



Chapter 10
Population

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10. Population

10.1 Introduction

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

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

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

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

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

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

The aim of the Proposed Scheme when in operation is to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which would enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor. The objectives of the Proposed Scheme are described in Chapter 1 (Introduction). 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 a comprehensive design iteration process, with particular emphasis on minimising the potential for environmental impacts, where practicable, whilst ensuring the objectives of the Proposed Scheme are attained. 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, residents, communities and businesses.

10.2.1 Study Area

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

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

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

10.2.1.1 Community Assessment - Study Area

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

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

The study area for the assessment of impacts on community amenity consists of 'community areas', which are informed by the Central Statistics Office (CSO) 2016 Census parish boundaries (CSO2016a). Community areas that will either be intersected by or experience displaced traffic as a result of the Proposed Scheme have been included in the study area, and consist of the following:

- Killinarden;
- Tallaght Oldbawn;
- Springfield;
- Tallaght Dodder;
- Tallaght Village;
- Tallaght Tymon;
- Kilnamanagh;
- Greenhills;
- Walkinstown;
- Crumlin;
- Mourne Road;
- Clogher Road;
- Dolphins Barn;
- Rialto;
- Donore Avenue;
- Francis Street;

- Meath Street and Merchants Quay;
- Clondalkin;
- Deansrath;
- Sruleen;
- Bawnogue; and
- Bluebell.

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

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

10.2.1.2 Economic Assessment - Study Area

The economic assessment considers impacts on individual commercial businesses along the Proposed Scheme within the community areas listed in Section 10.2.1.1, as well as any as well as any businesses in the surrounding road network that are located on a road that is expected to experience a moderate or greater traffic impact from displaced traffic in the AM and PM peak hours. To consider and assess these impacts, the economic assessment has been divided into the follow two assessment topics:

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

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

10.2.2 Relevant Guidelines, Policy and Legislation

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

Table 10.1: Relevant Guidelines, Policies and Legislation

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

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

The baseline for the community assessment is founded on the OSI Prime 2 dataset. The OSI Prime 2 dataset has been used to establish the number of community receptors, including local educational, recreational and healthcare facilities (see Section 10.3.3).

Desktop research was supplemented by walkover surveys 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) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (hereafter referred to as the EPA Guidelines) (EPA 2022). The significance of impacts matrix, based on the EPA Guidelines (EPA 2022), was used to determine the significance of impact for land use and accessibility impacts (see Table 10.2).

Table 10.2: EPA 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 (EPA 2022), the assessment of land use and accessibility impacts has been informed by the UK 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 is appropriate for use in Ireland, for the assessment of environmental impacts. The DMRB Guidance (Highways England 2020)

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 (EPA 2022).

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 considers the 'indirect' impact of the following environmental effects which are typically expected to contribute to a change in amenity:

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

Where there is a combination of at least two direct 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 has been 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 and 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 measures 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 such that it will not result in a significant air quality impact.

Chapter 9 (Noise and 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 Compounds. 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 (EPA 2022). The term 'Significant' in the amenity matrix includes the EPA terms 'Profound', 'Very Significant' and 'Significant', while the term 'Not Significant' includes the EPA terms 'Not Significant' and 'Imperceptible' as outlined in the EPA Guidelines (EPA 2022). Table 10.3 is used for either negative or positive impacts, but not a combination of both. Where both negative and positive impacts occur, professional judgement has been used to assign the overall impact on amenity.

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

With this determination, the nature, significance and duration of effects for each community area have been reported in line with the EPA Guidelines (EPA 2022). Amenity impacts that may arise on individual receptors have only been stated separately in the Potential Impacts (see Section 10.2.4.1.1) for Slight / Moderate, Moderate, Moderate/Significant and Significant amenity impacts. Amenity impacts on individual receptors that are assessed as less than Moderate (Slight, Not Significant and Imperceptible) are not discussed in the amenity assessment. Only individual receptors that are expected to experience a Moderate / Significant or Significant amenity impact are listed in the Residual Impact tables (see Section 10.6).

Table 10.3: In-Combination Amenity Significance Matrix (Construction and Operational Phases)

Environmental Effect 1	Environmental Effect 2	Environmental Effect 3	Environmental Effect 4	Combined Impact
Significant	Significant	Significant	Significant	Significant
Significant	Significant	Significant	Moderate	Significant
Significant	Significant	Significant	Slight	Significant
Significant	Significant	Significant	Not Significant	Significant
Significant	Significant	Moderate	Moderate	Significant
Significant	Significant	Moderate	Slight	Moderate / Significant
Significant	Significant	Moderate	Not Significant	Moderate / Significant
Significant	Significant	Slight	Slight	Moderate
Significant	Significant	Slight	Not Significant	Moderate
Significant	Significant	Not Significant	Not Significant	Moderate
Significant	Moderate	Moderate	Moderate	Moderate / Significant
Significant	Moderate	Moderate	Slight	Moderate
Significant	Moderate	Moderate	Not Significant	Moderate
Significant	Moderate	Slight	Slight	Moderate
Significant	Moderate	Slight	Not Significant	Moderate
Significant	Moderate	Not Significant	Not Significant	Moderate
Significant	Slight	Slight	Slight	Slight / Moderate
Significant	Slight	Slight	Not Significant	Slight / Moderate
Significant	Slight	Not Significant	Not Significant	Slight
Significant	Not Significant	Not Significant	Not Significant	Not Significant / Potential direct impact on amenity*
Moderate	Moderate	Moderate	Moderate	Moderate / Significant
Moderate	Moderate	Moderate	Slight	Moderate / Significant
Moderate	Moderate	Moderate	Not Significant	Moderate
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 (Highways England 2020) and supported by professional judgement. In general, direct acquisition of a property has been categorised with a high or very high magnitude. A medium magnitude would be assigned where there will be changes to access or the acquisition of land, but the changes overall will not compromise the overall ability to use a property. A low magnitude has been assigned where there will be a minor loss of land, or where severance will be introduced but adequate accessibility will be maintained throughout the Construction Phase or provided during the Operational Phase. The assessment has been reported by community area with the nature, significance, and duration of effect assigned using the EPA Guidelines (EPA 2022).

10.2.4.1.2.2 Accessibility

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

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

Changes in access to community receptors as a result of the Operational Phase of the Proposed Scheme were considered in respect to the outcomes of a changed walking environment for pedestrians, cycling provision for cyclists and bus infrastructure for bus users. The community accessibility assessment has drawn on the outcomes of the qualitative assessment metrics identified in Chapter 6 (Traffic & Transport). These qualitative assessments were considered collectively in order to assess the significance of impacts on access for each community area during the Operational Phase. The assessment has been reported by community area and by different user types

(bus users, cyclists, pedestrians and private vehicles). Where a road is expected to experience an impact to accessibility, moderate and above, this has been reported individually, alongside the community receptors that are likely to be impacted as a result. The nature, significance and duration of effect for each receptor has been assigned using the EPA Guidelines (EPA 2022).

