Chapter 10
Population

Contents

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 Belfield / Blackrock 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 considers 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 drew 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)).
- 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, urban 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). 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;
- 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 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. In addition, feedback received from the comprehensive consultation

programme undertaken throughout the option selection and design development process have been incorporated, where appropriate.

10.2 Methodology

This Section presents the study area and appraisal method for the assessment of impacts on the local population, 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 area 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/or 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 consist 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:

- Monkstown;
- Newtownpark;
- Blackrock;
- Booterstown;
- Donnybrook;
- Merrion Road;
- Sandymount;
- Haddington Road;
- University (Newman) Church and
- Westland Row.

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

Chapter 6 (Traffic & Transport) assessed changing traffic volumes within the 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 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 following 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 (hereafter referred to as the EPA Guidelines) (EPA 2017)	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 all of 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: • 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.
Environmental Impact Assessment of Projects – Guidance on the Preparation of the Environmental Impact Assessment Report (European Commission 2017	This document provides practical insight to those who are involved during the stages of the EIA process, drawing upon experiences in Europe and worldwide.	This guidance has been used to inform the wider EIA methodology as outlined in Chapter 1 (Introduction).

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; CSO 2018a; CSO 2018b);
- 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 the number of community receptors, including local educational, recreational and healthcare facilities (see Section 10.3.2).

Desktop research has been supplemented by a walkover survey in October 2021 to verify baseline data collection including the commercial businesses listed in Appendix A10.1 Schedule of Commercial Businesses in Volume 4 of this EIAR.

As part of the non-statutory public consultation process, submissions received were reviewed by the BusConnects Infrastructure Team. Among the submissions received, there were some from business owners raising issues which they believed could have an effect on their businesses (e.g., loss/reduction of parking and loading bays). Discussions were also held with various businesses along the Proposed Scheme to inform them if the Proposed Scheme would impact on their property boundary. The issues raised were considered during the iterative design development for the Proposed Scheme by the BusConnects Infrastructure Team and where reasonably practicable, measures to reduce the impact of the Proposed Scheme were included.

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) Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (hereafter referred to as the EPA Guidelines) (EPA 2017). 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 measure have been implemented). 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, and 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 2017). 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 2017). 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 0).

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

Environmental Effect 1	Environmental Effect 2	Environmental Effect 3	Environmental Effect 4	Combined Impact
Moderate	Moderate	Moderate	Slight	Moderate / Significant
Moderate	Moderate	Moderate	Not Significant	Moderate
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 2017).

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 2017).

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, of 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 2017).

The potential impacts of the Proposed Scheme on parking and loading bays during the Construction Phase and Operational Phase are described in Chapter 6 (Traffic & Transport) and therefore are 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 2017).

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 2017).

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 2017).

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 and road 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 2017).

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 2017).

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 Proposed Scheme includes two main sections; Blackrock to City Centre and Nutley Lane. The Blackrock to City Centre section will commence on the R113 at Temple Hill, approximately 80m to the north of the R827 Stradbrook Road, travel along the N31 Frascati Road, the R118 Rock Road / Merrion Road / Pembroke Road, the R816 Pembroke Road / Baggot Street Upper / Baggot Street Lower, turn onto Fitzwilliam Street Lower and terminate at the junction of Mount Street Upper / Merrion Square South / Merrion Square East. The Nutley Lane section of the Proposed Scheme will commence at the tie-in with the signalised junction on the R138 Stillorgan Road on the southern end of Nutley Lane, travel along Nutley Lane and terminate at the junction with the R118 Merrion Road.

The study area for the Proposed Scheme consists of 10 community areas which have an approximate total population of 70,000 according to the 2016 Census (CSO 2016a) (see Figure 10.1 in Volume 3 of this EIAR).

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 recreation receptors, the number and type of receptor 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
Monkstown	5	3	1	6
Newtownpark	3	3	4	4
Blackrock	4	6	1	8
Booterstown	4	2	1	8
Donnybrook	6	9	2	3
Merrion Road	1	2	5	1
Sandymount	6	8	3	9
Haddington Road	2	2	2	7
University (Newman) Church	2	3	2	3
Westland Row	5	1	2	5
Study Area Total	**38**	**39**	**23**	**54**

Table 10.4 demonstrates that there is a larger number of recreational resources in Sandymount and Donnybrook compared to the rest of the community study area. Examples of community receptors along the Proposed Scheme which may attract a large number of users include:

- St. Vincent's University Hospital, Merrion Road;

- Blackrock Park, Blackrock;
- St Mary's Nursing Home, Merrion Road;
- Elm Park Golf and Sports Club, Merrion Road;
- St Michael's College, Merrion Road;
- Blackrock Clinic, Blackrock;
- Blackrock Hospice, Blackrock;
- Benicasa Special School, Booterstown; and
- Blackrock College, Booterstown.

The Proposed Scheme is also located between the Aviva Stadium and the Royal Dublin Society (RDS) venue; both venues attract large crowds, particularly on game days and training days.

10.3.2.2 Residential Land

There are approximately 21,000 residential properties within the community study area (OSI 2020).

10.3.2.3 Commute to Work

There are approximately 30,700 commuters across the Proposed Scheme community study area and 19% of these travel by public transport (bus or train) (CSO 2016b). The method of travel to work by community area is presented in Table 10.5. There is a significantly larger proportion of commuters travelling by foot or bike in the study area (32%) compared to the County Dublin average (17%). Commuters residing in Newtownpark, one of the furthest community areas from the City Centre, has the largest percent of commuters travelling car or van (53%). In the community area of University (Newman) Church only 11% of commuters travel to work by car or van.

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
Monkstown	8%	44%	20%	17%	11%
Newtownpark	13%	53%	10%	15%	9%
Blackrock	10%	46%	17%	16%	11%
Booterstown	14%	47%	11%	18%	9%
Donnybrook	11%	33%	3%	37%	15%
Merrion Road	12%	38%	10%	29%	12%
Sandymount	7%	38%	6%	37%	11%
Haddington Road	6%	22%	4%	53%	15%
University (Newman) Church	6%	11%	5%	51%	26%
Westland Row	6%	15%	5%	45%	30%
Study Area Average	**9%**	**35%**	**9%**	**32%**	**15%**
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 464 public transport access points across the study area as shown in Table 10.6. Westland Row community area has the largest proportion of public transport access points across the study area (24%), which reflects its proximity to Dublin City Centre. The furthest community areas from the City Centre are Newtownpark and Monkstown, which have a total of 44 access points (only 9% of the total) between them.

