions (not already completed by the preceding development), top-down construction of the station along with drill and blast tunnelling. Local traffic management measures will include closure of Dartmouth Road, diversions for vehicles, pedestrians and cyclists along with loss of on-street parking on Dartmouth Road. The Luas Green line is	No impact determined due to distance.

Section	Premises	Location	Relevant construction activities	Effect
			sufficient distance away from the construction activities and will remain fully operational throughout. Its service operation should not be impacted by the Construction Phase	
	ICT offices in the Charlemont area	Various	Construction of Charlemont Station is programmed for the duration of 102 months. The nearby activities of relevance will include site establishment, utility diversions (not already completed by the preceding development), top-down construction of the station along with drill and blast tunnelling. Local traffic management measures will include closure of Dartmouth Road, diversions for vehicles, pedestrians and cyclists along with loss of on-street parking on Dartmouth Road. Zendesk and Viasat on Charlemont Place are adjacent to the Project Boundary.	Disruption/severance to the road network locally and environmental impacts (e.g. noise, air quality - dust) resulting in negative, moderate, medium-term effect. However, mitigation measures including alternative routes and advance notices are available reducing the impacts to negative, slight, medium-term.

It should be noted that the indirect and induced benefits to the transport and communications industry have been addressed under expenditure. The impacts on journey amenity and connectivity at the neighbourhood level has been separately considered in Section 11.5.2.4 of this Chapter with further detail provided in Chapter 9 (Traffic & Transport).

11.5.2.3.4 Business Operations

As outlined above, a range of business within the Study Area, particularly adjacent to the proposed stations and construction compounds will be affected during the construction of the proposed Project. It is considered that these establishments will experience disturbance, however in many cases the businesses will remain open and functional. Additionally, any utility diversions and protection measures will be planned, agreed and undertaken in cooperation with the relevant utility stakeholders (and relevant agencies) as described in Section 5.4.7 of Chapter 5 (MetroLink Construction Phase). For those businesses that will need to be closed temporarily and/or acquired permanently, suitable measures will be proposed for these businesses under the provisions of the Railway Order.

The impact on the operation of individual businesses at the neighbourhood level is summarised below and described in detail in Table 11.57.

- 17 buildings will be acquired and demolished to accommodate construction
- 42 businesses are within the Project Boundary (in addition to those acquired and demolished) and will be directly impacted by construction activities (e.g. from noise or air quality impacts during construction).
- 2,479 businesses are within 5 minutes walking distance of the stations whilst 2,944 are within 250m of the Project Boundary and thus will potentially be indirectly impacted as accessibility may be compromised as described in Section 11.5.2.4 of this Chapter and further detail provided in Chapter 9 (Traffic & Transport). These include businesses directly adjacent to the Project Boundary which may be subject to severance and other disturbance, such as businesses in Airside Business Park, Travelodge Swords, and Swords Veterinary Hospital.

Table 11.57: Business Operations in the Study Area that will be Impacted During Construction of the Proposed Project

Sector	Section of the Study Area	Business	Location	Effect
Business that will be acquired and demolished	Section 1	Bolands Cars	Dublin Airport North Portal	Loss of premises due to acquisition resulting in negative, significant, permanent effect. However, compensation will be provided reducing the impacts to negative, slight, permanent term.
		ESB (x2)	Fosterstown Station	Loss of premises due to acquisition resulting in negative, significant, permanent effect. However, ESB Networks will receive compensation in order to facilitate a replacement facility reducing the impacts to negative, not significant, permanent.
	Section 4A	No properties identified, therefore no significant effects.		
	Section 4B	ESB substation	Collins Avenue Station	Loss of premises due to acquisition resulting in negative, significant, permanent effect. However, ESB Networks will receive compensation in order to facilitate a replacement facility reducing the impacts to negative, not significant, permanent.
		Health centre	Griffith Park Station	Loss of premises due to acquisition resulting in negative, significant, permanent effect. However, compensation will be in place reducing the impacts to negative, slight, permanent term.
		The Brian Boru Public House	Glasnevin Station	
		Bytek Office Systems	Glasnevin Station	
		Des Kelly Interiors	Glasnevin Station	
		Laragh Counselling Service	Glasnevin Station	
		Prospect House	Glasnevin Station	
	Section 4C	Ashford House on Tara Street	Tara Station	
		Poolbeg Street property	Tara Station	
		Markievicz Leisure Centre	Tara Station	The Leisure Centre will be demolished resulting in negative, significant, permanent effect. However, TII has committed to fund the re-provision of this centre upon selection of a suitable alternative site by Dublin City Council reducing the impacts to negative, not significant, permanent effect.

Sector	Section of the Study Area	Business	Location	Effect
Businesses within the Project Boundary that will be directly impacted	Section 1	No further properties identified, therefore no significant effects.		
	Section 2 and 3	No properties identified, therefore no significant effects.		
	Section 4A	No properties identified, therefore no significant effects.		
	Section 4B	Bua Coffee	Mobhi Road at Griffith Park Station	Severance/disruption and environmental impacts (e.g. noise, air quality) resulting in negative, significant, medium-term effect. However, mitigation measures including alternative routes and advance notices are available reducing the impacts to negative, slight, medium-term.
	Section 4C	Opsona Therapeutics Limited	Poolbeg Street – Tara Street at Tara Station	As for Ashford House, Tara Street, above – direct loss of premises due to acquisition resulting in negative, significant, permanent effect. However, compensation will be in place reducing the impacts to negative, slight, permanent effect.
		Utmost Ireland DAC		
		Sitecore (formerly Boxever)		
		Augura Ireland Dac		
		Healy Kelly Turner & Townsend Limited		
		Harcourt Life Services Limited		
		National Treatment Purchase Fund		
		Union Heritage		
		Harcourt Life Corporation Dac		
		Harcourt Life Ireland		
Harcourt Life International Dac				
Utmost Holdings Ireland Limited				
Scottish Mutual International Dac				
Utmost Services Limited				

Sector	Section of the Study Area	Business	Location	Effect
		LCCQ Ireland Limited		Severance/disruption and environmental impacts (e.g. noise, air quality) resulting in negative, significant, medium-term effect. However, access will be maintained and mitigation measures including alternative routes and advance notices will be in place reducing the impacts to negative, slight, medium-term.
		Utmost Ireland		
		Irish Funds Industry Association CLQ		
		Altraplan Bermuda Limited		
		Alstead Securities		
		La Punk Beauty Hair Salon	Henry Place at O'Connell Street Station	
		Flanagans Restaurant	O'Connell Street at O'Connell Street Station	
		Carrolls Irish Gifts		
		Doctor Quirkeys Good Time Emporium		
		Carlton Casino Club		
		Dr Quirkey's Xd Theatre		
		Daybreak		
		Wing's		
		Green Island		
		Ned Kelly's		
		Ten Thousand Buffet		
		Oriental Pantry	Moore Lane/Street at O'Connell Street Station	
		Pulido's		
		Mobile Hub		
		Fantom Gym		
Allpoints Car Park				

11.5.2.3.5 *Development Potential/Capacity*

The implementation of the proposed Project shall provide certainty to prospective development projects and planning authorities that the high-capacity transport is being progressed, which will support development feasibility and investment in sites/projects across the Study Area, particularly along the proposed Project corridor. In accordance with the objectives of the Fingal and Dublin City CDPs, the commencement of construction of the proposed Project could progress having regard to its proximity to the high-capacity transport corridor. In this regard, there is a positive, significant, long-term effect on Population and land-use in terms of facilitating access to sustainable transport for future residents, supporting the delivery of much needed housing developments in strategically located areas along/ in close proximity to the proposed Project route.

Phasing of development is controlled by planning authorities for their respective areas (DCC, FCC and An Bord Pleanála for the case of Strategic Housing and Infrastructure Development). TII as a statutory body is consulted on all pertinent planning applications within the Study Area and of relevance to the proposed Project. Any sites immediately adjoining the route alignment and/or Project Boundary may be subject to temporary development constraints (where development is dependent on public transport capacity) throughout the construction of the proposed Project as they could rely on the commencement of operation of the proposed Project. The proposed Project will bring indirect positive economic benefit by providing essential infrastructure to support the viability of future development projects.

11.5.2.4 *Community and Social Infrastructure*

11.5.2.4.1 *Neighbourhood Amenity*

Given the scale of construction works and associated construction employment, there will be an increase in the daily number of persons working in the Study Area. Further, given the length of the Construction Phase, some of these workers may decide to move to and reside within the Study Area to be closer to their place of work. This is likely to increase the presence and movement of people within the Study Area and increase the demand on the housing market in Dublin which is under considerable pressure. Overall, in light of the large regional scale and the fact that most of the construction workforce is expected to be home-based and not require new accommodation, this is considered to be a direct, negative, slight, medium-term effect for the housing market.

Overall, the construction works are likely to have a negative, significant and medium-term effect on the attractiveness of neighbourhoods and neighbourhood amenity of the population in the Study Area due to the presence of construction compounds, plant, equipment, hoarding and construction vehicles. The impact on the local community is most evident for the population in the vicinity of haul routes and construction compounds (particularly those accommodating material storage and station construction). Amenity impacts will generally arise for those environmental topics as detailed in Chapters 9 through to 27 of this EIAR and impacts purely related to population arising as a result have been considered. It is expected that there will be no additional significant impacts on the Population during construction other than those detailed in Chapters 9 through to 27 of this EIAR.

Social Infrastructure

Within Section 1 of the Study Area, a range of social infrastructure will be impacted during the construction phase of the proposed Project which is anticipated to last a period of approximately 5.5 years with works taking place at Estuary Railhead starting in Year 5 and continuing for an expected 5-year period, as set out in Chapter 5 (Metrolink Construction Phase). As outlined in Table 11.58, this includes 18 facilities within 250m of the Project Boundary and ten minutes walking distance of the stations which are delivering childcare, education, health and emergency (fire) services to the local communities in Swords. These facilities will experience direct, ranging from Slight to significant and short to medium-term impacts during construction of the proposed Project.

Table 11.58: Social Infrastructure that may Experience Impacts in Section 1 of the Study Area during Construction

Social Infrastructure	Service Delivered	Effect
Little Caterpillars at Fingallians GAA club – Approximately 20m from the Project Boundary and less than 10 minutes walking distance from Estuary Station	Childcare	Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting service user amenity. Negative, significant, short-term effect. However, mitigation measures will reduce effects to negative, slight, short-term effect.
Fingal House Nursing Home on North Street – Approximately 10m from the Project Boundary and less than 10 minutes walking distance from Estuary Station	GP and nursing home	Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting resident and service user amenity. Negative, significant, short-term effect. However, mitigation measures will reduce effects to negative, slight, short-term effect.
Emmaus Centre on Ennis Lane – Adjacent to the Project Boundary and less than 2 minutes walking distance from Estuary Station	Retreat and Conference Centre (Note – currently closed)	Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting resident and service user amenity. Negative, significant, short-term effect. However, mitigation measures will reduce effects to negative, slight, short-term effect.
Swords Fire Station on Balheary Road – Approximately 85m from the Project Boundary and less than 10 minutes walking distance from Estuary Station	Fire station	Environmental impacts from construction activities (e.g. noise, air quality - dust). Traffic impacts due to road closures and diversions on the R132/Estuary Roundabout may negatively impact emergency service vehicle provision resulting in negative, significant, short-term effect. However, mitigation measures including alternative routes and diversions are available reducing effects to negative, slight, short-term effect.
Kids Inc on Seatown Road – Approximately 20m from the Project Boundary and less than 5 minutes walking distance from Seatown Station	Childcare	Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting service user amenity. Negative, significant, short-term effect. However, mitigation measures will reduce effects to negative, slight, short-term effect.
Fingal Community College on Seatown Road– Approximately 100m from the Project Boundary and less than 5 minutes walking distance from Seatown Station	Secondary school	Environmental impacts from construction activities (e.g. noise, air quality - dust) and potential severance impacts due to road closures or diversions on the R132 resulting in negative, significant, short-term effect. However, mitigation measures including alternative

Social Infrastructure	Service Delivered	Effect
		routes and diversions are available reducing effects to negative, slight, short-term effect.
St Colmcilles National Schools on Chapel Lane – Approximately 100m of the Project Boundary and less than 5 minutes walking distance from Seatown Station	Primary school	Environmental impacts from construction activities (e.g. noise, air quality - dust) and potential severance impacts due to road closures or diversions on the R132 resulting in negative, significant, short-term effect. However, mitigation measures including alternative routes and diversions are available reducing effects to negative, slight, short-term effect.
St Colmcilles Church – Approximately 250m from the Project Boundary and less than 10 minutes walking distance from Seatown Station	Church	No impact determined due to distance from route.
First Steps on Chapel Lane – Approximately 250m from the Project Boundary and less than 10 minutes walking distance from Seatown Station	Childcare	No impact determined due to distance from route.
Oaklands Creche and Montessori on Chapel Lane – Approximately 170m from the Project Boundary and less than 10 minutes walking distance from Swords Central Station	Childcare	Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting service user amenity. Negative, not significant, short-term effect.
Breeda’s Playschool in Foxwood – Approximately 210m from the Project Boundary and less than 10 minutes walking distance from Swords Central Station	Childcare	Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting service user amenity. Negative, not significant, short-term effect.
HSE Health Centre for Dublin North City and County on the R132 – Approximately 10m from the Project Boundary and less than 5 minutes walking distance from Swords Central Station	Health centre	Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting service user amenity. Negative, significant, short-term effect. However, mitigation measures including alternative routes and diversions are available reducing effects to negative, slight, short-term effect.
VHI Swiftcare Clinic - Approximately 30m from the Project Boundary and less than 5 minutes walking distance from Fosterstown Station	GP	Environmental impacts from construction activities (e.g. noise, air quality - dust) and potential severance impacts due to road closures or diversions on the R132 resulting in negative, significant, short-term effect. However, mitigation measures including alternative

Social Infrastructure	Service Delivered	Effect
		routes and diversions are available reducing effects to negative, slight, short-term effect.
Tara Winthrop Clinic on Nevinstown Lane – Less than 5 minutes' walk from Fosterstown Station and the western-most end of the buildings are within the Project Boundary.	Nursing home	Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting service user amenity. Negative, slight, short-term effect.
Funky Kids Preschool and Kids of Life in Columba House, Airside - Approximately 200m from the Project Boundary and less than 5 minutes walking distance from Fosterstown Station	Childcare	Environmental impacts from construction activities (e.g. noise, air quality – dust) and potential severance impacts due to road closures or diversions on the R132 resulting in negative, not significant, short-term effect.
Helping Hand Preschool - Approximately 160m from the Project Boundary and less than 10 minutes walking distance from Fosterstown Station	Childcare	Environmental impacts from construction activities (e.g. noise, air quality – dust) and potential severance impacts due to road closures or diversions on the R132 resulting in negative, not significant, short-term effect.
Gabrielle Hand in Boraimhe - Approximately 150m from the Project Boundary and less than 10 minutes walking distance from Fosterstown Station	Childcare	Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting service user amenity. Negative, not significant, short-term effect.
Smart Angels Childcare in Boraimhe – Approximately 220m from the Project Boundary and less than 10 minutes walking distance from Fosterstown Station	Childcare	Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting service user amenity. Negative, not significant, short-term effect.

Within Section 2 and 3 of the Study Area, a range of social infrastructure will be impacted during the construction phase of the proposed Project which is anticipated to last a period of approximately 5.5 years with some works at Dublin Airport Station Compound and North and South Portals expected to last from between 7.5 and 9.5 years, as set out in Chapter 5 (Metrolink Construction Phase). As outlined in Table 11.59, this includes four facilities within 250m of the Project Boundary and ten minutes walking distance of the stations which are delivering religious, emergency, health and childcare services to the local communities at the airport and in Ballymun which is considered to be a negative, moderate, medium-term impact during construction of the proposed Project. It should be noted that there is no social infrastructure in proximity to Dardistown.