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

10.2.4.2 Economic Assessment

This Section outlines the methodology for the assessment of economic impacts.

10.2.4.2.1 Commercial Amenity

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

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

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

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

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

10.2.4.2.2 Commercial Land Use and Accessibility

10.2.4.2.2.1 Land Take

This assessment considers direct land take on commercial properties / land and designated car parking. The impact on private landings, which can be used for a variety of reasons by businesses, has also been considered. This assessment has only considered commercial properties within the Proposed Scheme boundary that would be expected to experience direct land take. This assessment has followed the same approach as set out for community land take (Section 10.2.4.1.2.1). This assessment has only considered commercial businesses

identified through a site walkover and desktop research (including businesses operating from residential properties where visible) and has not considered people choosing to work from home.

Large areas of commercial land, such as a business park or shopping centre, were assigned a high sensitivity. Derelict land or unoccupied buildings were assigned a low sensitivity. The magnitude of impact on commercial land has been determined by the degree of loss of the resource as per the DMRB Guidance (Highways England 2020). 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 Guidance (Highways England 2020) and EPA Guidelines (EPA 2022).

10.2.4.2.2 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 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)). It has been referred to in the assessment section, where appropriate.

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

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

10.3 Baseline Environment

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

10.3.1 Overview

The Tallaght Section of the Proposed Scheme will travel through the suburban community areas of Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road and Dolphins Barn before crossing the Grand Canal into Dublin City Centre. Once past the Grand Canal, the Proposed Scheme will pass through the community areas of Donore Avenue and Francis Street before finishing in Meath Street and Merchants Quay. The Tallaght Section of the Proposed Scheme will run through residential and mixed residential / commercial suburban areas in Tallaght, Walkinstown and Crumlin, as well as more commercial / industrial areas in Tallaght and Greenhills. North of the Grand Canal the area becomes increasingly urban in character.

The Clondalkin Section of the Proposed Scheme will commence in the community area of Clondalkin and is almost entirely commercial and industrial in nature, passing through the Western Industrial Estate and John F. Kennedy Industrial Estate in the community area of Bluebell. The Clondalkin Section of the Proposed Scheme only becomes more residential in nature where it links with the Tallaght Section in Walkinstown.

The study area for the Proposed Scheme consists of 22 community areas which have an approximate total population of 165,000 according to the 2016 Census (CSO 2016a).

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 will pass a number of community and recreation receptors. The number and type of receptors are presented by community area in Table 10.4.

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

Community and Recreation Receptors	Place of Worship	Recreation	Hospital / Health Centre	Schools
Killinarden	1	5	1	4
Tallaght Oldbawn	1	6	0	3
Springfield	2	4	0	4
Tallaght Dodder	1	1	0	2
Tallaght Village	3	2	2	1
Tallaght Tymon	1	1	2	5
Kilnamanagh	2	6	0	3
Greenhills	1	5	0	4
Walkinstown	1	3	0	2
Crumlin	6	2	4	5
Mourne Road	2	4	1	4
Clogher Road	3	4	1	4
Dolphins Barn	1	1	2	3
Rialto	1	2	0	0
Donore Ave	4	1	2	3

Community and Recreation Receptors	Place of Worship	Recreation	Hospital / Health Centre	Schools
Francis Street	3	2	0	5
Meath Street and Merchants Quay	6	6	1	6
Clondalkin	10	18	0	9
Deansrath	2	2	0	3
Sruleen	1	2	0	1
Bawnogue	1	0	0	1
Bluebell	3	2	0	2
Study Area Total	56	79	16	74

Table 10.4 demonstrates that there is a higher proportion of schools and recreational resources in Clondalkin compared to the rest of the study area, reflecting the size of this community area. Examples of community receptors along the Proposed Scheme which draw a large number of users include:

- Tallaght Hospital, Tallaght Village;
- Technological University Dublin – Tallaght Campus, Tallaght Village;
- Children’s Health Ireland at Crumlin, Mourne Road;
- Loreto College, Dolphins Barn; and
- Coombe Women’s Hospital, Dolphins Barn.

Within the study area there are two national trails used for walking and other recreational activities. These are the Dublin Mountains Way and Grand Canal Way.

10.3.2.2 Residential Land

There are approximately 52,000 residential properties within the community study area (OSI 2020).

10.3.2.3 Commute to Work

There are approximately 70,000 commuters across the Proposed Scheme community study area and 19% of those travel by public transport (bus or train) (CSO 2016b). The method of travel to work by community area is presented in Table 10.5. The proportion of commuters using public transport within the Proposed Scheme community study area is in line with the County Dublin average. The number of residents commuting to work by bus is fairly consistent across the community areas with the exception of Tallaght Oldbawn (8%), Kilnamanagh (5%) and Bluebell (7%), which have fewer residents travelling to work by bus.

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
Killinarden	13%	59%	4%	12%	12%
Tallaght Oldbawn	8%	72%	4%	9%	8%
Springfield	7%	60%	11%	13%	8%
Tallaght Dodder	13%	67%	2%	12%	6%
Tallaght Village	13%	43%	13%	21%	10%
Tallaght Tymon	13%	67%	2%	12%	6%
Kilnamanagh	5%	69%	12%	8%	5%
Greenhills	15%	66%	1%	12%	7%
Walkinstown	17%	53%	4%	16%	8%
Crumlin	18%	53%	1%	20%	8%
Mourne Road	16%	46%	10%	21%	8%

Community Area	Travel by Bus / Minibus or Coach	Travel by Car / Van	Travel by Train	Travel by Foot / Bike	Other
Clogher Road	17%	45%	3%	28%	6%
Dolphins Barn	15%	32%	10%	36%	7%
Rialto	13%	31%	14%	34%	9%
Donore Avenue	13%	23%	5%	50%	8%
Francis Street	14%	16%	6%	52%	12%
Meath Street and Merchants Quay	12%	11%	7%	44%	27%
Clondalkin	12%	63%	6%	11%	7%
Deansrath	16%	68%	1%	8%	7%
Sruleen	11%	68%	3%	8%	10%
Bawnogue	13%	69%	1%	11%	6%
Bluebell	7%	42%	15%	15%	21%
Study Area Average	13%	51%	6%	21%	9%
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 733 public transport access points across the study area, as shown in Table 10.6. The community area of Clondalkin, which is also the furthest community area from the City Centre, has the greatest proportion of public transport stops (16%) within the study area.