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

Community Areas	Number of Public Transport Access Points	Percentage of Stops Across the Study Area
Monkstown	25	5%
Newtownpark	19	4%
Blackrock	35	8%
Booterstown	30	6%
Donnybrook	77	17%
Merrion Road	24	5%
Sandymount	45	10%
Haddington Road	58	13%
University (Newman) Church	40	9%
Westland Row	111	24%
Study Area Total	**464**	

10.3.3 Economic Baseline

10.3.3.1 Commercial Receptors

The Proposed Scheme will pass several clusters of small commercial receptors as well as a number of larger commercial centres. 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 lists all commercial businesses along the Proposed Scheme, approximately 260 were identified, this equates to 3.5% of all the businesses in the study area.

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

Community Area	Commercial Receptors*
Monkstown	218
Newtownpark	78
Blackrock	546
Booterstown	124
Donnybrook	493
Merrion Road	195
Sandymount	304
Haddington Road	723
University (Newman) Church	1,576
Westland Row	2,830
Study Area Total	**7,087**

*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 the largest number of commercial receptors is located in Westland Row and University (Newman) Church and the smallest number of commercial receptors is in Newtownpark community area.

Appendix A10.2 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).

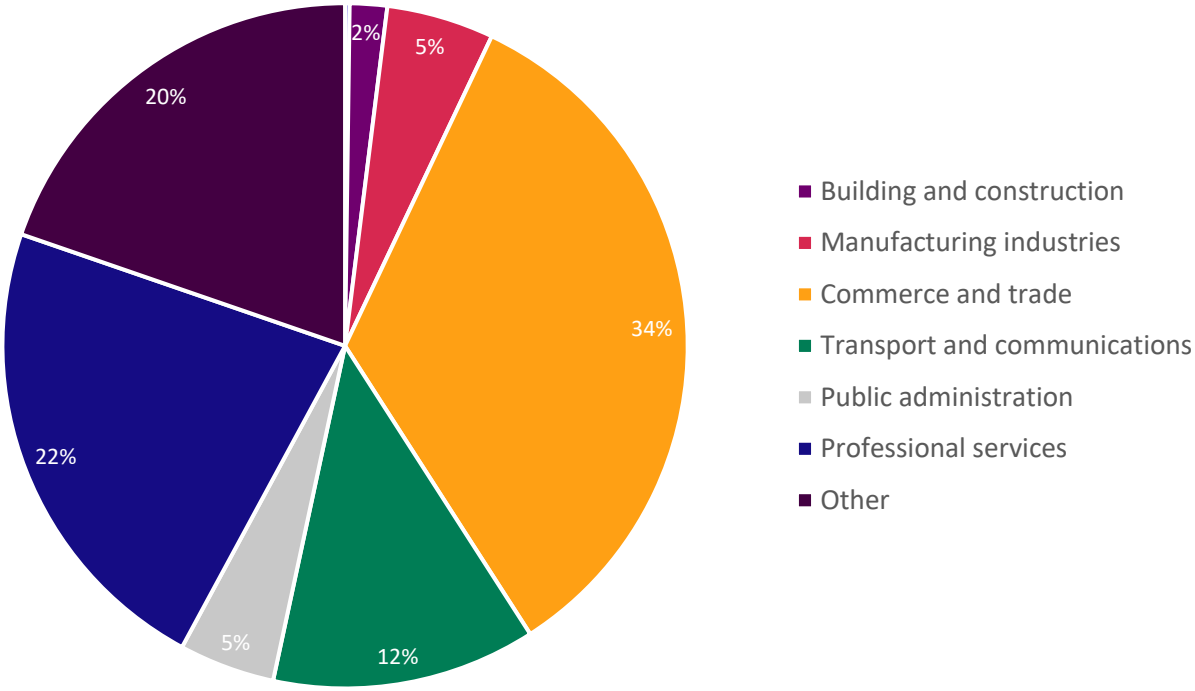
10.3.3.2 Employment

Within the study area there are approximately 34,800 people in employment (50% of the total study area population). Of the working age population, over 2,000 people are unemployed. This equates to 3% of the total study area population and this is much less than the unemployment rate for Dublin as a whole (6.5%) (CSO 2016a).

Notable key centres of employment within the study area include:

- Frascati Centre, Blackrock;
- Miesian Plaza, Westland Row;
- St. Vincent's University Hospital, Merrion Road;
- Blackrock Village Centre, Blackrock;
- Elmpark Green Development, Merrion Road; and
- Merrion Shopping Centre, Merrion Road.

Graph 10.1 presents a breakdown of employment across the study area. The largest sector of employment is commerce and trade which accounts for nearly 35% of 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 total length of the Proposed Scheme is approximately 8.3 km and is comprised of two alignments; the Blackrock to City Centre section and along Nutley Lane. The Blackrock to City Centre section will commence on the R113 at Temple Hill, approximately 80m to the north of the R827 Stradbrook Road, travel along the N31 Frascati Road, the R118 Rock Road / Merrion Road / Pembroke Road, the R816 Pembroke Road / Baggot Street Upper / Baggot Street Lower, turn onto Fitzwilliam Street Lower and terminate at the junction of Mount Street Upper / Merrion Square South / Merrion Square East. The Nutley Lane section of the Proposed Scheme will

commence at the tie-in with the signalised junction on the R138 Stillorgan Road on the southern end of Nutley Lane, travel along Nutley Lane and terminate at the junction with the R118 Merrion Road.

