# 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 Bray 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):

- 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 by 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, urban realm, health and wellbeing, social cohesion, and adapting to the future.
  This appendix has been referred to within this population assessment where relevant.

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

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

The design of the Proposed Scheme has evolved through 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) in Volume 4 of this EIAR.

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

#### 10.2.1.1 Community Assessment – Study Area

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

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

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

- Westland Row;
- University (Newman) Church;
- Haddington Road;
- Rathmines;
- Donnybrook;
- Merrion Road;
- Booterstown;
- Mount Merrion;
- Blackrock;
- Kilmacud Stillorgan;
- Newtownpark;
- Foxrock;
- Cabinteely;
- Johnstown Killiney;
- Ballybrack Killiney;



- Loughlinstown;
- Shankill;
- Little Bray; and
- Bray.

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 Opening Year (2028) and the Design Year (2043). The results identified key junctions in the surrounding road network where capacity issues may arise. In this population assessment, the results from the Opening Year (2028) traffic assessment have been considered with respect to accessibility and amenity.

#### 10.2.1.2 Economic Assessment – Study Area

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

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

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

#### 10.2.2 Relevant Guidelines, Policy and Legislation

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

| Guidance   | Description  | Relevance to Assessment  |
|--|--|--|
| Environmental Protection Agency<br>(EPA) Guidelines on the Information to<br>be Contained in Environmental Impact<br>Assessment Reports (EPA 2022)             | This document outlines EPA guidance for<br>conducting Environmental Impact<br>Assessments (EIAs) / EIARs and provides<br>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<br>(DMRB) LA 112 Population and<br>human health (Highways England<br>2020)   | The DMRB Guidance provides guidance<br>on the assessment of land use and<br>accessibility within an EIA.   | <ul> <li>This DMRB Guidance has been used to inform sensitivity and magnitude for the following assessment topics:</li> <li>Community land take; and</li> <li>Commercial land take.</li> </ul> |
| Guidelines for Planning Authorities<br>and An Bord Pleanála on carrying out<br>an Environmental Impact Assessment<br>(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<br>Projects – Guidance on the<br>Preparation of the Environmental<br>Impact Assessment Report (European<br>Commission 2017) | This document provides practical insight to<br>those who are involved during the stages<br>of the EIA process, drawing upon<br>experiences in European and worldwide | This guidance has been used to inform the wider<br>EIA methodology as outlined in Chapter 1<br>(Introduction)  |

#### Table 10.1: Relevant Guidelines, Policies and Legislation

## 10.2.3 Data Collection and Collation

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

- 2016 Census Demographic, residential, travel to work and employment statistics (CSO 2016a; CSO 2016b; CSO 2016c);
- Population scoping reports and impacts assessments for other major linear infrastructure projects;



- Ordnance Survey Ireland (OSI) Prime 2 dataset (OSI 2020);
- Geodirectory data (Geodirectory 2019);
- Google Maps (Google 2021);
- Proposed Scheme Design Drawings; and
- National Public Transport Access Nodes (NaPTAN) (NTA 2020).

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

Desktop research has been supplemented by a walkover survey in May 2023 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. The nature of the submissions varied from business owners, including loss / reduction of parking. Discussions were held with various businesses along the Proposed Scheme to inform them if the Proposed Scheme would impact on their property boundary.

### 10.2.4 Appraisal Method for the Assessment of Impacts

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

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

|         |           | Sensitivity     |                                |             |                  |             |  |  |  |
|---------|-----------|-----------------|--------------------------------|-------------|------------------|-------------|--|--|--|
|         |           | Very Low        | Very Low Medium High Very High |             |                  |             |  |  |  |
|         | Very Low  | Imperceptible   | Not significant                | Slight      | Slight           | Slight      |  |  |  |
| nitude  | Low       | Not Significant | Slight                         | Moderate    | Moderate         | Moderate    |  |  |  |
| Magnitu | Medium    | Slight          | Moderate                       | Moderate    | Significant      | Significant |  |  |  |
|         | High      | Slight          | Moderate                       | Significant | Very Significant | Profound    |  |  |  |
|         | Very High | Slight          | Moderate                       | Significant | Profound         | Profound    |  |  |  |

#### Table 10.2: EPA Significance Matrix

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

There is no prescribed method for determining the significance of impacts 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 impacts is also adapted from the EPA Guidelines.

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



#### 10.2.4.1 Community Assessment

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

#### 10.2.4.1.1 Community Amenity

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

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

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

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

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

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

#### 10.2.4.1.1.1 Aligning Receptors

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

Chapter 6 (Traffic & Transport) assesses the impacts on 'general traffic' along the Proposed Scheme. The impact on general traffic has been considered as having the greatest potential to create a wider impact on community amenity, when combined with other environmental effects. The amenity assessment has considered residual impacts on general traffic (i.e., those after proposed mitigation 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, 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, upgrading, utility diversion, urban realm landscaping and Construction Compounds. In an instance where an 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), 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 in-combination 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. The term 'Significant' in the amenity matrix encompasses the EPA terms 'Profound', 'Very Significant' and 'Significant' while, the term 'Not Significant' encompasses the EPA terms 'Not Significant' and 'Imperceptible' as outlined in the EPA Guidelines (EPA 2022). With this determination, the nature, significance, and duration of impacts for each community area has been reported in line with the EPA Guidelines. Amenity impacts that may arise on individual receptors have only been stated separately in the Potential Impacts (see Section 10.4) for Slight / Moderate, Moderate, Moderate / Significant and Significant, 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 (Section 10.6).

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



| Environmental<br>Effect 1 | Environmental<br>Effect 2 | Environmental<br>Effect 3 | Environmental<br>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<br>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  |

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

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

#### 10.2.4.1.2 Community Land Use and Accessibility

#### 10.2.4.1.2.1 Land Take

This assessment considers both temporary and permanent direct land take impacts on community receptors. Temporary land take is considered during the Construction Phase while permanent land take is considered during



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

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

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

Some other examples of different sensitivities include:

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

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

The potential impacts of the Proposed Scheme on parking and loading bays during the Construction Phase and Operational Phase are described in Chapter 6 (Traffic & Transport), and therefore, are not considered further in this population assessment unless a negative, significant impact is identified at any point along the Proposed Scheme.

#### 10.2.4.2 Economic Assessment

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

#### 10.2.4.2.1 Commercial Amenity

The commercial amenity assessment has included consideration of 'direct' and 'indirect' impacts on commercial amenity. An indirect amenity impact on commercial receptors has been assessed using the same method as for community amenity (Section 10.2.4.1). 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 impacts (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:
  - o Air quality;
  - o 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?; and
  - 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 impacts 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 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 and EPA Guidelines (EPA 2022).

#### 10.2.4.2.2.2 Accessibility

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

During the Construction Phase, temporary diversions may be required for short periods of time with designated detour routes in place and local access accommodated as required. Lane closures will be required during different Construction Phases which will reduce traffic capacity. Chapter 6 (Traffic & Transport) has qualitatively assessed the potential impacts on pedestrians, cyclists, bus users and private vehicles as a result of construction activity. The residual impacts assigned to each user type within Chapter 6 (Traffic & Transport) informs the 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 commercial receptors as a result of the Operational Phase of the Proposed Scheme were considered in respect to the outcomes of a changed walking environment for pedestrians, cycling provision for cyclists, bus infrastructure for bus users, and changes to general traffic for private vehicles. The community accessibility assessment has therefore drawn on the outcomes of the qualitative assessment metrics identified in the Chapter 6 (Traffic & Transport). These qualitative assessments were considered collectively in order to assess the significance of impacts on access during the Operational Phase. The assessment has been reported by community area and by different user types (bus users, cyclists, pedestrians, and private vehicles). However, where a road is expected to experience an impact to accessibility, moderate or 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 EPA Guidelines.