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
Killinarden	27	4%
Tallaght Oldbawn	19	3%
Springfield	27	4%
Tallaght Dodder	10	1%
Tallaght Village	46	6%
Tallaght Tymon	22	3%
Kilnamanagh	19	3%
Greenhills	28	4%
Walkinstown	58	8%
Crumlin	47	6%
Mourne Road	44	6%
Clogher Road	32	4%
Dolphins Barn	24	3%
Rialto	8	1%
Donore Avenue	17	2%
Francis Street	18	2%
Meath Street and Merchants Quay	57	8%
Clondalkin	117	16%
Deansrath	25	3%
Sruleen	19	3%
Bawnogue	20	3%
Bluebell	49	7%
Study Area Total	733	

10.3.3 Economic Baseline

10.3.3.1 Commercial Receptors

The Proposed Scheme will pass a number of commercial receptors. The number of commercial receptors in the study area are presented in Table 10.7 (Geodirectory 2019). Appendix A10.1 (Schedule of Commercial Businesses) in Volume 4 of this EIAR provides a list of all commercial businesses along the Proposed Scheme. Approximately 526 were identified, which is approximately 6% of the commercial businesses across the total study area.

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

Community Area	Commercial Receptors
Killinarden	279
Tallaght Oldbawn	56
Springfield	70
Tallaght Dodder	61
Tallaght Village	962
Tallaght Tymon	177
Kilnamanagh	51
Greenhills	46
Walkinstown	1,261
Crumlin	308
Mourne Road	120
Clogher Road	115
Dolphins Barn	166
Rialto	70
Donore Avenue	133
Francis Street	264
Meath Street and Merchants Quay	1,572
Clondalkin	842
Deansrath	30
Sruleen	69
Bawnogue	89
Bluebell	1,528
Study Area Total	8,269

Table 10.7 shows the largest number of commercial receptors are located in Meath Street and Merchants Quay and Bluebell and the smallest number of commercial receptors are in the Tallaght Oldbawn, Springfield, Tallaght Dodder, Kilnamanagh, Greenhills, Rialto, Deansrath and Sruleen community areas.

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

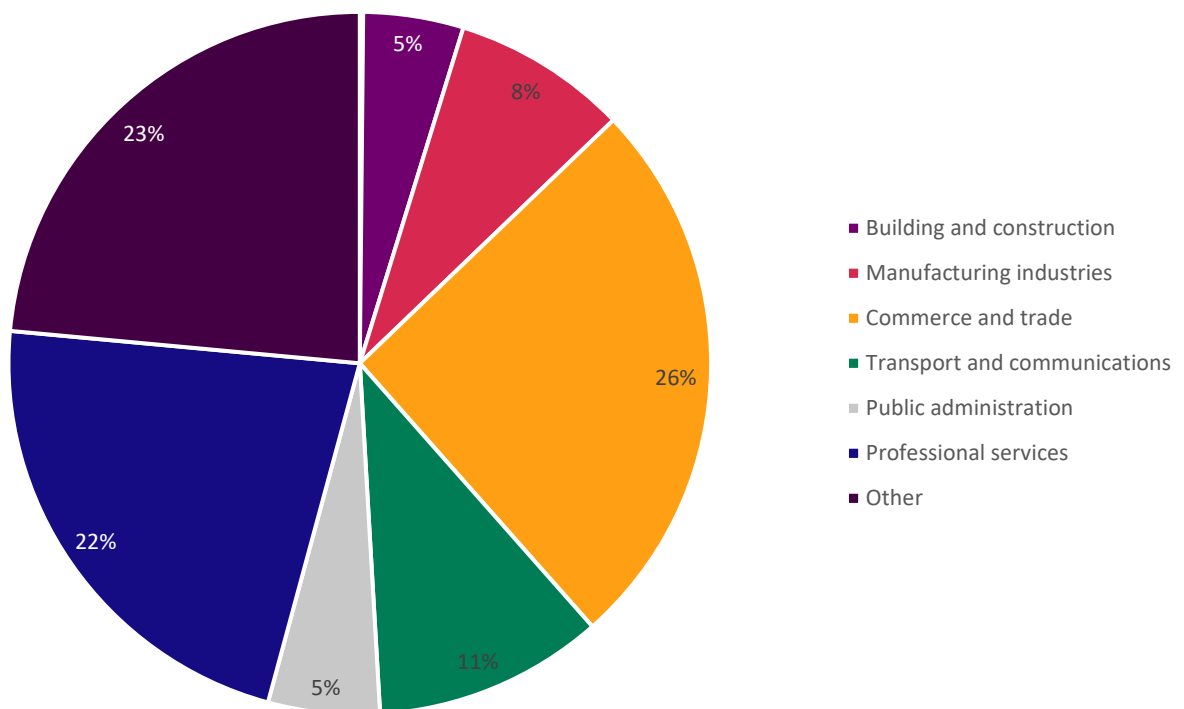
Within the study area there are approximately 72,500 people in employment (44% of the total study area population). Of the working age population, over 12,000 people are unemployed (14% of the working age population) across the study area population, and this equates to 7% being unemployed (CSO 2016c).

The Proposed Scheme passes a number of industrial estates and other key employment locations, including:

- The Square Shopping Centre, Tallaght Village;
- Ballymount Industrial Estate, Walkinstown;

- Crumlin Shopping Centre, Dolphins Barn;
- Broomhill Industrial Estate, Tallaght Village;
- Clondalkin Industrial Estate, Clondalkin;
- Western Business Park / Western Industrial Estate, Bluebell; and
- John F Kennedy Industrial Estate, Bluebell.

Graph 10.1 presents a breakdown of employment across the study area. The largest sectors of employment are commerce and trade (26%), other (23%) and professional services (22%) (CSO 2016c).



Graph 10.1: Employment by Industry within the Study Area (%)

10.4 Potential Impacts

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

10.4.1 Characteristics of the Proposed Scheme

The Proposed Scheme has an overall length of approximately 15.5km with an additional offline cycling facility approximately 3.9 km.

It will be comprised of two main alignments in terms of the route it follows: namely the Tallaght to City Centre section and the Clondalkin to Drimnagh section.