Physical bus priority is proposed along the majority of the Proposed Scheme, and at some localised cross-section constraints signal controlled priority and Bus Gates have been utilised to retain bus priority. There is one Bus Gate proposed on the Proposed Scheme between the junctions of Eastmoreland Place and Waterloo Road. This results in a shared lane in each direction for buses and general traffic on Pembroke Road between Eastmoreland Place and Northumberland Road (inbound and outbound). Permanent land take along the Proposed Scheme will be required from seven residential properties, thirteen community facilities and eleven commercial businesses. All permanent land acquisition will be required to facilitate the widening of the carriageway and allow for the provision of improved bus and cycle infrastructure.

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 the majority of footways along the existing route were in a reasonable state of repair, however there were some instances where crossing facilities at side roads are of a poor standard, particularly in terms of catering for the mobility and visually impaired. The Proposed Scheme will address gaps in existing provisions, as well as upgrade some pedestrian and cycle routes to a better standard (segregated cycle tracks instead of on-road cycle lanes or cyclist sharing bus lanes). 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 approximately 200 staff, rising to 250 staff 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 in volume 4 of this EIAR, 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 in Volume 4 of this EIAR).

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 one Construction Compound BB1, which will be located in Booterstown Car Park, within Blackrock Park, along the R118, opposite Willow Terrace.

10.4.2 'Do Nothing' Scenario

In the Do Nothing scenario the Proposed Scheme would not be implemented and there would 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 can 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 Temporary impact on general traffic along the Proposed Scheme and a Negative, Slight and Temporary impact from additional construction traffic flows in the surrounding road network. The following impacts have been identified on community facilities:

- A Moderate impact is assigned to all community receptors along the Proposed Scheme; and
- A Slight impact is assigned to community receptors located in the surrounding road network.

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 the following noise impacts that are of importance to this amenity assessment:

- A Negative, Moderate to Significant and Temporary impact at St. Vincent's University Hospital from general road works;
- A Negative, Slight to Moderate and Temporary noise impact at Ballsbridge College of Further Education from urban realm landscaping; and
- A Negative, Slight to Moderate and Temporary noise impact on all community facilities within 1km of the Proposed Scheme from construction traffic.
- Residual noise from construction traffic was identified on Pembroke Lane (Negative, Moderate and Temporary) and Elgin Road (Negative, Slight-Moderate, Temporary). Only one community facility is located on Pembroke Road, Gateway Montessori School Creche, no community facilities are located on Elgin Road.

Chapter 17 (Landscape (Townscape) & Visual) identified a residual Negative, Very Significant and Short-Term impact on amenity designations that are used for recreation within the local community. These include Blackrock and Booterstown parks, Booterstown Nature Reserve, the River Dodder and Grand Canal corridors, Elm Park Golf and Sports Club, and smaller open spaces such as at Merrion Gates, and in junction islands on Pembroke Road. The townscape and streetscape character assessment identified the following impacts during the Construction Phase:

- Negative, Very Significant and Short-Term impact on Stradbrook Road to Booterstown Avenue;
- Negative, Significant and Short-Term impact on Booterstown Avenue to Nutley Lane;
- Negative, Significant / Very Significant and Short-Term impact on Merrion Road (Nutley to Ballsbridge);
- Negative, Very Significant and Short-Term impact on Ballsbridge to Merrion Square; and
- Negative, Significant / Very Significant and Short-Term impact on Nutley Lane.

This impact on townscape and streetscape as summarised above represents the visual impact experienced by community receptors along these stretches of road (see Chapter 17 (Landscape (Townscape) & Visual)).

These environmental impacts have been considered together to identify if there will be a combination of 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 to Significant and Short-Term impact on the amenity of one community facility, St. Vincent's University Hospital. All other community facilities along the Proposed Scheme are expected to experience a Negative, Moderate and Short-Term impact on amenity. Community receptors expected to experience this impact are:

- Temple Hill Cemetery;
- Pembroke Montessori School;
- Willow Park School, Blackrock College;
- Blackrock Garda Station;
- St Mary's Boys National School;
- Elm Park Golf and Sports Club;
- Our Lady Queen of Peace Church, Hibernia College;
- Wanderer's Football Club, Royal Dublin Society;

- Pembroke Library Blackrock Clinic;
- Blackrock Hospice;
- The Alzheimer Society of Ireland;
- Benicasa Special School;
- St Mary's Nursing Home;
- Blackrock Park;
- City of Dublin Education and Training Board (CDETB); and
- Booterstown Park (playground) and Nature Reserve.

Some of these facilities are likely to become less attractive as a result of negative, visual and traffic impacts due to construction, which could discourage users to visit certain recreational assets such as Booterstown Park and Nature Reserve. These community facilities are evenly distributed along the length of the Proposed Scheme in the community areas of Blackrock, Booterstown, Donnybrook, Merrion Road, Haddington Road and Westland Row. Overall, the impact on these community areas is expected to be Negative, Not Significant and Short-Term during the Construction Phase.

All other community areas (Monkstown, Newtownpark, Sandymount and University (Newman) Church) are expected to experience a Neutral, Not Significant and Short-Term impact on amenity.

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 assesses the temporary land take acquired to accommodate construction works and the potential impacts this has on community facilities and residential properties.

A total of 21 community receptors (11 residential properties and 10 community facilities) are impacted by temporary land take as a result of the Proposed Scheme. Table 10.8 summarises the findings of the community land take assessment for residential properties along the Proposed Scheme during the Construction Phase.

Table 10.8: Land Take Impacts on Residential Properties during the Construction Phase

Community Area	Nature of Effect / Number of Residential Properties Affected			
	Imperceptible / Not Significant	Slight	Moderate	Significant
Booterstown	0	1	1	0
Merrion Road	0	1	1	5
Haddington Road	0	1	0	0
Donnybrook	0	0	1	0
Total	0	3	3	5

Table 10.8 shows that shows that residential properties that will be impacted by temporary land take are located in Merrion Road, Haddington Road and Donnybrook community areas. Within each community area the following residential land take impacts are expected:

- Booterstown: No significant impacts in this community area. A Negative, Moderate and Short-Term impact is expected at Lios an Uisce from loss trees and shrubbery at the front of this residential property.
- Merrion Road: A Negative Significant and Short-Term land take impact at 85, 151, 153, 155 and 157 Merrion Road which require land take from front driveways to accommodate the construction activity.
- Haddington Road: No Significant impacts in this community area. A Negative, Slight and Short-Term impact is expected at no. 1 to no. 11 Pembroke Road from the works to the boundary railing and entrances.