Table 11.59: Social Infrastructure that may Experience Effects in Section 2 and 3 of the Study Area during Construction

Social Infrastructure	Service Delivered	Effects
<p>Our Lady Queen of Heaven Church at Dublin Airport - Approximately 50m from the Project Boundary and less than 5 minutes walking distance from Dublin Airport Station</p>	<p>Church</p>	<p>Road closures and pedestrian diversions as a result of the construction of Dublin Airport Station may cause severance for service users. Environmental impacts from construction activities (e.g. noise, air quality) negatively impacting service user amenity. Pedestrian links to this church including links to the Airport terminals will be maintained. Construction activities that may impact on places of worship (e.g. noise generation near churches) will be timed to occur outside of service hours to minimise impacts. Negative, significant, medium-term effect.</p> <p>However, mitigation measures including alternative routes reduce effects to negative, slight, medium-term effect.</p>
<p>Dublin Airport Police Station at Dublin Airport - Approximately 180m from the Project Boundary and less than 10 minutes walking distance from Dublin Airport Station</p>	<p>Garda station</p>	<p>Environmental impacts from construction activities (e.g. noise, air quality – dust). Traffic impacts due to road closures and diversions during the construction of Dublin Airport Station may negatively impact emergency service vehicle provision; however, alternative routes will be available and connections between this station and the rest of the Dublin Airport site will not be disrupted. Negative, moderate, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, slight, medium-term effect.</p>
<p>SSC Medical Centre in Gulliver's Retail Park - Approximately 75m from the Project Boundary and less than 5 minutes walking distance from Ballymun Station</p>	<p>GP</p>	<p>Environmental impacts from construction activities (e.g. noise, air quality – dust). Road closures and diversions on Northwood Avenue/R108 Ballymun Road may hinder access to service during construction of Northwood Station. However, Gulliver Park access road will remain open and alternative routes are available via Northwood Avenue. Negative, significant, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, slight, short-term effect.</p>
<p>The Chestnut Tree at Santry Cross - Approximately 110m from the Project Boundary and less than 5 minutes walking distance from Ballymun Station</p>	<p>Childcare</p>	<p>Environmental impacts from construction activities (e.g. noise, air quality – dust). Road closures and diversions on Northwood Avenue/R108 Ballymun Road may hinder access to service during construction of Northwood Station. However, Gulliver Park access road will remain open and alternative routes are available via Northwood Avenue. Negative, slight, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, not significant, short-term effect.</p>

Within Section 4A of the Study Area, a range of social infrastructure will be impacted for an expected duration of approximately 8-8.5 years, as set out in detail in Chapter 5 (Metrolink Construction Phase). As outlined in Table 11.60, this includes 13 facilities within 250m of the Project Boundary and ten minutes walking distance of the stations which are delivering education, health, religious, community and medical services to the local communities in Ballymun, Santry and North Glasnevin which is considered to be a negative, moderate, medium-term impact during construction of the proposed Project.

Table 11.60: Social Infrastructure that may Experience Effects in Section 4A of the Study Area during Construction

Social Infrastructure	Service Delivered	Effects
St Joseph's National School (Junior and Senior) adjacent to Balbutcher Lane – Between 90 – 150m from the Project Boundary and within 10-15 minutes walking distance of Northwood Station.	Primary school	Potential environmental impacts from construction activities (e.g. noise, air quality – dust). Road closures and diversions on Northwood Avenue/R108 Ballymun Road may potentially impact access to service during construction of Northwood Station. However, Balbutcher Lane and other local access roads will remain open. Negative, moderate, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, slight, medium-term effect.
HSE Health Centre (Domville House Clinic) on Ballymun Road – Approximately 200m from the Project Boundary and less than 10 minutes walking distance from Northwood and Ballymun stations.	Health centre	Potential environmental impacts from construction activities (e.g. noise, air quality – dust). Road closures and diversions on Northwood Avenue/R108 Ballymun Road may potentially impact access to service during construction of Northwood and Ballymun Stations. However, Ballymun and other local access roads will remain open. Negative, slight, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, not significant, medium-term effect.
Holy Spirit Catholic Church on Sillogue Road - Approximately 175m from the Project Boundary and less than 5 minutes walking distance from Ballymun Station.	Church	Potential environmental impacts from construction activities (e.g. noise, air quality – dust). Road and footpath closures and diversions on R108 Ballymun Road may potentially negatively impact access to service during construction of Ballymun Station. However, Sillogue Road will remain open and alternative access routes will be available. Negative, slight, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, not significant, medium-term effect.
Holy Spirit Boys National School on Sillogue Road - Approximately 250m from the Project Boundary and less than 10 minutes walking distance from Ballymun Station.	Primary school	Potential environmental impacts from construction activities (e.g. noise, air quality – dust), Road and footpath closures and diversions on R108 Ballymun Road may potentially negatively impact access to service during construction of Ballymun Station. However, Sillogue Road will remain open and alternative access routes will be available. Negative, not significant, medium-term effect.
Holy Spirit Girls National School on Gateway Avenue - Approximately 250m from the Project Boundary and less than 5 minutes walking distance from Ballymun Station.	Primary school	Potential environmental impacts from construction activities (e.g. noise, air quality – dust). Road and footpath closures and diversions on R108 Ballymun Road may potentially negatively impact access to service during construction of Ballymun Station. However, Sillogue Road will remain open and alternative access routes will be available. Negative, not significant, medium-term effect.
HSE Health Centre (Ballymun Civic Centre) on Ballymun Road – Adjacent to the Project Boundary and less than 5 minutes walking distance from Ballymun Station	Health centre	Potential environmental impacts from construction activities (e.g. noise, air quality – dust). Road and footpath closures and diversions on R108 Ballymun Road may potentially negatively impact access to service during construction of Ballymun Station. Access will be maintained to the clinic premises. Negative, slight, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, not significant, medium-term effect.
Axis Ballymun Arts and Community Resource Centre on Ballymun Road – Approximately 10m	Childcare and community facilities	Road and footpath closures and diversions on R108 Ballymun Road may potentially negatively impact access to service during construction of Ballymun Station. Environmental impacts from construction activities (e.g. noise, air quality) may negatively impact service user amenity. However, access will be maintained to Axis Centre/Ballymun Civic Centre. Negative, significant,

Social Infrastructure	Service Delivered	Effects
from the Project Boundary and less than 5 minutes walking distance from Ballymun Station		medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, slight, medium-term effect.
Virgin Mary's National Schools (boy and girls) on Shangan Road - Approximately 160m from the Project Boundary and less than 5 minutes walking distance from Ballymun Station	Primary school	Potential environmental impacts from construction activities (e.g. noise, air quality – dust). Road and footpath closures and diversions on R108 Ballymun Road may potentially negatively impact access to service during construction of Ballymun Station. However, Shangan Road will remain open and alternative access routes will be available. Negative, not significant, medium-term effect.
Ballymun East Community Centre (including Aisling Project) on Woodhazel Close - Approximately 200m from the Project Boundary and less than 10 minutes walking distance from Ballymun Station	Community centre	Potential environmental impacts from construction activities (e.g. noise, air quality – dust). Road and footpath closures and diversions on R108 Ballymun Road may potentially negatively impact access to service during construction of Ballymun Station. However, Shangan Road/Coultry Road will remain open and alternative access routes will be available. Negative, not significant, medium-term effect
Trinity Comprehensive School on Ballymun Road - Approximately 190m from the Project Boundary and less than 10 minutes walking distance from Ballymun Station	Secondary school	Potential environmental impacts from construction activities (e.g. noise, air quality – dust). Road and footpath closures and diversions on R108 Ballymun Road may potentially negatively impact access to service during construction of Ballymun Station. However, Ballymun Road will remain open and alternative access routes will be available. Negative, not significant, medium-term effect.
Scoil and Seachtar Laoch on Ballymun Road - Approximately 250m from the Project Boundary and less than 10 minutes walking distance from Ballymun Station	Primary school	Road and footpath closures and diversions on R108 Ballymun Road may potentially negatively impact access to service during construction of Ballymun Station. However, Ballymun Road will remain open and alternative access routes will be available. Negative, not significant, medium-term effect.
Ballymun Library on Ballymun Road - Approximately 100m from the Project Boundary and less than 10 minutes walking distance from Collins Avenue Station	Library	Potential environmental impacts from construction activities (e.g. noise, air quality – dust). Road and footpath closures and diversions on R108 Ballymun Road may potentially negatively impact access to service during construction of Ballymun Station. However, Ballymun Road will remain open and alternative access routes will be available. Negative, significant, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, slight, medium-term effect
D9 Medical Centre / LIR Mental Health and Psychological Services - Approximately 100m from the Project Boundary and less than 10 minutes walking distance from Collins Avenue Station	GP	Potential environmental impacts from construction activities (e.g. noise, air quality – dust). Road and footpath closures and diversions on R108 Ballymun Road may potentially negatively impact access to service during construction of Collins Avenue Station. However, Sillogue Road will remain open and alternative access routes will be available. Negative, significant, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, slight, medium-term effect

Within Section 4B of the Study Area, a range of social infrastructure will be impacted for an expected duration of approximately 8 to 8.5 years, as set out in detail in Chapter 5 (Metrolink Construction Phase). As outlined in Table 11.61, this includes 20 facilities within 250m of the Project Boundary and ten minutes walking distance of the stations which are delivering education, health, religious and childcare services to the local communities in Ballymun, Glasnevin, Phibsborough and Drumcondra which is considered to be a negative, moderate, medium-term overall impact during construction of the proposed Project.

Table 11.61: Social Infrastructure that may Experience Effects in Section 4B of the Study Area during Construction

Social Infrastructure	Service Delivered	Effect
Our Lady of Victories National School on Ballymun Road – Adjacent to the Project Boundary and less than five minutes walking distance from Collins Avenue Station	Primary school	Road and footpath closures and diversions on Ballymun Road may potentially negatively impact access to service during construction of Collins Avenue Station. Environmental impacts from construction activities (e.g. noise, air quality) may negatively impact service user amenity. However, access will be maintained to the schools. Negative, significant, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, moderate, medium-term effect
Our Lady of Victories Church on Ballymun Road – Adjacent to the Project Boundary and adjacent to Collins Avenue Station, experiencing loss of access paths, car parking and one-way entrance to car park	Church	Road and footpath closures and diversions on Ballymun Road may potentially negatively impact access to service during construction of Collins Avenue Station. Loss of church garden, pathways, car park entrance, and car parking to the front of the church. Environmental impacts from construction activities (e.g. noise, air quality) may negatively impact service user amenity. However, access will be maintained to the church via Albert College Drive. Construction activities that may impact on places of worship (e.g. noise generation near churches) will be timed to occur outside of service hours to minimise impacts. Negative, significant, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, moderate, medium-term effect.
Sandra’s Playschool on Clonmel Road - Approximately 160m from the Project Boundary and less than 10 minutes walking distance from Collins Avenue Station	Childcare	Environmental impacts from construction activities (e.g. noise, air quality) may negatively impact service user amenity. Road and footpath closures and diversions on Ballymun Road may potentially negatively impact access to service during construction of Collins Avenue Station. However, Clonmel Road and St Pappin’s estate access will be maintained. Negative, not significant, medium-term effect.
Magic Days Creche and Montessori on DCU Campus - Approximately 110m from the Project Boundary and less than five minutes walking distance from Collins Avenue Station	Childcare	Access will remain to and within the DCU campus throughout construction. Environmental impacts from construction activities (e.g. noise, air quality - dust) may negatively impacting service user amenity. Negative, slight, medium-term effect.
Dublin City University campus – Approximately 180m from the Project Boundary and within 10 minutes walking distance from Collins Avenue Station	Third level education (university)	Access will remain to and within the DCU campus throughout construction. Environmental impacts from construction activities (e.g. noise, air quality) may negatively impact service user amenity. Negative, not significant, medium-term effect
College Gate Clinic on Ballymun Road – Approximately 80m from the Project Boundary and within five minutes walking distance from Collins Avenue Station	GP	Road and footpath closures and diversions on Ballymun Road may potentially negatively impact access to service during construction of Collins Avenue Station. Environmental impacts from construction activities (e.g. However, Ballymun Road will remain open and access will be maintained to the clinic. Negative, slight medium-term effect.

Social Infrastructure	Service Delivered	Effect
Na Fianna Montessori on Ballymun Road – Approximately 70m from the Project Boundary at the Albert College Park intervention shaft	Childcare	Potential environmental impacts from construction activities (e.g. noise, air quality – dust). Road and footpath closures and diversions on Ballymun Road may potentially negatively impact access to service during construction of Albert College Park intervention shaft. However, access to the service will be maintained. Negative, moderate, medium-term effect However, mitigation measures including alternative routes reduce effects to negative, slight, medium-term effect
North Dublin National School Project off Ballymun Road – Approximately 170m from the Project Boundary at the Albert College Park intervention shaft	Primary school	Road and footpath closures and diversions on Ballymun Road may potentially negatively impact access to service during construction of Albert College Park intervention shaft. However, access to the school will be maintained. Negative, slight, medium-term effect
St Michael's House on Ballymun Road - - Approximately 220m from the Project Boundary at the Albert College Park intervention shaft	GP and special education school	Road and footpath closures and diversions on Ballymun Road may potentially negatively impact access to service during construction of Albert College Park intervention shaft. However, access to the service will be maintained. Negative, slight, medium-term effect
Tír na nÓg Montessori and Preschool on St Mobhi Road - Approximately 100m from the Project Boundary and less than five minutes walking distance from Griffith Park Station	Childcare	Road and footpath closures and diversions on St Mobhí Road may potentially negatively impact access to service during construction of Griffith Park Station. However, access Na Fianna grounds and to the service will be maintained. Environmental impacts from construction activities (e.g. noise, air quality) may negatively impact service user amenity, although these will be more limited with distance. Negative, moderate, medium-term effect However, mitigation measures including alternative routes reduce effects to negative, slight, medium-term effect.
Our Lady of Dolours Church on Botanic Avenue - Approximately 115m from the Project Boundary and less than five minutes walking distance from Griffith Park Station	Church	Road and footpath closures and diversions on St Mobhí Road may potentially negatively impact access to service during construction of Griffith Park Station. However, Botanic Avenue and local access roads will remain open. Negative, slight, medium-term effect
Glasnevin National School on Botanic Avenue - Approximately 100m from the Project Boundary and less than five minutes walking distance from Griffith Park Station	Primary school	Road and footpath closures and diversions on St Mobhí Road may potentially negatively impact access to service during construction of Griffith Park Station. However, Botanic Avenue and local access roads will remain open. Negative, moderate, medium-term effect However, mitigation measures including alternative routes reduce effects to negative, slight, medium-term effect.
Glasnevin Health Centre on Botanic Avenue - Approximately 100m from the Project Boundary and less than five minutes walking distance from Griffith Park Station	Health centre	Road and footpath closures and diversions on St Mobhí Road may potentially negatively impact access to service during construction of Griffith Park Station. However, Botanic Avenue and local access roads will remain open. Negative, moderate, medium-term effect However, mitigation measures including alternative routes reduce effects to negative, slight, medium-term effect.

Social Infrastructure	Service Delivered	Effect
Bon Secours Hospital on Glasnevin Hill - Approximately 210m from the Project Boundary and less than ten minutes walking distance from Griffith Park Station	Hospital	Road and footpath closures and diversions on St Mobhí Road may potentially negatively impact access to service during construction of Griffith Park Station. However, Glasnevin Hill and local access roads will remain open. Negative, not significant, medium-term effect
Whitehall College of Further Education – Adjacent to the Project Boundary and to Griffith Park Station	Third level education	Road and footpath closures and diversions on St Mobhí Road may potentially negatively impact access to service during construction of Griffith Park Station. Parts of college grounds fall within Project Boundary. Environmental impacts from construction activities (e.g. noise, air quality) may negatively impact service user amenity and teaching, However, access to the college will be maintained throughout construction. Negative, moderate, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, slight, medium-term effect.
St Vincent's Primary School on St Philomena's Road - Approximately 180m from the Project Boundary and less than five minutes walking distance from Glasnevin Station	Primary school	Road and footpath closures and diversions on Prospect Road may potentially negatively impact access to service during construction of Glasnevin Station. However, Finglas Road and local access roads will remain open. Direct, not significant, medium-term effect
Glasnevin Family Practice on Finglas Road - Approximately 110m from the Project Boundary and less than five minutes walking distance from Glasnevin Station	GP	Road and footpath closures and diversions on Prospect Road may potentially negatively impact access to service during construction of Glasnevin Station. However, Finglas Road and local access roads will remain open. Negative, slight, medium-term effect.
St Vincent's CBS on Finglas Road- Approximately 215m from the Project Boundary and less than ten minutes walking distance from Glasnevin Station	Secondary school	Road and footpath closures and diversions on Prospect Road may potentially negatively impact access to service during construction of Glasnevin Station. However, Finglas Road and local access roads will remain open. Negative, not significant, medium-term effect.
Prospect Medical Centre on Prospect Road – Adjacent to the Project Boundary and less than five minutes walking distance from Glasnevin Station	GP	Road and footpath closures and diversions on Prospect Road may potentially negatively impact access to service during construction of Glasnevin Station. Environmental impacts from construction activities (e.g. noise, air quality) may negatively impact service user amenity and teaching, However, access to the service will be maintained throughout construction. Negative, moderate, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, slight, medium-term effect.
Bee Happy Playschool on Clarendon Crescent - – Adjacent to the Project Boundary at Glasnevin Station	Childcare	Road and footpath closures and diversions on Prospect Road may potentially negatively impact access to service during construction of Glasnevin Station. However, service is sufficient distance from closures and severance impact assessed. Environmental impacts from construction activities (e.g. noise, air quality). Negative, moderate, medium-term effect. However, mitigation measures including alternative routes reduce effects to negative, slight, medium-term effect.

Within Section 4C of the Study Area, a range of social infrastructure will be impacted for an expected duration of approximately 8 to 8.5 years, as set out in detail in Chapter 5 (Metrolink Construction Phase). As outlined in Table 11.62, this includes 54 facilities within 250m of the Project Boundary and ten minutes walking distance of the stations which are delivering education, health, religious and childcare services to the local communities which is considered to be a negative, moderate, medium-term impact during construction of the proposed Project.

