



Chapter 10
Population

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10. Population

10.1 Introduction

This Chapter of the Environmental Impact Assessment Report (EIAR) has considered the potential community and economic impacts on the human population associated with the Construction and Operational Phases of the Ringsend to City Centre Core Bus Corridor Scheme (hereafter referred to as the Proposed Scheme).

These potential impacts can affect the way in which people live, work, relate to one another, organise to meet their needs, and generally operate as members of society. This population assessment will consider both social impacts on communities (community assessment) as well as economic impacts on commercial businesses (economic assessment). The assessment also considers the ways in which the Proposed Scheme will improve walking, cycling and bus facilities and is anticipated to encourage sustainable modes of transport, therefore reducing the demand for private vehicles / parking along the Proposed Scheme.

This Chapter draws on the outcomes of the assessments in the following EIAR chapters (Volume 2):

- Chapter 6 (Traffic & Transport);
- Chapter 7 (Air Quality);
- Chapter 9 (Noise & Vibration); and
- Chapter 17 (Landscape (Townscape) & Visual).

This Chapter is also supported by Figure 10.1 in Volume 3 of this EIAR and in the following two appendices in Volume 4 of this EIAR:

- Appendix A10.1 Schedule of Commercial Businesses. This is a list of all commercial businesses located along the Proposed Scheme and any businesses in the surrounding road network that are located on a road that is expected to experience a moderate or greater traffic impact from displaced traffic in the AM and PM peak hours (as identified in Chapter 6 (Traffic & Transport)); and
- Appendix A10.2 The Economic Impact of the Core Bus Corridors Report (EY 2021). This report is an assessment of the economic impact of the Core Bus Corridors. The impacts have been considered across the short, medium, and long term and are based on a review of published literature, including academic papers, wider reports and briefings provided on relevant projects globally. The assessment has not considered each individual corridor separately but rather them all together. The assessment identified five areas that could be influenced by the Core Bus Corridors: local businesses, public realm, health and wellbeing, social cohesion, and adapting to the future. This appendix has been referred to within this population assessment where relevant.

The aim of the Proposed Scheme when in operation is to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which would enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor. The objectives of the Proposed Scheme are described in Chapter 1 (Introduction & Environmental Impact Assessment Process). The Proposed Scheme as described in Chapter 4 (Proposed Scheme Description) has been designed to meet these objectives. The specific objectives that are applicable to this assessment are:

- Enhance the capacity and potential of the public transport system by improving bus speeds, reliability, and punctuality through the provision of bus lanes and other measures to provide priority to bus movement over general traffic movements;
- Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable; and
- Enable compact growth, regeneration opportunities and more effective use of land in Dublin, for present and future generations, through the provision of safe and efficient sustainable transport networks; and
- Improve accessibility to jobs, education, and other social and economic opportunities through the provision of improved sustainable connectivity and integration with other public transport services.

The design of the Proposed Scheme has evolved through a comprehensive design iteration process, with particular emphasis on minimising the potential for environmental impacts, where practicable, whilst ensuring the objectives of the Proposed Scheme are attained.

10.2 Methodology

This Section presents the study area and appraisal method for the assessment of impacts on the local population; residents, communities and businesses.

10.2.1 Study Area

The population assessment requires potential impacts to be considered and assessed for a wide range of receptors, comprising community facilities, recreational resources, tourism assets, residential properties, and commercial businesses. To capture how these receptors are likely to be impacted by the Proposed Scheme, the population assessment has been split into two sub-assessments. The two sub-assessments are:

- **Community Assessment:** An assessment to capture impacts from the Proposed Scheme on the local population; residents and communities; and
- **Economic Assessment:** An assessment to capture impacts from the Proposed Scheme on commercial receptors. Wider economic impacts of all the Core Bus Corridors are discussed in Appendix A10.2 (The Economic Impact of the Core Bus Corridors) (EY 2021) in Volume 4 of this EIAR.

The study areas for both assessments are described in Section 10.2.1.1 and Section 10.2.1.2.

10.2.1.1 Community Assessment - Study Area

The community assessment considers impacts on individual population receptors, including community facilities and recreational resources, as well as individual residential properties and land parcels being acquired on a temporary and permanent basis to accommodate the Proposed Scheme. As such, the community assessment comprises of the following assessment topics:

- Community amenity; and
- Community land use and accessibility.

The study area for the assessment of impacts on community amenity, land-take and accessibility consists of 'community areas', which are informed by the Central Statistics Office (CSO) 2016 Census parish boundaries (CSO 2016a). Community areas that would either be intersected by or are adjacent to the Proposed Scheme consist of the following:

- Pro Cathedral;
- City Quay;
- Sean McDermott Street;
- Seville Place – North Wall;
- Ringsend; and
- Sandymount.

These community areas are presented in Figure 10.1 in Volume 3 of this EIAR.

Chapter 6 (Traffic & Transport) assessed changing traffic volumes within an indirect study area for the AM and PM peak periods in the 2028 Opening Year and the 2043 Design Year. The results identified key junctions in the surrounding road network where capacity issues may arise. In this Population assessment, the results from the 2028 Opening Year traffic assessment have been considered with respect to accessibility and amenity.

10.2.1.2 Economic Assessment - Study Area

The economic assessment considers impacts on individual commercial businesses along the Proposed Scheme within the community areas listed in Section 10.2.1.1, as well as any businesses in the surrounding road network

that are located on a road that is expected to experience a moderate or greater traffic impact from displaced traffic in the AM and PM peak hours. To consider and assess these impacts, the economic assessment has been divided into the follow two assessment topics:

- Commercial amenity; and
- Commercial land use and accessibility.

The study areas for these two assessment topics are the same as those outlined in Section 10.2.1.1.

10.2.2 Relevant Guidelines, Policy and Legislation

Guidelines, policy and legislation specifically relevant to the population assessment are outlined in Table 10.1.

Table 10.1: Relevant Guidelines, Policies and Legislation

Guidance	Description	Relevance to Assessment
Environmental Protection Agency (EPA) Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA 2022)	This document outlines EPA guidance for conducting Environmental Impact Assessments (EIAs) / EIARs and provides the fundamental requirements of the EIAR.	This guidance has been used to inform the significance of effect for the topics in the population assessment.
Design Manual for Roads and Bridges (DMRB) LA 112 Population and human health (hereafter referred to as the DMRB Guidance) (Highways England 2020)	The DMRB Guidance provides guidance on the assessment of land use and accessibility within an EIA.	This DMRB Guidance has been used to inform sensitivity and magnitude for the following assessment topics: <ul style="list-style-type: none"> • Community land take; and • Commercial land take.
Guidelines for Planning Authorities and An Bord Pleanála on carrying out an Environmental Impact Assessment (Government of Ireland 2018)	This document outlines Ireland specific guidance for consenting authorities carrying out EIA.	This report has been used to inform the development of the assessment methodologies.

10.2.3 Data Collection and Collation

Baseline data was collected through carrying out a desk study, availing of the most up-to-date available data, at the time of writing. This comprises the following sources:

- 2016 Census - Demographic, residential, travel to work and employment statistics (CSO 2016a; CSO 2016b; CSO 2016c);
- Population scoping reports and impacts assessments for other major linear infrastructure projects;
- Ordnance Survey Ireland (OSI) Prime 2 dataset (OSI 2020);
- Geodirectory data (Geodirectory 2019);
- Google maps (Google 2021);
- Proposed Scheme Design Drawings; and
- National Public Transport Access Nodes (NaPTAN) (NTA 2020).

The baseline for the community assessment is founded on the OSI Prime 2 dataset. The OSI Prime 2 dataset was used to establish a count of community receptors, including local educational, recreational, and healthcare facilities (see Section 10.3.2).

As part of the three rounds of public consultation, submissions were reviewed by the BusConnects Infrastructure team. The nature of the submissions varied from residents, commuters and local representatives on such issues as impacts on trees, bus routing and the design of bus and cycle facilities more generally. Discussions were held with various businesses along the Proposed Scheme to inform them if the Proposed Scheme would impact on their property boundary.

Desktop research has been supplemented by a walkover survey in October 2022 to verify baseline data collection including the commercial businesses listed in Appendix A10.1 (Schedule of Commercial Businesses) in Volume 4 of this EIAR.

10.2.4 Appraisal Method for the Assessment of Impacts

This Section sets out how each assessment topic has been undertaken and highlights where input from other environmental disciplines has been included within the population assessment.

The population assessment has been adapted from the Environmental Protection Agency (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (hereafter referred to as the EPA Guidelines) (EPA 2022). The significance of impacts matrix, based on the EPA Guidelines, was used to determine the significance of impact for land use and accessibility impacts (see Table 10.2).

Table 10.2: Significance Matrix

		Sensitivity				
		Very Low	Low	Medium	High	Very High
Magnitude	Very Low	Imperceptible	Not significant	Slight	Slight	Slight
	Low	Not significant	Slight	Moderate	Moderate	Moderate
	Medium	Slight	Moderate	Moderate	Significant	Significant
	High	Slight	Moderate	Significant	Very significant	Profound
	Very High	Slight	Moderate	Significant	Profound	Profound

In addition to the EPA Guidelines, the assessment of land use and accessibility impacts has been informed by the Design Manual for Roads and Bridges (DMRB) LA 112 Population and human health (land use and accessibility) (hereafter referred to as the DMRB Guidance) (Highways England 2020). The DMRB guidance is the standard approach used for road infrastructure schemes across the UK and Ireland, for the assessment of environmental impacts. The DMRB Guidance provides a framework for assessing the impact on land use and accessibility and has therefore been used to determine the sensitivity and magnitude of impact for relevant receptors.

There is no prescribed method for determining the significance of effects on receptors as a result of a change in amenity. The methodology for this assessment topic is therefore informed by established best practice and experience on other linear infrastructure projects, while the significance of impact is also adapted from the EPA Guidelines.

The assessment methodologies were applied to assess both the potential impacts during the Construction Phase and the potential impacts during the Operational Phase of the Proposed Scheme, unless otherwise stated.

10.2.4.1 Community Assessment

The methodology for the assessment of community impacts is outlined in this Section.

10.2.4.1.1 Community Amenity

Community amenity describes the perceived character or attractiveness of an area. This community amenity assessment has assessed the potential for people to change how they perceive their communities or how they use community facilities and recreational resources as a result of the Proposed Scheme.

The community amenity assessment includes the 'indirect' impact of the following environmental effects which may combine to create a change in amenity:

- Air quality;
- Visual;
- Traffic and transport; and
- Noise and vibration.

Where there is a combination of at least two environmental effects on a receptor, or group of receptors, this is classified as an 'indirect' impact on community amenity. For example, where there are both visual and air quality impacts on a receptor, or a group of receptors, the assessed receptor(s) would be indirectly impacted.

The assessment has considered the residual effect reported for each of the environmental effects under consideration. Therefore, specific sensitivity and magnitude criteria are not required for community amenity. The level of significance from each environmental effect was determined by the individual environmental assessments presented in the following chapters:

- Chapter 6 (Traffic & Transport);
- Chapter 7 (Air Quality);
- Chapter 9 (Noise & Vibration); and
- Chapter 17 (Landscape (Townscape) & Visual).

10.2.4.1.1.1 Aligning Receptors

To determine the impact on community amenity, there needs to be an alignment of receptors across the different contributing environmental assessments.