The first section, the Tallaght to City Centre section, begins at the junction of Old Blessington Road / Cookstown Way and is routed along Belgard Square West, Belgard Square North, Belgard Square East and Blessington Road to the junction of R819 Greenhills Road and Bancroft Park. From here the Proposed Scheme is routed along the R819 Greenhills Road to Walkinstown Roundabout via new transport link roads; in the green area to the east of Birchview Avenue / Treepark Road; in the green area to the south of Ballymount Avenue, and in the green area to the east of Calmount Road. From Walkinstown Roundabout the Proposed Scheme is routed along the R819 Walkinstown Road to the junction with R110 Long Mile Road and Drimnagh Road. The shared spine with the Clondalkin section commences at this junction and the Proposed Scheme is routed along the R110 to the junction of Dean Street and Patrick Street via Drimnagh Road, Crumlin Road, Dolphins Barn, Cork Street, St. Luke's Avenue and Dean Street. From here the Proposed Scheme is routed along the R137 via Patrick Street to the junction at Winetavern Street and Christchurch Place where the Proposed Scheme terminates within the City Centre. An offline cycle facility is proposed to facilitate cycling between Walkinstown Roundabout and Parnell Road (Grand Canal) where end to end cycle facilities are not feasible along the main corridor and provides a more direct route towards the City Centre. This offline section of the Proposed Scheme is routed via Bunting Road, Kildare Road and Clogher Road.

The second section, the Clondalkin to Drimnagh section, begins at the junction of New Nangor Road and Woodford Walk and is routed along the R134 New Nangor Road, R810 Naas Road, R112 Walkinstown Avenue and the R110 Long Mile Road to the junction of Walkinstown Road and Drimnagh Road where it is routed towards the City Centre along the shared spine section as described above.

The Proposed Scheme includes an upgrade of the existing bus priority and cycle facilities. The scheme includes a substantial increase in the level of bus priority provided along the corridor, including the provision of additional lengths of bus lane resulting in improved journey time reliability. Throughout the Proposed Scheme bus stops will be enhanced to improve the overall journey experience for bus passengers and cycle facilities will be substantially improved with segregated cycle tracks provided along the links and protected junctions with enhanced signalling for cyclists provided at junctions.

Moreover, pedestrian facilities will be upgraded, and additional signalised crossings be provided. In addition, urban realm works will be undertaken at key locations with higher quality materials, planting and street furniture provided to enhance the pedestrians experience.

Bus gates (operating 24-hours a day) are proposed along the Proposed Scheme at the following locations:

- Belgard Square West between Belgard Square South and Old Blessington Road (inbound and outbound);
- Belgard Square West between Old Blessington Road and access to Broadfield Hall (inbound and outbound);
- Belgard Square East between Belgard Square North and access to ABB Belgard Road (inbound and outbound);
- Existing bus gate retained on Blessington Road at TUD access (inbound and outbound);

- Old Greenhills Road at junction with R819 Greenhills Road / Bancroft Park (inbound and outbound); and
- Clogher Road at junction with Sundrive Road (inbound and outbound).

10.4.2 'Do Nothing' Scenario

With respect to Population, the 'Do Nothing' scenario means that 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 arise from a combination of traffic, air quality, noise and visual impacts. These impacts are considered in combination to determine the potential adverse impact on residents living in a community area. As discussed in Section 10.2.4.1.1 this assessment has been based on the residual significant effects identified in the following chapters:

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

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 in the surrounding road network as a result of additional construction traffic from the Proposed Scheme.

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

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

- A Negative, Significant to Very Significant and Temporary impact is expected at Our Lady's Children's Hospital, Crumlin;
- A Negative, Moderate to Significant and Temporary impact is expected at the Coombe Women's Hospital; and
- A Negative, Slight to Moderate and Temporary impact is expected at several community receptors along the Proposed Scheme.

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

- A Negative, Very Significant and Temporary to Short-Term impact between Tallaght and Ballymount;
- A Negative, Significant and Temporary to Short-Term impact between Ballymount and Crumlin;
- A Negative, Very Significant and Temporary to Short-Term impact between Crumlin and Grand Canal;
- A Negative, Moderate and Temporary to Short-Term impact between Grand Canal and Christchurch;
- A Negative, Moderate and Temporary to Short-Term impact between Woodford Walk (R113) / New Nangor Road (R134) and Long Mile Road (R110) / Naas Road (R810) / New Nangor Road (R134) junction; and

- A Negative, Moderate and Temporary to Short-Term impact between Long Mile Road (R110) / Naas Road (R810) / New Nangor Road (R134) junction and Drimnagh.

These impacts on townscape represent the visual impact experienced by community receptors along the Proposed Scheme.

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 and Short-Term impact on amenity for all community facilities along the Proposed Scheme, with the exception of Our Lady's Children's Hospital Crumlin, which is expected to experience a Negative, Moderate to Significant and Short-Term impact.

The following schools and hospitals, amongst other community facilities, allocated adjacent to the Proposed Scheme and likely to experience a Negative, Moderate and Short-Term impact on amenity are:

- Tallaght Hospital;
- Coombe Women's Hospital;
- Drimnagh Castle Primary and Secondary Schools;
- Assumption Secondary School, Walkinstown;
- Assumption National Schools (Junior and Senior);
- Crumlin College of Further Education;
- Scoil Mhuire Óg;
- Brú Chaoimhin Hospital;
- Little Tots Creche and Montessori;
- Loreto College;
- Marist National School;
- Pearse College of Education;
- Liberties College;
- Saint Brigid's National School;
- Ardscoil Eanna;
- BIMM Institute;
- Saint Mary's National School; and
- Saint Cillian's National School.

The community facilities are located in the community areas of Tallaght Village, Tallaght Tymon, Kilnamanagh, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street, Meath Street and Merchants Quay and Bluebell. However, due to the small number of community facilities in each community areas, the overall impact on these community areas is expected to be Negative, Not Significant and Short-Term.

All other community areas are expected to experience a Neutral, Not Significant and Short-Term amenity impact.

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 77 community receptors (55 residential properties and 22 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
Greenhills	0	0	1	0
Walkinstown	0	0	54	0
Total	0	0	55	0

Table 10.8 shows that no residential properties are expected to experience significant land take impacts during the Construction Phase.

Of the 55 residential properties experiencing temporary land take impacts, 54 are located in the community area of Walkinstown, along Walkinstown Road, and are expected to experience moderate temporary land take impacts during the Construction Phase. For all properties, a small section of their front garden and driveway are required to accommodate the construction of bus and cycle lanes. The remaining one is in the Greenhills area, where a small section of driveway access will be 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
Clogher Road	0	0	1	0
Crumlin	0	1	0	0
Dolphins Barn	0	2	1	0
Greenhills	0	0	1	0
Kilnarnagh	0	1	2	0
Mourne Road	0	0	2	0
Springfield	0	0	1	0
Tallaght Tymon	0	0	2	0
Tallaght Village	2	1	3	0
Walkinstown	1	1	0	0
Total	3	6	13	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.

Overall, the impact of land take across the impacted community areas as a whole (Clogher Road, Crumlin, Dolphins Barn, Greenhills, Kilnarnagh, Mourne Road, Springfield, Tallaght Tymon, Tallaght Village, Walkinstown) is considered Negative, Not Significant and Short-Term during the Construction Phase. No other community areas are predicted to be 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 works 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 (which includes private parking).