Table 11.62: Social Infrastructure that may Experience Severance in Section 4C of the Study Area during Construction

Social Infrastructure	Service Delivered	Effects
Mater Hospital on North Circular Road – Adjacent to the Project Boundary and less than five minutes walking distance from Mater Station	Hospital	Construction at Mater Station will give rise to inconveniences and disturbances affecting activities and services at a localised level and Berkeley Street in particular. This includes potential Noise and Vibration impacts from construction activities as detailed in Chapter 13 (Airborne Noise & Vibration) and Chapter 14 (Groundborne Noise & Vibration), with corresponding negative impacts on local residents and on patients of the Mater Hospital. The impact is considered a negative, moderate and medium-term effect. However, mitigation measures reduce effects to negative, slight, medium-term effect.
Mater Private Medical Consulting Rooms on Berkeley Street - Adjacent to the Project Boundary and less than five minutes walking distance from Mater Station	GP	Construction at Mater Station will give rise to inconveniences and disturbances affect activities and services at a localised level and Berkeley Street in particular. This includes potential Noise and Vibration impacts from construction activities as detailed in Chapter 13 (Airborne Noise & Vibration) and Chapter 14 (Groundborne Noise & Vibration), with corresponding negative impacts on local residents and on patients of the Mater Hospital. The impact is considered negative, moderate, medium-term effect. However, mitigation measures reduce effects to negative, slight, medium-term effect.
St Joseph's Church on Berkeley Street - Adjacent to the Project Boundary and less than five minutes walking distance from Mater Station	Church	Road and footpath closures and diversions Berkeley Street may potentially negatively impact access to service during construction of Mater Station. Construction activity will take place in a park adjacent to the church, with parts of the church grounds within the Project Boundary. Environmental impacts from construction activities (e.g. noise, air quality) may negatively impact service user amenity. However, access will be maintained to the church. Construction activities that may impact on places of worship (e.g. noise generation near churches) will be timed to occur outside of service hours to minimise impacts. Negative, significant, medium-term effect. However, mitigation measures reduce effects to negative, slight, medium-term effect.
Reproductive Choice Limited on Berkeley Street – Approximately 50m from the Project Boundary and less than five minutes walking distance from Mater Station	GP	Construction at Mater Station will give rise to inconveniences and disturbances affecting activities and services at a localised level and Berkeley Street in particular. This includes potential Noise and Vibration impacts from construction activities as detailed in Chapter 13 (Airborne Noise & Vibration) and Chapter 14 (Groundborne Noise & Vibration), with corresponding negative impacts on local services. The impact is considered negative, moderate, medium-term effect. However, mitigation measures reduce effects to negative, slight, medium-term effect.
The Berkeley Clinic on Berkeley Street – Approximately 120m from the Project Boundary and less than five minutes walking distance from Mater Station	GP	Construction at Mater Station will give rise to inconveniences and disturbances affecting activities and services at a localised level and Berkeley Street in particular. This includes potential Noise and Vibration impacts from construction activities as detailed in Chapter 13

Social Infrastructure	Service Delivered	Effects
		(Airborne Noise & Vibration) and Chapter 14 (Groundborne Noise & Vibration), with corresponding negative impacts on local services. The impact is considered negative, slight, medium-term effect
SafetyNet Primary Care Helix Unit on Nelson Street – Approximately 60m from the Project Boundary and less than five minutes walking distance from Mater Station	GP	Construction at Mater Station will give rise to inconveniences and disturbances affecting activities and services at a localised level and Berkeley Street in particular. This includes potential Noise and Vibration impacts from construction activities as detailed in Chapter 13 (Airborne Noise & Vibration) and Chapter 14 (Groundborne Noise & Vibration), with corresponding negative impacts on local services. The impact is considered negative, moderate, medium-term effect However, mitigation measures reduce effects to negative, slight, medium-term effect.
Suantraí Creche on Eccles Street – Approximately 140m from the Project Boundary and less than five minutes walking distance from Mater Station	Childcare	Construction at Mater Station will give rise to inconveniences and disturbances affect activities and services at a localised level and Berkeley Street in particular. This includes potential Noise and Vibration impacts from construction activities as detailed in Chapter 13 (Airborne Noise & Vibration) and Chapter 14 (Groundborne Noise & Vibration), with corresponding negative impacts on local services. However, access to Eccles Street will be maintained. The impact is considered negative, slight, medium-term effect.
Mater Private Hospital on Eccles Street – Approximately 240m from the Project Boundary and less than five minutes walking distance from Mater Station	Hospital	Construction at Mater Station will give rise to inconveniences and disturbances affect activities and services at a localised level and Berkeley Street in particular. This includes potential Noise and Vibration impacts from construction activities as detailed in Chapter 13 (Airborne Noise & Vibration) and Chapter 14 (Groundborne Noise & Vibration), with corresponding negative impacts on local services. However, access to Eccles Street will be maintained. The impact is considered negative, slight, and medium-term.
Mountjoy Garda Station on North Circular Road - Approximately 200m from the Project Boundary and less than five minutes walking distance from Mater Station	Garda station	Traffic impacts due to road closures and diversions during the construction of Mater Station may negatively impact emergency service vehicle provision; however, alternative routes will be available and access to the Garda Station will not be disrupted. The impact is considered negative, slight, medium-term effect.
Mountjoy Prison on North Circular Road – Approximately 160m from the Project Boundary and less than five minutes walking distance from Mater Station	Prison	Traffic impacts due to road closures and diversions during the construction of Mater Station may negatively impact prison service vehicles and visitor amenity; however, alternative routes will be available and access to the prison will not be disrupted. The impact is considered negative, slight, medium-term effect.
Dochas Centre Health Care Unit on North Circular Road - Approximately 200m from the Project Boundary and less than five minutes walking distance from Mater Station	Health centre	Traffic impacts due to road closures and diversions during the construction of Mater Station may negatively impact service vehicles and visitor amenity; however, alternative routes will be available and access to the Mountjoy Prison site will not be disrupted. The impact is considered negative, slight, medium-term effect.

Social Infrastructure	Service Delivered	Effects
All Saints Church on Phibsborough Road - Approximately 250m from the Project Boundary and less than ten minutes walking distance from Mater Station	Church	Phibsborough Road will remain open and due to distance no likely impact assessed as a result.
Phibsborough Fire Station on Phibsborough Road - Approximately 260m from the Project Boundary and less than ten minutes walking distance from Mater Station	Fire station	Phibsborough Road will remain open and due to distance no likely impact assessed as a result.
Rotunda Maternity Hospital on Parnell Street - Approximately 60m from the Project Boundary and less than five minutes walking distance from O'Connell Street Station	Hospital	Impacts due to road/path closures and diversions during the construction of O'Connell Street Station may negatively impact emergency service vehicles and visitor amenity; however, alternative routes will be available and access to the hospital will not be disrupted. The impact is considered negative, significant, medium-term effect. However, mitigation measures reduce effects to negative, slight, medium-term.
Parnell Square Medical Suites on Parnell Square - Approximately 95m from the Project Boundary and less than five minutes walking distance from O'Connell Street Station	GP	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. The impact is considered negative, moderate, medium-term effect. However, mitigation measures reduce effects to negative, slight, medium-term effect.
The Children's Place on Parnell Square - Approximately 170m from the Project Boundary and less than five minutes walking distance from O'Connell Street Station	Childcare	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. The impact is considered negative, slight, medium-term effect.
Delfin School of English on Parnell Square - Approximately 170m from the Project Boundary and less than five minutes walking distance from O'Connell Street Station	Third level education	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. The impact is considered negative, slight, medium-term effect.
Polmed Medical Centre on Parnell Street - Approximately 250m from the Project Boundary and less than five minutes walking distance from O'Connell Street Station	GP	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, not significant, medium-term effect.
Gresham House on Sean McDermott Street - Approximately 230m from the Project Boundary and less than five minutes walking distance from O'Connell Street Station	Third level education	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, not significant, medium-term effect.
The English Academy on Parnell Street - Approximately 50m from the Project Boundary and less than five minutes walking distance from O'Connell Street Station	Third level education	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted.

Social Infrastructure	Service Delivered	Effects
		The impact is considered negative, moderate, medium-term effect. However, mitigation measures reduce effects to negative, slight, medium-term effect.
The Irish Family Planning Association on Cathal Brugha Street - Approximately 100m from the Project Boundary and less than five minutes walking distance from O'Connell Street Station	GP	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. The impact is considered negative, moderate, medium-term effect. However, mitigation measures reduce effects to negative, slight, medium-term effect.
Technical University Dublin on Cathal Brugha Street - Approximately 120m from the Project Boundary and less than five minutes walking distance from O'Connell Street Station	Third level education	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. The impact is considered negative, slight, medium-term effect.
St Mary's Pro Cathedral on Marlborough Street - Approximately 120m from the Project Boundary and less than five minutes walking distance from O'Connell Street Station	Church	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. The impact is considered negative, slight, medium-term effect.
Nurture Childcare and Early Learning Centre at the Department of Education on Marlborough Street - Approximately 150m from the Project Boundary and less than five minutes walking distance from O'Connell Street Station	Childcare	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. The impact is considered negative, slight, medium-term effect.
Abbey Street Medical centre on Abbey Street - Approximately 200m from the Project Boundary and less than five minutes walking distance from O'Connell Street Station	GP	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, slight, medium-term effect.
National Cancer Screening Services and Advisory Centre on Parnell Street - Approximately 200m from the Project Boundary and less than ten minutes walking distance from O'Connell Street Station	GP	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, slight, medium-term effect.
Fledglings St Mary's Preschool and Creche on City Quay - Approximately 170m from the Project Boundary and less than five minutes walking distance from Tara Station	Childcare	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, slight, medium-term effect.
Immaculate Heart of Mary Church on City Quay - Approximately 150m from the Project Boundary and less than five minutes walking distance from Tara Station	Church	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, slight, medium-term effect.

Social Infrastructure	Service Delivered	Effects
City Quay National School on Gloucester Street - Approximately 120m from the Project Boundary and less than five minutes walking distance from Tara Station	Primary school	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, slight, medium-term effect.
Dublin Fire Brigade Headquarters on Tara Street - Adjacent to the Project Boundary and Tara Station.	Fire Station	Severance due to road closures and diversions on Townsend Street during the construction of Tara Station may negatively impact emergency service vehicle provision; however, access to the Fire Station will be maintained. No impact expected if plans for Dublin Fire Brigade to move to a new headquarters proceed prior to the commencement of construction. Negative, slight, medium-term effect.
Pearse Street Primary Care Centre on Mark's Lane - Approximately 120m from the Project Boundary and less than five minutes walking distance from Tara Station	GP and Health Centre	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, slight, medium-term effect.
St Mark's Church on St Mark's Street / Pearse Street - Approximately 120m from the Project Boundary and less than five minutes walking distance from Tara Station	Church	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, slight, medium-term effect.
HSE Civil Registration Service on Lombard Street East - Approximately 250m from the Project Boundary and ten minutes walking distance from Tara Station	Health Centre	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, not significant, medium-term effect.
Irish Family Planning Association - Approximately 220m from the Project Boundary and less than five minutes walking distance from Tara Station	GP	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, not significant, medium-term effect.
HSE Drug Treatment Centre on Pearse Street - Approximately 100m from the Project Boundary and less than five minutes walking distance from Tara Station	Health Centre	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. The impact is considered negative, moderate, medium-term effect. However, mitigation measures reduce effects to negative, slight, medium-term effect.
Pearse Street Garda Station - Approximately 50m from the Project Boundary and less than five minutes walking distance from Tara Station	Garda station	Severance due to road closures and diversions during the construction of Tara Station may negatively impact emergency service vehicle provision; however, access to the Garda Station will be maintained. The impact is considered negative, moderate, medium-term effect. However, mitigation measures reduce effects to negative, slight, medium-term effect.
Trinity College Dublin campus - Approximately 50m from the Project Boundary and less than five minutes walking distance from Tara Station	Third level education	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. The impact is considered negative, moderate, medium-term effect. However, mitigation measures reduce effects to negative, slight, medium-term effect.

Social Infrastructure	Service Delivered	Effects
College of Computing Technology on Marlborough Street - Approximately 230m from the Project Boundary and less than five minutes walking distance from Tara Station	Third level education	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, not significant, medium-term effect.
Abbey Street Presbyterian Church on Abbey Street - Approximately 200m from the Project Boundary and less than five minutes walking distance from Tara Station	Church	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, not significant, medium-term effect.
Loreto College on St Stephen's Green - Adjacent to the Project Boundary and less than five minutes walking distance from St Stephen's Green Station	Secondary school	Road/path closures during construction may negatively impact service user amenity. However, access to the service will not be disrupted. Environmental impacts from construction activity (e.g. noise, air quality) may negatively impact student amenity. The impact is considered negative, moderate, medium-term effect. However, mitigation measures reduce effects to negative, slight, medium-term effect.
McDonnell GP on Ely Place - Approximately 120m from the Project Boundary and less than five minutes walking distance from St Stephen's Green Station	GP	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, slight, medium-term effect.
Catholic University School on Leeson Street - Approximately 120m from the Project Boundary and less than five minutes walking distance from St Stephen's Green Station	Secondary school	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, slight, medium-term effect.
Newman University Church on St Stephen's Green - Approximately 140m from the Project Boundary and less than five minutes walking distance from St Stephen's Green Station	Church	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, slight, medium-term effect.
ULearn Language School on St Stephen's Green - Approximately 230m from the Project Boundary and less than five minutes walking distance from St Stephen's Green Station	Third level education	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, not significant, medium-term effect.
Royal College of Surgeons Ireland on St Stephen's Green - Approximately 290m from the Project Boundary and less than five minutes walking distance from St Stephen's Green Station	Third level education	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, not significant, medium-term effect.

Social Infrastructure	Service Delivered	Effects
St Ann's Church of Ireland on Dawson Street - Approximately 270m from the Project Boundary and less than five minutes walking distance from St Stephen's Green Station	Church	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, not significant, medium-term effect.
Fitzwilliam Medical Centre on Fitzwilliam Lane - Approximately 240m from the Project Boundary and less than five minutes walking distance from St Stephen's Green Station	GP	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, not significant, medium-term effect.
Morris Clinic on Adelaide Road - Approximately 180m from the Project Boundary and less than five minutes walking distance from Charlemont Station	GP	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, not significant, medium-term effect.
The Adelaide Clinic on Adelaide Road - Approximately 240m from the Project Boundary and less than five minutes walking distance from Charlemont Station	GP	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, not significant, medium-term effect.
Linguaviva Language School - Approximately 240m from the Project Boundary and less than ten minutes walking distance from Charlemont Station	Third level education	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, not significant, medium-term effect.
Royal Victoria Eye and Ear Hospital on Adelaide Road - Approximately 110m from the Project Boundary and less than ten minutes walking distance from Charlemont Station	Hospital	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, slight, medium-term effect.
Adelaide Road Presbyterian Church on Adelaide Road - Approximately 100m from the Project Boundary and less than ten minutes walking distance from Charlemont Station	Church	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, slight, medium-term effect.
Kidds Care on Adelaide Road - Approximately 140m from the Project Boundary and less than ten minutes walking distance from Charlemont Station	Childcare	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative, slight, medium-term effect
Giraffe Childcare Harcourt on Iveagh Court - Approximately 250m from the Project Boundary and less than five minutes walking distance from Charlemont Station	Childcare	Road/path closures during construction may negatively impact service user amenity. However, alternative routes will be available and access to the service will not be disrupted. Negative not significant, medium-term effect.

Open Space, Leisure, Recreation and Sports Facilities

During construction of the proposed Project, a total of 23.46ha of open space lies within the Project Boundary of which 11.77ha will be acquired temporarily to accommodate construction compounds and construction activities (including enabling works, demolition, excavations, traffic diversions, station and route construction as well as tunnelling). This will limit functionality of the open space at the local level during that time, however the population will still be able to access green areas given the overall availability of open space across the Study Area (approximately 533 ha will remain in use). The impact on open space is therefore considered to be a negative, slight, medium-term impact at the regional and local level during construction of the proposed Project.

A breakdown of the land designated for open space that will be impacted per section within the Study Area is provided in Table 11.63.

Table 11.63: Open Space that will be Impacted in the Study Area during Construction

Section	Location	Size of Area	Length of Construction Works at this Location
Section 1	Lissenhall	16.07ha within Project Boundary and 6.89ha within the Temporary Land Take, of which the majority designated as G3 - Conservation, amenity or buffer space, corridor/belt, landscape (11.26ha and 4.93ha respectively) and the remainder is G4 - Active open space	Estuary Station and Park and Ride: 2.5 years
	Balheary Park		Seatown Station: 5.5 years
	Seatown – Swords Business Park (including adjacent corridor along the R132)		Swords Central Station: 5 years
	Barrysparks and Pavilions roundabout (including green space at Ashley Avenue and adjacent corridor along the R132)		Fosterstown Station: 5 years
	Pinnock Hill and Airside area (including adjacent corridor along the R132)		North Portal – Airport Tunnel: 5 years
	Nevinstown		
Section 2 and 3	Ballymun Cross / Naul Park Shangan Sandyhill	0.33ha within Project Boundary and 0.32ha within the Temporary Land Take, all of which is designated as G4 – Active open space	Northwood Station: 7 years
Section 4B	Ballymun Road to the west of Our Lady of Victories Church (church grounds)	4.99ha within Project Boundary and 4.24ha within the Temporary Land Take, of which the majority designated as G4 – Active open space (4.55ha and 3.8ha respectively) and the remainder is G3 - Conservation, amenity or buffer space, corridor/belt, landscape	Collins Avenue Station: 8 years
	Albert College Park		Albert College Park Intervention Shaft: 5 years
	Griffith Park and the River Tolka corridor (including adjacent corridor along the R108)		Griffith Park Station: 8 years
	Whitworth Road and the Royal Canal corridor		Glasnevin Station: 8 years
Section 4C	Mater plot	1.85ha within Project Boundary and 0.16ha within the Temporary Land Take, all of which is designated as G5 – Mixed, general green, recreation/conservation and other	Mater Station: 8.5 years
	St Stephen's Green		St Stephen's Green Station: 8.5 years
	Charlemont and the Grand Canal corridor		Charlemont Station: 8 years

Within the Study Area, a number of leisure, recreation and sports facilities within the Project Boundary will also be impacted during the Construction Phase as outlined in Table 11.64.