Chapter 6 (Traffic & Transport) assesses the impacts on 'general traffic' along the Proposed Scheme. The impact on general traffic has been considered as having the greatest potential to create a wider impact on community amenity, when combined with other environmental effects. The amenity assessment has considered residual impacts on general traffic (i.e., those after proposed mitigation). During construction, the amenity assessment has considered the restrictions to general traffic along the Proposed Scheme as well as the residual impact that will arise from additional construction traffic flows on the surrounding road network. During operation, the amenity assessment has considered the reduction in general traffic along the Proposed Scheme and the redistributed general traffic along the surrounding road network. The residual impact on general traffic along the Proposed Scheme is assigned to all receptors located along the Proposed Scheme, while the impact from construction traffic flows (Construction Phase) or redistributed traffic (Operational Phase) is assigned to all receptors on the surrounding road network.

For the assessment of air quality, the residual impact on human receptors identified in Chapter 7 (Air Quality) were used for all receptors along the Proposed Scheme for construction and operation. Construction dust has been excluded from the amenity assessment as it is considered to be sufficiently mitigated during construction, that it will not result in a significant air quality impact.

Chapter 9 (Noise & Vibration) assesses the impact on Noise Sensitive Locations (NSL) which include: residential dwellings, schools and other educational establishments, hospitals and nursing homes, hotels and other short-term accommodation buildings, buildings of religious sensitivity, recreational and noise sensitive amenity areas and offices. During construction, noise impacts at NSLs can occur from a variety of activities including road widening, utility diversion, urban realm landscaping, and at the Construction Compound. In an instance where a NSL is impacted by more than one noise source, the worst impact has been considered in the amenity assessment. Construction traffic impacts were considered when aligning a noise impact to receptors in the surrounding road network. During operation, two assessment topics are considered in the noise and vibration assessment, namely, traffic noise along the Proposed Scheme and traffic noise on the surrounding road network. The residual impacts reported in respect to these two assessment topics are aligned to community and commercial receptors depending on whether they are situated along the Proposed Scheme or in the surrounding road network.

In Chapter 17 (Landscape (Townscape) & Visual), the assessment of townscape and streetscape has been used to assign a visual impact to all receptors along the Proposed Scheme. In Chapter 17 (Landscape (Townscape) & Visual), the term townscape is used to describe built-up areas of a medium to large extent, generally equivalent to neighbourhood scale or larger. Streetscape is used to define built up areas of largely public space within the confines of a street or road corridor. The townscape and streetscape assessment assigned a significance of impact to sections of road along the Proposed Scheme. These impacts have then been used to align a visual residual impact to all receptors along those sections of road unless Chapter 17 (Landscape (Townscape) & Visual) identified a visual amenity impact on a specific receptor.

10.2.4.1.1.2 Determining Significance of Effect

Following alignment of the environmental effects, an indirect amenity significance matrix has been used to determine the significance of localised impacts on individual receptors (see Table 10.3).

The amenity significance matrix is closely aligned with the EPA Guidelines. The term ‘Significant’ in the amenity matrix encompasses the EPA terms ‘Profound’, ‘Very Significant’ and ‘Significant’ while, the term ‘Not Significant’ encompasses the EPA terms ‘Not Significant’ and ‘Imperceptible’ as outlined in the EPA Guidelines (EPA 2022). Table 10.3 is used for either negative or positive impacts, but not a combination of both. Where both negative and positive impacts occur, professional judgement has been used to assign the overall impact on amenity.

Whilst the community amenity assessment imposes no duration criteria of its own, where a ‘Significant’ impact on amenity is identified, the temporal aspects from the environmental effects were examined to determine whether the impacts are likely to occur simultaneously and result in a ‘Significant’ indirect impact.

With this determination, the nature, significance, and duration of effects for each community area has been reported in line with the EPA Guidelines (EPA 2022). Amenity impacts that may arise on individual receptors have only been stated separately in the Potential Impacts (see Section 10.4) for Slight/Moderate, Moderate, Moderate/Significant and Significant amenity impacts. Amenity impacts on individual receptors that are assessed as less than Moderate (Slight, Not Significant, and Imperceptible) are not discussed in the amenity assessment. Only individual receptors that are expected to experience a Moderate/Significant or Significant amenity impact are listed in the Residual Impact tables (see Section 10.6).

Table 10.3: Indirect Amenity Significance Matrix (Construction and Operational Phases)

Environmental Effect 1	Environmental Effect 2	Environmental Effect 3	Environmental Effect 4	Combined Impact
Significant	Significant	Significant	Significant	Significant
Significant	Significant	Significant	Moderate	Significant
Significant	Significant	Significant	Slight	Significant
Significant	Significant	Significant	Not Significant	Significant
Significant	Significant	Moderate	Moderate	Significant
Significant	Significant	Moderate	Slight	Moderate / Significant
Significant	Significant	Moderate	Not Significant	Moderate / Significant
Significant	Significant	Slight	Slight	Moderate
Significant	Significant	Slight	Not Significant	Moderate
Significant	Significant	Not Significant	Not Significant	Moderate
Significant	Moderate	Moderate	Moderate	Moderate / Significant
Significant	Moderate	Moderate	Slight	Moderate
Significant	Moderate	Moderate	Not Significant	Moderate
Significant	Moderate	Slight	Slight	Moderate
Significant	Moderate	Slight	Not Significant	Moderate
Significant	Moderate	Not Significant	Not Significant	Moderate
Significant	Slight	Slight	Slight	Slight / Moderate
Significant	Slight	Slight	Not Significant	Slight / Moderate
Significant	Slight	Not Significant	Not Significant	Slight
Significant	Not Significant	Not Significant	Not Significant	Not Significant / Potential direct impact on amenity*
Moderate	Moderate	Moderate	Moderate	Moderate / Significant
Moderate	Moderate	Moderate	Slight	Moderate / Significant
Moderate	Moderate	Moderate	Not Significant	Moderate

Environmental Effect 1	Environmental Effect 2	Environmental Effect 3	Environmental Effect 4	Combined Impact
Moderate	Moderate	Slight	Slight	Moderate
Moderate	Moderate	Slight	Not Significant	Moderate
Moderate	Moderate	Not Significant	Not Significant	Moderate
Moderate	Slight	Slight	Slight	Slight / Moderate
Moderate	Slight	Slight	Not Significant	Slight / Moderate
Moderate	Slight	Not Significant	Not Significant	Slight
Moderate	Not Significant	Not Significant	Not Significant	Not Significant
Slight	Slight	Slight	Slight	Slight / Moderate
Slight	Slight	Slight	Not Significant	Slight / Moderate
Slight	Slight	Not Significant	Not Significant	Slight
Slight	Not Significant	Not Significant	Not Significant	Not Significant
Not Significant	Not Significant	Not Significant	Not Significant	Not Significant

*Potential direct impacts on amenity for commercial businesses is discussed in Section 10.2.4.2.1.

10.2.4.1.2 Community Land Use and Accessibility

10.2.4.1.2.1 Land Take

This assessment considers both temporary and permanent direct land take impacts on community receptors. Temporary land take is considered during the Construction Phase while permanent land take is considered during the Operational Phase. In this assessment community receptors include community land and assets such as parks and public rights of way as well as residential land, including gardens, paths, and driveways within the Proposed Scheme boundary. Direct land take impacts can lead to a temporary or permanent restriction in the ability of a user to use a property or a community facility.

Following the DMRB Guidance (Highways England 2020), residential land has been assigned a high sensitivity. A high sensitivity for residential properties ensures that all populations are considered in the assessment including vulnerable groups such as young children, elderly, and people with disabilities. The sensitivity of community facilities varies, and therefore, specific aspects were considered using professional judgement to assess the sensitivity of these receptors, such as:

- Availability of viable alternatives;
- Frequency of use; and
- Number of users on an average visit.

Some other examples of different sensitivities include:

- A hospital would be assigned a very high sensitivity;
- A nature reserve that attracts visitors from across Dublin City with no alternatives would be assigned a high sensitivity;
- A golf course, frequented daily, with no immediate alternative would be assigned a medium sensitivity;
- A small local park, with no extra amenities or features would be assigned a low sensitivity; and
- Derelict land or unoccupied buildings would be assigned a very low sensitivity.

The magnitude of impact of land take has been determined by the degree of loss of the resource including acquisition of gardens and private landings/driveways, as set out in DMRB Guidance, and supported by professional judgement. In general, direct acquisition of a property has been categorised with a high or very high magnitude. A medium magnitude would be assigned where there will be changes to access or the acquisition of land, but the changes overall will not compromise the overall ability to use a property. A low magnitude has been assigned where there will be a minor loss of land, or where severance will be introduced but adequate accessibility

will be maintained throughout the Construction Phase or provided during the Operational Phase. The assessment has been reported by community area with the nature, significance, and duration of effect assigned using the EPA Guidelines (EPA 2022).

10.2.4.1.2.2 Accessibility

Community accessibility relates to the ability of users to access community facilities, recreational resources, and residential properties. Change in access to facilities can significantly affect users, particularly if these are important facilities (e.g., hospitals), or if there are a lack of alternative facilities available. Changes in traffic flow, parking provision, public transport services and walking and cycling provision can also impact the ability of users to access certain community facilities.

During the Construction Phase, temporary diversions and temporary road closures will be required for short periods of time with designated detour routes in place and local access accommodated. Lane closures may be required during different Construction Phases which will reduce traffic capacity. Chapter 6 (Traffic & Transport) has qualitatively assessed the potential impacts on pedestrians, cyclists, bus users and private vehicles as a result of construction activity. The residual effects assigned to each user type within Chapter 6 (Traffic & Transport) informs the qualitative accessibility assessment in this Chapter. As such, the impact on access to community receptors during construction has been reported by each user type and for each community area, in line with EPA Guidelines (EPA 2022).

Changes in access to community receptors as a result of the Operational Phase of the Proposed Scheme were considered in respect to the outcomes of a changed walking environment for pedestrians, cycling provision for cyclists and bus infrastructure for bus users. The community accessibility assessment has drawn on the outcomes of the qualitative assessment metrics identified in Chapter 6 (Traffic & Transport). These qualitative assessments were considered collectively in order to assess the significance of impacts on access for each community area during the Operational Phase. The assessment has been reported by community area and by different user types (bus users, cyclists, pedestrians, and private vehicles). Where a road is expected to experience an impact to accessibility, moderate and above, this has been reported individually, alongside the community receptors that are likely to be impacted as a result. The nature, significance, and duration of effect for each receptor has been assigned using the EPA Guidelines (EPA 2022).

A parking assessment has been undertaken in Chapter 6 (Traffic & Transport) and therefore is not considered further in this Population assessment unless a negative, significant impact is identified at any point along the Proposed Scheme.

10.2.4.2 Economic Assessment

The methodology for the assessment of economic impacts is outlined in this Section.

10.2.4.2.1 Commercial Amenity

The commercial amenity assessment has included consideration of 'direct' and 'indirect' impacts on commercial amenity. An indirect amenity impact on commercial receptors has been assessed using the same method as for community amenity (Section 10.2.4.1.1). As before, an indirect amenity assessment matrix has been used to determine the significance of localised impacts on individual receptors (see Table 10.3). The amenity significance matrix is closely aligned with the EPA Guidelines (EPA 2022).

In some cases, a single (direct) environmental effect in isolation can result in an impact on commercial amenity where a business has a particular sensitivity. For example, certain activities can be sensitive to noise and vibration effects (i.e., performing arts, advanced manufacturing, and sound recording facilities). The assessment has therefore included an assessment of direct impacts on amenity for commercial receptors. Appendix A10.1 Schedule of Commercial Businesses in Volume 4 of this EIAR provides a list of all commercial businesses located along the Proposed Scheme and any businesses in the surrounding road network that are located on a road that is expected to experience a moderate or greater traffic impact from displaced traffic in the AM and PM peak hours (as identified in Chapter 6 (Traffic & Transport)). This appendix has been referred to in the assessment section, where appropriate.