## **10.3 Baseline Environment**

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



## 10.3.1 Overview

The Proposed Scheme will commence at the junction of R138 Leeson Street Lower with St Stephen's Green in Dublin City Centre. This northern end of the Proposed Scheme is urban in character, with the R138 Leeson Street Lower being lined by a mix of buildings, including commercial properties, educational facilities, leisure facilities and a number of embassies. Donnybrook Village is lined by commercial properties, as well as places of worship and the Donnybrook rugby stadium.

The Proposed Scheme will cross the River Dodder via Anglesey Bridge, continuing onto the start of the dual carriageway. This dual carriageway is one of the main routes into Dublin City from the south-eastern suburbs of the county, as well as from Wicklow and Wexford, and comprises the majority of the Proposed Scheme. The dual carriageway currently includes two general traffic lanes and a bus lane in each direction, as well as varying levels of pedestrian and cyclist provision. It is lined by a mix of land-uses including residential, commercial, recreation, education, healthcare and places of worship. The Proposed Scheme will pass by Donnybrook Bus Depot, RTÉ Studios and continue south to University College Dublin (UCD), Ireland's largest university. At UCD a bus interchange facility is proposed. Continuing south from UCD, at the junction with Mount Merrion Avenue the dual carriageway changes from the R138 Stillorgan Road to the N11 Stillorgan Road. Continuing south from there, the Proposed Scheme will pass through Stillorgan, Foxrock, Cabinteely and Loughlinstown. The Proposed Scheme will then leave the N11 at the Loughlinstown Roundabout.

South of Loughlinstown Roundabout the Proposed Scheme will continue on R837 Dublin Road into the suburb of Shankill, a rapidly growing coastal community. The Proposed Scheme will pass a number of individual houses as well as newer housing estates, schools and St. Anne's Church as it continues south onto the R119 Dublin Road. It will then pass through the main street in Shankill Village, a short stretch of road with pubs, shops and restaurants as well as residential properties. South of Shankill Village, the Proposed Scheme will continue past residential areas until reaching the more demesne landscape character areas located between Shankill and Bray.

Bray is a former seaside resort town, popular particularly with Dublin holiday makers following the extension of the railway line from Dublin in 1854. It is the ninth largest urban area in Ireland. The Proposed Scheme will follow the R761 Dublin Road, south through Little Bray, and passing into County Wicklow onto Castle Street, to the end of the Proposed Scheme just north of the Dargle River crossing at Fran O'Toole Bridge. The route through Little Bray will take the Proposed Scheme past a number of largely commercial and residential properties.

The study area for the Proposed Scheme consists of 19 community areas which have an approximate total population of 152,000 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 is located in the vicinity of a number of community and recreational receptors, the number and type of receptor are presented by community area in Table 10.4.



| Community and Recreation Receptors | Place of Worship | Recreation | Hospital / Health Centre | Schools |
|------------------------------------|------------------|------------|--------------------------|---------|
| Westland Row                       | 5                | 1          | 2                        | 5       |
| University (Newman) Church         | 2                | 3          | 2                        | 3       |
| Haddington Road                    | 2                | 2          | 2                        | 7       |
| Rathmines                          | 1                | 5          | 3                        | 7       |
| Donnybrook                         | 6                | 9          | 2                        | 3       |
| Merrion Road                       | 1                | 2          | 5                        | 1       |
| Booterstown                        | 4                | 2          | 1                        | 8       |
| Mount Merrion                      | 2                | 2          | 0                        | 4       |
| Blackrock                          | 4                | 6          | 1                        | 8       |
| Kilmacud - Stillorgan              | 4                | 3          | 0                        | 9       |
| Newtownpark                        | 3                | 3          | 4                        | 4       |
| Foxrock                            | 4                | 8          | 1                        | 8       |
| Cabinteely                         | 2                | 5          | 0                        | 2       |
| Johnstown - Killiney               | 1                | 1          | 0                        | 2       |
| Ballybrack - Killiney              | 3                | 3          | 0                        | 6       |
| Loughlinstown                      | 1                | 2          | 0                        | 5       |
| Shankill                           | 5                | 7          | 3                        | 3       |
| Little Bray                        | 3                | 4          | 1                        | 7       |
| Bray                               | 5                | 8          | 4                        | 8       |
| Study Area Total                   | 58               | 76         | 31                       | 100     |

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

Table 10.4 demonstrates that there are a large number of recreation resources, particularly in the community areas of Donnybrook, Foxrock and Bray. Places of worship, health care facilities and schools are evenly spread across the study area. Examples of community receptors along the Proposed Scheme which draw a large number of users include:

- St Stephen's Green, University (Newman) Church;
- Energia Park (Donnybrook Stadium), Donnybrook;
- University College Dublin, Donnybrook;
- St John of God Hospital, Kilmacud Stillorgan;
- Kilbogget Park, Cabinteely / Johnstown Killiney;
- St. Columcille's Hospital, Shankill; and
- Shanganagh Park, Shankill.

Within the study area there is one national trail, Dublin Mountains Way, used for walking and other recreational activities.

#### 10.3.2.2 Residential Land

There are approximately 47,000 residential properties and 330 apartment buildings in the community study area (OSI 2020).

#### 10.3.2.3 Commute to Work

There are approximately 65,000 commuters across the Proposed Scheme community study area and 20% of these travel by public transport (bus or train) (CSO 2016b). The method of travel to work by community area is presented in Table 10.5. The majority of residents within the study area commute by car, particularly from the community areas of Little Bray, Cabinteely, Foxrock, Killiney and Shankill, which are furthest from the City Centre. Haddington Road has the highest proportion of residents commuting by walking or cycling (53%).



| Community Area             | Travel by Bus /<br>Minibus or Coach | Travel by Car /<br>Van | Travel by Train | Travel by Foot /<br>Bike | Other |
|----------------------------|-------------------------------------|------------------------|-----------------|--------------------------|-------|
| Westland Row               | 6%                                  | 15%                    | 5%              | 45%                      | 30%   |
| University (Newman) Church | 6%                                  | 11%                    | 5%              | 51%                      | 26%   |
| Haddington Road            | 6%                                  | 22%                    | 4%              | 53%                      | 15%   |
| Rathmines                  | 10%                                 | 20%                    | 8%              | 50%                      | 12%   |
| Donnybrook                 | 11%                                 | 33%                    | 3%              | 37%                      | 15%   |
| Merrion Road               | 12%                                 | 38%                    | 10%             | 29%                      | 12%   |
| Booterstown                | 14%                                 | 47%                    | 11%             | 18%                      | 9%    |
| Mount Merrion              | 13%                                 | 58%                    | 3%              | 15%                      | 11%   |
| Blackrock                  | 10%                                 | 46%                    | 17%             | 16%                      | 11%   |
| Kilmacud - Stillorgan      | 11%                                 | 55%                    | 12%             | 15%                      | 7%    |
| Newtownpark                | 13%                                 | 53%                    | 10%             | 15%                      | 9%    |
| Foxrock                    | 16%                                 | 60%                    | 5%              | 10%                      | 9%    |
| Cabinteely                 | 10%                                 | 64%                    | 10%             | 8%                       | 7%    |
| Johnstown - Killiney       | 12%                                 | 64%                    | 7%              | 9%                       | 7%    |
| Ballybrack - Killiney      | 6%                                  | 61%                    | 16%             | 8%                       | 9%    |
| Loughlinstown              | 17%                                 | 59%                    | 11%             | 9%                       | 4%    |
| Shankill                   | 10%                                 | 60%                    | 17%             | 6%                       | 8%    |
| Little Bray                | 12%                                 | 61%                    | 8%              | 13%                      | 7%    |
| Bray                       | 9%                                  | 52%                    | 18%             | 14%                      | 7%    |
| Study Area Average         | 11%                                 | 46%                    | 9%              | 22%                      | 11%   |
| County Dublin              | 12%                                 | 54%                    | 8%              | 17%                      | 9%    |