- Donnybrook: A Negative, Moderate and Short-Term impact is expected at 118 Stillorgan Road due to temporary land take from the front driveway.

During the Construction Phase, access to residential properties and community facilities will be maintained, as far as reasonably practicable (see Chapter 5 (Construction)). Although access for residents will be maintained during the Construction Phase, in situations where the entirety of the front garden or driveway will be required as temporary land take to accommodate construction activity, parking private vehicles at a residence may not be possible and alternative parking provision in side streets would need to be temporarily used.

Table 10.9 summarises the findings of the community land take assessment for community facilities along the Proposed Scheme during the Construction Phase.

Table 10.9 Land Take Impacts on Community Facilities during the Construction Phase:

Community Area	Nature of Effect / Number of Community Facilities Affected			
	Imperceptible / Not Significant	Slight	Moderate	Significant
Booterstown	1	2	2	0
Donnybrook	0	0	2	0
Merrion Road	0	0	2	0
Total	1	2	6	0

Table 10.9 shows that no community facilities are expected to experience significant land take impacts during the Construction Phase of the Proposed Scheme. St. Vincent's University Hospital is expected to have land take from three different areas of the hospital grounds, however, as the land take is minor at each point the effect on the hospital is considered to be a Negative, Moderate and Short-Term land take effect. The other community facilities expected to experience a Negative, Moderate and Short-Term impact on land take are Blackrock Clinic, Blackrock College, St Mary's Nursing Home**,** Elm Park Golf and Sports Club and CDETB site (1-3 Merrion Road).

Overall, the impact of land take across the impacted community areas (Booterstown, Merrion Road, Haddington Road and Donnybrook) 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.

10.4.3.1.2.2 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, Cyclists and Bus Users

Pedestrian and cyclist safety measures are discussed in Chapter 5 (Construction). These safety measures are intended to allow 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, there will be some level of disruption to users and 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 practicable, to reduce the impact on accessibility along the Proposed Scheme.

Chapter 6 (Traffic & Transport) has identified a residual Negative, Slight and Temporary impact on walking and cycling along the Proposed Scheme during the Construction Phase. Taking into consideration the 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, is expected to be a Negative, Slight and Short-Term impact for pedestrians and cyclists during the Construction Phase.

As confirmed in Chapter 5 (Construction), existing bus routes will be maintained during the Construction Phase. However, the temporary closure of dedicated bus lanes may be required to facilitate the construction of new bus priority infrastructure. Bus stop locations may need to be temporarily relocated to accommodate the works. Use of the 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 facilities.

Chapter 6 (Traffic & Transport) has identified a residual Negative, Slight and Temporary impact on bus users along the Proposed Scheme. Taking into consideration the measures in Chapter 5 (Construction) it is expected that 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 impact 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 Temporary 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 impact during construction. Additional construction traffic flows on the surrounding road network are expected to result in a Negative, Slight and Temporary impact on general traffic. This does not include the impact of construction access vehicles which is considered in Chapter 6 (Traffic and Transport). Private vehicles may therefore be negatively affected on the surrounding road network although this is only expected to be a Negative, Slight and Short-Term impact during 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 Short-Term impact (pedestrians, cyclists and bus users) and a Negative, Moderate and Short-Term impact (private vehicles) as a result in changes to access are Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road.

Newtownpark, Sandymount, University (Newman) Church and Westland Row only have small sections of the Proposed Scheme located within the community areas, while Monkstown would not experience any construction activity. Therefore, pedestrians, cyclists and bus users in these community areas are expected to experience a Negative, Not Significant and Short-Term impact on change in access. Private vehicles will experience a Negative, Slight and Short-Term impact on change in access during the construction of the Proposed Scheme in these community areas.

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 a 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 Temporary impact on general traffic along the Proposed Scheme and a Negative, Slight and Temporary impact from additional construction traffic flows in the surrounding road network. The following negative impacts have been identified:

- A Moderate residual impact is assigned to all commercial receptors along the Proposed Scheme; and
- A Slight impact is assigned to commercial receptors located in the surrounding road network.

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 Negative, Significant to Very Significant, Temporary noise impact at the Intercontinental Dublin and Herbert Park Hotel and Park Residence from evening construction activity and a Negative, Slight to Moderate and Temporary noise impact at commercial businesses within 1km of the Proposed Scheme from construction traffic. Residual noise from construction traffic was identified on Pembroke Lane (Negative, Moderate and Temporary) and Elgin Road (Negative, Slight-Moderate, Temporary). Commercial businesses located on these roads are Bank of Ireland Ballsbridge and First Editions book shop.

Chapter 17 (Landscape (Townscape) & Visual) identified in the townscape and streetscape character assessment the following impacts during the Construction Phase:

- Negative, Very Significant and Short-Term impact on Stradbrook Road to Booterstown Avenue;
- Negative, Significant and Short-Term impact on Booterstown Avenue to Nutley Lane;
- Negative, Significant/Very Significant and Short-Term impact on Merrion Road (Nutley to Ballsbridge);
- Negative, Very Significant and Short-Term impact on Ballsbridge to Merrion Square; and
- Negative, Significant/Very Significant and Short-Term impact on Nutley Lane.

These impacts on townscape and streetscape represents the visual impact on commercial receptors along these sections of road. For example, all businesses located between Stradbrook Road and Booterstown Avenue would be assigned a very significant visual impact.

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 significant noise, traffic and visual impacts will combine to create:

- A Negative, Moderate to Significant and Short-Term amenity impact on the Intercontinental Dublin and Herbert Park Hotel and Park Residence.
- All other commercial businesses along the Proposed Scheme are expected to experience a Negative, Moderate and Short-Term indirect amenity impact (except for those experiencing a direct amenity impact discussed below).