The following approach has been taken for the assessment of direct amenity:

- The sensitivity of each commercial receptor has been considered from the perspective of the following environmental effects:
 - Air quality;
 - Visual;
 - Noise and vibration; and
 - Traffic.
- The following example questions were posed to assess the sensitivity of commercial receptors:
 - Is this business providing support to vulnerable people or people with disabilities who may be sensitive to noise disturbance?
 - Does the operation of the business rely on the visual landscape to attract trade (e.g., a restaurant, hotel, or tourism asset)?

The magnitude of impact on each commercial receptor has been informed by the residual significance of effects identified within each environmental assessment. The nature, significance, and duration of effect for each receptor has been assigned using the EPA Guidelines (EPA 2022).

10.2.4.2.2 Commercial Land Use and Accessibility

10.2.4.2.2.1 Land Take

This assessment considers direct land take on commercial properties / land and designated car parking. The impact on private landings, which can be used for a variety of reasons by businesses, has also been considered. This assessment has only considered commercial properties within the Proposed Scheme boundary that would be expected to experience direct land take. This assessment has followed the same approach as set out for community land take (Section 10.2.4.1.2.1). This assessment has only considered commercial businesses identified through a site walkover and desktop research (including businesses operating from residential properties where visible) and has not considered people choosing to work from home.

Large areas of commercial land, such as a business park or shopping centre, were assigned a high sensitivity. Derelict land or unoccupied buildings were assigned a low sensitivity. The magnitude of impact on commercial land has been determined by the degree of loss of the resource as per the DMRB guidance. Where there will be substantial permanent land take from a commercial land holding, a high magnitude has been assigned. A low magnitude would be assigned where there will be minimal disruption to non-operational land or a car park.

The nature, significance, and duration of effect for each receptor has been assigned using the DMRB and EPA Guidelines (EPA 2022).

10.2.4.2.2.2 Accessibility

Commercial accessibility relates to the ability of users and employees to access commercial businesses. Changes in access to commercial business (i.e., changes in traffic flow, public transport services and walking and cycling provision) can significantly affect the level of usage experienced by commercial receptors, which may affect the ability of a business to operate successfully. The accessibility assessment has considered the commercial properties along the Proposed Scheme as well as those areas that are expected to experience positive and negative changes in traffic flows in the surrounding road network. Appendix A10.1 Schedule of Commercial Businesses in Volume 4 of this EIAR provides a list of all commercial businesses located along the Proposed Scheme and any businesses in the surrounding road network that are located on a road that is expected to experience a moderate or greater traffic impact from displaced traffic in the AM and PM peak hours (as identified in Chapter 6 (Traffic & Transport)) and has been referred to in the assessment section, where appropriate.

During the Construction Phase, temporary diversions may be required for short periods of time, with designated detour routes in place and local access accommodated as required. Lane closures will be required during different Construction Phases which will reduce traffic capacity. Chapter 6 (Traffic & Transport) has qualitatively assessed the potential impacts on pedestrians, cyclists, bus users and private vehicles as a result of construction activity. The residual effects assigned to each user type within Chapter 6 (Traffic & Transport) informs the accessibility

assessment in this Chapter. As such, the impact on access to commercial receptors during construction has been reported by each user type and for each community area, in line with EPA Guidelines (EPA 2022).

Changes in access to commercial receptors as a result of the Operational Phase of the Proposed Scheme were considered in respect to the outcomes of a changed walking environment for pedestrians, cycling provision for cyclists, bus infrastructure for bus users, and changes to general traffic for private vehicles. The community accessibility assessment has therefore drawn on the outcomes of the qualitative assessment metrics identified in the Chapter 6 (Traffic & Transport). These qualitative assessments were considered collectively in order to assess the significance of impacts on access during the Operational Phase. The assessment has been reported by community area and by different user types (bus users, cyclists, pedestrians, and private vehicles). However, where a road is expected to experience an impact to accessibility, moderate and above, this has been reported individually, alongside the commercial receptors that are likely to be impacted as a result. The nature, significance, and duration of effect for each receptor has been assigned using the EPA Guidelines (EPA 2022).

10.3 Baseline Environment

This Section presents the baseline environment for the community and economic assessments. The baseline includes a brief description of the community areas near or intercepted by the Proposed Scheme, details about the different types of community and commercial receptors in the study area and any notable features along the Proposed Scheme.

10.3.1 Overview

The north and south quays between Talbot Memorial Bridge and the Tom Clarke East Link Bridge have been transformed in recent times. Once an area of heavy industry and maritime activity, these areas are now considered one of the most modern and contemporary of the City Centre of Dublin. This transformation, assisted by the proximity of these areas to the City Centre, has allowed for these areas to become more livable, with considerable residential and commercial receptors as well as some amenity areas all being developed in tandem with each other, making these areas some of the most sought after areas to live in within Ireland. The study area for the Proposed Scheme consists of six community areas which have an approximate total population of 42,000 according to the 2016 Census (CSO 2016a).

The section of the Proposed Scheme between Tom Clarke East Link Bridge and Sean Moore Road diverts along two separate routes, one along York Road and Pigeon House Road, and the other close to the centre of the Ringsend / Irishtown area, along Pembroke Cottages, Cambridge Park, Ringsend Park, and Kerlogue Road. The Ringsend / Irishtown area is considered to be a well-established, close-knit community with rich cultural heritage (see Chapter 15 (Archaeological & Cultural Heritage) for more details on the archaeology and cultural heritage of the area). The area comprises of predominantly residential receptors and has an abundance of recreational resources by way of Ringsend Park, Irishtown Stadium, and Sean Moore Park as well as access to the East Coast Trail along Beach Road to the south. There is sufficient commercial and community receptors along Irishtown Road to meet the immediate needs of the community.

For more details on the extent of the Proposed Scheme in the areas outlined above, please see Chapter 4 (Proposed Scheme Description).

10.3.2 Community Baseline

10.3.2.1 Community Facilities and Recreational Receptors

The Proposed Scheme is located in the vicinity of a number of community and recreational receptors, the number and type of these receptors are presented by community area in Table 10.4.

Table 10.4: Community Receptor Type by Community Area (OSI 2020)

Community and Recreation Receptors	Place of Worship	Recreation	Hospital / Health Centre	Schools
City Quay	3	2	1	2

Community and Recreation Receptors	Place of Worship	Recreation	Hospital / Health Centre	Schools
Pro Cathedral	1	1	1	3
Ringsend	1	9	1	3
Sandymount	5	8	3	8
Sean Mc Dermott Street	2	5	2	3
Seville Place - North Wall	1	8	1	3
Study Area Total	13	32	9	22

Table 10.4 demonstrates that there is a high concentration of schools, particularly in Sandymount, and recreational areas, particularly Ringsend, Sandymount, and Seville Place – North Wall, within the study area. Other community facilities are more evenly distributed throughout the study area. Examples of community receptors in the vicinity of the Proposed Scheme which may attract a large number of users include:

- Tara Street Station;
- St Patrick's Rowing Club;
- Stella Marris Rowing Club;
- Ringsend Park (and associated facilities);
- Irishtown Athletics Stadium;
- Grand Canal Dock;
- Capital Dock Park; and
- The Poolbeg Yacht and Boat Club.

Within the study area there is also one national trail, the National Famine Way, used for walking and recreational activity. Clanna Gael Fontenoy GAA Club and Cambridge Football Club are also situated in proximity to the Proposed Scheme which attract large number of residents from local communities during peak times of the seasons, particularly during game days and training days.

10.3.2.2 Residential Land

There are approximately 7,400 residential properties within the study area (OSI 2020).

10.3.2.3 Commute to Work

There are approximately 22,000 commuters across the Proposed Scheme community study area and 18% of these commuters travel by public transport (bus or train) (CSO 2016b). The method of travel to work by community area is presented in Table 10.5. On average, nearly 50% of the study area walk or cycle to work (49%), while 17% of these commuters use a car or van to travel to work. The number of residents travelling by foot or bike to work (49%) is considerably more than the average for County Dublin (17%), reflecting the proximity of the Proposed Scheme to Dublin City Centre.

Table 10.5: Method of Travel to Work for Bus, Train, Car and Foot / Bike (%)

Community Area	Travel by Bus / Minibus or Coach	Travel by Car / Van	Travel by Train	Travel by Foot / Bike	Other
City Quay	9%	14%	7%	58%	13%
Pro Cathedral	16%	7%	8%	38%	30%
Ringsend	7%	23%	5%	57%	9%
Sandymount	7%	38%	6%	37%	11%
Sean Mc Dermott Street	15%	10%	9%	46%	21%
Seville Place - North Wall	7%	11%	11%	55%	15%
Study Area Average	10%	17%	8%	49%	17%
County Dublin	12%	54%	8%	17%	9%

NaPTAN data published by the NTA (NTA 2020) identifies the access points for bus stops, rail stations, airports, and tram stops providing an indication of the level of availability of public transport within community areas. There are a total of 304 public transport access points across the study area as shown in Table 10.6. Pro Cathedral has the largest proportion of public transport access points across the study area, making up 33% of the stops in the study area. Ringsend has the fewest, accounting for 7% of the total number of public transport access points. The remaining community areas, City Quay, Sandymount, Sean McDermott Street and Seville Place – North Wall, have similar level of public transport access points.

Table 10.6: Number of Public Transport Access Points Across the Study Area

Community Areas	Number of Public Transport Access Points	Percent of Stops Across the Study Area
City Quay	40	13%
Pro Cathedral	101	33%
Ringsend	20	7%
Sandymount	45	15%
Sean Mc Dermott Street	48	16%
Seville Place - North Wall	50	16%
Study Area Total	304	

10.3.3 Economic Baseline

10.3.3.1 Commercial Receptors

The Proposed Scheme will pass a large number of commercial receptors, including a significant number of offices along the River Liffey. The number of commercial receptors in the study area, are presented in Table 10.7 (Geodirectory 2019). Appendix A10.1 (Schedule of Commercial Businesses) in Volume 4 of this EIAR provides a list of all commercial businesses along the Proposed Scheme. Approximately 150 businesses have been identified along the Proposed Scheme, which is approximately 5% of businesses in the study area.

Table 10.7: Commercial Receptors within each Community Area (Geodirectory 2019)

Community Area	Commercial Receptors*
City Quay	558
Pro Cathedral	1,042
Ringsend	254
Sandymount	304
Sean Mc Dermott Street	389
Seville Place - North Wall	554
Study Area Total	3,101

*Geodirectory data can count commercial businesses that are in the same location e.g., a shopping centre, as one commercial business, which may skew the commercial receptor count.

Table 10.7 shows there are a large number of offices within the study area particularly in City Quay and Seville Place – North Wall, the community areas closest to the City Centre.

Appendix A10.2 (The Economic Impact of the Core Bus Corridors) (EY 2021) in Volume 4 of this EIAR provides additional baseline data on footfall, modes of transport to commercial hubs and expenditure by mode of transport (EY 2021).