Table 11.64: Leisure, Recreation and Sports Facilities that will be Impacted in the Study Area during Construction

Section	Location	Service Delivered	Duration of Construction Works at this Location	Effect
Section 1	Swords Rovers FC soccer pitches, Balheary	Two full size soccer pitches	Estuary Station and Park and Ride: 33 months	Partial loss of site for construction work along Metrolink route. Both pitches at the Swords Rovers Football Club will be realigned due to the loss of land to the north and eastern boundaries of the park. This will require the removal of some trees along the western boundary to provide sufficient space. Environmental impacts (e.g. noise, air quality) on user amenity. Negative, significant, short-term effect. However, mitigation measures including temporary adjustments and advance notices will be in place reducing the impacts to negative, slight, short-term.
	Fingallians GAA pitches, Balheary	Two full size GAA pitches and one training pitch		Pitches will need to be re-positioned and reduced in size. It is proposed to reduce the pitch dimensions from 137m x 89m to 130m x 70m. Potential severance impacts due to construction activity along R132 leading to temporary road closures and diversions. Environmental impacts (e.g. noise, air quality) will impact on user amenity. Negative, significant, short-term effect. However, mitigation measures including temporary adjustments and advance notices will be in place reducing the impacts to negative, moderate, short-term.
Section 2 and 3	Starlights GAA pitches, Dardistown	One full size GAA pitch and one floodlight training/warm up area	Dardistown Depot: -57 months	Potential severance impacts due to construction activity. The new access road off the Old Airport Road into Dardistown Depot will cross the Starlights GAA lands, separating the car park and changing rooms from the pitches. The main pitch will be moved slightly to the northeast, and the dimensions will be increased. A raised pedestrian zebra crossing will be constructed to maintain linkages. Negative, significant, short-term effect. However, mitigation measures including temporary adjustments and alternative routes will be in place reducing the impacts to negative, slight, short-term.
	Na Fianna GAA pitches, Dardistown	Three full size GAA pitches and one training pitch		These pitches would be modified to accommodate the requirement to divert the existing open drain/river to the south of the Na Fianna Collinstown Grounds, which will result in the loss of land and impact one existing pitch. This pitch will be rotated by 90°. The existing juvenile pitch will be relocated to the south west of the site and made larger. Negative, significant, short-term effect. However,

Section	Location	Service Delivered	Duration of Construction Works at this Location	Effect
	Whitehall Rangers FC soccer pitches, Dardistown	Two full size soccer pitches		mitigation measures including temporary adjustments will be in place reducing the impacts to negative, slight, short-term. The Whitehall Rangers Football Club currently located at the proposed Dardistown Depot site will be demolished. Negative, significant, permanent. However, it will be relocated to Dublin City Council lands adjacent to the Whitehall GAA club grounds where the new facilities will comprise two full sized grass playing pitches, a similar amount of car parking spaces, and new changing facilities. The impacts will be reduced to negative, slight, permanent.
	Section 4A No properties identified, therefore no significant effects.			
Section 4B	Albert College Park pitches	Community recreation area, two 11-a-side pitches and two 5-a-side pitches	Albert College Park Intervention Shaft: 63 months	Land take required for the Albert College Intervention shaft will result in the loss of both of the existing 5 a-side pitches and a small portion of one of the full-sized pitches. Negative, significant, short-term effect. However, to maintain the existing facilities, it is proposed to rotate the existing full-sized pitches 90 degrees and locate them side-by-side to the east of the park, resulting in slightly reduced dimensions. Sufficient area will be available to increase the dimensions of both 5 a-side pitches. Sufficient area will also be available for circulation around the pitches while they are occupied. The impacts will be reduced to negative, slight, short-term.
	Home Farm FC soccer pitches, Mobhi Road	One full size soccer pitch	Griffith Park Station: 105 months	During construction, the pitch will be used for construction. Negative, slight, medium-term effect.
Section 4C	Markievicz Leisure Centre	Sports and fitness centre with a swimming pool, gymnasium, studio and associated classes that is owned and operated by Dublin City Council	Tara Station: 105 months	The Leisure Centre will be demolished as a result of land take at Tara Station. Negative, significant, permanent. However, TII have committed to fund the re-provision of a sports centre at Ringsend which has been agreed with DCC, reducing the impacts to negative, slight, permanent.

Specifically, the Whitehall Rangers FC pitches at Dardistown will be permanently acquired to accommodate the Dardistown Depot and the College Gate Apartment Complex which houses the existing Markievicz Leisure Centre will be demolished to accommodate the proposed Tara Station.

In addition, there are a range of indoor and outdoor facilities delivering publicly accessible and private services to the local communities in all sections of the Study Area (outside of the Project Boundary specifically) that will be impacted during construction. However, the population will still be able to access other facilities across the Study Area given the overall quantum of facilities within the Study Area and across the Dublin region. The impact on leisure, recreation and sports facilities overall is considered to be negative, moderate, medium-term during construction of the proposed Project.

11.5.2.5 Connectivity and Land Use

11.5.2.5.1 Journey Patterns and Amenity

Construction traffic will use the existing road network and the construction vehicle movements required during the construction phase, including a detailed breakdown of vehicle types and material rates is described in the Construction Vehicles Report in Appendix A5.7 and Chapter 9 (Traffic & Transport). Designated access and egress will be put in place for each site and a comprehensive Scheme Traffic Management Plan (STMP) will be put in place and implemented across the Study Area as identified in Chapter 5 (MetroLink Construction Phase).

The construction of the stations will require large areas of road space to be removed and these temporary traffic management works (such as road safety audits, erection of signage and hoarding, diversions and road closures) along with enabling works (including archaeological excavations, utility diversions, service connections and site establishment) and construction deliveries/removal can impact on accessibility and connectivity at the local level.

Overall, these construction works will be more prevalent in Section 1 of the Study Area due to the extensive above ground works, particularly along the R132 where numerous bus stops and bus routes will be relocated and diverted along with the closure of the adjoining footpath. In contrast within Section 2, 3, 4A, 4B and 4C tunnelling will reduce the extent of above ground works and thus the effects will be more localised effects around stations and the Project Boundary as described in detail on a site-specific basis in Section 9.5.1 of Chapter 9 (Traffic & Transport). Further the retained cut works at Dardistown depot are isolated from roads and residences so that effects will be minimal and not significant. Generally, the traffic management measures during construction will result in the movement of various bus stops (for Dublin Bus, Bus Eireann and other operator services) whilst some footpaths, roads and cycle paths will be subject to localised diversions and/or closures. It should also be noted that portions of the Royal Canal and Grand Canal (i.e. at Glasnevin and Charlemont Stations respectively) will be closed to accommodate construction activities within the Project Boundary which may impact on amenity and necessitate diversions for cyclists, pedestrians and road users. The construction of the proposed Project at Glasnevin will necessitate the temporary closure of the existing Royal Canal Way at Cross Guns Bridge/5th Lock, with the north bank of the canal falling within the Project Boundary. Users of this path will be diverted along the south bank of the canal, re-joining the Royal Canal Way via a temporary pedestrian/cycle bridge.

Some delays are inevitable and will represent a negative effect on journey patterns and amenity across the Study Area and this in turn, will impact vulnerable users and some people could be deterred from making journeys and loss of neighbourhood amenity. Specifically, this is expected to affect private cars, buses, cyclists and pedestrians to varying extents however the railway and Luas networks will not be impacted. Further, it is expected that this effect will relate to the population (i.e. just people) who live and travel through rather than land use.

This will be a negative, slight, medium-term impact on the Population travelling through the Study Area during construction as journey patterns and amenity (particularly those living in neighbourhoods within and adjacent to the Project Boundary) will be affected throughout construction.

11.5.2.5.2 Severance

The temporary closure of sections of roads, footpaths and some cycleways and the diversion of traffic around construction site compounds could exacerbate severance on local residents, employees of local businesses and other people passing through the Study Area. Temporary road closures will also require diversions and thus will exacerbate severance effect for local residents adjacent to construction activities, particularly those vulnerable users including pedestrians, cyclists, local residents with mobility issues along with the young, elderly and those with lower incomes that rely on these lower cost transport modes to move around.

Similarly, to journey patterns and amenity, the residents who will be most affected by severance due to the presence of the construction compounds are those within and adjacent to the Project Boundary as described in detail in Section 9.5.1 of Chapter 9 (Traffic & Transport). Specifically, the effects of severance will be most prevalent within Section 1 of the Study Area, due to the extensive and linear arrangement of construction works along the R132. This will be particularly relevant at Estuary Roundabout, R132 Swords Bypass, Chapel Lane and Malahide Roundabout where the footbridges that traverse the R132 will be demolished during construction and some private properties may experience severance.

The construction of Collins Avenue Station may generate some severance for local residents due to construction activities and temporary closures, in particular for residents in Albert College Court and Albert College Drive. Additionally, closures of portions of the Royal Canal and Grand Canal at Glasnevin and Charlemont stations respectively throughout construction may impact and generate severance for those neighbourhoods whilst vehicular movements may experience severance at all stations and in the vicinity of the Project Boundary throughout the Study Area. Perceived and actual severance may be exacerbated due to the presence of site hoarding, screening and the presence of construction compounds which can affect the streetscape, social cohesion along with access to facilities (including employment, community and social infrastructure, open space, sports facilities as described previously).

Given the duration of the Construction Phase, the extent of the Project Boundary and proximity to residential areas and facilities and infrastructure of importance to communities, the effect of severance and in the absence of mitigation, is a negative, significant, medium-term impact on Population and Land Use during construction of the proposed Project.

11.5.2.5.3 Land Use Zoning

During construction of the proposed Project, a total of 189.35 ha of land lies within the Project Boundary including 91.69ha to be acquired temporarily to accommodate construction compounds and construction activities (including enabling works, demolition, excavations, traffic diversions, station and route construction as well as tunnelling). An overview of the land use zoning within the Project Boundary is provided in Table 11.50 whilst the breakdown of land use zoning within the land that will be temporarily acquired is provided in Table 11.65.

Table 11.65: Land Use Zoning (Hectares) by Section that will be temporarily acquired during construction (Reflect adopted zoning in DCC and FCC as assessed 2021)

Land Use Zoning	Section 1	Section 2 and 3	Section 4A	Section 4B	Section 4C
C1.2 - Retail warehouse	1.08	0.00	0.00	0.00	0.00
C2.1 - Industrial, enterprise, employment	0.00	0.00	0.00	0.00	0.00
C3 - Office, business/technology park and related	4.30	14.58	0.00	0.00	0.00
C6 - Mixed/general commercial/industrial/enterprise uses	0.00	21.44	0.00	0.00	0.00
G3 - Conservation, amenity or buffer space, corridor/belt, landscape	4.93	0.00	0.00	0.43	0.00
G4 - Active open space	1.96	0.32	0.00	0.00	0.00
G5 - Mixed/general 'green'/recreation/conservation, other	0.00	0.00	0.16	3.80	0.16
M1 - Mixed Use, general development, opportunity/proposal site	16.37	6.45	0.00	0.00	0.00
M2 - City/Town/village Centre, central area	1.74	0.00	0.00	0.00	0.00
M3 - District, neighbourhood centre	0.00	0.00	26.24	1.00	0.00
M5 - Other mix of uses	0.00	0.00	1.20	0.00	1.20
N1.3 - Airport	0.66	0.00	0.00	0.00	0.00
O2 - General	0.00	0.00	0.00	0.01	0.00
R1 - New/proposed residential	0.00	0.00	0.00	0.00	0.00
R2 - Existing residential	0.25	0.00	0.20	0.15	0.20
S5 - Mixed/general community services/facilities uses	0.00	0.00	0.00	0.77	0.00
Total	31.28	42.79	27.81	6.17	1.57

Given the length of the Construction Phase (i.e. 9.25 years) and recognition of the need for the proposed Project as set out in the NPF and RSES, the land use zoning that will be within the Project Boundary and/or temporarily acquired during construction of the proposed Project could be appropriately reflected and considered as part of the forthcoming updates to the County Development Plans for Fingal and Dublin City (i.e. in a similar manner to the Metro Economic Corridor as designated in the CDP for Fingal). Further details in relation to land to be acquired as a result of the proposed Project has been separately addressed in Chapter 21 (Land Take). With regards to Population and Land Use, this is considered to be a negative, slight, medium-term impact during construction of the proposed Project.

11.5.2.5.4 Residential Lands

During construction of the proposed Project, a total of 11.87ha of residential land is within the Project Boundary and 0.80ha of that will be acquired temporarily to accommodate construction compounds and construction activities (including enabling works, demolition, excavations, traffic diversions, station and route construction as well as tunnelling). This will reduce the availability of residential land at the local level, however the overall availability across the Study Area will generally remain at approximately 704ha. Further, the relevant planning policy (as set out in the Planning Report for Railway Order) has also identified the need to implement the proposed Project before proceeding with some of these developments.

The impact on residential zoned land is therefore considered to be a negative, not significant, medium-term impact at the regional level during construction of the proposed Project. A breakdown of the land designated for residential that will be affected per section within the Study Area is provided in Table 11.66.

Table 11.66: Residential Land that will be Impacted in the Study Area during Construction

Section	Location	Size of Area
Section 1	Along the R132 corridor including pockets at Balheary, Seatown, Pavilions and Pinnock hill roundabouts	0.7ha within Project Boundary and 0.25ha within the Temporary Land Take which is designated as R2 – Existing residential
Section 2 and 3	Adjacent to Balcurris Park (to the north)	1.12ha within Project Boundary and none within the Temporary Land Take, of which the majority (1ha) designated as R1 – New/proposed residential and the remainder is R2 – Existing residential
Section 4A	Adjacent to Balcurris Park (to the south)	2.53ha within Project Boundary and 0.2ha within the Temporary Land Take, of which the majority (2.00 ha) within the Project Boundary is designated as R1 – New/proposed residential and the remainder (including all within the Temporary Land Take) is R2 – Existing residential
	At Ballymun Road – Collins Avenue junction (to the north)	
Section 4B	At Ballymun Road – Collins Avenue junction (to the south)	3.42ha within Project Boundary and 0.15ha within the Temporary Land Take, of which the majority (3.00 ha) within the Project Boundary is designated as R1 – New/proposed residential and the remainder (including all within the Temporary Land Take) is R2 – Existing residential
	Dalcassian Downs adjacent to the Royal Canal	
Section 4C	Whitworth Road, Eglinton Terrace and the Royal Canal corridor	4.1ha within Project Boundary and 0.2ha within the Temporary Land Take, of which the majority (4.00 ha) within the Project Boundary is designated as R1 – New/proposed residential and the remainder (including all within the Temporary Land Take) is R2 – Existing residential
	Berkeley Road – Berkeley Street	
	Dartmouth Road – Ranelagh Road	

11.5.3 Operational Phase

11.5.3.1 Overview

This section examines the significant effects of the proposed Project that are likely to arise during the operational phase. This assessment has been undertaken based on the details as described in detail in Chapter 6 (MetroLink Operations & Maintenance).

Section 1

The operation of the proposed Project will facilitate statutory planning objectives to develop lands to the north, east and west of the proposed Estuary Station zoned 'Metro Economic Corridor'. This is also in accordance with National Policy Objectives to facilitate sustainable development and compact urban form, co-ordinated with infrastructure delivery. The site is also in close proximity to Swords Business Park and Swords Business Campus. The impact on Land Use is considered to be long-term significant and positive. With greatly improved access to sustainable public transport, the impact on Populations is considered to be positive, significant and long-term.

The proposed Project will provide a high frequency, sustainable and integrated public transport solution that will cater to the travel requirements of a large and growing population in Swords and along the R132 corridor. Landscaping and urban design works proposed will provide for a greatly improved urban realm and pedestrian environment along the R132 corridor and at the stations. It shall reduce severance and support linkage for population groups between facilities, services and residential areas. The impact on Population is therefore considered to be positive, significant and long-term.

In terms of land use, the proposed project shall positively interact with land designations for 'Metro Economic Corridor' and Masterplans for Seatown (North and South). The proposed Swords Central Station shall positively facilitate development of lands designated 'Metro Economic Corridor', 'Major Town Centre' and 'High Technology' lands further to the south (Barrysparks & Crowscastle).

The proposed Project supports FCC's vision for the long-term development of Swords to 'promote and facilitate the sustainable development of Swords Town as a vibrant consolidated major town with a thriving economy; an integrated public transport network'.