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

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 831 public transport access points across the study area as shown in Table 10.6. Access to public transport stops is fairly consistent throughout the study area, only the community areas of Foxrock and Westland Row have a slightly greater number of stops (23% in total).



| Community Areas            | Number of Public Transport Access Points | Percentage of Stops Across the Study Area |
|----------------------------|--|---|
| Westland Row               | 111                                      | 13%                                       |
| University (Newman) Church | 40                                       | 5%  |
| Haddington Road            | 58                                       | 7%  |
| Rathmines                  | 35                                       | 4%  |
| Donnybrook                 | 77                                       | 9%  |
| Merrion Road               | 24                                       | 3%  |
| Booterstown                | 30                                       | 4%  |
| Mount Merrion              | 41                                       | 5%  |
| Blackrock                  | 35                                       | 4%  |
| Kilmacud - Stillorgan      | 52                                       | 6%  |
| Newtownpark                | 19                                       | 2%  |
| Foxrock                    | 87                                       | 10%                                       |
| Cabinteely                 | 56                                       | 7%  |
| Johnstown - Killiney       | 15                                       | 2%  |
| Ballybrack - Killiney      | 25                                       | 3%  |
| Loughlinstown              | 11                                       | 1%  |
| Shankill                   | 34                                       | 4%  |
| Little Bray                | 42                                       | 5%  |
| Bray                       | 39                                       | 5%  |
| Study Area Total           | 831                                      |   |

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

#### 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 300 were identified, which is approximately 3% of the commercial businesses across the total study area.



| Community Area             | Community Receptors <sup>1</sup> |
|----------------------------|----------------------------------|
| Westland Row               | 2,830                            |
| University (Newman) Church | 1,576                            |
| Haddington Road            | 723                              |
| Rathmines                  | 606                              |
| Donnybrook                 | 493                              |
| Merrion Road               | 195                              |
| Booterstown                | 124                              |
| Mount Merrion              | 182                              |
| Blackrock                  | 546                              |
| Kilmacud - Stillorgan      | 250                              |
| Newtownpark                | 78                               |
| Foxrock                    | 241                              |
| Cabinteely                 | 163                              |
| Johnstown - Killiney       | 42                               |
| Ballybrack - Killiney      | 85                               |
| Loughlinstown              | 41                               |
| Shankill                   | 160                              |
| Little Bray                | 237                              |
| Bray                       | 620                              |
| Study Area Total           | 9,192                            |

Table 10.7 shows the largest number of commercial receptors is located in Westland Row and the smallest number of commercial receptors are in the Loughlinstown and Johnstown - Killiney community areas.

Appendix A10.2 (The Economic Impact of the Core Bus Corridors Report) 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 70,800 people in employment (47% of the total study area population). Of the working age population, over 5,100 people are unemployed (7% of the working age population) across the study area population, equating to 3% of the general population within the study area being unemployed (CSO 2016c).

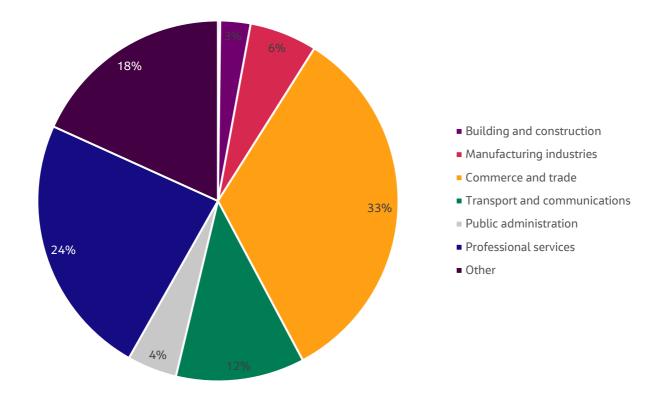
Key centres of employment within the study area include:

- Grafton Street, Westland Row;
- RTÉ Studios, Donnybrook;
- University College Dublin, Donnybrook; and
- Cornelscourt Shopping Centre, Foxrock.

Graph 10.1 presents a breakdown of employment across the study area. The largest sector of employment is commerce and trade which employs 33% of the study area population (CSO 2016c).

<sup>&</sup>lt;sup>1</sup> Note that Geodirectory data can sometimes count commercial businesses that are in the same location (e.g., a shopping centre) as one commercial business, which may skew the commercial receptor count.





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 sections already take into account mitigation proposed in those chapters.

## 10.4.1 Characteristics of the Proposed Scheme

The Proposed Scheme will commence at the junction of Leeson Street Lower and St. Stephen's Green. The Proposed Scheme will run along Leeson Street Lower and Upper including the existing one-way system on Sussex Road. It will continue on Morehampton Road and Donnybrook Road through Donnybrook Village, and on to the Stillorgan Road. It will intersect with the Belfield / Blackrock to City Centre Core Bus Corridor at Nutley Lane and include the UCD Bus Interchange at the entrance to UCD. It will continue south on Stillorgan / Bray Road as far as the Loughlinstown Roundabout. The route will then proceed along the Dublin Road through Shankill and on to Bray through the Wilford Roundabout (M11 Access Roundabout), Dublin Road, and Castle Street. The Proposed Scheme will terminate at the Dargle River Crossing (Fran O'Toole Bridge).

The Proposed Scheme includes an upgrade of the existing bus priority and cycle facilities. The Proposed 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 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, an example of this can be seen in Donnybrook at Mulberry Lane.

As per Chapter 5 (Construction), during the Construction Phase, the anticipated site staff numbers working on the Proposed Scheme will be 150 to 200, rising to 280 workers at peak construction. This level of employment will provide a positive economic impact to the economy in terms of associated spending from construction workers, although a proportion will already reside locally. As discussed in Appendix A10.2 (The Economic Impact of the Core Bus Corridors Report), the operation of the Proposed Scheme will give households along the route access to wider and better job opportunities (EY 2021). The availability of public transport is expected to reduce the time taken to commute to workplaces, this would have a particular impact for low-income households and people with a disability. Appendix A10.2 (The Economic Impact of the Core Bus Corridors Report) also identifies that there is expected to be an increase in job satisfaction as well as an increase in job retention.

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

The Proposed Scheme will have two Construction Compounds along its length, as listed below:

- Construction Compound BR1: South-west of Wilford Roundabout, beside Cois Cairn; and
- Construction Compound BR2: At Fosterbrook, across from the UCD Campus, by the Radisson Hotel.

#### 10.4.2 'Do Nothing' Scenario

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

#### **10.4.3 Construction Phase**

#### 10.4.3.1 Community Assessment

#### 10.4.3.1.1 Community Amenity

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

Chapter 6 (Traffic & Transport) identified a residual Negative, Moderate and Temporary impact on general traffic along the Proposed Scheme and 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 from construction traffic along the following roads:

- A Negative, Significant and Temporary impact along Grove Avenue;
- A Negative, Moderate to Significant and Temporary impact along Lower Dargle Road, South Hill Avenue; and
- A Negative, Moderate and Temporary impact along Stillorgan Grove, Upper Dargle Road and Priory Avenue.