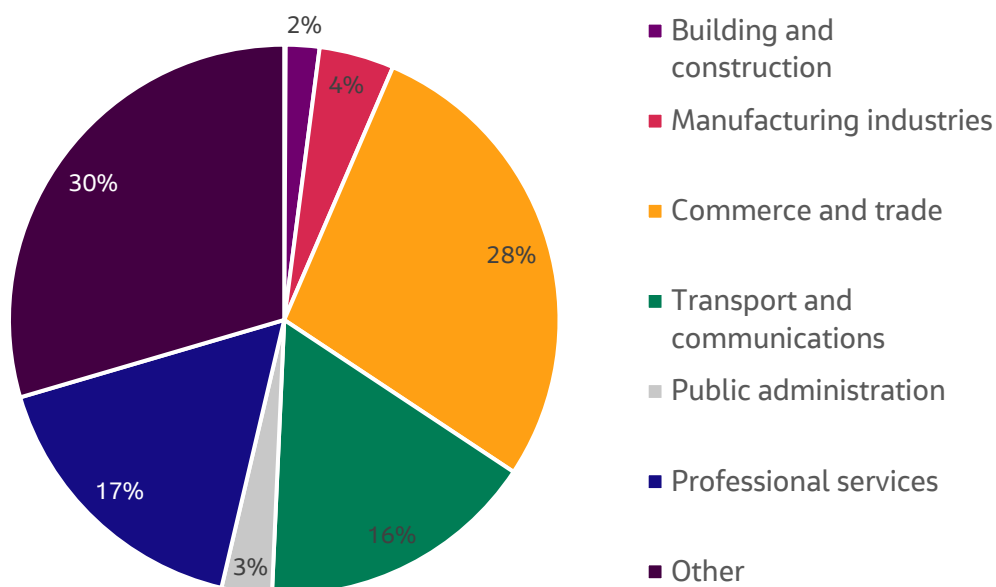
10.3.3.2 Employment

Within the study area there are approximately 24,300 people in employment (57% of the total study area population). Of the working age population, over 2,500 people are unemployed (10% of the working age population), across the study area population and this equates to 6% being unemployed (CSO 2016c).

Once an area of heavy industry and maritime activity, the North and South Quays are now considered one of the most modern and contemporary areas of the City Centre of Dublin. These areas are now home to some of the most recognisable international brands and businesses (for example Citi Bank, PWC, Facebook, JP Morgan, Grant Thornton, Ancestry.com, Indeed, etc.) and institutions (Irish Financial Services Centre (IFSC), Central Bank of Ireland, and National Treasury Management Agency). These businesses and institutions are important centres of employment within Dublin City Centre.

In contrast, the centres of employment in the areas of Ringsend and Irishtown largely consist of small to medium sized enterprises / businesses in fitting with the more localised context in which these community areas are set.

Graph 10.1 presents a breakdown of employment across the study area. The largest sectors of employment are other (30%) and commerce and trade (28%) which together make over 50% of the employment in the study area (CSO 2016c).



Graph 10.1: Employment by Industry within the Study Area (%), CSO 2016c

10.4 Potential Impacts

Potential impacts are typically those that could occur in the absence of mitigation, which then inform the need for mitigation or monitoring (refer to Section 10.5) and enables residual impacts to be determined. However, as explained in Section 10.2, the population assessment presented in this chapter is partly informed by the residual impacts identified in other topic chapters forming part of this EIAR, and as such the potential impacts in the following section already take into account mitigation proposed in those chapters.

10.4.1 Characteristics of the Proposed Scheme

The Proposed Scheme will be approximately 4.3km (kilometres) long from end to end, consisting of 1.6km of core bus corridor along the North Quays, 1.4km of core bus corridor along the South Quays, which will increase to 1.6km when the River Dodder Public Transport Opening Bridge connection (DPTOB) is completed across the mouth of the River Dodder and its confluence with the River Liffey, and 1.1km of cycle route through Ringsend and Irishtown to Sean Moore Road. Permanent land acquisition is minimal across the study area with two community facilities, Saint Patricks Rowing Club and Ringsend Park, and one commercial business, Stack B Building (offices) expected to be impacted. The Saint Patricks Rowing Club will be relocated as part of the

Proposed Scheme to accommodate the construction of the DPTOB. Ringsend Park will be the location of a pedestrian priority zone.

The Proposed Scheme has been designed following the guidelines in Building for Everyone – A Universal Design Approach (Centre for Excellence in Universal Design, 2020). In general, the Proposed Scheme is likely to improve the street environment, ensuring it will meet current Universal Design good practice standards. An accessibility audit determined that footways along the existing route were in a reasonable state of repair and some crossings already have dropped kerbs and tactile paving. However, the Proposed Scheme will address gaps in existing provision of pedestrian and cycle routes. The urban environment will be easier and safer for a wider variety of pedestrians, including the visually impaired, wheelchair users and people with mobility difficulties, parents with young children and pushchair users. Details of provision for mobility impaired are set out in Chapter 4 (Proposed Scheme Description). This would help to reduce the impact of accessibility in the urban environment, particularly for people with disabilities.

As per Chapter 5 (Construction), during the Construction Phase, the anticipated site staff numbers working on the Proposed Scheme will be 20 to 30, rising to 50 personnel at peak construction. This level of employment will provide a positive economic impact to the economy in terms of associated spending from construction works, although a proportion will already reside locally. As discussed in Appendix A10.2 (The Economic Impact of the Core Bus Corridors) (EY 2021), the operation of the Proposed Scheme will give households along the route access to wider and better job opportunities (EY 2021). The availability of public transport is expected to reduce the time taken to commute to workplaces, this would have a particular impact for low-income households and people with a disability. The Economic Impact of the Core Bus Corridors Report (EY 2021) also identifies that there is expected to be an increase in job satisfaction as well as an increase in job retention (see Appendix A10.2 (The Economic Impact of the Core Bus Corridors) (EY 2021)).

Bus passenger numbers are projected to increase as a result of the Proposed Scheme through the realisation of faster journey times and better reliability, which will be coupled with the opportunity to increase capacity through more frequent services if required. In addition, the provision of enhanced cycling facilities should also increase the number of cyclists utilising the infrastructure.

The Proposed Scheme will have four Construction Site Compounds at the following locations:

- **Construction Compound R1:** George's Dock Scherzer Bridges;
- **Construction Compound R2:** Royal Canal Scherzer Bridges;
- **Construction Compound R3A/3B:** West of the DPTOB; and
- **Construction Compound R4:** East of the DPTOB.

10.4.2 'Do Nothing' Scenario

In the Do Nothing scenario the Proposed Scheme would not be implemented and therefore be no changes to pedestrian, cycling or bus amenity and access, and no change to land use as a result of the Proposed Scheme. Therefore, there would be a Neutral impact on land use and potential Negative impacts on amenity and accessibility under the 'Do Nothing' scenario.

10.4.3 Construction Phase

10.4.3.1 Community Assessment

10.4.3.1.1 Community Amenity

Community amenity impacts arise from a combination of traffic, air quality, noise and visual impacts as discussed in Section 10.2.4.1.1.

Chapter 6 (Traffic & Transport) identified a residual Negative, Moderate and Short-term impact on general traffic along the Proposed Scheme and a Negative, Slight and Short-term impact from additional construction traffic flows on the surrounding road network. These impacts are assigned to community receptors situated along these routes.

Chapter 7 (Air Quality) identified residual road traffic impacts on local human receptors to be Neutral and Short-Term during construction.

Chapter 9 (Noise & Vibration) identified a number of noise impacts for NSL at varying distances to the Proposed Scheme:

- A Negative, Moderate to Significant and Temporary impact is expected on all community receptors located along the north quays;
- A Negative Slight to Moderate and Temporary impact is anticipated on all community receptors located along the south quays, with the exception of those in the immediate vicinity of the DPTOB;
- A Negative, Significant to Very Significant noise impact is considered likely on all community receptors adjacent to the DPTOB (however Capital Dock Park and SPRC are predicted to have noise impacts that are Negative, Very Significant to Profound and Temporary in nature); and
- A Negative, Slight to Moderate and Temporary impact was reported for the majority of community receptors along the section of the Proposed Scheme between Tom Clarke East Link Bridge and Sean Moore Road, however Ringsend Park is expected to experience a noise impact that is Negative, Moderate to Significant and Temporary in nature.

In specific regard to works to construct the DPTOB, Chapter 9 (Noise & Vibration) also identified the following impacts:

- During the daytime, High Intrusive Noise Level Works (i.e. use of sheet piling rigs and breakers during demolition and construction of structural works) are expected to create a Negative, Significant to Very Significant and Temporary impact on receptors within 25m of proposed sheet piling works, demolition of St. Patrick's Rowing Club and DPTOB approach structural works. In the evening, this changes to Negative, Very Significant to Profound and Temporary;
- Main Structural Works (i.e. Bored Piling Rigs, Excavators and Asphalt Pavers) are expected to create a Negative, Significant to Very Significant and Temporary noise impact on receptors within 15m of bored piling and access road works during the daytime and evenings; and
- Less Intrusive Works (i.e. construction of support structures) are expected to create a Negative, Slight to Moderate and Temporary noise impact on receptors within 25m of the works. In the evening time, this changes to Negative, Moderate to Significant and Temporary.

Chapter 17 (Landscape (Townscape) & Visual) identified the following townscape and streetscape impacts:

- Negative, Moderate / Significant and Temporary / Short-Term impact on townscape and streetscape character between Talbot Memorial Bridge and Tom Clarke East Link Bridge;
- Negative, Very Significant and Temporary / Short-Term impact on the DPTOB; and
- Negative, Moderate and Temporary / Short-Term impact between Tom Clarke East Link Bridge and Sean Moore Road.

These impacts on townscape represents the visual impact experienced by community receptors along the Proposed Scheme (see Chapter 17 (Landscape (Townscape) & Visual)). The amenity designations of the Campshires and at the open space at York Road / Tom Clarke East Link Bridge, including Capital Dock Park and St. Patrick's Rowing Club, are expected to experience a Negative, Very Significant and Temporary / Short-Term impact during construction. The amenity designations of Ringsend Park, the open space adjacent to Irishtown Stadium and Sean Moore Park are expected to experience a Negative, Slight and Temporary / Short-Term impact during the Construction Phase.

These environmental impacts have been considered together to identify if there will be in-combination impacts acting upon the same community facilities.

The assessment concluded that these residual air quality, noise, traffic, and visual impacts will combine to create a Negative, Moderate and Short-term impact on community amenity along the north quays between Talbot Memorial Bridge and Tom Clarke East Link Bridge that are directly on the Proposed Scheme (i.e., within the community area of Seville Place – North Quays predominantly, but also within a small area of the community area of Pro Cathedral). The only community receptors along this section of the Proposed Scheme are Trinity College Dublin (Stack B Building), the EPIC Museum in the CHQ Building and Spencer Dock Park.

The section of the Proposed Scheme along the south quays between Talbot Memorial Bridge and Tom Clarke East Link Bridge (i.e., within the community area of City Quay) is expected to experience a Negative, Moderate and Temporary / Short-term impact on amenity during the Construction Phase of the Proposed Scheme. Community receptors along this section of the Proposed Scheme include the Immaculate Heart of Mary Church, St. Mary's Creche, and Elizabeth O'Farrell Park.

The community amenity of receptors in proximity to the location of where the DPTOB is to be constructed is also expected to be significantly impacted, given the scale of construction. The consideration of the above environmental impacts in-combination concluded that there would be a Negative, Moderate to Significant and Short-term impact on the community amenity of two receptors in proximity to the DPTOB, St. Patrick's Rowing Club (SPRC) (Ringsend) and Capital Dock Park (City Quay).