The proposed Project shall provide for improved access to employment locations along the R132 corridor as well as the retail destinations (discussed below). The proposed Fosterstown Station shall improve sustainable transport access and to the retail park and proximate enterprise and employment lands. The proposed Project shall positively facilitate Part C of the Swords Masterplans (FCC 2019) greenfield development to the west of the R132 (and proposed Fosterstown Station) between Forest Road, the Pinnock Hill roundabout and Boroimhe Willows. This is also in accordance with NPOs to facilitate sustainable development and compact urban form, co-ordinated with infrastructure delivery. The impact on land-use is therefore considered to be positive, significant and long-term.

Section 2 and 3

The operation of the proposed Project will facilitate Dublin Airport Station to ensure effective linkage between the existing Ground Transportation Centre. The provision of the Airport Station is a fundamental objective of the proposed Project and statutory land use plans for the area. The Station shall support sustainable public access to the Airport from the city centre and all other metro stations, benefitting those who work at the campus and use the airport for travel. The impact on Population is considered long-term, significant and positive. The proposed Project supports more sustainable access to the airport and the impact therefore is considered, slight and long-term.

The impact on Land Use is considered to be long-term, significant and positive. Arising from improved access, impact on Populations is considered to be positive, significant and long-term.

The proposed Project shall positively facilitate the development of lands surrounding Dardistown as provided for under the Local Area Plan (FCC 2013). This is an important strategic development landbank between Dublin City Centre and Dublin Airport that is accessible from the M50 Motorway. The Dardistown Depot will also be an important economic and activity hub for the area. The impact on both Population and Land Use is considered to be positive, moderate and long term.

The proposed Project will positively facilitate the development of lands surrounding the proposed Northwood Station zoned 'Metro Economic Corridor' and mix of commercial, residential and retail uses in the area. The impact on both Land Use and Population is considered positive, moderate and long term.

Section 4A and 4B

The development of Ballymun Station will support land use planning objectives for development of the 'District Centre' and to '*provide for and improve mixed services facilities*' including compact urban development, expanded employment provision and residential growth. The impact on both Land Use and Population is considered to be positive, moderate and long-term.

At Collins Avenue Station the proposed Project shall provide improved access to a wide range of community facilities including schools, Dublin City University and associated sport campuses, and community facilities nearby as described in detail in Section 11.4.4.3 of this Chapter. The impact on Land Use is considered to be long-term, slight and positive. The impact on Population is considered to be positive, significant and long-term.

Griffith Park Station is also a primarily residential area with the site in use as playing fields. Educational facilities are described in detail in Section 11.4.4.3 and sports facilities in 11.4.4.4 of this Chapter. The proposed Project provides for an enhanced public realm and reinstated playing pitches in this location. The impact on Land Use is considered to be positive, slight and long-term. The impact on Population is considered positive, moderate and long-term.

The proposed Glasnevin Station shall positively facilitate the land use zoning 'District Centre' and be constructed here to provide an interchange between main line and suburban rail networks (as described in detail in Chapter 4 (Description of the MetroLink Project)) and an enhanced public realm. The impact on Land Use is considered to be positive, slight and long-term. The impact on Population is considered to be positive, moderate and long-term.

Section 4C

The proposed underground Mater Station shall facilitate high quality public transport access to the hospital and surrounding area and provide for the reinstatement of an improved public realm. The proposed Project shall facilitate land use objectives for Inner Suburban (Sustainable Mixed-Use) with the 'Strategic Development and Regeneration Area' around Grangegorman and 'District Centre' around Phibsborough. The impact on Land Use is considered to be positive, slight and long-term. The impact on Population is considered to be positive, moderate and long-term.

The proposed O'Connell Street Station will facilitate land use objectives supporting O'Connell Street and surrounding district as a hub for economic activity, supporting tourism, institutional, education, administrative, retail, commercial and residential functions. It will also align with public transport connections that traverse through the area (including a large number of city and regional bus routes and the Luas Red Line services that connect to Connolly Station and Heuston Station which have national rail connections). The impact on Land Use is considered positive, moderate and long term. The impact on Population is considered positive, significant and long term.

The Tara Station is also located in a prime city centre location and an intensive city centre hub for tourist, institutional, education, administrative, retail, commercial and residential uses given its strategic location on the banks of the River Liffey close to Custom House Quay, the employment hub of the IFSC and close to Trinity College Dublin. The existing Tara Station is located to the north-east of the proposed Tara Station and it is intended that there will be an interchange between the DART, Iarnród

Éireann and MetroLink networks with urban realm enhancements to create a more permeable and pedestrian friendly space. The impact on Land Use is considered positive, moderate and long term. The impact on Population is considered positive, moderate and long term.

The operation of St Stephen's Green Station is another primary access point for the southern city centre including numerous cultural and visitor attractions, retail destination and office district. It also supports interchange with the existing Luas stop to the west and the numerous bus routes that traverse the area. The impact on Land Use is considered long term and moderately positive. The impact on Population is considered positive, moderate and long term.

The proposed underground Charlemont Station will be consistent with planning objectives to provide for 'Employment/Enterprise' and residential land use in the vicinity. The designation of part of Charlemont Place to the north as a 'District Centre' will complement the southern edge of city centre location proximate to mixed-use office district. There is potential for interchange with the Luas Green Line and bus routes. The impact on Land Use is considered positive, moderate and long term. The impact on Population is considered positive, moderate and long term.

11.5.3.2 Demography and Households

There will be no further loss of households during operation of the proposed Project (other than those acquired during construction as described in Section 11.5.2.2 of this Chapter). During operation, the necessary infrastructure and services required by the overall change in population and households within the Study Area shall be managed by the respective planning authorities in accordance with the population targets set out in the NPF, RSES and CDPs in accordance with government guidelines. The proposed Project shall not of itself give rise to population growth (and thus additional households) but it shall facilitate and support the interaction between transport and effective land use. The implementation of the proposed Project will support the development of residential communities at higher densities in proximity to high-capacity public transport nodes and thus facilitate compact growth across the Study Area, in line with key goals and objectives of the National Planning Framework: Ireland 2040, Housing for All 2021-2030, and supporting ambitions set out in the Climate Action Plan 2021 and various other national, regional and local policies as detailed in the Planning Report for Railway Order. The impact on Population is considered positive, moderate and long term.

As noted in Section 11.5.1 of this Chapter, the planning datasheets have been provided by the National Transport Authority for the forecast years 2030, 2040, 2045 and 2060. Using these data, population and jobs projections along the alignment have been incorporated within model forecasts, and therefore any potential cumulative impacts during the operation of the proposed Project have been considered in the Traffic & Transport assessment and thus Chapter 9 (Traffic & Transport) should be referred to for further details in this regard.

11.5.3.3 Economic Activity and Employment

11.5.3.3.1 Expenditure

A range of contracts will be put in place to facilitate the operation of the proposed Project as described in detail in Chapter 6 (MetroLink Operations and Maintenance). The annual operational expenditure (OPEX) for proposed Project is estimated to be €2.977 billion over the period 2029 - 2090. This will be a positive, moderate, medium-term impact for the local and regional economy during the operation of the proposed Project.

As outlined in Section 11.5.2.3 of this Chapter, the Leontief Inverse Coefficients have also been considered for the operation of the proposed Project. A multiplier of 1.396 has been identified for the land transport services industry (CSO 2015). On the basis of the OPEX noted above over a 62-year period, it has been estimated that multiplier effects will equate to approximately €67 million per year. This will be a positive, moderate, permanent impact for the local and regional economy during the operation of the proposed Project.

11.5.3.3.2 *Employment*

It is estimated that the operation of the proposed Project would require approximately 300 FTE employees (i.e. direct permanent staff). The workforce associated with the proposed Project will be distributed throughout the Study Area including an estimated 17 FTE staff at the Operational Control Centre at Dardistown Depot, approximately 100 FTE maintenance and technical staff at the Dardistown Depot along with other back of house staff for maintenance, security and cleaning.

The provision of direct employment opportunities (full and part-time employment) within the transport and communications sectors (i.e. throughout the supply chain) will have a positive, slight, long-term impact on the local and regional economy.

Once operational, individual businesses in proximity to the stations will also gain relative advantage to competitors not served by the rail system in the first instance. This is expected to balance over time as land values adjust, however an indirect employment increase is anticipated given the indirect economic effects associated with additional expenditure and multiplier effects as described above. As such there will be an indirect, positive, slight, long-term impact on employment in those business neighbouring stations associated with increased use of local services and retail outlets by customers and commuters throughout the Study Area.

11.5.3.3.3 *Key Sectors*

Better transport on its own is unlikely to stimulate economic activity within individual sectors, however it can encourage operational efficiencies and clustering that can benefit from economies of scale by way of improved accessibility (i.e. the high frequency trains during the hours of 5:30 – 12:30 with peak capacity of up to 20,000 passengers per hour). Initially, any impacts will be at the neighbourhood level as individual businesses in proximity to the stations would gain relative advantage to competitors not served by the infrastructure. However, over the long term the location of high value activities within the relevant sectors would shift to reflect land values, assuming all other factors are held equal.

Overall, the trips that will be made per year (estimated to be 53 million in the Opening Year) along the route alignment and those sectors within clusters of businesses and/or significant assets (e.g. nationally important tourist attractions) in close proximity will benefit during operation of the proposed Project, cumulatively bringing about benefits for the economy. Analysis of the isochrones (i.e. walking distance from stations in Figure 11.15) illustrates that there are 10,907 businesses within a 15-minute walking distance of the stations. Of those, 2,479 businesses are within a five-minute walking distance of the stations. Each of those businesses will therefore be indirectly impacted as accessibility and connectivity will be improved through the provision and operation of the proposed Project.

Other than the indirect and induced benefits that have been addressed under expenditure, other industries will not be significantly impacted during the operation of the proposed Project. Further, the impact on the operation of individual businesses and specific establishments other than those identified in the following subsections is also not considered to be significant during operation of the proposed Project.

Tourism, Retail and Hospitality

The analysis of the isochrones (i.e. walking distance from stations in Figure 11.15) illustrates that those retail hubs (i.e. clusters of shops and shopping centres) identified in Table 11.67 will be within a reasonable walking distance and as such retail outlets therein will likely benefit from the operation of the proposed Project. Overall, the impact on the retail industry is considered to be a positive, moderate, permanent effect for the local and regional economy and for each of the locations listed during operation of the proposed Project.

Table 11.67: Impacts on Retail Cluster and Shopping Centres during the Operation of the Proposed Project

Section	Shopping Centre / Retail Cluster	Location	Walking Distance
Section 1	Pavilions Shopping Centre	Swords Central Station	10 minutes
	Airside Retail Park	Fosterstown Station	5 minutes
Section 2 and 3	Gulliver's Retail Park	Northwood Station	5 minutes
	IKEA Ballymun	Northwood Station	15 minutes
Section 4A	n/a		
Section 4B	Glasnevin Town Centre shops	Glasnevin Station	5 minutes
Section 4C	Phibsborough Town Centre shops	Glasnevin Station / Mater Station	10 minutes
	O'Connell Street – Henry Street shopping district	O' Connell Street Station	5 minutes
	Temple Bar shopping district	Tara Station	10 minutes
	St Stephen's Green – Grafton Street shopping district	St Stephen's Green Station	5 minutes
	City centre core	Various	5-15 minutes

Specific consideration has been given to the tourist attractions and accommodation establishments that have been identified within the Study Area within a reasonable walking distance of the proposed Project. Overall, the impact on the hospitality and tourism industry is considered to be a positive, moderate, permanent effect for the local, regional and state economy during operation of the proposed Project given connectivity with Dublin Airport and the quantum of tourist accommodation and tourism assets within the Study Area.

Transport and Communications

The analysis of the isochrones (i.e. walking distance from stations in Figure 11.15) illustrates that those transport and communications hubs as described in Sections 11.4.3.7 and 11.5.2.3.3 of this Chapter will be within a reasonable walking distance and as such will likely benefit from the operation of the proposed Project.

Specifically, accessibility of and connectivity to Dublin Airport will be improved and offer a strategic connection for passengers to areas within Dublin City and further afield. With the Park and Ride facility at the Estuary Station north of Swords, accessibility for persons travelling to and from the north of Ireland will be greatly enhanced. As set out in Section 6.4 of Chapter 6 (MetroLink Operations & Maintenance), the proposed maximum headway (i.e. longest wait time) will be 7.5 minutes for the 'Dublin Airport-Charlemont' section of the line and 15 minutes for the 'Estuary-Dublin Airport' section of the line. The service will run between 5:30am and 0:30am. The current operational strategy does not include for night-time services on the proposed Project; however, it is likely that night time services will run in the future on an occasional basis to facilitate night time travel during busy holiday periods. As described in detail in Section 9.5.2.2.1.1 of Chapter 9 (Traffic & Transport), the provision of a fast, efficient and reliable transit to Dublin Airport and the City Centre, therefore alleviating traffic impacts through facilitating a modal shift from private car onto public transport. Furthermore, it is envisaged that the proposed Project will provide an attractive alternative for journeys that are currently made by bus, therefore it is likely that there will be a shift from existing bus services onto the proposed Project, resulting in a reduction in bus, taxi and private car trips on the road network at Dublin Airport. Overall,

this will benefit users of and employees at Dublin Airport along with indirectly benefiting the businesses therein and improving the overall attractiveness of Dublin Airport as a major hub in Europe.

Overall, the impact on the transport and communication industry is considered to be a positive, moderate, permanent effect for the local and regional economy during operation of the proposed Project.

Development Potential/Capacity

Transport infrastructure of this scale will have a positive impact on an area by helping to unlock previously inaccessible or hard to reach undeveloped and/or underutilised sites. The proposed Project will indirectly increase capacity for development within the Study Area, particularly in those derelict, brownfield and greenfield sites that have relatively poor accessibility. It is recognised the provision of this infrastructure will indirectly enable the relevant planning authorities to plan for and grant consent for additional development in appropriately zoned lands within the Study Area during operation of the proposed Project.

The land designated as 'Metro Economic Corridor' is intended to facilitate high-density mixed-use development in order to stimulate economic activity and maximise the transport and socio-economic benefits of the proposed Project. Further, there are a number of masterplans and lands zoned for 'High Technology' that will benefit from the operation of the proposed Project. As such, a large quantum of future development will be enabled in currently undeveloped sites in Sections 1, 2 and 3 of the Study Area. In contrast, Sections 4A, 4B and 4C of the Study Area are mostly already developed, however it is anticipated that the proposed Project may enable regeneration and reinstatement of streetscapes therefore improving and activating the public realm in and around each station. Each station has been designed in such a way so as to integrate with the existing neighbourhoods and public realm, therefore passively facilitating future development potential along the route corridor. Stations at Ballymun and O'Connell Street have also been designed to integrate with planned over-site development.

11.5.3.4 Community and Social Infrastructure

11.5.3.4.1 Neighbourhood Amenity

At a neighbourhood level, the proposed Project will interact with urban environments in the vicinity of the stations. Indeed, the stations shall function as activity centres for communities comparable to commuter train stations in the city and thus facilitate additional pedestrian, cyclists and overall movements. The increased level of pedestrian footfall will provide opportunities for local services, enterprises and retail business and thus contribute to neighbourhood amenity through improved provision of services, employment opportunities and social cohesion where the stations enhance the urban realm. In established neighbourhoods the proposed Project will also introduce a new means of access/egress (at the local and regional level) to the locality providing a new experience of how populations experience and interact with local neighbourhoods across the Study Area.

Overall, the impact on neighbourhood amenity is considered to be a positive, moderate, permanent effect at the neighbourhood, local and regional level during operation of the proposed Project.

11.5.3.4.2 Social Infrastructure

The analysis of the isochrones (i.e. walking distance from stations in Figure 11.15) illustrates that a large range of social infrastructure will be within a reasonable walking distance and as such will likely benefit from the operation of the proposed Project.

The proposed Project will provide a frequent, high quality transport option along the route alignment and improve accessibility to social infrastructure within the Study Area through a more accessible public transport network. Overall, the impact on social infrastructure is considered to be a positive, moderate, permanent effect at the neighbourhood, local and regional level during operation of the proposed Project.

11.5.3.4.3 *Open Space, Leisure, Recreation and Sports Facilities*

The analysis of the isochrones (i.e. walking distance from stations in Figure 11.15) illustrates that a large range of open space, leisure, recreation and sports facilities will be within a reasonable walking distance and as such will likely benefit from the operation of the proposed Project.

The proposed Project will provide a frequent, high quality transport option along the route alignment and improve accessibility to open space, leisure, recreation and sports facilities within the Study Area. The proposed Project will also restore, enhance, or create open spaces and green spaces at stations and along the proposed Project route across the Study Area as described in Chapter 4 (Background to the MetroLink Project) and Chapter 27 (Landscape & Visual). This includes extensive landscaping along the R132 in Swords. It is designed to provide continuous connectivity through the landscape park from north to south, but also to provide connections to the adjacent neighbourhoods and across the R132, connecting areas in the east and west of Swords across the R132. It will provide new planting, high-quality landscaping, and new plazas along the R132. Additionally, the football pitches at Balheary are set to receive an overall enhancement after construction. Overall, the impact on open space, leisure, recreation and sports facilities is considered to be a positive, moderate, permanent effect at the neighbourhood, local and regional level during operation of the proposed Project.