Chapter 9 (Noise & Vibration) also identified noise impacts for a number of community NSLs (noise sensitive locations) at varying distances to the Proposed Scheme, most of which are Negative, Not Significant and Temporary, with the following exceptions:

- A Negative, Slight to Moderate and Temporary impact is expected at the following community receptors:
  - Everest School of Music, Upper Dargle Road, Bray;
  - St Anne's Catholic Church and Resource Centre, Shanganagh Road, Shankhill;
  - $\circ$   $\;$  St Thomas' Church, Foster Aveune, Booterstown; and
  - The Institute of Education, Leeson Street Lower, Dublin.

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

- A Negative, Moderate to Significant and Temporary / Short-Term impact between Leeson Street to Donnybrook (Anglesea Road Junction);
- A Negative, Moderate and Temporary / Short-Term impact between Donnybrook (Anglesea Road Junction to Loughlinstown Roundabout;
- A Negative, Very Significant to Profound and Temporary / Short-Term impact between Loughlinstown Roundabout to Wilford Roundabout; and
- A Negative, Significant and Temporary / Short-Term impact between Bray North to Bray South (Wilford Roundabout to Fran O'Toole Bridge).

These impacts on townscape represent the visual impact experienced by community receptors along the Proposed Scheme. The assessment from Chapter 17 (Landscape (Townscape) & Visual) also identified a number of receptors as having specific impacts during the Construction Phase of the Proposed Scheme, including:

- UCD Belfield Negative, Moderate to Significant and Short-Term;
- Coláiste Eoin Negative, Moderate to Significant and Short-Term;
- St. Laurence's College Negative, Moderate to Significant and Short-Term;
- St. Stephen's Green Negative, Significant and Short-Term;
- Kilbogget Park Negative, Significant and Short-Term; and
- Stillorgan College of Further Education Negative, Moderate to Significant and Short-Term.

These environmental impacts have been considered together to identify if there will be in-combination impacts acting upon community facilities. The assessment concluded that the residual air quality, noise, traffic, and visual impacts will combine to create a largely Negative, Moderate and Temporary / Short-Term impact on community amenity within the portions of the community areas located directly along the entire length of the Proposed Scheme (University (Newman) Church, Haddington Road, Rathmines, Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Loughlinstown, Shankill and Little Bray).

The wider areas of the aforementioned community areas are not expected to be significantly negatively impacted however, as such impacts on amenity resulting from the construction of the Proposed Scheme are considered to be localised. Therefore, the overall impact on the community amenity of community areas along the Proposed Scheme is considered to be Negative, Not Significant and Temporary / Short-Term.

Community areas located away from the Proposed Scheme (Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray) are likely to experience a Neutral and Temporary / Short-Term impact on community amenity.



#### 10.4.3.1.2 Community Land Use and Accessibility

#### 10.4.3.1.2.1 Land Take

The assessment of community land take during the Construction Phase assesses the temporary land take required to accommodate construction works and the potential impacts this has on community facilities and residential properties.

A total of 76 community receptors (40 residential properties and 36 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 Pro | operties During the Construction Phase |
|--|--|
|--|--|

| Community Area | Nature of Effect / Number of Residential Properties Affected |        |          |                                   |          |
|----------------|--|--------|----------|-----------------------------------|----------|
|                | Imperceptible / Not<br>Significant                           | Slight | Moderate | Significant / Very<br>significant | Profound |
| Donnybrook     | 0  | 0      | 1        | 0                                 | 0        |
| Foxrock        | 0  | 1      | 0        | 0                                 | 0        |
| Little Bray    | 0  | 9      | 4        | 6                                 | 1        |
| Shankill       | 0  | 4      | 13       | 1                                 | 0        |
| Total          | 0  | 14     | 18       | 7                                 | 1        |

Table 10.8 shows that seven residential properties are expected to experience Negative, Significant and Short-Term land take impacts during the Construction Phase. These include three properties on Dublin Road (5,6 and 7), Crinken Lodge, 1 Aughmore Lane and Beauchamp Lodge in Little Bray, and 4 Beech Road in Shankill. At all of these properties an area of gardens / land is required to accommodate the construction works. A Negative, Profound and Short-Term impact on The Side Lodge at Woodbrook Estate is expected due to demolition of the property for substantial road widening.

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

| Community Area             | Nature of Effect / Number of Community Facilities Affected |        |          |             |  |
|----------------------------|--|--------|----------|-------------|--|
|                            | Imperceptible / Not Significant                            | Slight | Moderate | Significant |  |
| Booterstown                | 0  | 2      | 2        | 0           |  |
| Cabinteely                 | 0  | 2      | 0        | 0           |  |
| Donnybrook                 | 0  | 1      | 1        | 0           |  |
| Foxrock                    | 0  | 2      | 0        | 0           |  |
| Kilmacud - Stillorgan      | 0  | 3      | 0        | 0           |  |
| Little Bray                | 0  | 6      | 2        | 0           |  |
| Mount Merrion              | 0  | 4      | 0        | 0           |  |
| Shankill                   | 0  | 3      | 7        | 0           |  |
| University (Newman) Church | 0  | 1      | 0        | 0           |  |
| TOTAL                      | 0  | 24     | 12       | 0           |  |

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

Table 10.9 shows that no community facilities are expected to experience significant land take impacts during the Construction Phase of the Proposed Scheme. The community receptors expected to experience a Negative, Moderate and Short-Term impact during the Construction Phase are:

- Coláiste Eoin / Coláiste Íosagáin;
- UCD, Belfield;
- Rathmichael National School;
- St. Anne's Church and St. Anne's Resource Centre;



- North Wicklow Educate Together;
- St. John Of God Carmona Services;
- St. James Church;
- Shanganagh Park and Cemetery; and
- Several areas of Green Space.

Therefore, the overall impact of land take during the Construction Phase on the following community areas is expected to be Negative, Not Significant to Slight and Short-Term:

- University (Newman) Church;
- Donnybrook;
- Booterstown;
- Mount Merrion;
- Kilmacud Stillorgan;
- Foxrock;
- Cabinteely;
- Ballybrack Killiney;
- Shankill; and
- Little Bray.

#### 10.4.3.1.2.2 Accessibility

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

#### Pedestrians and Cyclists

Pedestrian and cyclist safety measures are discussed in Chapter 5 (Construction). These safety measures are intended to allow the safe continuation of access along the route of the Proposed Scheme during the Construction Phase. It is expected that, as roads, cycle lanes and footpaths are being upgraded, 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 Chapter 5 (Construction), measures will be undertaken by the appointed contractor to ensure that access and parking are maintained during construction, wherever possible, to reduce the impact on accessibility along the Proposed Scheme.

Chapter 6 (Traffic & Transport) has identified a 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 the 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 these 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 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 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 on general traffic travelling along the Proposed Scheme during construction. 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 Temporary during construction. Additional construction traffic flows on the surrounding road network are expected to result in a Negative, Moderate 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, expected to be Negative, Moderate and Temporary during the Construction Phase.

#### Summary

The impacts identified above are expected to be experienced by community areas located predominately along the length of the Proposed Scheme where construction activity and road diversions are expected. It is acknowledged that users will travel between community areas to access community facilities within other community areas. However, the impact of construction activity will be experienced where the facility is located. The community areas that are expected to experience a Negative, Slight, and Temporary impact (pedestrians and bus users) and a Negative, Moderate and Temporary impact (cyclists and private vehicles) as a result of changes in access are University (Newman) Church, Haddington Road, Rathmines, Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Loughlinstown, Shankill and Little Bray.