The community amenity of receptors along the section of the Proposed Scheme between Tom Clarke East Link Bridge and Sean Moore Road, mostly in the community area of Ringsend but also a very small portion of the Sandymount community area, is expected to experience a Negative, Moderate and Short-term impact. Community receptors along this section of the Proposed Scheme include Ringsend Park, Irishtown Athletics Stadium, and Stella Marris Rowing Club.

The wider areas of these community areas are not expected to be significantly negatively impacted however as the aforementioned impacts resulting from the Proposed Scheme are considered to be localised. As such, the impact on community amenity in the community areas of Seville Place – North Wall, City Quay and Ringsend during the Construction Phase is considered to be Negative, Not Significant and Temporary / Short-term, while the community areas of Pro Cathedral and Sandymount as well as Sean McDermott Street are expected to experience a Neutral, Not Significant and Short-term impact on amenity.

The River Liffey although not assessed as an individual receptor is used for recreational activity by a number of sports clubs (SPRC and Poolbeg Yacht and Boat Club) as well as by individuals. Construction activity, particularly as a result of the construction of the pedestrian boardwalks and DPTOB, may deter individuals from using this resource for marine leisure activity and exercise.

10.4.3.1.2 Community Land Use and accessibility

10.4.3.1.2.1 Land Take

The assessment of community land take during the Construction Phase assessed the temporary land take acquired to accommodate construction works and the potential impacts this will have on community facilities and residential properties.

No community facilities or residential properties are impacted by temporary land take acquired to accommodate construction works for the Proposed Scheme. A number of community facilities are impacted by permanent land take however these impacts are outlined and assessed in Section 10.4.4.1.2.1. As such, there are no impacts reported in respect to temporary land take on community facilities and residential properties during the Construction Phase of the Proposed Scheme.

10.4.3.1.2.2 Accessibility

Community accessibility relates to the ability of users to access community facilities, recreational resources, and residential properties. The nature of the Proposed Scheme means accessibility impacts will differ based on the mode of travel used. The assessment has therefore separately assessed accessibility impacts on pedestrians, and cyclists, bus users and private vehicles.

Pedestrians and Cyclists

Pedestrian and cyclist safety measures are discussed in Chapter 5 (Construction). These safety measures are intended to allow the safe continuation of access along the route of the Proposed Scheme during the Construction Phase. It is expected that, as roads, cycle lanes and footpaths are being upgraded, that there will be some level of disruption to users and their ability to access community facilities. It is important to note that as the Construction Phase will be undertaken in sections, construction impacts would be limited to where the work is being undertaken

and for a limited duration. As outlined in Section 5.5 of Chapter 5 (Construction), measures will be undertaken by the appointed contractor to ensure that access and parking are maintained during construction, wherever possible, to reduce the impact on accessibility along the Proposed Scheme.

Chapter 6 (Traffic & Transport) has identified a Negative, Slight and Temporary impact on walking access and a Negative, Moderate and Temporary impact on cycling along the Proposed Scheme during the Construction Phase. Taking into consideration the mitigation measures presented in Chapter 5 (Construction) and Appendix A5.1 (Construction Environmental Management Plan (CEMP)) in Volume 4 of this EIAR, it is expected that access to community receptors along the Proposed Scheme, will also likely be negatively impacted during the Construction Phase.

Bus Users

As confirmed in Chapter 5 (Construction), existing bus routes will be maintained during the Construction Phase. Bus stop locations will need to be temporarily relocated to accommodate the works. Use of buses to access community facilities will continue throughout construction, albeit there may be a change in the distance required to walk between the temporary bus stops and the community facilities.

Chapter 6 (Traffic & Transport) has identified a residual Negative, Moderate and Temporary impact on bus users along the Proposed Scheme. Taking into consideration the measures in Chapter 5 (Construction), it is expected that the impact on access to community receptors along the Proposed Scheme will also likely be negatively impacted during the Construction Phase.

Private Vehicles

Chapter 5 (Construction) outlines temporary traffic management measures which may affect accessibility to parking provision and community facilities along certain parts of the Proposed Scheme particularly where road closures or diversions will be required. Road diversions will be temporary and may result in an increase in the time taken to get to a community facility via private vehicle, but that overall access to that facility will not be prohibited. The impact on specific parking and loading provision is discussed in Chapter 6 (Traffic & Transport).

Chapter 6 (Traffic & Transport) has identified a residual Negative, Moderate and Short-term impact for general traffic travelling along the Proposed Scheme. Taking into consideration the measures in Chapter 5 (Construction), it is expected that the impact on access to community receptors from private vehicles along the Proposed Scheme will be Negative, Moderate and Short-term during construction. Additional construction traffic flows on the surrounding road network are expected to result in a Negative, Slight and Short-term impact on general traffic. This will not include the impact of construction access vehicles which are considered in Chapter 6 (Traffic & Transport). Private vehicles may therefore be negatively affected on the surrounding road network although this is only expected to be Negative, Slight and Short-term during the Construction Phase.

The impacts identified above are expected to be experienced by community areas located predominately along the length of the Proposed Scheme where construction activity, road diversions and closures are expected. It is acknowledged that users will travel between community areas to access community facilities within other community areas. However, the impact of construction activity will be experienced where the facility is located. The community areas that are expected to experience a Negative, Slight and Temporary impact (pedestrians) and a Negative, Moderate and Temporary (cyclists and bus users) and Negative, Moderate and Short-term (private vehicles) as a result in changes to access are Ringsend, City Quay and Seville Place – North Wall.

Pedestrians, cyclists, and bus users in all other community areas (Sandymount, Pro Cathedral and Sean McDermott Street) are expected to experience a Negative, Not Significant and Temporary impact as a result of changes to access, while private vehicles will experience a Negative, Slight and Temporary impact as a result of changes to access during the construction of the Proposed Scheme.

10.4.3.2 Economic Assessment

10.4.3.2.1 Commercial Amenity

As outlined above in Section 10.2.4.2.1, commercial amenity impacts can arise indirectly from a combination of traffic, air quality, noise, and visual impacts or directly where a single environmental impact is significant enough to affect the amenity of the commercial business and potentially having implications on the ability of the business to operate successfully.

Chapter 6 (Traffic & Transport) identified a residual Negative, Moderate and Short-term impact on general traffic along the Proposed Scheme and a Negative, Slight and Short-term impact from additional construction traffic flows in the surrounding road network. These impacts are assigned to community receptors situated along these routes.

Chapter 7 (Air Quality) identified residual road traffic impacts on local human receptors to be Neutral and Short-Term during construction.

Chapter 9 (Noise & Vibration) identified a number of noise impacts for NSL at varying distances to the Proposed Scheme:

- A Negative, Moderate to Significant and Temporary impact is expected on all commercial receptors located along the north quays;
- A Negative Slight to Moderate and Temporary impact is anticipated on all commercial receptors located along the south quays, with the exception of those in the immediate vicinity of the DPTOB;
- A Negative, Significant to Very Significant noise impact is considered likely on all commercial receptors adjacent to the DPTOB; and
- A Negative, Slight to Moderate and Temporary impact was reported for the majority of commercial receptors along the section of the Proposed Scheme between Tom Clarke East Link Bridge and Sean Moore Road.

In specific regard to works to construct the DPTOB, Chapter 9 (Noise & Vibration) also identified the following impacts:

- During the daytime, High Intrusive Noise Level Works (i.e. use of sheet piling rigs and breakers during demolition and construction of structural works) are expected to create a Negative, Significant to Very Significant and Temporary impact on receptors within 25m of proposed sheet piling works, demolition of St. Patrick's Rowing Club and DPTOB approach structural works. In the evening, this changes to Negative, Very Significant to Profound and Temporary;
- Main Structural Works (i.e. Bored Piling Rigs, Excavators and Asphalt Pavers) are expected to create a Negative, Significant to Very Significant and Temporary noise impact on receptors within 15m of bored piling and access road works during the daytime and evenings; and
- Less Intrusive Works (i.e. construction of support structures) are expected to create a Negative, Slight to Moderate and Temporary noise impact on receptors within 25m of the works. In the evening time, this changes to Negative, Moderate to Significant and Temporary.

Chapter 17 (Landscape (Townscape) & Visual) identified the following townscape and streetscape impacts:

- Negative, Moderate / Significant and Temporary / Short-term between Talbot Memorial Bridge and Tom Clarke East Link Bridge;
- Negative, Very Significant and Temporary / Short-term impact on the DPTOB; and
- Negative, Moderate and Temporary impact between Tom Clarke East Link Bridge and Sean Moore Road.

These environmental impacts have been considered together to identify if there will be a combination of impacts acting on the same commercial receptor.

The assessment concluded that these residual air quality, noise, traffic, and visual impacts will combine to create a Negative, Moderate and Short-term impact on all commercial businesses along the north quays between Talbot Memorial Bridge and Tom Clarke East Link Bridge that are directly on the Proposed Scheme (i.e., within the

community area of Seville Place – North Quays, predominantly, but also within a small area of the community area of Pro Cathedral). Appendix A10.1 (Schedule of Commercial Businesses) in Volume 4 of this EIAR provides a schedule of all commercial businesses along the Proposed Scheme.

Commercial receptors along the section of the Proposed Scheme between Talbot Memorial Bridge and Tom Clarke East Link Bridge on the south quays (i.e., within the community area of City Quay) are expected to experience a Negative, Moderate and Temporary / Short-term impact on amenity during the Construction Phase of the Proposed Scheme.

The amenity of commercial receptors in proximity to the location of where the DPTOB is to be constructed is also expected to be significantly impacted, given the scale of construction. The consideration of the above environmental impacts in-combination concluded that there would be a Negative, Moderate and Temporary / Short-term impact on the amenity of commercial receptors in proximity to the DPTOB (see Appendix A10.1 (Schedule of Commercial Businesses) in Volume 4 of this EIAR for nearby commercial receptors.

Commercial receptors along the section of the Proposed Scheme between Tom Clarke East Link Bridge and Sean Moore Road, mostly in the community area of Ringsend but also a very small portion of the Sandymount community area, are expected to experience a Negative, Moderate and Temporary / Short-term impact on amenity.

The wider areas of these community areas are not expected to be significantly negatively impacted however as the aforementioned impacts resulting from the Proposed Scheme are considered to be localised. As such, the impact on commercial amenity in the community areas of Seville Place – North Wall, City Quay and Ringsend during the Construction Phase is considered Negative, Slight and Temporary / Short-term given the number of commercial receptors in these areas. The community areas of Pro Cathedral and Sandymount as well as Sean McDermott Street are expected to experience a Neutral, Not Significant and Short-Term impact on commercial amenity during the Construction Phase.

The River Liffey although not assessed as an individual receptor is used for recreational activity by a number of commercial businesses (City Kayaking Dublin Bay Cruises, Sea Safari Tours Limited and Adventure Training Ireland) as well as by individuals. Construction activity, particularly as a result of the construction of the pedestrian boardwalks and DPTOB, may deter individuals from using this resource for marine leisure activity and exercise.

As discussed in Section 10.2.4.2.1, a single significant environmental effect in isolation can result in a direct impact on commercial amenity where a business has a particular sensitivity. No direct amenity impacts were identified on any commercial receptors during the Construction Phase of the Proposed Scheme.

10.4.3.2.2 Commercial Land Use and accessibility

10.4.3.2.2.1 Land Take

The assessment of commercial land take during the Construction Phase assesses the temporary land take acquired and the potential impacts this has on commercial businesses. This assessment also considers the impact on private landings, this is the area in front of businesses that may be used for a variety of reasons including outdoor seating, selling produce or parking.