Pedestrians and Cyclists

Pedestrian and cyclist safety measures are discussed in Chapter 5 (Construction). These safety measures are intended to allow the safe continuation of access along the route of the Proposed Scheme during the Construction Phase. It is expected that as roads, cycle lanes and footpaths are being upgraded, that there will be some level of disruption to users and their ability to access community facilities. It is important to note that as the Construction Phase will be undertaken in sections, construction impacts would be limited to where the work is being undertaken and for a limited duration. As outlined in Section 5.5 of Chapter 5 (Construction), measures will be undertaken by the appointed contractor to ensure that access and parking are maintained during construction, wherever 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 a Negative, Moderate and Temporary impact on cycling along the Proposed Scheme during the Construction Phase. Taking into consideration the mitigation measures presented in Chapter 5 (Construction) and Appendix A5.1 Construction Environmental Management Plan (CEMP) in Volume 4 of this EIAR, it is expected that access to community receptors along the Proposed Scheme, will also likely be negatively impacted during the Construction Phase.

Bus Users

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

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

Private Vehicles

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

Chapter 6 (Traffic & Transport) has identified a residual Negative, Moderate and 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 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 will not include the impact of construction access vehicles which are 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 Negative, Slight and Short-Term during the Construction Phase.

The impacts identified above are expected to be experienced by community areas located predominately along the length of the Proposed Scheme where construction activity, road diversions and closures are expected. It is acknowledged that users will travel between community areas to access community facilities within other community areas. However, the impact of construction activity will be experienced where the facility is located.

The community areas that are expected to experience a Negative, Slight and Short-Term impact (pedestrians and bus users) and a Negative, Moderate and Short-Term impact (cyclists and private vehicles) as a result in changes to access are Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street and Bluebell.

Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Meath Street and Merchants Quay, Clondalkin, Deansrath, Sruleen and Bawnogue are expected to experience a Negative, Not Significant and Short-Term change in access for pedestrians, cyclists, bus users and private vehicles during the Construction Phase of the Proposed Scheme.

10.4.3.2 Economic Assessment

10.4.3.2.1 Commercial Amenity

As outlined above in Section 10.2.4.2.1, commercial amenity impacts can arise indirectly from a combination of traffic, air quality, noise and visual impacts or directly where a single environmental impact is significant enough to affect the viability 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 in the surrounding road network as a result of additional construction traffic from the Proposed Scheme.

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 that a Negative, Moderate and Temporary impact is expected at commercial businesses on Kildare Road and Balfe Road. While commercial businesses on Calmount Road and Ballymount Avenue, are expected to experience a Negative, Slight to Moderate and Temporary noise impact from Road Widening and General Road Works.

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

- A Negative, Very Significant and Temporary to Short-Term impact between Tallaght and Ballymount;
- A Negative, Significant and Temporary to Short-Term impact between Ballymount and Crumlin;
- A Negative, Very Significant and Temporary to Short-Term impact between Crumlin and Grand Canal;
- A Negative, Moderate and Temporary to Short-Term impact between Grand Canal and Christchurch;
- A Negative, Moderate and Temporary to Short-Term impact between Woodford Walk (R113) / New Nangor Road (R134) and Long Mile Road (R110) / Naas Road (R810) / New Nangor Road (R134) junction; and
- A Negative, Moderate and Temporary to Short-Term impact between Long Mile Road (R110) / Naas Road (R810) / New Nangor Road (R134) junction and Drimnagh.

These impacts on townscape represent the visual impact experienced by community receptors along the Proposed Scheme.

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 air quality, noise, traffic and visual impacts will combine to create a Negative, Moderate and Short-Term impact on amenity for all commercial businesses along the Proposed Scheme. Commercial businesses located along the Proposed Scheme are listed in Appendix A10.1 (Schedule of Commercial Businesses) in Volume 4 of this EIAR. The proportion of commercial businesses located along the Proposed Scheme is low compared to the businesses across the entire community areas – see Table 10.7. Therefore, the impact on community areas along the

Proposed Scheme (Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mounre Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street, Meath Street and Merchants Quay, Clondalkin and Bluebell) is considered to be Negative, Not Significant and Short-Term.

All other community areas are expected to experience a Neutral, Not Significant and Short-Term amenity impact.

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. One direct amenity impact has been identified during the Construction Phase. The Iveagh Hostel is subject to a Negative, Moderate and Short-Term traffic impact. As hostels are assigned a medium sensitivity to visual disturbance overall the direct amenity impact is expected to be Negative, Moderate and Short-Term on this business.

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 51 commercial receptors are impacted by temporary land take as a result of the Proposed Scheme. Table 10.10 summarises the findings of the commercial land take assessment for 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
Tallaght Village	0	2	5	0
Tallaght Tymon	0	2	0	0
Greenhills	0	0	1	0
Walkinstown	0	7	16	0
Bluebell	0	4	14	0
Total	0	15	36	0

Table 10.10 shows that no commercial receptors are expected to experience a significant land take impact during the Construction Phase. The majority of commercial receptors impacted are located in the Community Areas of Walkinstown and Bluebell, and are expected to experience Negative, Moderate and Temporary land take impacts.

Overall, the impact of land take across the impacted community areas as a whole (Tallaght Village, Tallaght Tymon, Greenhills, Walkinstown and Bluebell) is considered Negative, Not Significant and Short-Term during the Construction Phase. No other community areas are predicted to be 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 works means accessibility impacts will differ based on the mode of travel used. The assessment, similar to the community accessibility assessment (see Section 10.4.3.1.2.2), has separately assessed accessibility impacts on pedestrians and cyclists, bus users and private vehicles (parking and loading). As the construction 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 10.2.4.1.2.2 for community accessibility.

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

The impact of the Proposed Scheme on business viability has been considered during operation (see Section 10.4.4.2.2.2), although the bus gates will be in place during construction (Chapter 5 (Construction)).

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, Moderate and Long-Term impact from redistributed traffic along the surrounding road network. No road junctions in the surrounding road network are expected to be significantly impacted by the operation of the Proposed Scheme.

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

Chapter 9 (Noise & Vibration) identified a Positive, Imperceptible to Slight and Short to Medium Term to Negative, Slight and Short to Medium-Term impact from traffic noise along the Proposed Scheme and a Positive, Imperceptible to Slight and Short to Medium Term to Negative, Moderate and Short to Medium-Term impact and in the surrounding road network.