Pedestrians, cyclists, and bus users in Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray are expected to experience a Neutral and Temporary impact as the community area is situated in proximity but away from the Proposed Scheme, where no change in existing user facilities is proposed as part of the Proposed Scheme. Private vehicles within Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray will experience a Negative, Moderate and Temporary impact however as a result of changes to access 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 amenity of a commercial business and potentially having implications on the ability of the business to operate successfully.

Chapter 6 (Traffic & Transport) identified a residual Negative, Moderate and Temporary impact on general traffic along the Proposed Scheme and 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 noise impacts from construction traffic along the following roads:

• A Negative, Significant and Temporary impact along Grove Avenue;



- A Negative, Moderate to Significant and Temporary impact along Lower Dargle Road, South Hill Avenue; and
- A Negative, Moderate and Temporary impact along Stillorgan Grove, Upper Dargle Road and Priroy Avenue.

Chapter 9 (Noise & Vibration) also identified noise impacts for some commercial NSLs at varying distances to the Proposed Scheme, most of which are Negative, Not Significant and Temporary, with the following exception:

• A Negative, Moderate to Significant and Temporary impact at the Conrad Hotel.

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

- A Negative, Moderate to Significant and Temporary / Short-Term impact between Leeson Street to Donnybrook (Anglesea Road Junction);
- A Negative, Moderate and Temporary / Short-Term impact between Donnybrook (Anglesea Road Junction to Loughlinstown Roundabout;
- A Negative, Very Significant to Profound and Temporary / Short-Term impact between Loughlinstown Roundabout to Wilford Roundabout; and
- A Negative, Significant and Temporary / Short-Term impact between Bray North to Bray South (Wilford Roundabout to Fran O'Toole Bridge).

These impacts on townscape represent the visual impact experienced by commercial receptors along the Proposed Scheme. The following commercial receptors are also expected to experience Negative, Moderate to Significant and Short-Term landscape and visual impacts as a result of the construction of the Proposed Scheme:

- Circle K / Fast Fit / First Stop, Donnybrook;
- RTÉ Campus;
- James Hennessy Motors;
- Shrewsbury House;
- The Barbeque Centre; and
- Shanganagh Marble and Stone Centre.

These environmental impacts have been considered together to identify if there will be in-combination impacts acting upon the same commercial receptors. The assessment concluded that these residual air quality, noise, traffic, and visual impacts will combine to create a largely Negative, Moderate and Temporary / Short-Term impact on commercial receptors within the portions of the community areas located directly along the entire length of the Proposed Scheme (University (Newman) Church, Haddington Road, Rathmines, Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Loughlinstown, Shankill and Little Bray). With the exception of the Conrad Hotel in University (Newman) Church community area, which is expected to experience a Negative, Moderate to Significant Temporary / Short-Term impact.

The wider areas of the aforementioned community areas are not expected to be significantly negatively impacted however, as such impacts on amenity resulting from the construction of the Proposed Scheme are considered to be localised. Therefore, the overall impact on the commercial receptors of community areas along the Proposed Scheme is considered to be Negative, Not Significant and Temporary / Short-Term.

Community areas located away from the scheme (Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray) are likely to experience a Neutral and Temporary / Short-Term impact on commercial receptors.

#### 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.

A total of 19 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.

| Community Area | Nature of Effect / Number of Co | Nature of Effect / Number of Commercial Receptors Affected |          |             |  |
|----------------|---------------------------------|--|----------|-------------|--|
|                | Imperceptible / Not Significant | Slight   | Moderate | Significant |  |
| Donnybrook     | 0                               | 0  | 3        | 3           |  |
| Foxrock        | 0                               | 0  | 1        | 0           |  |
| Little Bray    | 0                               | 1  | 3        | 4           |  |
| Mount Merrion  | 0                               | 1  | 0        | 0           |  |
| Shankill       | 0                               | 1  | 2        | 0           |  |
| TOTAL          | 0                               | 3  | 9        | 7           |  |

Table 10.10 shows 7 commercial receptors, a Circle K filling station and Ford Motors, AXA insurance, Dargle Centre and Castle Street Shopping Centre in Bray, and the Circle K filling station, FirstStop and FastFit in Donnybrook, are expected to experience a Negative, Significant, Short-Term land take effect during the Construction Phase.

The overall impact of land take during the Construction Phase is expected to be Negative, Not Significant to Slight and Short-Term for the following community areas: Donnybrook, Mount Merrion, Foxrock, Cabinteely, Shankill and Little Bray.

#### 10.4.3.2.2.2 Accessibility

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

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

## **10.4.4 Operational Phase**

#### **10.4.4.1 Community Assessment**

10.4.4.1.1 Community Amenity

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

Chapter 6 (Traffic & Transport) identified a Positive, Significant 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 Neutral and Long-Term residual impact on human receptors during the Operational Phase.

Chapter 9 (Noise & Vibration) identified a Direct, Positive, Imperceptible to Moderate and Short to Medium-Term to Direct, Negative, Slight and Short to Medium-Term impact along the Proposed Scheme due to a reduction in traffic volumes during the opening year (2028). An Indirect, Positive, Imperceptible to Moderate and Short to



Medium-Term to Indirect, Negative, Moderate to Significant and Short to Medium-Term impact has been identified from traffic noise on the surrounding road network.

Due to increased traffic noise levels during the Opening Year (2028), Negative, Moderate to Significant and Short to Medium-Term impacts were identified on Clonkeen Road, and Negative, Moderate and Short to Medium-Term impacts were identified on Stillorgan Grove, Grove Avenue, Cross Avenue, Priory Avenue, South Avenue and Herbert Road.

Chapter 17 (Landscape (Townscape) & Visual) identified the following impacts on townscape and streetscape character during the Operational Phase within 1-year of the Proposed Scheme opening:

- A Negative, Moderate and Short-Term impact between Leeson Street to Donnybrook (Anglesea Road Junction);
- A Negative, Slight and Short-Term impact between Donnybrook (Anglesea Road Junction to Loughlinstown Roundabout;
- A Negative, Very Significant and Short-Term impact between Loughlinstown Roundabout to Wilford Roundabout; and
- A Neutral, Moderate to Significant and Short-Term impact between Bray North to Bray South (Wilford Roundabout to Fran O'Toole Bridge).

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 assessment from Chapter 17 (Landscape (Townscape) & Visual) identified that the following specific community receptors are expected to experience a Negative, Moderate to Significant and Short-Term impact during the Operational Phase of the Proposed Scheme:

- UCD Belfield Negative, Moderate to Significant and Short-Term;
- Stillorgan College of Further Education Negative, Moderate to Significant and Short-Term;
- St. Laurence's College Negative, Moderate to Significant and Short-Term;
- St Stephen's Green Negative, Significant and Short-Term; and
- Kilbogget Park Negative, Significant and Short-Term.

These environmental impacts have been considered together to identify if there will be in-combination impacts acting upon the same community facilities. The assessment concluded that there would be a range of impacts on community amenity as a result of the Operational Phase of the Proposed Scheme. The majority of community receptors are expected to experience a Negative, Slight and Short-Term impact during the first year of operation, with the exception of the Everest School of Music and North Wicklow Educate Together (both in Little Bray community area) which are expected to experience a Positive, Slight and Short-Term impact.

Overall, community areas along the Proposed Scheme are expected to experience a Negative, Not Significant and Short-Term impact on community amenity, this includes the following community areas: University (Newman) Church, Haddington Road, Rathmines, Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Loughlinstown, Shankill and Little Bray.

Community areas located away from the Proposed Scheme (Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray) are expected to experience a Neutral and Short-Term impact during the first year of the Operational Phase.