Three commercial receptors are expected to be impacted by temporary land acquisition during the Construction Phase of the Proposed Scheme:

- Trinity College Dublin (Stack B Building) along Custom House Quay (in the community area of Seville Place – North Wall);
- The Jeanie Johnston, docked off North Wall Quay (in the community area of Seville Place – North Wall); and
- The National Convention Centre at Spencer Dock (in the community area of Seville Place – North Wall).

In respect to Trinity College Dublin (Stack B Building), temporary land take is required from the car park to the east of the building in order to accommodate a construction compound and the changes to the Scherzer Bridges immediately adjacent to it. The private landing associated with this commercial receptor is not affected by the

proposed temporary land take, however. The impact of temporary land take on this receptor has been assessed as Negative, Moderate and Short-Term.

Temporary land-take is required from where The Jeanie Johnston is currently docked off North Wall Quay to facilitate the construction of Custom House Quay pedestrian boardwalk proposed as part of the Proposed Scheme. It is envisaged that the currently position and access points to The Jeanie Johnston will be moved slightly downstream for the duration of the works with the potential to be reinstated in its original position upon completion. Therefore, the impact of temporary land take on this commercial receptor during the Construction Phase is considered to be Negative, Slight and Short-term.

The National Convention Centre at Spencer Dock is also subject to temporary land acquisition. To assist with the adjustment of ground level to facilitate the raised Scherzer Bridges at the Royal Canal by an increase of approximately 1m, the forecourt / main entrance area of The National Convention Centre is to be acquired temporarily to facilitate these works. It should be noted however that it is anticipated that adequate access to and from the National Convention Centre will be maintained throughout the duration of works at this location. Therefore, the impact of temporary land-take on this commercial receptor during the Construction Phase of the Proposed Scheme is considered to be Negative, Slight and Short-term.

Overall, the impact of land take across the impacted community areas (Seville Place – North Wall) as a whole is considered Negative, Not Significant and Short-Term during the Construction Phase. No other community areas are impacted by land take during the Construction Phase.

10.4.3.2.2.2 Accessibility

Commercial accessibility relates to the ability of users to access commercial businesses as customers or employees. The nature of the Proposed Scheme means that accessibility impacts will differ based on the mode of travel used. The assessment, similar to the community accessibility assessment (Section 10.2.4.1) has separately assessed accessibility impacts on pedestrians and cyclists, bus users and private vehicles. As the Construction Phase mitigation measures presented in Chapter 5 (Construction) and the residual effects presented in Chapter 6 (Traffic & Transport) are the same for each mode of travel, the impacts on commercial accessibility are the same as those reported in Section 10.4.3.1.2.2 for community accessibility.

A parking assessment has been undertaken in Chapter 6 (Traffic and Transport). No significant impacts on parking along the Proposed Scheme route during construction were identified.

10.4.4 Operational Phase

10.4.4.1 Community Assessment

10.4.4.1.1 Community Amenity

Community amenity impacts arise from a combination of traffic, air quality, noise, and visual impacts, as discussed in Section 10.2.4.1.1.

Chapter 6 (Traffic & Transport) identified a Positive, Slight and Long-Term impact from a reduction in general traffic along the Proposed Scheme and a Negative, Slight and Long-Term impact from redistributed traffic along the surrounding road network. A Negative Moderate and Long-Term impact was identified on the junction of Cathal Brugha Street / Cumberland Street North / Sean McDermott Street Upper on Cathal Brugha Street during the AM Peak in the Opening Year of the Proposed Scheme (i.e., 2028) as well as at the junction of Townsend Street / Moss Street / Shaw Street on Townsend Street during the PM Peak in 2028. All remaining junctions will be able to accommodate additional general traffic volumes redistributed, as a result of the Proposed Scheme and therefore are assessed as Negative, Not Significant and Long Term.

Chapter 7 (Air Quality) identified a Neutral and Long-Term residual impact from road traffic impacts on local human receptors during the Operational Phase.

Chapter 9 (Noise & Vibration) identified a direct Positive, Imperceptible to Slight, Short to Medium Term impact from traffic noise along the Proposed Scheme and an indirect Positive, Imperceptible to Slight, Short to Medium

Term to Negative, Moderate, Short to Medium Term impact from traffic noise in the surrounding road network. No roads are expected to experience significant traffic noise during the Operational Phase.

Chapter 17 (Landscape (Townscape) & Visual) identified the following townscape and streetscape effects:

- Neutral, Moderate and Short-Term impact between Talbot Memorial Bridge to Tom Clarke East Link Bridge;
- Neutral, Very Significant and Short-Term impact on the DPTOB; and
- Neutral, Slight and Short-Term impact between Tom Clarke East Link Bridge to Sean Moore Road.

These impacts on townscape represents the visual impact experienced by community receptors along these stretches of road 1 year post-construction and are expected to improve overtime (see Chapter 17 (Landscape (Townscape) & Visual)). The amenity designations of the Campshires and at the open space at York Road / Tom Clarke East Link Bridge are expected to experience a Neutral, Moderate and Short-term impact during the Operational Phase. The amenity designations of Ringsend Park, the open space adjacent to Irishtown Stadium and Sean Moore Park is expected to experience a Neutral, Not Significant and Short-Term impact during the Operational Phase.

These environmental impacts have been considered together to identify if there will be in-combination impacts acting upon the same community facilities.

The assessment concluded that there will be a Neutral to Positive, Slight and Long-term impact on community amenity for those community facilities positioned along the Proposed Scheme given the nature of changes brought about by the Proposed Scheme (i.e., new structures (DPTOB and pedestrian boardwalks), relocated Scherzer Bridges, as well as urban realm improvements). For those community facilities located away from and not directly on the Proposed Scheme, a Negative Slight to Moderate and Long-term impact on community amenity is expected.

Overall, the impact on community amenity in community areas predominately along the Proposed Scheme (i.e., Seville Place – North Wall, City Quay and Ringsend is expected to be Neutral to Positive, Not Significant and Long-Term, while the amenity of those community areas situated away from the Proposed Scheme (Pro Cathedral, Sandymount and Sean McDermott Street) are expected to be Neutral, Not Significant and Long-Term during the Operational Phase.

10.4.4.1.2 Community Land Use and accessibility

10.4.4.1.2.1 Land Take

The assessment of community land take during the Operational Phase assessed the impact of permanent land take acquisition on community facilities and residential properties.

There are three community receptors anticipated to be impacted by permanent land take as a result of the Proposed Scheme, namely Capital Dock Park (in the community area of City Quay), St Patrick's Rowing Club Clubhouse and Ringsend Park (located in the Ringsend community area).

The northern half of Capital Dock Park is required as permanent land take for the Operational Phase of the Proposed Scheme, specifically to provide space to facilitate Construction Compound R3 during the Construction Phase of the Proposed Scheme but also to facilitate the western carriageway approach onto the DPTOB from Sir John Rogerson's Quay. While the permanent land take will be slightly less than that required during the Construction Phase, it still pertains to approximately half of the entire park. As such, the impact of permanent land take on Capital Dock Park during the Operational Phase of the Proposed Scheme is considered to be Negative, Moderate and Long-Term.

The area around and in immediate proximity to St Patrick's Rowing Club Clubhouse and floating jetty is to be permanently acquired to provide space to facilitate Construction Compound R4 during the Construction Phase of the Proposed Scheme but also to facilitate urban realm improvements and the eastern carriageway approach onto the DPTOB from the R131. St Patrick's Rowing Club Clubhouse and floating jetty are to be demolished and replaced / relocated to accommodate the Proposed Scheme (particularly the DPTOB). Demolition of the existing

St Patrick's Rowing Club premises will not be undertaken until the new accommodation / facilities are completed, or alternative interim accommodation / facilities are agreed with and provided for the St. Patrick's Rowing Club, therefore provision will be maintained into the Operational Phase, if necessary. The clubhouse will be relocated to the reclaimed land, just north of its current location, while the new jetty will be positioned adjacent to its new position. The impact of permanent land take upon this community receptor due to this relocation is considered to be Negative, Slight and Long-Term.

Ringsend Park is expected to lose some of the grass verge along a path at its most western boundary to accommodate a widened shared user path, however as the land take is minor and is only extending an existing path the impact of permanent land take is considered to be Negative, Not Significant and Long-term.

Overall, the impact of land take across the impacted community areas of City Quay and Ringsend is considered Negative, Not Significant and Long-Term during the Operational Phase. No other community areas are impacted by land take during the Operational Phase.

10.4.4.1.2.2 Accessibility

Community accessibility relates to the ability of users to access community facilities, recreational resources, and residential properties. The nature of the Proposed Scheme means that accessibility impacts will differ based on the mode of travel used. The assessment has therefore separately assessed accessibility impacts on pedestrians, cyclists, bus users and private vehicles.

The significant improvement to the walking, cycling and bus facilities included within the Proposed Scheme will encourage sustainable modes of transport, therefore reducing the demand for private vehicles / parking along the Proposed Scheme. Improved accessibility is also expected to increase social cohesion within the local community as discussed further in Appendix A10.2 (The Economic Impact of the Core Bus Corridors) (EY 2021) in Volume 4 of this EIAR (EY 2021).

Pedestrians and Cyclists

The Proposed Scheme will include improvements to pedestrian infrastructure along its length including quiet street treatment along Pigeon House Road, Pembroke Cottages and Cambridge Park (in the community area of Ringsend). These roads are predominately residential in nature and therefore are unlikely to change access or provide a new access route to any individual community receptors. Chapter 6 (Traffic & Transport) identified a Positive, Slight and Long-Term impact on pedestrian infrastructure along the Proposed Scheme.

The Proposed Scheme will provide fully segregated cycle tracks along the entire length of the north and south quays (within the community areas of City Quay and Seville Place-North Wall). On the Ringsend cycle route (proposed within the community areas of Ringsend and Sandymount), there will be a mix of shared quiet street, a pedestrian and cycle path in Ringsend Park and a segregated cycle track adjacent to Strand Street, and Pembroke Street and Beach Road in Irishtown. Chapter 6 (Traffic & Transport) identified a residual Positive, Moderate and Long term impact on cycling infrastructure along the Proposed Scheme. The beneficial impacts on walking and cycling infrastructure is expected to lead to improvements in access to community facilities along the Proposed Scheme for those choosing to walk or cycle as there will be increased provision for these modes of travel.

Bus Users

Full bus priority will be provided along the length of the Proposed Scheme. Chapter 6 (Traffic & Transport) identified a Positive, Very Significant and Long-Term impact on bus network performance indicators (which includes journey times and journey time reliability), and as such, ease of access to community facilities via bus will also likely improve along the Proposed Scheme. Chapter 6 (Traffic & Transport) also identified a Positive, Imperceptible to Profound and Long-Term impact on bus infrastructure along the Proposed Scheme.

The impacts to walkers, cyclists and bus users are expected to be experienced by community areas located along the length of the Proposed Scheme, as these will be the locations of the improved footpaths, cycle tracks, and signal controlled bus priority. The community areas that are expected to experience a Positive, Slight and Long-Term impact on pedestrians, a Positive, Moderate and Long-Term impact on cyclists and a Positive, Imperceptible

to Profound and Long-Term impact on bus users during the Operational Phase are the community areas of City Quay, Seville Place – North Wall and Ringsend, with very small parts of the community areas of Pro Cathedral and Sandymount also experiencing these impacts. Community facilities located along the Proposed Scheme where accessibility will be improved as a result of reduced traffic are:

- Radox Travel Health Centre;
- Immaculate Heart of Mary Church;
- St Mary’s Creche and Preschool;
- Selah Church;
- Trinity College Dublin (Stack B Building);
- Elizabeth O’Farrell Park; and
- Capital Dock Park.