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

- A Negative, Significant and Short-Term impact between Tallaght and Ballymount;
- A Neutral, Moderate and Short-Term impact between Ballymount and Crumlin;
- A Negative, Significant and Short-Term impact between Crumlin and Grand Canal;
- A Positive, Moderate to Significant and Short-Term impact between Grand Canal to Christchurch;
- A Negative, Slight to Moderate and Short-Term impact between Woodford Walk (R113) / New Nangor Road (R134) to Long Mile Road (R110) / Naas Road (R810) / New Nangor Road (R134) junction; and
- A Negative, Slight and Short-Term impact between Long Mile Road (R110) / Naas Road (R810) / New Nangor Road (R134) junction to Drimnagh.

These impacts on townscape represent the visual impact experienced by community receptors along these stretches of road, one year post-construction and are expected to improve over time (see Chapter 17 (Landscape (Townscape) & Visual)). The following amenity designations are expected to be impacted during the Operational Phase of the Proposed Scheme with a Negative, Significant and Short-Term impact:

- Bancroft Park;
- Tallaght Athletics Club;
- Iveagh Grounds / Guinness Athletics Union; and
- Tymon Park.

These environmental impacts have been considered together to identify if there will be an in-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 Positive, Slight, Long-Term impact on the majority of receptors located between Grand Canal and Christchurch. Therefore overall, the impact on community areas Donore Avenue, Francis Street and Meath Street and Merchants Quay is expected to be Positive, Not Significant and Long-Term.

All other receptors are expected to experience a Negative, Slight, Long-Term impact. Therefore, community areas, Tallaght Village, Tallaght Tymon, Kilnamanagh, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Clondalkin and Bluebell are likely to experience a Negative, Not Significant, Long-Term impact.

The impact on all other community areas is expected to be a Neutral, Not Significant, Long-Term impact.

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 73 community receptors (55 residential properties and 18 community facilities) requires permanent land take as a result of the Proposed Scheme. Table 10.11 summarises the findings of the community land take assessment for residential properties along the Proposed Scheme during the Operational Phase.

Table 10.11: Land Take Impacts on Residential Properties during the Operational Phase

Community Area	Nature of Effect / Number of Residential Properties Affected			
	Imperceptible / Not Significant	Slight	Moderate	Significant
Greenhills	0	0	1	0
Walkinstown	0	0	54	0
Total	0	0	55	0

Table 10.11 shows that no residential properties are expected to experience significant land take impacts during the Operational Phase.

All bar one of the impacted properties are in the Walkinstown community area. The majority are on Walkinstown Road, north of Walkinstown Roundabout, and will have less than 3.5m of permanent land take from their front gardens and driveways. The overall impact on these properties has been assessed as a Negative, Moderate and Permanent land take impact. Most other impacted properties are on Greenhills Road, still in the Walkinstown community area, where the impacts are on use of hardstanding at the properties. The remaining one is in the Greenhills area, where a small section of driveway access will be used.

Table 10.12 summarises the findings of the community land take assessment for community facilities along the Proposed Scheme during the Operational Phase.

Table 10.12: 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
Clogher Road	0	1	0	0
Dolphins Barn	0	2	0	0
Greenhills	1	0	0	0
Kilnamanagh	0	1	2	0
Mourne Road	1	1	0	0
Tallaght Tymon	0	2	0	0
Tallaght Village	2	2	1	0

Community Area	Nature of Effect / Number of Community Facilities Affected			
	Imperceptible / Not Significant	Slight	Moderate	Significant
Walkinstown	1	1	0	0
Total	5	10	3	0

Table 10.12 shows there are no community facilities that are expected to experience significant permanent land take during the Operational Phase. Overall, the impact of land take across the impacted community areas as a whole (Clogher Road, Dolphins Barn, Greenhills, Kilnarnagh, Mourne Road, Tallaght Tymon, Tallaght Village, Walkinstown) is considered to be Negative, Not Significant and Long-Term during the Operational Phase. No other community areas are predicted to be 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 works means 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 infrastructure included within the Proposed Scheme are anticipated to 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).

Pedestrians, Cyclists and Bus Users

The purpose of the Proposed Scheme is to improve the accessibility for all users in and out of the City Centre. It is therefore expected that during operation there will be beneficial impacts. Chapter 6 (Traffic & Transport) identified a significant residual Positive, Moderate to Very Significant and Long-Term impact on pedestrian infrastructure and a Positive, Moderate to Significant 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 those modes of travel.

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

The impacts described above are expected to be experienced by community areas located predominately along the length of the Proposed Scheme and where there is Quiet Street Treatment, as these are the locations of the improved footpaths, cycle paths and bus lanes. The community areas that are expected to experience a Positive, Moderate to Very Significant and Long-Term impact on walking and bus users and a Positive, Moderate to Significant and Long-Term impact on cyclists are Tallaght Village, Tallaght Tymon, Kilnarnagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street, Meath Street and Merchants Quay, Clondalkin and Bluebell.

Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Deansrath, Srulleen and Bawnogue are expected to experience a Neutral, Not Significant and Long-Term change in access for pedestrians, cyclists and bus users 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, Long-Term impact for redistributed traffic in the surrounding road network. The redistributed traffic assessment did not identify any individual significant impacts at junctions during the Operational Phase.

The five bus gates in the community area of Tallaght Village (two located on Belgard Square West, one located on Belgard Square East, one located on Blessington Road, and one located on Old Greenhills Road) are designed to restrict access to private vehicles and prioritise buses. The impact on private vehicles passing through Clogher Road at Sundrive Road will require minor local rerouting but will not change the ability to access the area.

The impact on community areas that are located predominately along the length of the Proposed Scheme (Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street and Bluebell) is expected to be Positive, Moderate and Long-Term. As a result of increased congestion from redistributed traffic in the surrounding road network the impact on the community areas of Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Meath Street and Merchants Quay, Clondalkin, Deansrath, Srulleen and Bawnogue is Negative, Moderate and Long-Term during the Operational Phase.

The Traffic and Transport assessment considered the impact on parking and loading spaces along the Proposed Scheme. A detailed description of where parking is suspended / altered is provided in Section 6.4 of Chapter 6 (Traffic & Transport). Overall, the impact on parking and loading during the Operational Phase is a Negative, Slight and Long-Term impact.

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 10.2.4.1.1.

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, Moderate and Long-Term impact from redistributed traffic along the surrounding road network. No road junctions in the surrounding road network are expected to be significantly impacted by the operation of the Proposed Scheme.

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

Chapter 9 (Noise & Vibration) identified a Positive, Imperceptible to Slight and Short to Medium Term to Negative, Slight and Short to Medium-Term impact from traffic noise along both the Proposed Scheme and a Positive, Imperceptible to Slight and Short to Medium Term to Negative, Moderate and Short to Medium-Term impact from noise in the surround road network.