10.4.4.1.2 Community Land Use and Accessibility

#### 10.4.4.1.2.1 Land Take

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

A total of 56 community receptors (27 residential properties and 29 community facilities) require 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.

| Community   | Nature of Effect / Number of Residential Properties Affected |                                |   |   |
|---|--|--------------------------------|---|---|
| Area Imperceptible / Not Significant Slight Moderate Sign |  | Significant / Very Significant |   |   |
| Little Bray   | 0  | 9                              | 4 | 2 |
| Shankill  | 0  | 11                             | 0 | 1 |
| TOTAL   | 0  | 20                             | 4 | 3 |

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

Table 10.11 shows three residential property are significantly impacted by permanent land take during the Operational Phase, including land adjacent to 4 Beech Road, Crinken Lodge and Aughmore Lane is expected to be taken to accommodate widening of the road for the Proposed Scheme. The overall effect on these residential properties has been assessed as a Negative, Significant and Long-Term land take effect.

The Side Lodge at Woodbrook Estate, to be demolished during construction as mentioned in Section 10.4.3, is to be replaced with a proposed new lodge to be built further back from the carriageway and has thus been assigned a Negative, Moderate and Long-Term impact. However, should this property not be rebuilt, the Operational Phase impact would be Negative, Profound and Long-Term.

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

| Community Area        | Nature of Effect / Number of Community Facilities Affected |        |          |             |
|-----------------------|--|--------|----------|-------------|
|                       | Imperceptible / Not<br>Significant                         | Slight | Moderate | Significant |
| Booterstown           | 0  | 2      | 0        | 0           |
| Cabinteely            | 0  | 1      | 0        | 0           |
| Donnybrook            | 0  | 0      | 1        | 0           |
| Foxrock               | 0  | 2      | 0        | 0           |
| Kilmacud - Stillorgan | 0  | 2      | 0        | 0           |
| Little Bray           | 0  | 5      | 2        | 0           |
| Mount Merrion         | 0  | 4      | 0        | 0           |
| Shankill              | 0  | 4      | 6        | 0           |
| TOTAL                 | 0  | 20     | 9        | 0           |

Table 10.12: Land Take Impacts on Community Facilities during the Operational Phase

Table 10.12 shows there are no community facilities that are expected to experience significant permanent land take during the Operational Phase of the Proposed Scheme. Community facilities that are expected to have Negative, Moderate, Long-Term impacts include UCD in Donnybrook, Woodbrook College, North Wicklow Educate Together and St. John of God Carmona Services in Little Bray, and Rathmichael National School, St. Anne's Church and Resource Centre, green space at Castle Farm, and Shanganagh Park and Cemetery in Shankill.

Overall, the following community areas are expected to experience a Negative, Not Significant to Slight and Long-Term impact from land take due to the Proposed Scheme:

- Donnybrook;
- Booterstown;
- Mount Merrion;
- Kilmacud Stillorgan;
- Foxrock;
- Cabinteely;



- Ballybrack Killiney;
- Shankill; and
- Little Bray.

All other community areas are expected to experience a Neutral and Long-Term impact.

#### 10.4.4.1.2.2 Accessibility

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

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

#### Pedestrians and Cyclists

Chapter 6 (Traffic and Transport) identified a Positive, Moderate to Very Significant and Long-Term impact on pedestrian infrastructure and a Not significant to Positive, Moderate and Long-term impact on cycling infrastructure along the Proposed Scheme. This is expected to lead to improvements in access to community facilities along the Proposed Scheme will improve for those choosing to walk or cycle as there will be increased provision for walking and cycling as modes of travel.

A Neutral and Long-Term impact is anticipated in the community areas of Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray as they are situated away from the Proposed Scheme, with no changes to pedestrian and cycling infrastructure proposed.

#### Bus Users

Chapter 6 (Traffic and Transport) identified a Positive, Moderate to Profound and Long-Term impact on bus infrastructure and a Positive, Significant and Long-Term impact on bus network performance (which includes journey times and journey time reliability). It is therefore expected that access to community facilities by bus users will also improve along the Proposed Scheme.

These impacts on access to community facilities for pedestrians, cyclists and bus users are expected to be experienced by community areas located predominantly along the Proposed Scheme as these will be where signal controlled junctions and improved footpath and cycle tracks will be provided. The community areas likely to experience these positive impacts are University (Newman) Church, Haddington Road, Rathmines, Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Loughlinstown, Shankill and Little Bray.

Whilst situated away from the Proposed Scheme, the community areas of Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray are still expected to experience the benefits expected on the wider bus network performance and as such there is a Positive, Slight and Long-term impact on bus users in these community areas.

#### Private Vehicles

Chapter 6 (Traffic and Transport) identified a Positive, Significant and Long-Term impact from the reduction in general traffic along the Proposed Scheme and a Negative, Moderate and Long-Term impact from redistributed traffic in the surrounding road network. Chapter 6 (Traffic and Transport) did not identify any localised impacts during the AM and PM peak period at any junctions in the surrounding network of the Proposed Scheme as a result of displaced traffic.



On the whole, the community areas that are likely to experience Positive, Moderate and Long-Term impacts on access to community facilities, as a result of the reduction in general traffic, are those situated along the Proposed Scheme. These are University (Newman) Church, Haddington Road, Rathmines, Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Loughlinstown, Shankill and Little Bray.

Negative, Slight and Long-Term impacts on access to community facilities, as a result of the redistribution of traffic in the surrounding road network, are likely to be experienced in community areas situated away from the Proposed Scheme, namely Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray.

#### 10.4.4.2 Economic Assessment

#### 10.4.4.2.1 Commercial Amenity

Commercial amenity impacts arise from a combination of traffic, air quality, noise and visual impacts as discussed in Section 10.2.4.2.1.

Chapter 6 (Traffic & Transport) identified a Positive, Significant 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 Neutral and Long-Term impact on human receptors during the Operational Phase.

Chapter 9 (Noise & Vibration) identified a Direct, Positive, Imperceptible to Moderate and Short to Medium-Term to Direct, Negative, Slight and Short to Medium-Term impact along the Proposed Scheme due to a reduction in traffic volumes during the opening year (2028). An Indirect, Positive, Imperceptible to Moderate and Short to Medium-Term to Indirect, Negative, Moderate to Significant and Short to Medium-Term impact has also been identified from traffic noise on the surrounding road network.

Due to increased traffic noise levels during the Opening Year (2028), Negative, Moderate to Significant and Short to Medium-Term impacts were identified on Clonkeen Road, and Negative, Moderate and Short to Medium-Term impacts were identified on Stillorgan Grove, Grove Avenue, Cross Avenue, Priory Avenue, South Avenue and Herbert Road.

Chapter 17 (Landscape (Townscape) & Visual) identified the following impacts on townscape and streetscape character during the Operational Phase within 1-year of the Proposed Scheme becoming operational:

- A Negative, Moderate and Short-Term impact between Leeson Street to Donnybrook (Anglesea Road Junction);
- A Negative, Slight and Short-Term impact between Donnybrook (Anglesea Road Junction to Loughlinstown Roundabout;
- A Negative, Very Significant and Short-Term impact between Loughlinstown Roundabout to Wilford Roundabout; and
- A Neutral, Moderate to Significant and Short-Term impact between Bray North to Bray South (Wilford Roundabout to Fran O'Toole Bridge).

These impacts on townscape represent the visual impact experienced by commercial receptors along the Proposed Scheme. The assessment from Chapter 17 (Landscape (Townscape) & Visual) identified the following specific commercial receptors which are also expected to experience Negative, Moderate to Significant and Short-Term becoming Negative, Moderate and Long-Term, landscape and visual impacts as a result of the Proposed Scheme:

- Circle K / Fast Fit / First Stop, Donnybrook;
- RTÉ Campus;
- James Hennessy Motors;



- Shrewsbury House;
- Shanganagh Marble and Stone Centre; and
- Castle Street Shopping Centre.