On the whole, the other community areas (Pro Cathedral, Sean McDermott Street and Sandymount) are expected to experience a Neutral, Not Significant and Long-Term impact as a result of changes in access during the Operational Phase of the Proposed Scheme.

Private Vehicles

Chapter 6 (Traffic & Transport) identified a Positive, Slight and Long-Term impact from the reduction in general traffic along the Proposed Scheme and a Negative, Slight and Long-Term impact from redistributed traffic in the surrounding road network. Chapter 6 (Traffic & Transport) also identified localised impacts during the AM and PM peak period at three junctions in the surrounding road network of the Proposed Scheme as a result of displaced traffic. A Negative Moderate and Long-Term impact was identified on the junction of Cathal Brugha Street / Cumberland Street North / Sean McDermott Street Upper on Cathal Brugha Street during the AM Peak in the Opening Year of the Proposed Scheme (i.e., 2028) as well as at the junction of Townsend Street / Moss Street / Shaw Street on Townsend Street during the PM Peak in 2028.

The community facilities near these junctions are as follows:

- Cathal Brugha Street / Cumberland Street North / Sean McDermott Street Upper on Cathal Brugha Street – Larkin Community College and Tilly’s After-School Programme; and
- Townsend Street / Moss Street / Shaw Street on Townsend Street – no community facilities in proximity to this junction.

The impact on access to community facilities along the Proposed Scheme for private vehicles is considered to be Positive, Slight and Long-Term. The community areas that are expected to experience this impact as a result of changes in access are the community areas of Seville Place – North Wall, City Quay and Ringsend along with very small parts of Pro Cathedral and Sandymount.

The impact on access to community facilities in the surrounding road network of the Proposed Scheme for private vehicles is considered to be a Negative, Slight and Long-Term. The community areas that are expected to experience this Negative, Slight and Long-term impact as a result of changes to access to community facilities are the wider areas of Pro Cathedral and Sandymount as well as Sean McDermott Street.

10.4.4.2 Economic Assessment

10.4.4.2.1 Commercial Amenity

Chapter 6 (Traffic & Transport) identified a Positive, Slight and Long-Term impact from a reduction in general traffic along the Proposed Scheme and a Negative, Slight and Long-Term impact from redistributed traffic along the surrounding road network. A Negative Moderate and Long-Term impact was identified on the junction of Cathal Brugha Street / Cumberland Street North / Sean McDermott Street Upper on Cathal Brugha Street during the AM Peak in the Opening Year of the Proposed Scheme (i.e., 2028) as well as at the junction of and Townsend Street / Moss Street / Shaw Street on Townsend Street during the PM Peak in 2028. All remaining junctions will be able to accommodate additional general traffic volumes redistributed, as a result of the Proposed Scheme and therefore are assessed as Negative, Not Significant and Long Term.

Chapter 7 (Air Quality) identified a Neutral and Long-Term residual impact from road traffic impacts on local human receptors during the Operational Phase.

Chapter 9 (Noise & Vibration) identified a direct Positive, Imperceptible to Slight, Short to Medium Term impact from traffic noise along the Proposed Scheme and an indirect Positive, Imperceptible to Slight, Short to Medium Term to Negative, Moderate, Short to Medium Term impact from traffic noise in the surrounding road network. No roads are expected to experience significant traffic noise during the Operational Phase.

Chapter 17 (Landscape (Townscape) & Visual) identified the following townscape and streetscape effects:

- Neutral, Moderate and Short-term impact between Talbot Memorial Bridge to Tom Clarke East Link Bridge;
- Neutral, Very Significant and Short-term impact on the DPTOB; and
- Neutral, Slight and Short-term impact between Tom Clarke East Link Bridge and Sean Moore Road.

These environmental impacts have been considered together to identify if there will be in-combination impacts acting upon the same commercial receptor.

The assessment concluded that there will be a Neutral to Positive, Slight and Long-term impact on commercial amenity for those commercial receptors located along the Proposed Scheme given the nature of changes brought about by the Proposed Scheme (i.e., new structures (DPTOB and pedestrian boardwalks), relocated Scherzer Bridges, as well as urban realm improvements). Commercial receptors located away from and not directly on the Proposed Scheme are expected to experience a Negative, Slight and Long-term impact on commercial amenity however there are commercial receptors situated away from the Proposed Scheme which will experience a Negative, Moderate and Long-term impact on commercial amenity.

The commercial receptors likely to experience this Negative, Moderate and Long-term impact are situated near to the junctions outlined below and are as follows:

- Cathal Brugha Street / Cumberland Street North / Sean McDermott Street Upper on Cathal Brugha Street – Centra (Cathal Brugha Street), Admiral, Cumberland Pain & Injury Clinic and Cumberland Pain and Injury Clinic; and
- Townsend Street / Moss Street / Shaw Street on Townsend Street – Travelodge - Dublin City Centre, Aline Belo Concept, Taboo Graphix, Green REIT PLC, F45 Training (Townsend Street), Tan N Glo and Deli Gold.

Commercial receptors at these junctions are expected to experience a combination of Negative, Moderate and Long-term impact from localised redistributed traffic, and an indirect Positive, Imperceptible to Slight, Short to Medium Term to Negative, Moderate, Short to Medium Term noise impact as a result of the Proposed Scheme. Together these combine to create a Negative, Moderate and Long-Term impact on amenity at these receptors.

As discussed in Section 10.4.3.1.1, the River Liffey is used for leisure and recreational activities and is also used by a number of commercial businesses. There is a small pontoon located along the north quays which serves as a docking station for the City Kayaking tourist attraction. Other businesses that use the River Liffey includes Dublin Bay Cruises, Sea Safari Tours Limited and Adventure Training Ireland as well as SPRC.

Overall, the impact on commercial amenity in community areas along the Proposed Scheme (Seville Place – North Wall, City Quay and Ringsend) is expected to be Neutral to Positive, Slight and Long-Term while the commercial amenity of those community areas situated away from the Proposed Scheme (i.e., the wider areas of Pro Cathedral, and Sandymount as well as Sean McDermott Street) are expected to be Neutral, Not Significant and Long-Term during the Operational Phase.

No direct amenity impacts were identified on any commercial businesses during the Operational Phase of the Proposed Scheme.

10.4.4.2.2 Commercial Land Use and accessibility

10.4.4.2.2.1 Land Take

The assessment of commercial land take during the Operational Phase assesses the permanent land acquired and the potential impacts this has on commercial businesses. This assessment also considers the impact on private landings, this is the area in front of businesses that may be used for a variety of reasons including outdoor seating, selling produce or parking.

Only two commercial receptors, Trinity College Dublin (Stack B Building) located on Custom House Quay in Seville Place – North Wall community area and Fresh The Good Food Market at Capital Dock in the community area of City Quay, are expected to be impacted by permanent land take as a result Operational Phase of the Proposed Scheme.

A small section of the car park, much smaller than the size of land temporary acquired at this location during the Construction Phase (see Section 10.4.3.2.2.1 for further information), immediately adjacent to Trinity College Dublin (Stack B Building) will be required to accommodate the changes to the Scherzer Bridges. The private landing associated with this commercial receptor is not affected by the proposed permanent land take, however. Given the extent of the required permanent land take, which is considerably less than the land take required during the Construction Phase, the impact of permanent land take on this receptor has been assessed as a Negative, Slight and Long-Term impact.

With respect to Fresh The Good Food Market at Capital Dock, permanent land take of some of the private landing associated with this commercial receptor is required to provide space for Construction Compound R3 during the Construction Phase of the Proposed Scheme but also to facilitate the western carriageway approach onto the DPTOB from Sir John Rogerson's Quay. While the permanent land take will be slightly less than that required during the Construction Phase, land acquisition of a small part of the private landing of this commercial receptor is still required for the Operational Phase of the Proposed Scheme., The commercial receptor does not currently use its private landing for any specific purpose, however, therefore, the impact of land take on this commercial receptor during the Operational Phase is considered to be Negative, Not Significant and Short-term.

Overall, the impact on Seville Place – North Wall and City Quay community areas is considered Negative, Not Significant and Long-Term as a result of the Proposed Scheme during the Operational Phase. No other community areas are impacted by land take during the Operational Phase.

10.4.4.2.2.2 Accessibility

Commercial accessibility relates to the ability of users and employees to access commercial businesses. The nature of the Proposed Scheme means that accessibility impacts will differ based on the mode of travel used. The assessment has therefore separately assessed accessibility impacts on pedestrians, cyclists, bus users and private vehicles.

Chapter 6 (Traffic and Transport) assessed that people movement would significantly increase along the Proposed Scheme. It is therefore anticipated that all businesses along the Proposed Scheme will, to some extent, benefit from the increase in passing trade. Commercial businesses located along the Proposed Scheme are numbered in Appendix A10.1 (Schedule of Commercial Businesses) in Volume 4 of this EIAR.

Pedestrians and Cyclists

The positive impacts to pedestrians and cyclists will predominantly be experienced by community areas located along the length of the Proposed Scheme, as these will be the locations of the improved footpaths and cycle paths. A Positive, Slight and Long-Term residual impact on pedestrian infrastructure along the Proposed Scheme was identified by Chapter 6 (Traffic & Transport), specifically within the community areas of Seville Place – North Wall, City Quay and Ringsend but also very small parts of Pro Cathedral and Sandymount.

Chapter 6 (Traffic & Transport) identified a Positive, Moderate and Long-Term residual impact on cycling infrastructure along the Proposed Scheme.

Bus Users

Chapter 6 (Traffic & Transport) identified a Positive, Very Significant and Long-Term impact on bus network performance indicators (which includes journey times and journey reliability), and as such, ease of access to commercial businesses via bus will also likely improve along the Proposed Scheme. Chapter 6 (Traffic & Transport) also identified a Positive, Imperceptible to Profound and Long-Term impact on bus infrastructure along the Proposed Scheme specifically within the community areas of Seville Place – North Wall, City Quay and Ringsend but also very small parts of Pro Cathedral and Sandymount.

Private Vehicles

Chapter 6 (Traffic & Transport) identified a Positive, Slight and Long-Term impact from the reduction in general traffic along the Proposed Scheme and a Negative, Slight and Long-Term impact from redistributed traffic in the surrounding road network. Chapter 6 (Traffic & Transport) also identified localised impacts during the AM and PM peak period at three junctions in the surrounding road network of the Proposed Scheme as a result of displaced traffic. A Negative Moderate and Long-Term impact was identified on the junction of Cathal Brugha Street / Cumberland Street North / Sean McDermott Street Upper on Cathal Brugha Street during the AM Peak in the Opening Year of the Proposed Scheme (i.e., 2028) as well as at the junction of Townsend Street / Moss Street / Shaw Street on Townsend Street during the PM Peak in 2028. Commercial businesses expected to experience this impact are presented in Appendix A10.1 and denoted with an '*’.

The impact on access to commercial businesses along the Proposed Scheme for private vehicles is considered to be Positive, Slight and Long-Term. The community areas that are expected to experience this impact as a result of changes in access are the community areas of Seville Place – North Wall, City Quay and Ringsend but also very small parts of Pro Cathedral and Sandymount.