11.5.3.5 *Connectivity and Land Use*

11.5.3.5.1 *Journey Patterns and Amenity*

The proposed Project will provide a new mode of transport for the population within the Study Area, which will improve accessibility and journey reliability. The largest benefit that the population would accrue is related to journey patterns and amenity through the increase in efficient travel and overall rail capacity enabling the community to access employment, social infrastructure, recreational facilities, valued places and wider social networks. Journey patterns and amenity will improve as the population will be better able to move across Dublin through more frequent and reliable access to services and employment. Overall satisfaction with neighbourhoods and across the general Study Area will likely be enhanced during operation of the proposed Project due to improved journey times and reliability as well as improved comfort and safety. This is considered to be a positive, significant, permanent impact at the neighbourhood, local and regional level during operation of the proposed Project.

The proposed Project will provide a frequent, high quality transport option along the route alignment that will shorten travel times (further detail on the effects on travel times are presented in Chapter 9 (Traffic & Transport)). Shorter travel times during operation of the proposed Project can increase economic efficiency (by enabling greater numbers of people to access employment or education in a more reasonable time) and improved wellbeing (associated with shorter, safer and more reliable transport mode that can reduce travel related stress). Further, social inclusion will be promoted through the operation of a travel option that is accessible to those without alternative transport modes, for all abilities and irrespective of inequalities or inequities. Step-free access will be provided throughout trains and stations, which will improve access to public transport for groups such as the elderly and people with disabilities. The improvement in commuting times via public transport modes and comparable reductions in journey times will be evident along the proposed Project alignment and will therefore directly contribute to and improve broader journey patterns. Journey patterns for commuters using public transport are therefore expected to represent a permanent, moderate and positive effect for the Population during operation of the proposed Project.

As described in detail in Chapter 9 (Traffic & Transport), congestion and delays in commuting to work via private car in Dublin City Centre is likely to decrease during operation of the proposed Project as a result of modal shift. Shorter and less stressful commutes are likely for the portion of the population that continue to commute via private car as journey times will decrease on most of the road network in the Study Area. Journey patterns for commuters using public transport (including the proposed Project and the wider public transport network) are therefore expected to result in a permanent, slight and positive effect for the Population of the Study Area and the Dublin region during operation of the proposed Project.

The proposed Project will provide a significant improvement in sustainable transport infrastructure across the Study Area. Access to sustainable transport will be further enhanced by provision of convenient interchanges with public transport and active travel at stations, such as provision of bus interchanges and of rail interchanges at Glasnevin and Tara stations. Bicycle access and bicycle parking facilities at and near each station are also a key design element of the proposed Project. Section 4.13 of Chapter 4 (Description of MetroLink Project) sets out the design arrangements for access to station, including outlining the bicycle parking requirement for the proposed Project and the provision at each station.

Within the FCC area, the full cycle parking provision will be accommodated at the proposed Project stations and the proposed level of bicycle parking provision has been agreed with FCC.

Due to space constraints in the vicinity of stations in the DCC area, it has not been possible to provide 100% of bicycle parking required for the Opening Year of the proposed Project at every station location. However, the maximum number of bicycle parking has been provided at each station given available space.

DCC supports the proposed cycle provision at each of the proposed station locations and has determined that as part of a wider cycling strategy supplementary bicycle provision and cycle parking will be provided at locations in close proximity to the proposed station locations.

As a result, the proposed Project will have a positive impact on access to sustainable travel within the Study Area and the wider region, with a moderate, permanent effect.

11.5.3.5.2 Severance

The proposed Project route and associated access points throughout the Study Area will increase footfall at all stations and improve overall accessibility as noted previously and described in detail in Chapter 9 (Traffic & Transport). Specifically, the operation of the proposed Project will increase the effective proximity (from time rather than distance) of the 146,604 people in 61,738 households living in the Study Area to education, employment, social infrastructure, and the broader transport network along with other assets that enhance quality of life. The effect on severance is therefore expected to be permanent, moderate and positive for the Population at the regional level during operation of the proposed Project. With regards to population, this is considered to be a Slight, permanent, positive impact during operation of the proposed Project. The proposed Project will not create new severance at a local level during operation, and connections temporarily severed during construction will be restored. Where connections or roads are permanently closed by the proposed Project (as with Ennis Lane at Estuary Station) diversions will be put in place to provide local new access. Stations will be designed to enable local connectivity and linkages, and the provision of a new linear open and green space on the R132 will enhance local linkages. As a result, the overall impact on severance at a local level within the Study Area is assessed as a permanent, slight, and positive effect.

11.5.3.5.3 Land Use

The operation of the proposed Project will not directly impact on Land Use; however, the provision and operation of the proposed Project will indirectly increase development capacity and facilitate future development within the Study Area. The likely significant effects on Land Use and associated impacts on the Population during operation of the proposed Project are therefore considered to be neutral and imperceptible.

Where it is known that land use is likely to change and/or additional development is forthcoming, these future receptors have been assumed for the purposes of the cumulative assessment and further detail on this is provided in Chapter 30 (Cumulative Impacts of Interaction Between Other Projects and MetroLink). It is also acknowledged that provision has been made for over-site development above some of the stations. Any such over-site development is not within the scope of the proposed Project (nor the subject of this EIAR) and should these be brought forward these would be undertaken by way of a separate planning application(s) at a later date.

Further details in relation to land to be acquired as a result of the proposed Project have been separately addressed in Chapter 21 (Land Take).

11.6 Mitigation Measures

11.6.1 Construction Phase

Chapter 5 (MetroLink Construction Phase) describes in detail the various systems, measures, procedures and monitoring mechanisms that will be implemented across the proposed Project during construction. This includes measures targeted specifically for property owners affected by the proposed Project, as well as measures aimed more broadly at mitigating impacts on local communities and groups.

11.6.1.1 Measures for Property Owners

As referred to above, MetroLink will require the acquisition of numerous land and property interests in both public and private ownership including a range of residential and commercial properties that are occupied. A Land Acquisition Strategy (LAS) has been prepared by TII which sets out the arrangements proposed for the provision of information and assistance to the residential owners / occupiers of land and property subject to compulsory purchase for the delivery of MetroLink. The LAS establishes the arrangements in place for communication and engagement with all affected parties, the assistance and supports that will be available to residential and commercial property owners including on acquisition and relocation. TII will be making all reasonable efforts to contact affected property owners and occupiers (where applicable) to give them the opportunity to provide feedback, with the aim to better understand their specific circumstances and identify if any assistance is required in respect of the proposed Project.

TII is committed to having a Property Owner Protection Scheme (POPS) in place prior to construction works commencing. The POPS comprises condition surveys of private properties and other selected properties along the route of the proposed Project. The purpose of the condition surveys would be to ascertain the condition of the properties before, during (if deemed necessary), and after the completion of the proposed Project to determine whether there has been any deterioration of any of the properties surveyed and whether the same may be attributable to the proposed Project and recommend repairs as appropriate. POPS will be a panel comprising three independent survey companies from which property owners can choose one to undertake a condition survey on their property, under instruction from the Client representative. The panel surveyor shall also recommend the repairs required where they assess that damage has been caused by the proposed Project.

Condition survey data gathered pre and post construction, and possibly during construction, will be used to assist the property owner and TII in the swift and accurate verification of any property damage claims which may be received from property owners. Condition surveys to be undertaken will take the form of:

- Pre-works condition surveys;
- Interim-works condition surveys (if required);
- Interim-works condition surveys (post repair works) (if required); and
- Post-works condition surveys.

The POPS would be introduced by TII through public consultation and will be formally advised to eligible property owners by the Public Relations Department. Property owners would be informed of the POPS, how to register, when and how to select their preferred panel surveyor and all further applicable detail. The premise of the POPS is that any property owner of a private property located within the POPS area may sign up to the POPS and obtain free, independent condition surveys of their property. Property owners within the POPS area will be invited to register for the POPS by TII. A reference number will be assigned to each registration and the proposed Project team will acknowledge receipt of the registration to the property owner.

At the appropriate time, in terms of the programme for the works in the proposed Project area, the proposed Project team will contact each property owner to advise that the proposed Project works are

due to commence in the vicinity of their property and request the choice of panel surveyor. In the event that the property owner feels they are unable to nominate a panel surveyor but nonetheless wishes to avail themselves of the POPS, TII's representative will nominate a panel surveyor on the property owner's behalf on a strict rotation basis. The nominated panel surveyor will contact the property owner directly and agree a mutually convenient time to carry out an internal and external pre-works condition survey on the owner's property. The panel surveyor shall ensure the survey is carried out prior to construction work commencing following instruction from the proposed Project team. After the completion of the proposed Project works in the vicinity of a particular property, the property owner will be sent a letter by the proposed Project team advising that the proposed Project works have concluded and inviting them to allow a post-works condition survey to be carried out. The same panel surveyor that carried out the pre-works condition survey, shall carry out the post-works condition survey to facilitate comparison of the property condition pre and post construction unless the property owner objects with good reason.

Interim-works condition surveys may be instructed by the proposed Project team where there is a particular concern that a property has been damaged by the proposed Project works and where such an interim-works condition survey might mitigate future loss. It should be noted that where repair works are identified as required by an interim-works condition survey, a separate Repair Recommendation Report shall be provided. Following the repairs being carried out, a further interim-works condition survey (post repair works) shall be carried out by the panel surveyor. All condition survey reports will be issued by the panel surveyor to the property owner and the TII representative by post and email respectively on the same day. The property owner may submit an application to the POPS to have their property rectified where a survey report by the panel surveyor outlined in a Repair Recommendation Report identifies defects:

- which have been caused to the property as a result of the proposed Project works; and
- for which the estimated cost of rectification will not exceed €45,000.00 excluding VAT.

The property owner may still avail of their standard legal rights. Additionally, all land acquisition will be undertaken in accordance with the Compulsory Purchase Order and where possible, minimise the extent and seek to negotiate directly with affected owners so that communication is transparent, open and appropriate. TII will offer compensation to property owners for land that is deemed to be acquired land in accordance with the general compulsory purchase code. Appropriate compensation will also be payable to owners of properties that are subject to short-term and or temporary acquisition. Compensation will be provided through the Compulsory Purchase Order (CPO) process. Details are set out in the LAS regarding the arrangements proposed for the provision of information and assistance to owners and occupiers of land required for the construction and/or operation of the MetroLink project whether or not the occupier has any interest in the land which may be subject to a compulsorily acquisition.

11.6.1.2 Construction Activity

Measures to mitigate and monitor impacts as a result of construction activity across the proposed Project are detailed in Chapter 5 (MetroLink Construction Phase) and summarised in Chapter 31 (Summaries of the Route Wide Mitigation & Monitoring Proposed). Measures and commitments of relevance to population include:

- Full implementation of the range of dust minimisation measures detailed in the mitigation section of Chapter 16 (Air Quality);
- Full implementation of the range of noise minimisation measures detailed in mitigation section of Chapter 13 (Airborne Noise & Vibration) and Chapter 14 (Groundborne Noise & Vibration);
- Temporary relocation relates to buildings where isolated floors or façades are impacted by the works and will benefit from temporary relocation of any noise sensitive activities for the duration of the phase of works. Where this option is recommended, a consultation process will be established between TII, the contractor and the building occupants / owners;
- Ensure all construction activities are appropriately located so as to limit impacts and reduce the footprint of construction activities where possible to avoid and/or minimise impacts;

- All construction areas will be suitably fenced, screened and monitored so that access to the sites will be limited to authorised personnel in the interest of public health and safety;
- Installation of the site hoarding/fencing (2.4m in height as a minimum) and gates to ensure that the sites are secure. An exception to the standard 2.4m hoarding or fencing will be at areas that need specific sound barriers or boundary treatment identified in Chapter 13 (Airborne Noise & Vibration) and as identified in the Landscape and Visual Impact Assessment discussed in Chapter 27 (Landscape & Visual). It is also set out in Chapter 13 (Airborne Noise & Vibration) that noise insulation or the reasonable costs thereof will be offered to owners, where applied for by owners or occupiers, subject to meeting the other requirements of the proposed Project. Further, works should be staggered wherever possible and hoarding removed as soon as it is no longer needed to mitigate against severance;
- Full implementation of the range of mobility and traffic management measures including Scheme Traffic Management Plan as detailed in mitigation section of Chapter 9 (Traffic & Transport);
- Alternative access arrangements (or diversions) will be put in place at the relevant locations and appropriate temporary signage will be put in place on roads, footpaths or cycleways that will be temporarily affected by the construction works. This signage will be monitored to ensure that it guides local residents, commercial activities and visitors to the temporary access arrangements in place that facilitate access to homes and businesses;
- Provide for safe pedestrian and cyclist access, egress and movement at points of entry and exit of construction vehicles at all sites. Tactile and audible signals for those with visual impairments should be integrated to ensure equitable access for all users;
- Implement and monitor safe working practices, in accordance with the relevant legislation during construction to protect the workers and visitors to the construction sites;
- The contractor(s) will inform stakeholders of the general construction process/phasing in line with the TII Community Engagement Strategy to ensure local residents and businesses are fully informed on the nature and duration of construction works taking place in the vicinity. Where possible crime prevention through environmental design principles (e.g. adequate lighting in all areas, active and passive surveillance) should be incorporated given the duration of the Construction Phase;
- Advance notice will be given to the owners of all residential, commercial and community properties (including social infrastructure) before construction starts and in advance of any major planned disruptions of services or localised traffic management measures noting in particular residents and businesses affected by temporary construction works crossing roads and those located within 250m of the construction works;
- Any works that could involve high noise or visual intrusion during major social events (such as St Patrick's Day or New Year's Eve festivals in the city centre or local annual events) will be avoided;
- Temporary adjustments will be made to the layout of affected pitches, as detailed in Section 5.7.1, Section 5.9.1 and Section 5.10.5 of Chapter 5 (MetroLink Construction Phase), during the works with rehabilitation of its pitches to be carried out at the earliest practicable opportunity following construction of the proposed Project;
- The permanent relocation of Whitehall Rangers FC from Dardistown will be accommodated at the earliest practicable opportunity;
- Re-provision of Markievicz Leisure Centre will be funded by TII upon selection of a suitable alternative site by Dublin City Council;
- Community Relations Officers (CRO's) will be employed during the construction of the proposed Project and contact details will be provided on the proposed Project website so that stakeholders and communities can make contact as required. The CRO's will be responsible for maintaining open, transparent and positive relationship with members of the public, local businesses, groups and organisations affected by the works. Specifically, the CRO's will work closely with Transport Infrastructure Ireland and the appointed contractors to ensure that all effort to address public concerns are made, and to ensure that information on the nature and duration of all works is provided; and
- Reinstate all land as quickly as possible following construction so as to expedite any local disruption and return to existing surface land uses that can be used by the surrounding residents, businesses and communities.

Having regard to the Project sustainability aims, the following key sustainability aims as detailed in Chapter 4 (Description of the MetroLink Project) are relevant to Population and Land Use and will be implemented during construction:

- Develop and implement an Apprenticeship and Trainee Programme, incorporating outreach programme with local schools and colleges.
- Provide an inclusive approach to recruitment, staff training and rotas to build community relationships and foster a sense of safety.
- Develop and implement a programme of community engagement to raise awareness of sustainability topics linked to the design, construction and operation of the proposed Project.
- Facilitate multidisciplinary workshops (including client, designers, technical specialists and contractor), encouraging collaboration to identify challenges and opportunities of delivering MetroLink.
- Incorporate skills and learning targets into MetroLink's construction contracts and measure and report progress on a monthly basis.
- Develop and maintain stakeholder and community engagement plan, including centralised complaint reporting line and minimum standards for resolution for construction and programme for virtual and face to face events during design and operation.
- Provide a dedicated and responsive helpline and social media channels (e.g. Twitter, Instagram) for the community before construction starts.
- Ongoing engagement and contingency planning with other transport agencies to maintain level of service during disruption events e.g. mass power outage and flooding.
- Use the universal design approach to design out safety issues in the construction and operational phases of the proposed Project.
- Establish a culture of everyone safe home at the end of their shift.
- Develop and include targets for the safe construction of the proposed Project.
- Implement and maintain an inclusive operational emergency response action plan.
- Implement and maintain measures to reduce antisocial behaviour, including provision of real time CCTV and appropriate lighting.
- Establish Noise and Vibration baseline and implement and monitor mitigation measures to reduce impacts during construction and operation.
- Establish an air quality baseline and collaborate with others to deliver reductions in air pollution.
- Appraise and implement a programme that provides help and support to those directly affected by the construction of the proposed Project, in partnership with others.
- Deliver construction logistics plans that mitigate the impacts of construction traffic on the communities being worked in.
- Include targets for worker and community health and wellbeing in contracts.
- Maintain access for all to facilities, stations, trains and public spaces to promote independent mobility.
- Establish a construction productivity benchmark for the proposed Project and demonstrate gains against this benchmark.
- Identify innovative technologies and practices that provide value for money and additional benefits to MetroLink users.
- Investigate and incorporate future growth trends into MetroLink's design and operations to facilitate future expansion based on quantified data from equivalent metro systems.
- Space proofing during design to allow for expansion of the metro system.
- Collaborate with local planning authorities and developers to fully recognise the socio-economic benefits of MetroLink.
- Implement and review on an annual basis a sustainable procurement strategy, aligned with TII's procurement policies.
- Incorporate sustainability requirements into all tenders to consider local and SME businesses and local employment.
- Use 'meet the buyer' events to promote opportunities to supply MetroLink.