These environmental impacts have been considered together to identify if there will be in-combination impacts acting upon the same commercial receptor. The assessment concluded that these residual air quality, noise, traffic, and visual impacts will combine to create a Negative, Not Significant and Short-Term impact on commercial businesses during the first year of the Operational Phase within the following community areas: University (Newman) Church, Haddington Road, Rathmines, Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Loughlinstown, Shankill and Little Bray.

The community areas of Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray, which lie away from the Proposed Scheme, are expected to experience a Neutral and Short-Term impact.

#### 10.4.4.2.2 Commercial Land Use and Accessibility

#### 10.4.4.2.2.1 Land Take

The assessment of commercial land take during the Operational Phase assesses the permanent land acquired and the potential impacts this has on commercial businesses.

A total of 12 commercial receptors require permanent land take as a 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.

| Community Area | Nature of Effect / Number of Commercial Receptors Affected |        |          |             |
|----------------|--|--------|----------|-------------|
|                | Imperceptible / Not Significant                            | Slight | Moderate | Significant |
| Donnybrook     | 0  | 0      | 3        | 0           |
| Foxrock        | 0  | 1      | 0        | 0           |
| Little Bray    | 0  | 1      | 5        | 1           |
| Shankill       | 0  | 1      | 0        | 0           |
| Total          | 0  | 3      | 7        | 1           |

#### Table 10.13: Land Take Impacts on Commercial Receptors During the Operational Phase

Table 10.13 shows that one commercial receptor are expected to experience a Negative, Significant and Long-Term impact by permanent land take. The Circle K filling station on the east side of the Dublin Road in Little Bray will require permanent removal of four of its pumping stations, which is expected to have an adverse impact on the business.

Overall, the impact of land take on community areas Donnybrook, Cabinteely, Shankill and Little Bray is expected to be Negative, Not Significant and Long-Term.

#### 10.4.4.2.2.2 <u>Accessibility</u>

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

#### Pedestrians, Cyclists and Bus Users

The positive impacts of improved accessibility to pedestrians, cyclists and bus users will predominantly be experienced by community areas located along the length of the Proposed Scheme as these will be the locations of 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 Not significant to Positive, Moderate and Long-term impact on cyclists and a Positive, Moderate to Profound and Long-Term impact on bus users, as a result of changes to access are University (Newman) Church, Haddington Road, Rathmines, Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Loughlinstown, Shankill and Little Bray.

A Neutral, Long-term impact is anticipated in the community areas of Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray as they are situated away from the Proposed Scheme, where no changes to pedestrian, cyclist or bus infrastructure is proposed.

#### Private Vehicles

Chapter 6 (Traffic and Transport) identified a Positive, Significant and Long-Term impact from the reduction in general traffic along the Proposed Scheme and a Negative, Moderate and Long-Term impact from the redistribution of traffic in the surrounding road network. Chapter 6 (Traffic and Transport) did not identify any localised capacity impacts during the AM and PM peak period at any junctions in the surrounding network of the Proposed Scheme as a result of displaced traffic.

The impact on access to commercial businesses along the Proposed Scheme for private vehicles is considered to be Positive, Moderate and Long-Term. The community areas that are expected to experience this impact this are University (Newman) Church, Haddington Road, Rathmines, Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Loughlinstown, Shankill and Little Bray.

The impact on access to commercial businesses in the surrounding road network, a result of redistributed traffic, is considered to be Negative, Slight and Long-Term. The community areas that are expected to experience this impact as a result of changes in access to commercial businesses during the Operational Phase of the Proposed Scheme are those situated away from the Proposed Scheme, namely Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray.

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

## **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, and therefore, the residual impacts are the same as the 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 construction of the Proposed Scheme. This includes all community and economic assessment topics.

| Assessment<br>Topic     | Predicted Impact (Residual Impacts) for Community Areas  | Significant Residual Impact (Receptor Specific)   |  |
|-------------------------|--|---|--|
| Community As            | sessment   |   |  |
| Community<br>amenity    | Negative, Not Significant and Temporary / Short-Term –<br>University (Newman) Church, Haddington Road, Rathmines,<br>Donnybrook, Merrion Road, Booterstown, Mount Merrion,<br>Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack –<br>Killiney, Loughlinstown, Shankill and Little Bray<br>Neutral and Temporary / Short-Term – Westland Row,<br>Blackrock, Newtownpark, Johnstown – Killiney and Bray | N/A   |  |
| Community<br>land take  | Negative, Not Significant to Slight and Short-Term – University<br>(Newman) Church, Donnybrook, Booterstown, Mount Merrion,<br>Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack –<br>Killiney, Shankill and Little Bray.   | Negative, Profound and Short-Term – The Side<br>Lodge at Woodbrook Estate requires complete<br>demolition.<br>Negative, Significant and Short-Term – 5, 6, 7<br>Dublin Road; Crinken Lodge; 1 Aughmore Lane;<br>Beauchamp Lodge; and 4 Beech Road |  |
| Community               | Pedestrians  |   |  |
| accessibility           | Negative, Slight and Temporary – University (Newman) Church,<br>Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxro<br>Shankill and Little Bray.  |   |  |
|                         | Neutral and Temporary – Westland Row, Blackrock, Newtownpa   | ırk, Johnstown – Killiney and Bray.   |  |
|                         | <u>Cyclists</u>  |   |  |
|                         | Negative, Moderate and Temporary – University (Newman) Church, Haddington Road, Rathmines, Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Loughlinstown, Shankill and Little Bray.   |   |  |
|                         | Neutral and Temporary – Westland Row, Blackrock, Newtownpa   | rk, Johnstown – Killiney and Bray.  |  |
|                         | Bus Users  |   |  |
|                         | Negative, Slight and Temporary – University (Newman) Church, Haddington Road, Rathmines, Donnybrook, Merrior Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Loughlinstown Shankill and Little Bray.  |   |  |
|                         | Neutral and Temporary – Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray.<br>Private Vehicles   |   |  |
|                         | Degative, Moderate and Temporary – Westland Row, University (Newman) Church, Haddington Road, Rathmines<br>Donnybrook, Merrion Road, Booterstown, Mount Merrion, Blackrock, Kilmacud – Stillorgan, Newtownpark, Foxroc<br>Cabinteely, Johnstown – Killiney, Ballybrack – Killiney, Loughlinstown, Shankill, Little Bray and Bray.  |   |  |
| Economic Ass            | essment  |   |  |
| Commercial<br>amenity   | Negative, Not Significant and Temporary / Short-Term –<br>University (Newman) Church, Haddington Road, Rathmines,<br>Donnybrook, Merrion Road, Booterstown, Mount Merrion,<br>Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack –<br>Killiney, Loughlinstown, Shankill and Little Bray<br>Neutral and Temporary / Short-Term – Westland Row,<br>Blackrock, Newtownpark, Johnstown – Killiney and Bray | N/A   |  |
| Commercial<br>land take | Negative, Not Significant to Slight and Short-Term –<br>Donnybrook, Mount Merrion, Foxrock, Cabinteely, Shankill and<br>Little Bray  | Negative, Significant and Short-Term – Circle K,<br>Little Bray; AXA insurance, Little Bray; Dargle<br>Centre, Little Bray; Caste Street Shopping Centre,<br>Little Bray; Circle K, Donnybrook; FirstStop,<br>Donnybrook; and FastFit, Donnybrook |  |