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)). The proportion of commercial businesses located along the Proposed Scheme is low compared to the businesses across the impacted community areas (Blackrock, Booterstown, Merrion Road, Donnybrook, Haddington Road, Sandymount, Westland Row and University (Newman) Church), see Table 10.7. Therefore, the impact on these community areas along the Proposed Scheme is Negative, Slight and Short-Term. All other community areas (Monkstown and Newtownpark) are expected to experience a Neutral, Not Significant and Short-Term amenity impact.

No direct amenity impacts were identified on any commercial businesses 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.

A total of 10 commercial receptors are impacted by temporary land take as a result of the Proposed Scheme.

Table 10.10: Land Take Impacts on Commercial Receptors during the Construction Phase

Community Area	Nature of Effect / Number of Commercial Receptors Affected			
	Imperceptible / Not Significant	Slight	Moderate	Significant
Booterstown	0	0	1	0
Donnybrook	0	0	2	0
Merrion Road	0	2	1	0
Blackrock	0	2	1	0
University (Newman) Church	0	1	0	0
Total	0	5	5	0

Table 10.10 has identified four businesses that are expected to experience a Negative, Moderate and Short-Term land take impact. These five commercial receptors comprise of Merrion House (Merrion Road community area), Glenalla Castledawson Avenue (Booterstown), the Clayton Hotel, Raidió Teilifís Éireann (both in Donnybrook) and the Booterstown Car Park (Blackrock).

Overall, the impact of land take across the impacted community areas (Booterstown, Donnybrook, Merrion Road, Blackrock, and University (Newman) Church) as a whole is considered to be 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 10.4.3.1.2.2), 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 and 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 for community accessibility.

A parking assessment has been undertaken in Chapter 6 (Traffic and Transport). No significant impacts on parking along the Proposed Scheme 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, Moderate 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. The following impacts have been identified:

- A Positive, Moderate residual impact has been assigned to all community facilities along the proposed Scheme; and
- A Negative, Slight residual impact has been assigned to all community facilities in the surrounding rod network.

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 to Direct, Negative, Not Significant, Short to Medium Term impact from traffic noise along the Proposed Scheme and an Indirect, Positive, Imperceptible to Slight, Short to medium Term to Indirect, Negative, Slight to Moderate Short to

Medium Term impact from traffic noise in the surrounding road network on Lansdowne Park, Herbert Road and Angelsea Avenue. No community facilities are located on these roads.

The Chapter 17 (Landscape (Townscape) & Visual) townscape and streetscape assessment identified the following impacts during the Operational Phase:

- Negative, Moderate and Short-Term impact on Stradbrook Road to Booterstown Avenue (locally Significant at Blackrock College);
- Negative, Moderate and Short-Term impact on Booterstown Avenue to Nutley Lane;
- Negative, Moderate/Significant and Short-Term impact on Merrion Road (Nutley to Ballsbridge);
- Positive, Moderate and Short-Term impact on Ballsbridge to Merrion Square; and
- Negative, Moderate and Short-Term impact on Nutley Lane.

The impacts described above from the townscape and streetscape assessment represent the visual impact on community facilities along these affected roads as discussed in Section 10.2.4.1.1.1. Details of the changes to townscape along these roads is detailed in Section 17.4.3.1 in Chapter 17 (Landscape (Townscape) & Visual). However, as a Negative, Moderate/Significant and Long-Term visual impact was identified on amenity designations that are used for recreation within the local community, a Negative, Moderate/Significant and Long-Term impact is assigned to Blackrock and Booterstown Parks, Booterstown Nature Reserve, the River Dodder and Grand Canal corridors and Elm Park Golf and Sports Club.

These environmental impacts have been considered together to identify if there will be a combination of impacts acting on the same community receptor. The assessment concluded that these residual significant noise, traffic and visual impacts will combine to create a Positive, Moderate, Long-Term impact on amenity for all community receptors between Ballsbridge and Merrion Square which extends across the community areas of Haddington Road, Westland Row, University (Newman) Church and Donnybrook. Community receptors expected to experience this amenity impact include (but are not limited to) Pembroke Montessori School, Baggot Street Medical, Morris Clinic and Ballsbridge College of Further Education (all located in Haddington Road) and Merrion Square Park (Westland Row).

Overall, the community areas impacted (Haddington Road, Westland Row, University (Newman) Church and Donnybrook) are expected to experience a Positive, Not Significant and Long-Term impact on amenity during the Operational Phase. All other community areas (Blackrock, Booterstown, Merrion Road, Monkstown, Newtownpark and Sandymount) are expected to experience a Neutral, Not Significant and Short-Term impact on amenity.

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 assesses the impact of permanent land take acquisition on community facilities and residential properties.

A total of 14 community receptors (seven residential properties and seven community facilities) require permanent land take as a result of the Proposed Scheme. A Negative, Moderate and Long-Term impact is expected at 85 Merrion Road which is losing land from its main driveway, front garden and adjacent laneway. A Negative, Slight and Long-Term land take impact is expected at 151, 153, 155, 157 Merrion Road and Elm Court Apartments (Merrion Road community area) and Lios an Uisce on Rock Road (Booterstown community area) which are all losing approximately 1m of land from their gardens.

Table 10.11 summarises the findings of the community land take assessment for community facilities along the Proposed Scheme during the Operational Phase.

Table 10.11: Land Take Impacts on Community Facilities during the Operational Phase

Community Area	Nature of Effect / Number of Community Facilities Affected			
	Imperceptible / Not Significant	Slight	Moderate	Significant
Booterstown	1	2	1	0
Donnybrook	0	1	0	0

Community Area	Nature of Effect / Number of Community Facilities Affected			
	Imperceptible / Not Significant	Slight	Moderate	Significant
Merrion Road	0	1	1	0
Total	1	4	2	0

Table 10.11 shows two community facilities are expected to experience a Negative, Moderate and Long-Term impact on land take during the Operational Phase of the Proposed Scheme. These are Blackrock Clinic and St. Vincent's University Hospital, both of which are expected to lose a small amount of land that has no impact on the ability of users to use the facilities.

Overall, the impact of land take across the impacted community areas (Booterstown, Merrion Road and Donnybrook) is considered Negative, Not Significant and Long-Term during the Operation 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 in Volume 4 of this EIAR (EY 2021).