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

- A Negative, Significant and Short-Term impact between Tallaght and Ballymount;
- A Neutral, Moderate and Short-Term impact between Ballymount and Crumlin;
- A Negative, Significant and Short-Term impact between Crumlin and Grand Canal;
- A Positive, Moderate to Significant and Short-Term impact between Grand Canal and Christchurch;
- A Negative, Slight to Moderate and Short-Term impact between Woodford Walk (R113) / New Nangor Road (R134) and Long Mile Road (R110) / Naas Road (R810) / New Nangor Road (R134) junction; and
- A Negative, Slight and Short-Term impact between Long Mile Road (R110) / Naas Road (R810) / New Nangor Road (R134) junction and Drimnagh.

These environmental impacts have been considered together to identify if there will be an in-combination of impacts acting upon the same commercial businesses. The assessment concluded that these residual air quality, noise, traffic and visual impacts will combine to create a Positive, Slight and Long-Term impact on commercial receptors between Grand Canal and Christchurch. Therefore, the overall impact on the community areas of Meath Street and Merchants Quay, Francis Street is expected to be Positive, Not Significant and Long-Term.

All other receptors are expected to experience a Negative, Slight and Long-Term amenity impact. Therefore, the community areas of Tallaght Village, Tallaght Tymon, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn and Bluebell are likely to experience a Negative, Not Significant and Long-Term impact.

The impact on all other community areas is expected to be Neutral, Not Significant and Long-Term.

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 47 commercial receptors requires permanent land take as result of the Proposed Scheme. Table 10.13 summarises the findings of the commercial land take assessment for the Proposed Scheme during the Operational Phase.

Table 10.13: 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
Tallaght Village	0	2	3	0
Tallaght Tymon	0	2	0	0
Greenhills	0	0	1	0
Walkinstown	0	11	11	0
Bluebell	0	9	8	0
Total	0	24	23	0

Table 10.13 shows that no commercial receptors are significantly impacted by permanent land take. 23 commercial receptors are expected to experience moderate land take impacts as a result of the Proposed Scheme. The majority of these are located in the Walkinstown Community Area.

Overall, no permanent significant adverse land take effects have been identified on commercial businesses as a result of the Proposed Scheme during the Operational Phase.

Overall, the impact of land take across the impacted community areas as a whole (Tallaght Village, Tallaght Tymon, Greenhills, Walkinstown and Bluebell) is considered Negative, Not Significant and Long-Term during the Operational Phase. No other community areas are predicted to be 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 works means 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 anticipated that all businesses along the Proposed Scheme will, to some extent, benefit from the increase in passing trade. Commercial businesses located along the Proposed Scheme are listed in Appendix A10.1 (Schedule of Commercial Businesses) in Volume 4 of this EIAR.

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 Quiet Street Treatment, as these will be the locations of the improved footpaths and cycle paths. The community areas that are expected to experience a Positive, Moderate to Very Significant and Long-Term impact on pedestrians, a Positive, Moderate to Significant and Long-Term impact on cyclists and a Positive, Very Significant and Long-Term impact on bus users as a result of changes to access are Tallaght Village, Tallaght Tymon, Kilnarnagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street and Bluebell.

Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Meath Street and Merchants Quay, Clondalkin, Deansrath, Srulleen and Bawnogue are expected to experience a Positive, Not Significant and Long-Term impact on pedestrians, cyclists, and bus users because of changes in access during the Operational Phase of the Proposed Scheme.

Private Vehicles

The impacts to private vehicles are the same as those identified in the community accessibility assessment. The impact on private vehicles passing through Tallaght Village community area is considered Negative, Slight and Long-Term, this is due to the proposed introduction of the bus gates at Belgard Square West, Belgard Square East, Blessington Road, Old Greenhills Road. The bus gate on Clogher Road at its junction with Sundrive Road, located in the Clogher Road community area is not expected to have a significant impact on private vehicles accessing commercial businesses.

The impact on community areas that are located predominately along the length of the Proposed Scheme (Tallaght Tymon, Kilnarnagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street and Bluebell) is expected to be Positive, Moderate and Long-Term. The impact on the community areas of Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Meath Street and Merchants Quay, Clondalkin, Deansrath, Srulleen and Bawnogue is Negative, Moderate and Long-Term due to the impact from distributed traffic during the Operational Phase.

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

Business Viability for Individual Receptors

The businesses located on stretches of roads impacted by bus gates are not expected to see a significant negative reduction in customers in private vehicles as there is currently no parking available outside these businesses at present, and as such they do not rely on passing trade by vehicle. Full access for pedestrians and cyclists will be maintained. Although access for vehicles servicing commercial premises is also impacted by the removal of general traffic from sections of the route, access arrangements for businesses in these locations will be maintained, and in some cases unchanged from current practices, where access is already limited.

Whilst there will be no access for private vehicles for the whole of Belgard Square West between its junction with Belgard Square South and Blessington Road, service vehicles will retain unrestricted access to the lane between Belgard Square West and Cookstown Way for servicing of the businesses. This will have a Neutral, Not Significant and Long-term impact on servicing for businesses on this stretch of road.

As noted, servicing is also maintained at all other bus gates proposed as part of the scheme and specific impacts are summarised as follows for each location:

- Belgard Square West between Old Blessington Road and access to Broadfield Hall – access to commercial businesses will be available via a short diversion;

- Belgard Square East between Belgard Square North and access to ABB Belgard Road – access to commercial businesses will be available via a short diversion;
- Existing bus gate on Blessington Road at TUD access – this is an existing bus gate. Therefore, there are no additional predicted impacts from this bus gate;
- Old Greenhills Road at its junction with R819 Greenhills Road – this is currently a no through-road so there are no additional predicted impacts from this bus gate; and
- Clogher Road at its junction with Sundrive Road – there are a small number of commercial businesses in the vicinity of this location. However, access will be available via a short diversion, where necessary.

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 additional road closures; minimising cycle track widths to reduce land take from residential properties; modifying junction layouts to protect cyclists and altering layout and signal timings of major junctions to minimise traffic redistribution into side roads.

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

10.6 Residual Impacts

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

10.6.1 Construction Phase

Table 10.14 summarises the predicted impacts (same as residual impacts) of the population assessment during the Construction Phase of the Proposed Scheme. This includes all community and economic assessment topics.

Table 10.14: 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 – Tallaght Village, Tallaght Tymon, Kilnamanagh, Walkinstown, Crumlin, Mourn Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street, Meath Street and Merchants Quay and Bluebell. Neutral, Not Significant and Short-Term – Greenhills, Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Clondalkin, Deansrath, Sruleen and Bawnogue.	No Significant impacts
Community land take	Negative, Not Significant and Short-Term – Clogher Road, Crumlin, Dolphins Barn, Greenhills, Kilnamanagh, Mourn Road, Springfield, Tallaght Tymon, Tallaght Village, Walkinstown.	No Significant impacts
Community accessibility	<u>Pedestrians and Bus Users</u> Negative, Slight and Short-Term – Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourn Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street and Bluebell.	