| Assessment<br>Topic | Predicted Impact (Residual Impacts) for Community Areas   | Significant Residual Impact (Receptor Specific)   |  |  |
|---------------------|---|---|--|--|
| Commercial          | Pedestrians   |   |  |  |
| accessibility       | accessibility Negative, Slight and Temporary – University (Newman) Church, Haddington Road, Rathmines, Donnyb<br>Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Li<br>Shankill and Little Bray. |   |  |  |
|                     | Neutral and Temporary – Westland Row, Blackrock, Newtownpa  | rk, Johnstown – Killiney and Bray.  |  |  |
|                     | <u>Cyclists</u>   |   |  |  |
|                     |   | e and Temporary – University (Newman) Church, Haddington Road, Rathmines, Donnybrook,<br>terstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney,<br>ankill and Little Bray. |  |  |
|                     | Neutral and Temporary – Westland Row, Blackrock, Newtownpa  | rk, Johnstown – Killiney and Bray.  |  |  |
|                     | Bus Users   |   |  |  |
|                     |   | nd Temporary – University (Newman) Church, Haddington Road, Rathmines, Donnybrook, Merrion<br>n, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Loughlinstown,<br>Bray.      |  |  |
|                     | Neutral and Temporary – Westland Row, Blackrock, Newtownpa  | rk, Johnstown – Killiney and Bray.  |  |  |
|                     | Private Vehicles  |   |  |  |
|                     | (Newman) Church, Haddington Road, Rathmines,<br>ock, Kilmacud – Stillorgan, Newtownpark, Foxrock,<br>town, Shankill, Little Bray and Bray.  |   |  |  |

## **10.6.2 Operational Phase**

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

| Assessment<br>Topic    | Predicted Impact (Residual Impacts) for Community Areas   | Significant Residual Impact<br>(Receptor Specific)  |
|------------------------|---|---|
| Community Ass          | sessment  |   |
| Community<br>amenity   | Negative, Not Significant and Short-Term – University (Newman) Church,<br>Haddington Road, Rathmines, Donnybrook, Merrion Road, Booterstown, Mount<br>Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney,<br>Loughlinstown, Shankill and Little Bray<br>Neutral and Short-Term – Westland Row, Blackrock, Newtownpark, Johnstown<br>– Killiney and Bray | N/A   |
| Community<br>land take | Negative, Not Significant to Slight and Long-Term – Donnybrook, Booterstown,<br>Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney,<br>Shankill and Little Bray.  | Negative, Significant and Long-<br>Term – 5, 6, 7 Dublin Road;<br>Crinken Lodge; 1 Aughmore<br>Lane; Beauchamp Lodge; and 4<br>Beech Road<br>Negative, Moderate and Long-<br>Term – Side Lodge, Woodbrook |
|                        |   | (this would change to Negative,<br>Profound and Long-Term if<br>replacement property is not<br>rebuilt)   |

#### Table 10.15: Summary of Operational Phase Significant Residual Impacts



| Predicted Impact (Residual Impacts) for Community Areas  | Significant Residual Impact<br>(Receptor Specific)   |  |
|--|--|--|
| Pedestrians           Positive, Moderate to Very Significant and Long-Term – University (Newman) Church, Haddington Road, Rathmines,<br>Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack –<br>Killiney, Loughlinstown, Shankill and Little Bray.           Neutral and Long-Term – Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray.                  |  |  |
| Cyclists<br>Not Significant to Positive, Moderate and Long-term – University (Newman) Churd<br>Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, F<br>Killiney, Loughlinstown, Shankill and Little Bray.  | ch, Haddington Road, Rathmines,  |  |
| Neutral and Long-Term – Westland Row, Blackrock, Newtownpark, Johnstown –<br><u>Bus Users</u><br>Positive, Moderate to Profound and Long-Term – University (Newman) Church, H  | addington Road, Rathmines,   |  |
| Killiney, Loughlinstown, Shankill and Little Bray.<br>Positive, Slight and Long-term – Westland Row, Blackrock, Newtownpark, Johnst  |  |  |
| Private Vehicles<br>Positive, Moderate and Long-Term – University (Newman) Church, Haddington Road, Rathmines, Donnybrook,<br>Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney,<br>Loughlinstown, Shankill and Little Bray.   |  |  |
|  | stown – Killiney and Bray.   |  |
| Negative, Not Significant and Short-Term – University (Newman) Church,<br>Haddington Road, Rathmines, Donnybrook, Merrion Road, Booterstown, Mount<br>Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney,<br>Loughlinstown, Shankill and Little Bray.  | N/A  |  |
| – Killiney and Bray  |  |  |
| Negative, Not Significant and Long-Term – Donnybrook, Cabinteely, Shankill and Little Bray   | Negative, Significant and Long-<br>Term – Circle K, Little Bray  |  |
| Pedestrians<br>Positive, Moderate to Very Significant and Long-Term – University (Newman) Church, Haddington Road, Rathmines,<br>Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack –<br>Killiney, Loughlinstown, Shankill and Little Bray.  |  |  |
| Cyclists<br>Not significant to Positive, Moderate and Long-term – University (Newman) Church, Haddington Road, Rathmines,<br>Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack –  |  |  |
| <ul> <li>Neutral and Long-Term – Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray.</li> <li><u>Bus Users</u></li> <li>Positive, Moderate to Profound and Long-Term – University (Newman) Church, Haddington Road, Rathmines,<br/>Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack –<br/>Killinov, Loughlingtown, Shankill and Little Bray.</li> </ul> |  |  |
| Neutral and Long-term – Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray.<br>Private Vehicles<br>Positive, Moderate and Long-Term – University (Newman) Church, Haddington Road, Rathmines, Donnybro  |  |  |
| Loughlinstown, Shankill and Little Bray.<br>Negative, Slight and Long-Term – Westland Row, Blackrock, Newtownpark, Johnstown – Killiney and Bray.  |  |  |
|  | Pedestrians         Positive, Moderate to Very Significant and Long-Term – University (Newman) Chu         Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, f         Killiney, Loughinstown, Shankill and Little Bray.         Neutral and Long-Term – Westland Row, Blackrock, Newtownpark, Johnstown –         Cyclists         Not Significant to Positive, Moderate and Long-term – University (Newman) Churn<br>Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, f         Killiney, Loughlinstown, Shankill and Little Bray.         Neutral and Long-Term – Westland Row, Blackrock, Newtownpark, Johnstown –         Busers         Positive, Moderate to Profound and Long-Term – University (Newman) Church, H         Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, F         Killiney, Loughinstown, Shankill and Little Bray.         Positive, Moderate and Long-Term – University (Newman) Church, Haddington R         Private Vehicles         Positive, Not Significant and Short-Term – University (Newman) Church, Haddington Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabi Loughlinstown, Shankill and Little Bray.         Negative, Not Significant and Short-Term – University (Newman) Church, Haddington Road, Rathmines, Donnybrook, Merrion Road, Booterstown, Mount Merrion, Kilmacud – Stillorgan, Foxrock, Cabinteely, Ballybrack – Killiney, Loughlinstown, Shankill and Little Bray.         Negative, Not Significant and Long-Term – Donnybrook, Cabinteely, Shankill and Little Bra |  |

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. The Proposed Scheme is also expected to benefit individuals and businesses whose workers live along the corridor. Retail and leisure businesses along the route could gain a double benefit from both increased sales and improved staff productivity (see Appendix A10.2 in Volume 4 of this EIAR).

These improvements will help to achieve the aims and objectives of the Proposed Scheme by providing an attractive alternative to the use of private vehicles and promoting a modal shift to walking, cycling and public transport, allowing for greater capacity along the corridor to access residential, community and commercial

receptors. As discussed in Appendix A10.2 in Volume 4 of this EIAR, the Proposed Scheme will also ensure the connection of people with essential services such as healthcare facilities and jobs (EY 2021).

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