Changes to RoW are outlined in Chapter 4 (Proposed Scheme Description). Changes typically include localised restrictions to vehicular traffic (including bicycles) or proposed changes to access arrangements to properties. However, access will still be available via the surrounding road network and alternative accesses to properties will be provided where necessary. Access for pedestrians will generally be maintained. Given the limited nature of the proposed changes it is not anticipated that there will be a material effect on a community basis and is therefore not considered further in this accessibility assessment.

Pedestrians and Cyclists and Bus Users

The Proposed Scheme will include fully segregated cycle tracks, both inbound and outbound, throughout the length of the route. Pedestrians and cyclists will share Toucan crossings where segregated cycle crossings are not possible.

Chapter 6 (Traffic & Transport) identified a residual Positive, Moderate to Significant and Long-Term impact on pedestrian infrastructure and a Positive, Moderate to Very Significant 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.

All other community areas (Monkstown, Newtownpark, Sandymount University (Newman) Church and Westland Row) are expected to experience a Positive, Not Significant and Long-Term change in access during the Operational Phase of the Proposed Scheme.

Full bus priority is proposed along the entire length of the Proposed Scheme. A single Bus Gate is proposed on Pembroke Road, between the Waterloo Road and Eastmoreland Place junctions. This is expected to reduce traffic on Pembroke Road and reduce the delay for buses. There are no community facilities located along the Bus Gate which would be impacted. Chapter 6 (Traffic & Transport) identified a Positive, Moderate to Very Significant and Long-Term impact on bus infrastructure and a Positive, Very Significant and Long-Term impact on bus network performance indicators (which includes journey times and journey time reliability), as such, ease of access to community facilities via bus is also likely to improve along the Proposed Scheme.

The impacts to pedestrians, cyclists and bus users are expected to be experienced by community areas located predominately along the length of the Proposed Scheme where the improved footpaths, cycle tracks and bus

lanes are located. The community areas that are expected to experience a Positive, Moderate to Significant, Long-Term impact on change in access for pedestrians, and a Positive, Moderate to Very Significant and Long-Term impact on change in access to cyclists and bus users are Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road. Community facilities located along the Proposed Scheme where accessibility would be improved as a result of reduced traffic are:

- Temple Hill Cemetery;
- Pembroke Montessori School;
- Willow Park School;
- Blackrock College;
- Blackrock Garda Station;
- St Mary's Boys National School;
- Elm Park Golf and Sports Club;
- Our Lady Queen of Peace Church;
- Hibernia College;
- Wanderer's Football Club;
- Royal Dublin Society;
- Pembroke Library Blackrock Clinic;
- Blackrock Hospice;
- The Alzheimer Society of Ireland;
- Benicasa Special School;
- Scoil Chaitríona Baggot Street;
- St Mary's Nursing Home;
- Blackrock Park;
- Ballsbridge College of Further Education; and
- Booterstown Park (playground) and Nature Reserve.

There are also a number of smaller medical centres, dentists and pharmacy's as well as private education facilities along the Proposed Scheme that would also experience improved changes in access.

All other community areas (Monkstown, Newtownpark, Sandymount University (Newman) Church and Westland Row) are expected to experience a Positive, Not Significant and Long-Term change in access during the Operational Phase of the Proposed Scheme.

Private Vehicles

Chapter 6 (Traffic & Transport) identified a Positive, Moderate 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 some localised impacts during the PM peak periods on a number of junctions in the surrounding road network as a result of displaced traffic. A Negative, Moderate impact was identified on Stillorgan Park, Sandford Road, Clanwilliam Place, Ailesbury Road, Carysfort Avenue and Ranelagh Road. Community facilities expected to experience negative impacts on accessibility are:

- Saint Augustine's School;
- All Saint's National School;
- Ailesbury Dental Practice;

- Blackrock Veterinary Clinic;
- All Saint's Church;
- Carysfort Dental Practice;
- Carysfort Park and Playground;
- UCD Blackrock Examination Centre;
- Blackrock Denture Clinic and Field Dental;
- Ladybug Creche & Montessori;
- Mountpleasant Square Park;
- Cuisle Centre;
- Ranelagh Seventh-day Adventist Church;
- Ranelagh Multi-Denominational School;
- Ranelagh Luas Station;
- Ranelagh Village Dental;
- Sandford Park School; and
- Sandford Parish Church.

Chapter 6 (Traffic & Transport) also identified a Positive, Moderate impact on Clanwilliam Place on the Grand Canal Street Lower / Clanwilliam Place junction in the AM peak during the Operational Phase, however there are no community facilities located near this junction.

The impact on access to community facilities along the Proposed Scheme for private vehicles is considered to be Positive, Moderate and Long-Term along the Proposed Scheme. Community facilities located along the Proposed Scheme where accessibility would be improved as a result of reduced traffic are the same as those discussed for pedestrians, cyclists and bus users. As there are no community facilities located along the Bus Gate, private vehicles would not experience a change in access as a result of the Bus Gate. The community areas that are expected to experience a Positive, Moderate and Long-Term impact on change in access are Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road.

The impact on access to community facilities in the surrounding road network is considered to be Negative, Slight and Long-Term. The community areas that are expected to experience a Negative, Slight and Long-Term impact as a result of changes to access to commercial facilities are Monkstown, Newtownpark, Sandymount, University (Newman) Church and Westland Row.

10.4.4.2 Economic Assessment

10.4.4.2.1 Commercial Amenity

Commercial amenity impacts arise from a combination of traffic, air quality, noise and visual impacts as discussed in Section 10.2.4.2.

Chapter 6 (Traffic & Transport) identified a Positive, Moderate 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. The following impacts have been identified:

- A Positive, Moderate residual impact has been assigned to all commercial businesses along the Proposed Scheme; and
- A Negative, Slight residual impact has been assigned to all commercial businesses in the surrounding road network.

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 to Direct, Negative, Not Significant, Short to Medium Term impact from traffic noise along the Proposed Scheme and an Indirect, Positive, Imperceptible to Slight, Short to medium Term to Indirect, Negative, Slight to Moderate Short to Medium Term from traffic noise in the surrounding road network on Lansdowne Park, Herbert Road and Angelsea Avenue, however no commercial businesses are located on these roads.