11.6.2 Operational Phase

Chapter 6 (MetroLink Operations & Maintenance) describes in detail the relevant procedures, processes and measures that will be implemented by the operator at stations and across the Study Area during the

operation of the proposed Project. No further mitigation measures other than those inherent in the design have been proposed with respect to Population and Land Use during the operation of the proposed Project.

Monitoring will be undertaken as appropriate by the operator in relation to users and local communities and the following key sustainability aims as detailed in Chapter 4 (Description of the MetroLink Project) are relevant to Population and Land Use and will be implemented during operation:

- Develop and implement an Apprenticeship and Trainee Programme, incorporating outreach programme with local schools and colleges.
- Provide an inclusive approach to recruitment, staff training and rotas to build community relationships and foster a sense of safety.
- Develop and implement a programme of community engagement to raise awareness of sustainability topics linked to the design, construction and operation of MetroLink.
- Develop and maintain stakeholder and community engagement plan, including centralised complaint reporting line and minimum standards for resolution for construction and programme for virtual and face to face events during design and operation.
- Ongoing engagement and contingency planning with other transport agencies to maintain level of service during disruptive events e.g. mass power outage and flooding.
- Use the universal design approach to design out safety issues in the construction and operational phases of the proposed Project.
- Establish a culture of everyone safe home at the end of their shift.
- Implement and maintain an inclusive operational emergency response action plan.
- Implement and maintain measures to reduce anti-social behaviour, including provision of real time CCTV and appropriate lighting.
- Implement landscaping and urban design measures for an enhanced public realm.
- Establish Noise and Vibration baseline and implement and monitor mitigation measures to reduce impacts during construction and operation.
- Establish an air quality baseline and collaborate with others to deliver reductions in air pollution. Include targets for worker and community health and wellbeing in contracts.
- Maintain access for all to facilities, stations, trains and public spaces to promote independent mobility.
- Measure and report reduction in private car journeys under 5km in-line with agreed annual reduction target.
- Maintain a minimum of 23% EV charging points at the park and ride facility and allow for this provision to increase.
- Implement and maintain a minimum of >1500 covered and uncovered cycle parking spaces at stations along the MetroLink route.
- Operation of carriage loading technology to measure crowding based on quantified data from equivalent metro systems.
- Implement and maintain provision of electronic and connectivity services on all train and at stations (including charging points and free high-speed Wi-Fi). Identify innovative technologies and practices that provide value for money and additional benefits to users.
- Investigate and incorporate future growth trends into MetroLink's design and operations to facilitate future expansion based on quantified data from equivalent metro systems.
- Space proofing during design to allow for expansion of the metro system.
- Collaborate with local planning authorities and developers to fully recognise the socio-economic benefits of MetroLink.
- Implement and review on an annual basis a sustainable procurement strategy, aligned with TII's procurement policies.
- Incorporate sustainability requirements into all tenders to consider local and SME businesses and local employment.
- Use 'meet the buyer' events to promote opportunities to supply MetroLink.
- Identify opportunities to engage with local and SME businesses in station facilities and in the public realm areas surrounding stations.

11.7 Residual Impacts

Residual impacts are the final or intended impacts which occur on the basis that the proposed mitigation measures (including monitoring and relevant design measures) have been implemented. They refer to the degree of change that will occur during construction and operation after the proposed mitigation measures have taken effect. It should be noted that where effects have not been assessed as significant, they are not listed here.

11.7.1 Construction Phase

Following the incorporation of mitigation and monitoring measures, the residual significant impacts on Population and Land Use will be Slight to moderate impacts on Population and Land Use and short to medium-term in duration given the length of the Construction Phase across the Study Area.

11.7.1.1 Demography and Households

Residual impacts for significant effects identified under the demography and households' section are set out in Table 11.68.

Table 11.68 Residual Impacts – Demography and Households

Impact	Mitigation Measures	Residual Impact
A number of residential properties will be acquired and demolished to facilitate the proposed Project. - Negative, significant, permanent.	Railway Order measures Property Owner Protection Scheme (POPS)	Negative, moderate, permanent.
Property owners within the POPS area whose properties require repair as a result of construction works. - Negative, significant, medium-term.	Property Owner Protection Scheme (POPS)	Negative, moderate, medium-term.

11.7.1.2 Economic Activity and Employment

Residual impacts for significant effects identified under the economic activity and employment section are set out in Table 11.69.

Table 11.69 Residual Impacts – Economy and Employment

Impact	Mitigation Measures	Residual Impact
<p>Potential severance and disruption and environmental impacts (e.g. noise, air quality - dust) to Pavilions Shopping Centre resulting in reduced footfall and/or spending. - Negative, moderate, short-term.</p>	<p>Alternative access arrangement (or diversions) will be put in place at the relevant locations and appropriate temporary signage will be put in place on roads, footpaths or cycleways that will be temporarily affected by the construction works. This signage will be monitored to ensure that it guides local residents, commercial activities and visitors to the temporary access arrangements in place that facilitate access to homes and businesses.</p> <p>Advance notice will be given to the owners of all residential, commercial and community properties (including social infrastructure) before construction starts and in advance of any major planned disruptions of services or localised traffic management measures noting in particular residents and businesses affected by temporary construction works crossing roads and those located within 250m of the construction works.</p> <p>Full implementation of the range of minimisation measures detailed in the mitigation section of Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	<p>Negative, slight, short-term.</p>
<p>Potential severance and disruption and environmental impacts (e.g. noise, air quality - dust) to Airside Retail Park resulting in reduced footfall and/or spending. - Negative, significant, short-term.</p>	<p>Alternative access arrangement (or diversions)</p> <p>Advance notice</p> <p>Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	<p>Negative, slight, short-term.</p>
<p>Smyths Toy Store at Airside loss of business premises. - Negative, significant, permanent.</p>	<p>TII will offer compensation to property owners for land that is deemed to be acquired in accordance with the general compulsory purchase code. Appropriate compensation will also be payable to owners of properties that are subject to short-term and or temporary acquisition. Compensation will be provided through the Compulsory Purchase Order (CPO) process.</p>	<p>Negative, slight, permanent.</p>
<p>Potential severance and disruption and environmental impacts (e.g. noise, air quality - dust) to Gulliver's Retail Park resulting in reduced footfall and/or spending. - Negative, significant, short-term.</p>	<p>Alternative access arrangement (or diversions)</p> <p>Advance notice</p> <p>Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	<p>Negative, slight, short-term.</p>
	<p>Alternative access arrangement (or diversions)</p>	

Impact	Mitigation Measures	Residual Impact
Potential severance, disruption and environmental impacts (e.g. noise, air quality - dust) causing reduced amenity to Glasnevin Town Centre shops resulting in reduced footfall and/or spending for retail businesses, with effects generally greater closer to Project Boundary. - Negative, significant, medium-term.	Advance notice	Negative, slight, medium-term.
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Direct loss of businesses Brian Boru pub, Des Kelly interiors and adjacent offices. - Negative, significant, permanent.	Compensation	Negative, slight, permanent.
Potential severance, disruption and environmental impacts (e.g. noise, air quality - dust) causing reduced amenity to O'Connell Street - Henry Street shopping district resulting in reduced footfall and/or spending for retail businesses, with effects generally greater closer to Project Boundary. - Negative, significant, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Potential severance, disruption and environmental impacts (e.g. noise, air quality - dust) to St Stephen's Green - Grafton Street shopping district resulting in reduced footfall and/or spending for retail businesses, with effects generally greater closer to Project Boundary. - Negative, significant, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Emmaus Centre may experience severance, disruption and environmental impacts (e.g. noise, air quality - dust). - Negative, significant, short-term.	Alternative access arrangement (or diversions)	Negative, slight, short-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Severance, disruption and environmental impacts (e.g. noise, air quality - dust) to Dublin Airport Travelodge. - Negative, significant, short-term.	Alternative access arrangement (or diversions)	Negative, slight, short-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Severance, disruption and environmental impacts (e.g. noise, air quality - dust) to Premier Inn Dublin Airport. - Negative, significant, short-term.	Alternative access arrangement (or diversions)	Negative, slight, short-term.
	Advance notice	

Impact	Mitigation Measures	Residual Impact
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Potential disruption/severance and environmental impacts (e.g. noise, air quality - dust) to Metro Hotel Dublin Airport if construction activities impact on local connections. - Negative, significant, short-term.	Alternative access arrangement (or diversions)	Negative, moderate, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Potential disruption/severance and environmental impacts (e.g. noise, air quality - dust) to Travelodge Dublin Airport South if construction activities impact on local connections. - Negative, significant, medium-term.	Alternative access arrangement (or diversions)	Negative, moderate, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Severance of route caused by closure of northern tow path during construction and environmental impacts (e.g. noise, air quality - dust) to the Royal Canal. - Negative, significant, medium-term.	Alternative access arrangement (or diversions)	Negative, moderate, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Severance/disruption to transport and environmental impacts (e.g. noise, air quality - dust) to Hugh Lane Gallery and Garden of Remembrance. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, not significant, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
The GPO: Potential disruption/severance where construction activities impact on local connections and environmental impacts (e.g. noise, air quality - dust). - Negative, significant, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
	Alternative access arrangement (or diversions)	

Impact	Mitigation Measures	Residual Impact
Potential disruption/severance and environmental impacts (e.g. noise, air quality - dust) to O'Connell Street hotels where construction activities impact on local connections. - Negative, significant, medium-term.	Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, slight, medium-term.
Potential disruption/severance and environmental impacts (e.g. noise, air quality - dust) to Trinity City Hotel where construction activities impact on local connections. - Negative, significant, medium-term.	Alternative access arrangement (or diversions) Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, slight, medium-term.
Severance/disruption to transport and environmental impacts (e.g. noise, air quality - dust) to Trinity College Dublin. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions) Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, not significant, medium-term.
Severance/disruption to transport and environmental impacts (e.g. noise, air quality - dust) to National Gallery of Ireland and National Museum of Ireland. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions) Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, not significant, medium-term.
Direct loss of portion of St Stephen's Green during construction. Construction activities will impact on visitor amenity for remainder of the Green. - Negative, very significant, medium-term.	Reinstate all land as quickly as possible following construction so as to expedite any local disruption and return to existing surface land uses that can be used by surrounding residents, businesses and communities. Alternative access arrangement (or diversions) Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, moderate, medium-term.
Potential disruption/severance and environmental impacts (e.g. noise, air quality - dust) to St Stephen's Green hotels where construction activities impact on local connections. - Negative, significant, medium-term.	Alternative access arrangement (or diversions) Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, slight, medium-term.
	Alternative access arrangement (or diversions)	

Impact	Mitigation Measures	Residual Impact
Potential severance on south bank of Grand Canal due to construction traffic and environmental impacts (e.g. noise, air quality - dust). - Negative, significant, medium-term.	Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, moderate, medium-term.
Environmental impacts (e.g. noise, air quality - dust) on Hilton Dublin at Charlemont. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions) Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, slight, medium-term.
Severance/disruption and environmental impacts (e.g. noise, air quality - dust) to Clayton Hotel at Charlemont. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions) Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, not significant, medium-term.
City Jet Office: Disruption/severance to the road network locally as a result of construction activity may impact accessibility and environmental impacts (e.g. noise, air quality - dust). - Negative, moderate, short-term.	Alternative access arrangement (or diversions) Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, slight, short-term.
Disruption/severance to the road network locally as a result of construction activity may impact An Post Distribution Centre on post movements. - Negative, moderate, short-term.	Alternative access arrangement (or diversions)	Negative, slight, short-term.
Transend Logistics: Disruption/severance to the road network locally as a result of construction activity. - Negative, moderate, short-term.	Alternative access arrangement (or diversions)	Negative, slight, short-term.
Nightline International: Disruption/severance to the road network locally as a result of construction activity. - Negative, moderate, short-term.	Alternative access arrangement (or diversions)	Negative, slight, short-term.
	Alternative access arrangement (or diversions)	

Impact	Mitigation Measures	Residual Impact
Hertz Office: Severance/disruption to the road network locally and environmental impacts (e.g. noise, air quality - dust) affecting services such as call centres. – Negative, significant, short-term.	Temporary relocation relates to buildings where isolated floors or façades are impacted by the works and will benefit from temporary relocation of any noise sensitive activities for the duration of the phase of works. Where this option is recommended, a consultation process will be established between TII, the contractor and the building occupants / owners.	Negative, moderate, short-term.
Ryanair Office: Severance/disruption to the road network locally and environmental impacts (e.g. noise, air quality - dust). – Negative, significant, short-term.	Alternative access arrangement (or diversions) Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, moderate, short-term.
Numerous car dealerships: Severance/disruption to the road network locally and environmental impacts (e.g. noise, air quality - dust). – Negative, significant, short-term.	Alternative access arrangement (or diversions) Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, slight, short-term
Dublin Airport Campus: Loss of parking space, severance/disruption and environmental impacts (e.g. noise, air quality - dust). - Negative, significant, medium-term.	Alternative access arrangement (or diversions) Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, slight, medium-term.
NCT Test Centre – Northside: Disruption/severance to the road network locally and environmental impacts (e.g. noise, air quality - dust). – Negative, moderate, short-term.	Alternative access arrangement (or diversions) Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, slight, short-term.
Europcar head office: Disruption/severance to the road network locally and environmental impacts (e.g. noise, air quality - dust). – Negative, moderate, short-term.	Alternative access arrangement (or diversions) Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, not significant, short-term.
Dublin Bus office: Severance/disruption due to road/footpath closures and environmental impacts (e.g.	Alternative access arrangement (or diversions) Advance notice	Negative, slight, medium-term.

Impact	Mitigation Measures	Residual Impact
noise, air quality - dust). – Negative, significant, medium-term.	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Irish Times office: Severance/disruption due to road/footpath closures and environmental impacts (e.g. noise, air quality - dust). – Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Department of Transport, Tourism and Sport: Disruption/severance to the road network locally and environmental impacts (e.g. noise, air quality - dust). – Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
National Transport Authority: Disruption/severance to the road network locally and environmental impacts (e.g. noise, air quality - dust). - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, not significant, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
ICT offices in the Charlemont area: Disruption/severance to the road network locally and environmental impacts (e.g. noise, air quality - dust). – Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Bolands Cars: Loss of premises due to acquisition. – Negative, significant, permanent.	Compensation	Negative, slight, permanent.
ESB at Fosterstown Station: Loss of premises due to acquisition. – Negative, significant, permanent.	Compensation	Negative, not significant, permanent.
ESB at Collins Avenue Station: Loss of premises due to acquisition. – Negative, significant, permanent.	Compensation	Negative, not significant, permanent.
Health centre at Griffith Park Station: Loss of premises due to acquisition. – Negative, significant, permanent.	Compensation	Negative, slight, permanent.
The Brian Boru Public House: Loss of premises due to acquisition. – Negative, significant, permanent.	Compensation	Negative, slight, permanent.

Impact	Mitigation Measures	Residual Impact
Bytek Office Systems: Loss of premises due to acquisition. – Negative, significant, permanent.	Compensation	Negative, slight, permanent.
Des Kelly Interiors: Loss of premises due to acquisition. – Negative, significant, permanent.	Compensation	Negative, slight, permanent.
Laragh Counselling Service: Loss of premises due to acquisition. – Negative, significant, permanent.	Compensation	Negative, slight, permanent.
Prospect House: Loss of premises due to acquisition. – Negative, significant, permanent.	Compensation	Negative, slight, permanent.
Ashford House on Tara Street: Loss of premises due to acquisition. – Negative, significant, permanent.	Compensation	Negative, slight, permanent.
Poolbeg Street property: Loss of premises due to acquisition. – Negative, significant, permanent.	Compensation	Negative, slight, permanent.
Markievicz Leisure Centre: The Leisure Centre will be demolished. – Negative, significant, permanent.	Re-provision of Markievicz Leisure Centre will be funded by TII upon selection of a suitable alternative site by Dublin City Council.	Negative, not significant, permanent.
Severance/disruption to Hilton Dublin at Charlemont. and environmental impacts (e.g. noise, air quality) as a result of construction activities may negatively impact customer and business amenity. - Negative, significant, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Severance/disruption and environmental impacts (e.g. noise, air quality) to businesses on Henry Place, O'Connell Street, Moore Lane/Street as a result of construction activities may negatively impact customer and business amenity. - Negative, significant, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	

11.7.1.3 Community and Social Infrastructure

Residual impacts for significant effects identified under the community and social infrastructure section are set out in Table 11.70.