The impact on access to commercial businesses in the surrounding road network is considered to be a Negative, Slight and Long-Term. The community areas that are expected to experience this impact as a result of changes to access to community facilities are Sean McDermott Street, as well as the wider areas of Pro Cathedral and Sandymount.

A parking assessment has been undertaken in Chapter 6 (Traffic and Transport). No significant impacts on parking along the Proposed Scheme route were identified.

10.5 Mitigation and Monitoring Measures

The design of the Proposed Scheme has evolved through comprehensive design iteration, with particular emphasis on minimising the potential for environmental impacts, where practicable, whilst ensuring the objectives of the Proposed Scheme are attained. This population assessment takes account of the design outlined in Chapter 4 (Proposed Scheme Description) which modifies junction layouts to protect cyclists and altering layout and signal timings of major junctions to minimise traffic redistribution into side roads.

The population assessment presented in Section 10.4 has been informed by the residual impacts reported in Chapter 6 (Traffic & Transport), Chapter 7 (Air Quality), Chapter 9 (Noise & Vibration) and Chapter 17 (Landscape (Townscape) & Visual). The reported residual impacts in these chapters take into account any topic-specific mitigation identified within the respective chapters. No further mitigation is proposed over and above that set out in individual topic chapters.

10.6 Residual Impacts

No additional mitigation measures have been proposed for this population assessment therefore the residual effects are the same as potential effects detailed in Section 10.4.

10.6.1 Construction Phase

Table 10.8 summarises the predicted impacts (same as residual impacts) of the population assessment during construction of the Proposed Scheme. This includes all community and economic assessment topics.

Table 10.8: Summary of Construction Phase Significant Residual Impacts

Assessment Topic	Predicted Impact (Residual Impacts) for Community Areas	Significant Residual Impact (Receptor Specific)
Community Assessment		
Community amenity	Negative, Not Significant and Temporary / Short-term – Seville Place – North Wall, City Quay and Ringsend. Neutral, Not Significant and Short-term – Pro Cathedral, Sandymount and Sean McDermott Street.	Direct Negative, Moderate and Short-term – community receptors along the north quays (i.e., TCD (Stack B Building) and the EPIC Museum). Negative, Moderate to Significant, and Short-term in proximity to the DPTOB works (Capital Dock Park and St Patrick’s Rowing Club). Negative, Moderate and Temporary / Short-term – community receptors along the south quays (i.e., Immaculate Heart of Mary Church, St Mary’s Creche and Elizabeth O’Farrell Park)
Community land take	No significant impacts.	No significant impacts.
Community accessibility	Pedestrians Negative, Slight and Temporary – Seville Place – North Wall, City Quay, Ringsend (and small parts of the community areas of Pro Cathedral and Sandymount) Neutral, Not Significant and Temporary – The wider community areas of the Pro Cathedral, Sandymount and Sean McDermott Street Cyclists Negative, Moderate and Temporary – Seville Place – North Wall, City Quay, Ringsend (and small parts of the community areas of Pro Cathedral and Sandymount) Neutral, Not Significant and Temporary – The wider community areas of the Pro Cathedral, Sandymount and Sean McDermott Street Bus Users Negative, Moderate and Temporary – Seville Place – North Wall, City Quay, Ringsend (and small parts of the community areas of Pro Cathedral and Sandymount) Neutral, Not Significant and Temporary – The wider community areas of the Pro Cathedral, Sandymount and Sean McDermott Street Private Vehicles Negative, Moderate and Short-term – North Wall, City Quay, Ringsend (and small parts of the community areas of Pro Cathedral and Sandymount) Negative, Slight and Short-term – The wider community areas of the Pro Cathedral, Sandymount and Sean McDermott Street	
Economic Assessment		
Commercial amenity	Negative, Slight and Temporary / Short-term – Seville Place, City Quay and Ringsend. Neutral Not Significant and Short-term – Pro Cathedral, Sandymount and Sean McDermott Street.	Direct Negative, Moderate and Short-term – commercial receptors along the north quays and in proximity to the DPTOB works. Negative, Moderate and Temporary / Short-term – commercial receptors along the south quays.
Commercial land take	Negative, Not Significant and Short-Term - Seville Place – North Wall	Negative, Moderate and Short-Term – Trinity College Dublin (Stack B Building) Negative, Slight and Short-term - The Jeanie Johnston Negative, Slight and Short-term – The National Convention Centre
Commercial accessibility	Pedestrians Negative, Slight and Temporary – Seville Place – North Wall, City Quay, Ringsend (and small parts of the community areas of Pro Cathedral and Sandymount) Neutral, Not Significant and Temporary – The wider community areas of the Pro Cathedral, Sandymount and Sean McDermott Street Cyclists Negative, Moderate and Temporary – Seville Place – North Wall, City Quay, Ringsend (and small parts of the community areas of Pro Cathedral and Sandymount)	

Assessment Topic	Predicted Impact (Residual Impacts) for Community Areas	Significant Residual Impact (Receptor Specific)
	<p>Neutral, Not Significant and Temporary – The wider community areas of the Pro Cathedral, Sandymount and Sean McDermott Street</p> <p>Bus Users</p> <p>Negative, Moderate and Temporary – Seville Place – North Wall, City Quay, Ringsend (and small parts of the community areas of Pro Cathedral and Sandymount)</p> <p>Neutral, Not Significant and Temporary – The wider community areas of the Pro Cathedral, Sandymount and Sean McDermott Street</p> <p>Private Vehicles</p> <p>Negative, Moderate and Short-term – North Wall, City Quay, Ringsend (and small parts of the community areas of Pro Cathedral and Sandymount)</p> <p>Negative, Slight and Short-term – The wider community areas of the Pro Cathedral, Sandymount and Sean McDermott Street</p>	

10.6.2 Operational Phase

Table 10.9 summarises the predicted impacts (same as residual impacts) of the population assessment during operation of the Proposed Scheme. This includes all community and economic assessment topics

Table 10.9: Summary of Operational Phase Significant Residual Impacts

Assessment Topic	Predicted Impact (Residual Impacts) for Community Areas	Significant Residual Impact (Receptor Specific)
Community Assessment		
Community amenity	<p>Neutral to Positive, Not Significant and Long-Term - Seville Place – North Wall, City Quay and Ringsend</p> <p>Neutral, Not Significant and Long-Term –Pro Cathedral, Sandymount and Sean McDermott Street</p>	No Significant impacts
Community land take	Negative, Not Significant and Long-Term – City Quay and Ringsend	<p>Negative, Moderate and Long-Term - Capital Dock Park</p> <p>Negative, Slight and Long-Term – St. Patrick’s Rowing Club</p> <p>Negative, Not Significant and Long-Term – Ringsend Park</p>
Community accessibility	<p>Walkers</p> <p>Positive, Slight and Long-Term – Seville Place – North Wall, City Quay and Ringsend (along with very small parts of Pro Cathedral and Sandymount)</p> <p>Neutral, Not Significant and Long-Term – the wider areas of Pro Cathedral and Sandymount as well as Sean McDermott Street</p> <p>Cyclists</p> <p>Positive, Moderate and Long-Term – Seville Place – North Wall, City Quay and Ringsend (along with very small parts of Pro Cathedral and Sandymount)</p> <p>Neutral, Not Significant and Long-Term – the wider areas of Pro Cathedral and Sandymount as well as Sean McDermott Street</p> <p>Bus Users</p> <p>Positive, Imperceptible to Profound and Long-Term - Seville Place – North Wall, City Quay and Ringsend (along with very small parts of Pro Cathedral and Sandymount)</p> <p>Neutral, Not Significant and Long-Term – the wider areas of Pro Cathedral and Sandymount as well as Sean McDermott Street</p> <p>Private Vehicles</p> <p>Positive, Slight and Long-Term – Seville Place – North Wall, City Quay and Ringsend (along with very small parts of Pro Cathedral and Sandymount)</p> <p>Negative, Slight and Long-Term - the wider areas of Pro Cathedral and Sandymount as well as Sean McDermott Street</p>	
Economic Assessment		
Commercial amenity	Neutral to Positive, Slight and Long-Term – Seville Place – North Wall, City Quay and Ringsend	Direct

Assessment Topic	Predicted Impact (Residual Impacts) for Community Areas	Significant Residual Impact (Receptor Specific)
	Neutral, Not Significant and Long-Term - Pro Cathedral, Sandymount and Sean McDermott Street	Negative, Moderate and Long-term – Commercial receptors situated at the following junctions (see Appendix A10.1 for details): <ul style="list-style-type: none"> Cathal Brugha Street / Cumberland Street North / Sean McDermott Street Upper on Cathal Brugha Street; and Townsend Street / Moss Street / Shaw Street on Townsend Street.
Commercial land take	Negative, Not Significant and Long-Term – Seville Place – North Wall and City Quay	Negative, Slight and Long-Term – Trinity College Dublin (Stack B Building) Negative, Not Significant and Short-Term – Fresh The Good Food Market
Commercial accessibility	<p>Walkers Positive, Slight and Long-Term – Seville Place – North Wall, City Quay and Ringsend but also very small parts of Pro Cathedral and Sandymount Neutral, Not Significant and Long-Term - the wider areas of Pro Cathedral and Sandymount as well as Sean McDermott Street</p> <p>Cyclists Positive, Moderate and Long-Term - Seville Place – North Wall, City Quay and Ringsend but also very small parts of Pro Cathedral and Sandymount Neutral, Not Significant and Long-Term - the wider areas of Pro Cathedral and Sandymount as well as Sean McDermott Street</p> <p>Bus Users Positive, Imperceptible to Profound and Long-Term - North Wall, City Quay and Ringsend but also very small parts of Pro Cathedral and Sandymount Neutral, Not Significant and Long-Term - the wider areas of Pro Cathedral and Sandymount as well as Sean McDermott Street</p> <p>Private Vehicles Positive, Slight and Long-Term - North Wall, City Quay and Ringsend but also very small parts of Pro Cathedral and Sandymount Negative, Slight and Long-Term - the wider areas of Pro Cathedral and Sandymount as well as Sean McDermott Street</p>	

As outlined within Section 10.4.4 and summarised in Table 10.9, the Proposed Scheme will deliver positive impacts in terms of accessibility to community facilities and commercial businesses for pedestrians, cyclists, and bus users during the Operational Phase. The Proposed Scheme is also expected to benefit individuals and businesses whose workers live along the corridor. Retail and leisure businesses along the route could gain a double benefit from both increased sales and improved staff productivity (see Appendix A10.2 in Volume 4 of this EIAR).

These improvements will help to achieve the aims and objectives of the Proposed Scheme by providing an attractive alternative to the use of private vehicles and promoting a modal shift to walking, cycling and public transport, allowing for greater capacity along the corridor to access residential, community and commercial receptors. As discussed in Appendix A10.2 the Proposed Scheme will also ensure to connect people with essential services such as healthcare facilities and jobs (EY 2021).

In order to accommodate the Proposed Scheme and to ensure it can be readily utilised by sustainable modes of transport, localised significant impacts from permanent land take are anticipated on a small number of properties. Negative (not significant) impacts are anticipated on private vehicles travelling in the surrounding road network. However, the design of the Proposed Scheme, which is a result of a detailed design iteration process, ensures that the surrounding road network will have the capacity to accommodate the redistributed traffic during the Operational Phase whilst still achieving the aims and objectives of the Proposed Scheme.

Accordingly, it is concluded that the Proposed Scheme will deliver strong benefits for users of sustainable modes of transport, with positive accessibility impacts expected for all community areas in the study area and align with specific objectives identified in Section 10.1.

10.7 References

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