Chapter 17 (Landscape (Townscape) & Visual) identified the following impacts on townscape and streetscape character during the Operational Phase:

- Negative, Moderate and Short-Term impact on Stradbrook Road to Booterstown Avenue;
- Negative, Moderate and Short-Term impact on Booterstown Avenue to Nutley Lane;
- Negative, Moderate/Significant and Short-Term impact on Merrion Road (Nutley to Ballsbridge);
- Positive, Moderate and Short-term impact on Ballsbridge to Merrion Square; and
- Negative, Moderate and Short-Term impact on Nutley Lane.

The impacts on townscape represent the visual impact on commercial businesses along these roads.

These environmental impacts have been considered together to identify if there will be a combination of impacts acting upon the same commercial businesses. The assessment concluded that these residual significant air quality, noise, traffic and visual impacts will combine to create a Positive, Moderate, Long-Term impact on amenity for all commercial receptors, between Ballsbridge and Merrion Square, within the community areas of Haddington Road, Westland Row, University (Newman) Church and Donnybrook. Commercial businesses 112 to 262 in Appendix A10.1 Schedule of Commercial Businesses in Volume 4 of this EIAR are expected to experience this positive impact. The proportion of commercial businesses located along the Proposed Scheme is low compared to the businesses across the four community areas, see Table 10.7, therefore the impact on Haddington Road, Westland Row, University (Newman) Church and Donnybrook is expected to be Positive, Not Significant and Long-Term impact overall.

Overall, a Neutral, Not Significant and Long-Term amenity impact is expected on all other community areas (Blackrock, Booterstown, Merrion Road, Sandymount, Monkstown and Newtownpark) during the Operational Phase.

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 to an environmental impact. The InterContinental Dublin, Herbert Park Hotel and Park Residence and Clayton Hotel Ballsbridge are expected to experience a Negative, Moderate/Significant and Short-Term visual impact due to their location on Merrion Road during the Operational Phase (see Chapter 17 (Landscape (Townscape) & Visual). The Elm Park Golf and Sports Club is expected to experience a Negative, Moderate/Significant and Short-Term visual impact due to its location on Nutley Lane. There is the potential for a direct amenity impact on these receptors which have all been assigned a medium sensitivity to visual disturbance. The impact on direct amenity at this receptor is assessed to be Negative, Moderate and Short-Term during the Operational Phase. The visual impact will be lessened as the landscaping becomes established.

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 take acquired and the potential impacts this has on commercial businesses.

A total of eight commercial receptors require permanent land take as a result of the Proposed Scheme. Table 10.12 summarises the findings of the commercial land take assessment for the Proposed Scheme during the Operational Phase.

Table 10.12: Land Take Impacts on Commercial Receptors during the Operational Phase

Community Area	Nature of Effect / Number of Commercial Receptors Affected			
	Imperceptible / Not Significant	Slight	Moderate	Significant
Booterstown	0	1	0	0
Donnybrook	0	2	0	0
Merrion Road	1	0	1	0
Blackrock	2	1	0	0
Total	3	4	1	0

Table 10.12 shows that one commercial receptor is expected to experience a Negative, Moderate and Long-Term land take impact in the Merrion Road community area. Merrion House is expected to lose approximately 15 car parking spaces permanently from the property. The impact on private landings identified in the Construction Phase is not expected to continue into the Operational Phase.

Overall, the impact on the impacted community areas (Booterstown, Donnybrook, Merrion Road and Blackrock) 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 & Transport) assessed that people movement would significantly increase along the Proposed Scheme. It is therefore expected 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.

Changes to RoW are outlined in Chapter 4 (Proposed Scheme Description). Changes typically include localised restrictions to vehicular traffic (including bicycles) or proposed changes to access arrangements to properties. However, access will still be available via the surrounding road network and alternative accesses to properties will be provided where necessary. Access for pedestrians will generally be maintained. Given the limited nature of the proposed changes it is not anticipated that there will be a material effect on a community basis and is therefore not considered further in this accessibility assessment.

Pedestrians, Cyclists and Bus Users

The positive impacts to pedestrians, cyclists and bus users will predominantly be experienced by community areas located along the length of the Proposed Scheme and where there will be improved footpaths and cycle paths. The community areas that are expected to experience a Positive, Moderate to Significant impact on pedestrians, and a Positive, Moderate to Very Significant and Long-Term impact on cyclists and bus users as a result of changes to access are Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road. All other community areas (Monkstown, Newtownpark, Sandymount, University (Newman) Church and Westland Row) are expected to experience a Positive, Not Significant and Long-Term impact on change in access during the Operational Phase of the Proposed Scheme.

Private Vehicles

Chapter 6 (Traffic & Transport) identified a Positive, Moderate 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 some localised impacts during the PM peak periods on a number of junctions in the surrounding road network as a result of displaced traffic. A Negative, Moderate impact was identified on Stillorgan Park, Sandford Road, Clanwilliam Place, Ailesbury Road, Carysfort Avenue and Ranelagh Road. A Positive, Moderate impact was identified on Clanwilliam Place on the Grand Canal Street Lower / Clanwilliam Place junction in the AM peak during the Operational Phase. Commercial businesses

located on these roads and expected to experience these impacts 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, Moderate and Long-Term. The community areas that are expected to experience a Positive, Moderate and Long-Term impact as a result of changes to access are Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road.

The impact on access to commercial businesses in the surrounding road network is considered to be Negative, Slight and Long-Term. The community areas that are expected to experience a Negative, Slight and Long-Term impact as a result of changes to access to commercial businesses are Monkstown, Newtownpark, Sandymount, University (Newman) Church and Westland Row.

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 minimises negative population impacts including: improving safety for cyclists with improved cycle facilities; minimising traffic lane, cycle track, and footpath widths to reduce land take from residential properties in localised instances; providing protected junctions for cyclists; and altering junction layout and signal timings of major junctions and implementing offline traffic management to minimise traffic redistribution into residential streets off the main Proposed Scheme corridor.

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 impacts are the same as the potential impacts detailed in Section 10.4.