Table 11.70 Residual Impact – Community and Social Infrastructure

Impact	Mitigation Measures	Residual Impact
<p>Impact on residential, community and commercial amenity and activity along the route due to Groundborne Noise and Vibration as a result of tunnelling activities. – Negative, significant, short to medium-term.</p>	<p>Advance public consultation and stakeholder engagement can greatly reduce the significance of groundborne noise effects, as building occupants would be prepared for the passage of the TBM and resultant elevated Noise and Vibration levels.</p>	<p>Negative, slight, short-term to medium-term.</p>
	<p>To offer temporary re-housing to adversely affected receptors for the short duration (a number of days) during which the TBM is in close proximity to a property. A strategy for the temporary re-housing of affected residents would be designed and implemented in advance of tunnel boring through each geographical section.</p>	
<p>Impact on cultural institutions (e.g. Trinity College Dublin, the National Gallery, National Museum of Ireland (Archaeology/Natural History), the Houses of the Oireachtas, and the National Concert Hall) along the route due to Groundborne Noise and Vibration as a result of tunnelling activities. – Negative, significant, short-term.</p>	<p>With regard to vibration effects on the use of sensitive equipment, there is potential to plan the passage of the TBM during weeks when critical use of the equipment can be avoided. The programme for the TBM will be planned by the contractor. Consultation will be undertaken with TCD as soon as this programme is available to ensure that sensitive research operations on the campus do not coincide with the passage of the TBM.</p>	<p>Negative, slight, short-term.</p>
<p>Impact on the attractiveness of neighbourhoods and neighbourhood amenity of the population in the Study Area due to environmental issues and the presence of construction compounds, plant, equipment, hoarding and construction vehicles. - Negative, significant, medium-term.</p>	<p>Advance notice will be given to the owners of all residential, commercial and community properties (including social infrastructure) before construction starts and in advance of any major planned disruptions of services or localised traffic management measures noting in particular residents and businesses affected by temporary construction works crossing roads and those located within 250m of the construction works.</p>	<p>Negative, slight, medium-term.</p>
	<p>Full implementation of the range of minimisation measures detailed in the mitigation section of Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	
	<p>Community Relations Officers (CRO) shall be employed during the construction of the proposed project and contact details will be provided on the proposed project website so that stakeholders and communities can make contact as required. The CRO will be responsible for maintaining open, transparent and positive relationship with members of the public, local businesses, groups and organisations affected by the works. Specifically, the CRO will work closely with TII and the appointed contractors to ensure that all effort to address public concerns are made, and to ensure that information on the nature and duration of all works is provided.</p>	

Impact	Mitigation Measures	Residual Impact
	Develop and maintain stakeholder and community engagement plan, including centralised complaint reporting line and minimum standards for resolution for construction and programme for virtual and face to face events during design and operation.	
Little Caterpillars at Fingallians GAA club: Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting service user amenity. - Negative, significant, short-term.	Advance notice	Negative, slight, short-term.
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Fingal House Nursing Home on North Street: Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting service user amenity. - Negative, significant, short-term.	Advance notice	Negative, slight, short-term.
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Emmaus Centre on Ennis Lane: Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting service user amenity. - Negative, significant, short-term.	Advance notice	Negative, slight, short-term.
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Swords Fire Station on Balheary Road: Environmental impacts from construction activities (e.g. noise, air quality - dust). Traffic impacts due to road closures and diversions on the R132/Estuary Roundabout may negatively impact emergency service vehicle provision. - Negative, significant, short-term.	Alternative access arrangement (or diversions)	Negative, slight, short-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	

Impact	Mitigation Measures	Residual Impact
<p>Kids Inc on Seatown Road: Environmental impacts from construction activities (e.g. noise, air quality - dust). - Negative, significant, short-term.</p>	<p>Advance notice</p>	<p>Negative, slight, short-term.</p>
	<p>Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	
<p>Environmental impacts from construction activities (e.g. noise, air quality - dust) and potential severance impacts on Fingal Community College due to road closure or diversions on the R132. - Negative, significant, short-term.</p>	<p>Alternative access arrangement (or diversions)</p>	<p>Negative, slight, short-term.</p>
	<p>Advance notice</p>	
	<p>Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	
<p>Environmental impacts from construction activities (e.g. noise, air quality - dust) and potential severance impacts on St Colmcille's National School due to road closure or diversions on the R132. - Negative, significant, short-term.</p>	<p>Alternative access arrangement (or diversions)</p>	<p>Negative, slight, short-term.</p>
	<p>Advance notice</p>	
	<p>Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	
<p>HSE Health Centre for Dublin North City and County: Environmental impacts from construction activities (e.g. noise, air quality - dust) negatively impacting service user. - Negative, significant, short-term.</p>	<p>Advance notice</p>	<p>Negative, slight, short-term.</p>
	<p>Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	
<p>Environmental impacts from construction activities (e.g. noise, air quality - dust) and potential severance impacts on VHI Swiftcare Clinic due to road closure or diversions on the R132. - Negative, significant, short-term.</p>	<p>Alternative access arrangement (or diversions)</p>	<p>Negative, slight, short-term.</p>
	<p>Advance notice</p>	
	<p>Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	

Impact	Mitigation Measures	Residual Impact
Severance impacts on Our Lady Queen of Heaven Church due to road closures and pedestrian diversions and environmental impacts from construction activities (e.g. noise, air quality) as a result of the construction of Dublin Airport Station. - Negative, significant, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Dublin Airport Police Station at Dublin Airport: Environmental impacts from construction activities (e.g. noise, air quality – dust). Traffic impacts due to road closures and diversions during the construction of Dublin Airport Station. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Environmental impacts from construction activities (e.g. noise, air quality – dust) and road closures and diversions on Northwood Avenue/R108 Ballymun Road may hinder access to SSC Medical Centre in Gulliver's Retail Park during construction. - Negative, significant, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Environmental impacts from construction activities (e.g. noise, air quality – dust) and road closures and diversions on Northwood Avenue/R108 Ballymun Road may hinder access to the Chestnut Tree at Santry Cross during construction. - Negative, slight, medium-term.	Alternative access arrangement (or diversions)	Negative, not significant, medium-term.
	Advance notice	

Impact	Mitigation Measures	Residual Impact
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
St Joseph's National School (Junior and Senior): Potential environmental impacts from construction activities (e.g. noise, air quality – dust). Road closures and diversions on Northwood Avenue/R108 Ballymun Road may potentially impact access to service during construction of Northwood Station. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Potential environmental impacts from construction activities (e.g. noise, air quality – dust) and road closures and diversions on Northwood Avenue/R108 Ballymun Road may potentially impact access to HSE Health Centre (Domville House Clinic) during construction. - Negative, slight, medium-term.	Alternative access arrangement (or diversions)	Negative, not significant, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Potential environmental impacts from construction activities (e.g. noise, air quality – dust) and road closures and diversions on R108 Ballymun Road may potentially impact access to Holy Spirit Catholic Church on Sillogue Road during construction. - Negative, slight, medium-term.	Alternative access arrangement (or diversions)	Negative, not significant, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	

Impact	Mitigation Measures	Residual Impact
<p>Potential environmental impacts from construction activities (e.g. noise, air quality – dust) and road closures and diversions on R108 Ballymun Road may potentially impact access to HSE Health Centre (Ballymun Civic Centre) during construction. - Negative, slight, medium-term.</p>	Alternative access arrangement (or diversions)	<p>Negative, not significant, medium-term.</p>
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
<p>Road closures and diversions on R108 Ballymun Road may potentially impact access to Axis Ballymun Arts and Community Resource Centre during construction. Environmental impacts from construction activities (e.g. noise, air quality) may negatively impact service user amenity. - Negative, significant, medium-term.</p>	Alternative access arrangement (or diversions)	<p>Negative, slight, medium-term.</p>
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
<p>Potential environmental impacts from construction activities (e.g. noise, air quality – dust) and road closures and diversions on R108 Ballymun Road may potentially impact access to Ballymun Library on Ballymun Road during construction. - Negative, significant, medium-term.</p>	Alternative access arrangement (or diversions)	<p>Negative, slight, medium-term.</p>
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
<p>Potential environmental impacts from construction activities (e.g. noise, air quality – dust) and road closures and diversions on R108 Ballymun Road may potentially impact access to D9 Medical Centre / LIR Mental Health and Psychological Services during construction. - Negative, significant, medium-term.</p>	Alternative access arrangement (or diversions)	<p>Negative, slight, medium-term.</p>
	Advance notice	

Impact	Mitigation Measures	Residual Impact
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Potential environmental impacts from construction activities (e.g. noise, air quality – dust) and road closures and diversions on Ballymun Road and environmental impacts from construction activities (e.g. noise, air quality) may potentially impact access to Our Lady of Victories National School on Ballymun Road during construction. - Negative, significant, medium-term.	Alternative access arrangement (or diversions)	Negative, moderate, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13, 14 and 16	
Road closures and diversions on Ballymun Road and environmental impacts from construction activities (e.g. noise, air quality) may potentially impact access to Our Lady of Victories Church on Ballymun Road during construction. - Negative, significant, medium-term.	Alternative access arrangement (or diversions)	Negative, moderate, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Potential environmental impacts from construction activities (e.g. noise, air quality – dust) and road closures and diversions on Ballymun Road may potentially impact access to Na Fianna Montessori on Ballymun Road during construction. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Road closures and diversions on St Mobhi Road and environmental impacts from construction activities (e.g. noise, air quality) may potentially impact access to Tír na	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	

Impact	Mitigation Measures	Residual Impact
nÓg Montessori and Preschool on St Mobhi Road during construction. - Negative, moderate, medium-term.	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Road closures and diversions on St Mobhi Road may potentially impact access to Glasnevin National School on Botanic Avenue during construction. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
Road closures and diversions on St Mobhi Road may potentially impact access to Glasnevin Health Centre on Botanic Avenue during construction. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
Road closures and diversions on St Mobhi Road and Environmental impacts from construction activities (e.g. noise, air quality) may potentially impact access to Whitehall College of Further Education during construction. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Road closures and diversions on Prospect Road and environmental impacts from construction activities (e.g. noise, air quality) may potentially impact access to Prospect Medical Centre on Prospect Road during construction. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Bee Happy Playschool on Clarendon Crescent: Road and footpath closures and diversions on Prospect Road may potentially negatively impact access to service during construction of Glasnevin Station. Environmental impacts from construction activities (e.g. noise, air quality). - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	

Impact	Mitigation Measures	Residual Impact
<p>Mater Hospital on North Circular Road: Potential Noise and Vibration impacts from construction activities with corresponding negative impacts on local residents and on patients of the Mater Hospital. - Negative, moderate, medium-term.</p>	<p>Advance notice</p>	<p>Negative, slight, medium-term.</p>
	<p>Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	
<p>Mater Private Medical Consulting Rooms on Berkeley Street: Potential Noise and Vibration impacts from construction activities with corresponding negative impacts on local residents and on patients. - Negative, moderate, medium-term.</p>	<p>Advance notice</p>	<p>Negative, slight, medium-term.</p>
	<p>Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	
<p>Road closures and diversions on Berkeley Street and Environmental impacts from construction activities (e.g. noise, air quality) may potentially impact access to St Joseph's Church on Berkeley Street during construction. - Negative, significant, medium-term.</p>	<p>Alternative access arrangement (or diversions)</p>	<p>Negative, slight, medium-term.</p>
	<p>Advance notice</p>	
	<p>Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	
<p>Reproductive Choice Limited on Berkeley Street: Potential Noise and Vibration impacts from construction activities with corresponding negative impacts on local services. - Negative, moderate, medium-term.</p>	<p>Advance notice</p>	<p>Negative, slight, medium-term.</p>
	<p>Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	
<p>SafetyNet Primary Care Helix Unit on Nelson Street: Potential Noise and Vibration impacts from construction activities with corresponding negative impacts on local services. - Negative, moderate, medium-term.</p>	<p>Advance notice</p>	<p>Negative, slight, medium-term.</p>
	<p>Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).</p>	
<p>Road/path closures may potentially impact service user amenity to Rotunda Maternity Hospital during construction. - Negative, significant, medium-term.</p>	<p>Alternative access arrangement (or diversions)</p>	<p>Negative, slight, medium-term.</p>

Impact	Mitigation Measures	Residual Impact
Road/path closures may potentially impact service user amenity to Parnell Square Medical Suites during construction. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
Road/path closures may potentially impact service user amenity to The English Academy on Parnell Street during construction. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
Road/path closures may potentially impact service user amenity to The Irish Family Planning Association on Cathal Brugha Street during construction. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
Road/path closures may potentially impact service user amenity to HSE Drug Treatment Centre on Pearse Street during construction. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
Severance due to road closures and diversions during the construction of Tara Station may impact Pearse Street Garda Station emergency service vehicles during construction. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
Road/path closures may potentially impact service user amenity to Trinity College Dublin campus during construction. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
Road/path closures may potentially impact service user amenity to Loreto College on St Stephen's Green during construction. Environmental impacts from construction activity (e.g. noise, air quality) may negatively impact student amenity. - Negative, moderate, medium-term.	Alternative access arrangement (or diversions)	Negative, slight, medium-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	
Partial loss of Swords Rovers FC pitches and environmental impacts (e.g. noise, air quality). - Negative, significant, short-term.	Temporary adjustments will be made to the layout of affected pitches during the works with rehabilitation of its pitches to be carried out at the earliest practicable opportunity following construction of the proposed project.	Negative, slight, short-term.
	Advance notice	
	Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	

Impact	Mitigation Measures	Residual Impact
Fingallians GAA pitches will need to be re-positioned and reduced in size and potential severance and environmental impacts on Fingallians GAA pitches due to construction activity. - Negative, significant, short-term.	Alternative access arrangement (or diversions) Temporary layout adjustments Advance notice Mitigation measures in Chapter 13 (Airborne Noise & Vibration), Chapter 14 (Groundborne Noise & Vibration) and Chapter 16 (Air Quality).	Negative, moderate, short-term.
Starlights GAA pitches will need to be rearranged and potential severance impacts on Starlights GAA pitches due to construction activity. - Negative, significant, short-term.	Alternative access arrangement (or diversions) Temporary layout adjustments	Negative, slight, short-term.
Loss of land and modification on Na Fianna GAA pitches. - Negative, significant, short-term.	Temporary layout adjustments	Negative, slight, short-term.
The Whitehall Rangers Football Club will be demolished and needs to be relocated. - Negative, significant, permanent.	The permanent relocation of Whitehall Rangers FC from Dardistown will be accommodated at the earliest practicable opportunity.	Negative, slight, short-term.
Land loss and reposition of Albert College Park pitches. - Negative, significant, short-term.	Temporary layout adjustments	Negative, slight, short-term.
Land loss of Home Farm FC pitches. - Negative, significant, short-term.	Temporary relocation	Negative, slight, short-term.
The Markievicz Leisure Centre will be demolished as a result of land take at Tara Station. – Negative, significant, permanent.	Re-provision of Markievicz Leisure Centre will be funded by TII upon selection of a suitable alternative site by Dublin City Council.	Negative, slight, medium-term

11.7.1.4 Connectivity and Land Use

Residual impacts for significant effects identified under the connectivity and land use section are set out in Table 11.71.

Table 11.71 Residual Impact - Connectivity and Land Use

Impact	Mitigation Measures	Residual Impact
The temporary closure of sections of roads, footpaths and some cycleways and the diversion of traffic around construction site compounds could exacerbate severance on local residents, employees of local businesses and other people passing the Study Area. – Negative, significant, medium-term.	Alternative access arrangement (or diversions) will be put in place at the relevant locations and appropriate temporary signage will be put in place on roads, footpaths or cycleways that will be temporarily affected by the construction works. This signage will be monitored to ensure that it guides local residents, commercial activities and visitors to the temporary access arrangements in place that facilitate access to homes and businesses.	Negative, slight, medium-term.
Severance effect for local residents adjacent to construction activities, particularly those vulnerable users including pedestrians, cyclists, local residents with mobility issues along with the young, elderly and those with lower incomes. – Negative, significant, medium-term.	Provide for safe pedestrian and cyclist access, egress and movement at points of entry and exit of construction vehicles at all sites. Tactile and audible signals for those with visual impairment should be integrated to ensure equitable access for all users.	Negative, slight, medium-term.
	Maintain access for all to facilities, stations, trains and public spaces to promote independent.	
Impacts on residential amenity and local communities due to temporary road or lane closures, traffic diversions as part of the construction of electricity grid connections. – Negative, significant, temporary.	Alternative access arrangement (or diversions) will be put in place at the relevant locations and appropriate temporary signage will be put in place on roads, footpaths or cycleways that will be temporarily affected by the construction works. This signage will be monitored to ensure that it guides local residents, commercial activities and visitors to the temporary access arrangements in place that facilitate access to homes and businesses.	Negative, not significant, temporary.

11.7.2 Operational Phase

No significant residual negative impacts are anticipated on the Population and Land Use from the operation of the proposed Project, following the incorporation of the mitigation measures into the design of the proposed Project and implementation on an ongoing basis throughout the lifecycle. The residual effects that will arise during operation will be permanent and positive as described in detail in Section 11.1.1 of this Chapter.

11.8 Difficulties Encountered in Compiling Information

No difficulties were encountered during the preparation of this assessment. The analysis set out in this assessment is an estimate of the likely significant effects of the proposed Project on Population and Land Use as opposed to a measurement of the actual effects.

All relevant assumptions and limitations in relation to data have been documented herein and the assessment has been undertaken using primarily secondary data (i.e. Census 2016, Geodirectory data). It should be noted that, wherever possible, the best available data at the time of writing has been considered and specifically in relation to the COVID-19 pandemic and its associated influence on Population and Land Use, particularly with respect to travel restrictions, enforced closures and impacts to specific sectors such as tourism and aviation as appropriate herein.

It should be noted that the scope of this assessment has considered direct and indirect significant effects in accordance with the requirements of the EIA Directive. As such, perceived effects on the population for example potential nuisance, speculative anti-social behaviour and opinions on safety around equipment that has been designed to industry standards have not been considered within this assessment.

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