Assessment Topic	Predicted Impact (Residual Impacts) for Community Areas	Significant Residual Impact (Receptor Specific)
	<p>Negative, Not Significant and Short-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Meath Street and Merchants Quay, Clondalkin, Deansrath, Sruleen and Bawnogue.</p> <p><u>Cyclists and Private Vehicles</u></p> <p>Negative, Moderate and Short-Term – Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street and Bluebell.</p> <p>Negative, Not Significant and Short-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Meath Street and Merchants Quay, Clondalkin, Deansrath, Sruleen and Bawnogue.</p>	
Economic Assessment		
Commercial amenity	<p>Negative, Not Significant and Short-Term – Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street, Meath Street and Merchants Quay, Clondalkin and Bluebell.</p> <p>Neutral, Not Significant and Short-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Deansrath, Sruleen and Bawnogue.</p>	No Significant impacts
Commercial land take	Negative, Not Significant and Short-Term – Tallaght Village, Tallaght Tymon, Greenhills, Walkinstown and Bluebell.	No Significant impacts
Commercial accessibility	<p><u>Pedestrians and Bus Users</u></p> <p>Negative, Slight and Short-Term – Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street and Bluebell.</p> <p>Negative, Not Significant and Short-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Meath Street and Merchants Quay, Clondalkin, Deansrath, Sruleen and Bawnogue.</p> <p><u>Cyclists and Private Vehicles</u></p> <p>Negative, Moderate and Short-Term – Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street and Bluebell.</p> <p>Negative, Not Significant and Short-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Meath Street and Merchants Quay, Clondalkin, Deansrath, Sruleen and Bawnogue.</p>	

10.6.2 Operational Phase

Table 10.15 summarises the predicted impacts (same as residual impacts) of the population assessment during the Operational Phase of the Proposed Scheme. This includes all community and economic assessment topics.

Table 10.15: Summary of Operational Phase Significant Residual Impacts

Assessment Topic	Predicted Impact (Residual Impacts) for Community Areas	Significant Residual Impact (Receptor Specific)
Community Assessment		
Community amenity	<p>Negative, Not Significant and Long-Term – Tallaght Village, Tallaght Tymon, Kilnamanagh, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Clondalkin and Bluebell.</p> <p>Positive, Not Significant and Long-Term – Donore Avenue, Francis Street and Meath Street and Merchants Quay.</p> <p>Neutral, Not Significant and Long-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Greenhills, Rialto, Deansrath, Sruleen and Bawnogue.</p>	No Significant impacts

Assessment Topic	Predicted Impact (Residual Impacts) for Community Areas	Significant Residual Impact (Receptor Specific)
Community land take	Negative, Not Significant and Long-Term – Clogher Road, Dolphins Barn, Greenhills, Kilnamanagh, Mourne Road, Tallaght Tymon, Tallaght Village, Walkinstown	No Significant impacts
Community accessibility	<p><u>Pedestrians</u></p> <p>Positive, Moderate to Very Significant and Long-Term – Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street, Meath Street and Merchants Quay, Clondalkin and Bluebell.</p> <p>Neutral, Not Significant, Long-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Deansrath, Sruleen and Bawnogue.</p> <p><u>Cyclists</u></p> <p>Positive, Moderate to Significant and Long-Term – Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street, Meath Street and Merchants Quay, Clondalkin and Bluebell</p> <p>Neutral, Not Significant, Long-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Deansrath, Sruleen and Bawnogue.</p> <p><u>Bus Users</u></p> <p>Positive, Moderate to Very Significant and Long-Term – Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street, Meath Street and Merchants Quay, Clondalkin and Bluebell</p> <p>Neutral, Not Significant and Long-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Deansrath, Sruleen and Bawnogue.</p> <p><u>Private Vehicles</u></p> <p>Positive, Moderate and Long-Term – Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street, Meath Street and Merchants Quay, Clondalkin and Bluebell</p> <p>Negative, Moderate and Long-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Deansrath, Sruleen and Bawnogue.</p>	
Economic Assessment		
Commercial amenity	<p>Negative, Not Significant and Long-Term – Tallaght Village, Tallaght Tymon, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, and Bluebell.</p> <p>Positive, Not Significant and Long-Term – Francis Street, Meath Street and Merchants Quay.</p> <p>Neutral, Not Significant and Long-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Kilnamanagh, Greenhills, Rialto, Donore Avenue, Clondalkin, Deansrath, Sruleen and Bawnogue.</p>	No Significant impacts
Commercial land take	Negative, Not Significant and Long-Term – Tallaght Village, Tallaght Tymon, Greenhills, Walkinstown and Bluebell .	No Significant impacts
Commercial accessibility	<p><u>Pedestrians</u></p> <p>Positive, Moderate to Very Significant and Long-Term – Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street and Bluebell.</p> <p>Positive, Not Significant and Long-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Meath Street and Merchants Quay, Clondalkin, Deansrath, Sruleen and Bawnogue.</p> <p><u>Cyclists</u></p> <p>Positive, Moderate to Significant and Long-Term – Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street and Bluebell.</p>	

Assessment Topic	Predicted Impact (Residual Impacts) for Community Areas	Significant Residual Impact (Receptor Specific)
	<p>Positive, Not Significant and Long-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Meath Street and Merchants Quay, Clondalkin, Deansrath, Sruleen and Bawnogue.</p> <p><u>Bus Users</u></p> <p>Positive, Significant and Long-Term – Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street and Bluebell.</p> <p>Positive, Not Significant and Long-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Meath Street and Merchants Quay, Clondalkin, Deansrath, Sruleen and Bawnogue.</p> <p><u>Private Vehicles</u></p> <p>Negative, Slight and Long-Term – Tallaght Village</p> <p>Positive, Moderate and Long-Term – Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street and Bluebell</p> <p>Negative, Moderate and Long-Term – Killinarden, Tallaght Oldbawn, Springfield, Tallaght Dodder, Rialto, Meath Street and Merchants Quay, Clondalkin, Deansrath, Sruleen and Bawnogue</p>	

As outlined within Section 10.4.4 and summarised in Table 10.15, 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. Negative impacts are expected on the accessibility of private vehicles as a result of the of proposed bus gates. However, these are not expected to be significant. 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), albeit it is acknowledged that there may be potential impacts on some businesses located within the bus gates.

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 impacts from permanent land take are expected on a number of properties. Slight negative impacts are expected on private vehicles travelling in the Tallaght Village community area, around the location of the bus gates. However, the design of the Proposed Scheme, ensures that the surrounding road network will have the capacity to accommodate the redistributed traffic during the Operational Phase whilst still achieving the aims and objectives of the Proposed Scheme.

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

10.7 References

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