10.6.1 Construction Phase

Table 10.13 summarises the residual impacts of the population assessment during the Construction Phase of the Proposed Scheme. This includes all community and economic assessment topics.

Table 10.13: 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 Short-Term: Blackrock, Booterstown, Donnybrook, Merrion Road, Haddington Road and Westland Row Neutral, Not Significant and Short-Term: Monkstown, Newtownpark, Sandymount and University (Newman) Church	Negative, Moderate to Significant and Short-Term: St. Vincent's University Hospital
Community land take	Negative, Not Significant and Short-Term: Booterstown, Merrion Road, Haddington Road and Donnybrook	Negative, Significant and Short-Term: 85,151,153,155 and 157 Merrion Road
Community accessibility	**Pedestrians, Cyclists, Bus Users** Negative, Slight and Short-Term: Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road Negative, Not Significant and Short-Term: Monkstown, Newtownpark, Sandymount, University (Newman) Church and Westland Row **Private Vehicles**	

Assessment Topic	Predicted Impact (Residual Impacts) for Community Areas	Significant Residual Impact (Receptor Specific)
	Negative, Moderate and Short-Term: Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road Negative, Slight and Short-Term: Monkstown, Newtownpark, Sandymount, University (Newman) Church and Westland Row	
Economic Assessment		
Commercial amenity	Negative, Slight and Short-Term: Blackrock, Booterstown, Merrion Road, Donnybrook, Haddington Road, Sandymount, Westland Row and University (Newman) Church Neutral, Not Significant and Short-Term: Monkstown and Newtownpark	**Indirect** No Significant impacts **Direct** No Significant impacts
Commercial land take	Negative, Not Significant and Short-Term: Booterstown, Donnybrook, Merrion Road, Blackrock and University (Newman) Church	No Significant impacts
Commercial accessibility	**Pedestrians, Cyclists, Bus Users** Negative, Slight and Short-Term: Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road Negative, Not Significant and Short-Term: Monkstown, Newtownpark, Sandymount, University (Newman) Church and Westland Row **Private Vehicles** Negative, Moderate and Short-Term: Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road Negative, Slight and Short-Term: Monkstown, Newtownpark, Sandymount, University (Newman) Church and Westland Row	

10.6.2 Operational Phase

Table 10.14 summarises the residual impacts of the population assessment during the Operational Phase of the Proposed Scheme. This includes all community and economic assessment topics.

Table 10.14: 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	Positive, Not Significant and Long-Term: Haddington Road, Westland Row, University (Newman) Church and Donnybrook Neutral, Not Significant and Long-Term: Blackrock, Booterstown, Merrion Road, Monkstown, Newtownpark and Sandymount	No Significant impacts
Community land take	Negative, Not Significant and Long-Term: Booterstown, Merrion Road and Donnybrook	No Significant impacts
Community accessibility	**Pedestrians** Positive, Moderate to Significant and Long-Term: Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road Positive, Not Significant and Long-Term: Monkstown, Newtownpark, Sandymount University (Newman) Church and Westland Row **Cyclists and Bus Users** Positive, Moderate to Very Significant and Long-Term: Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road Positive, Not Significant and Long-Term: Monkstown, Newtownpark, Sandymount University (Newman) Church and Westland Row **Private Vehicles** Positive, Moderate and Long-Term: Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road Negative, Slight and Long-Term: Monkstown, Newtownpark, Sandymount, University (Newman) Church and Westland Row	

Assessment Topic	Predicted Impact (Residual Impacts) for Community Areas	Significant Residual Impact (Receptor Specific)
Economic Assessment		
Commercial amenity	Positive, Not Significant and Long-Term - Haddington Road, Westland Row, University (Newman) Church and Donnybrook Neutral, Not Significant and Long-Term: Blackrock, Booterstown, Merrion Road, Monkstown, Newtownpark and Sandymount	**Indirect** No Significant impacts **Direct** No Significant impacts
Commercial land take	Negative, Not Significant and Long-Term: Booterstown, Donnybrook, Merrion Road and Blackrock	No Significant impacts
Commercial accessibility	**Pedestrians** Positive, Moderate to Significant and Long-Term: Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road Positive, Not Significant and Long-Term: Monkstown, Newtownpark, Sandymount University (Newman) Church and Westland Row **Cyclists and Bus Users** Positive, Moderate to Very Significant and Long-Term: Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road Positive, Not Significant and Long-Term: Monkstown, Newtownpark, Sandymount University (Newman) Church and Westland Row **Private Vehicles** Positive, Moderate and Long-Term: Blackrock, Booterstown, Merrion Road, Donnybrook and Haddington Road Negative, Slight and Long-Term: Monkstown, Newtownpark, Sandymount, University (Newman) Church and Westland Row	

As outlined within Section 0 and summarised in Table 10.14, 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 in Volume 4 of this EIAR, 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 expected 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 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

CSO (2016a). Census 2016 Small Area Population Statistics [Online] Available from www.cso.ie/en/census/census2016reports/census2016smallareapopulationstatistics/

CSO (2016b). Means of Travel to Work [Online] Available from www.cso.ie/en/releasesandpublications/ep/p-cp6ci/p6cii/p6mtw/

CSO (2016c). Persons at work by industry and sex [Online] Available from census2016.geohive.ie/datasets/37cc24559d00445cb3d3364420ff730b_0

Department for Transport (2020). TAG Unit A4.2 Distributional Impact Appraisal

EPA (2017). Guidelines on the information to be contained in Environmental Impact Assessment Reports. Draft. August 2017

European Commission (2017). Environmental Impact Assessment of Projects – Guidance on the Preparation of the Environmental Impact Assessment Report [Online]. Available from: https://ec.europa.eu/environment/eia/pdf/EIA_guidance_EIA_report_final.pdf

EY (2021). The Economic Impact of the Core Bus Corridors

Geodirectory (2019)

Government of Ireland (2018). Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment

Highways England (2020). LA 112 Population and human health, Revision 1, Standards for Highways

NTA (2020). National Public Transport Access Nodes (NaPTAN) [Online] Available from data.gov.ie/dataset/2017-national-public-transport-access-nodes-naptan

Ordnance Survey Ireland (2020). PRIME2