

Chapter 17
Landscape
(Townscape)
& Visual

Contents

17. Landscape (Townscape) & Visual	1
17.1 Introduction	1
17.2 Methodology	2
17.2.1 Study Area	2
17.2.2 Relevant Guidelines, Policy and Legislation	2
17.2.3 Data Collection and Collation	4
17.2.4 Appraisal Method for the Assessment of Impacts	5
17.3 Baseline Environment.....	13
17.3.1 City Context	13
17.3.2 Overview of Route of the Proposed Scheme	13
17.3.3 Landscape, Townscape and Visual Planning Policy	13
17.3.4 Townscape / Streetscape Character	14
17.4 Potential Impacts	17
17.4.1 Characteristics of the Proposed Scheme	17
17.4.2 'Do Nothing' Scenario	20
17.4.3 Construction Phase	20
17.4.4 Operational Phase	29
17.5 Mitigation and Monitoring Measures	37
17.5.1 Construction Phase	37
17.5.2 Operational Phase	40
17.6 Residual Impacts	44
17.6.1 Construction Phase	44
17.6.2 Operational Phase	45
17.7 References	47

17. Landscape (Townscape) & Visual

17.1 Introduction

This Chapter of the Environmental Impact Assessment Report (EIAR) has considered the potential landscape (townscape) and visual impacts associated with the Construction and Operational Phases of the Clongriffin to City Centre Core Bus Corridor Scheme (hereafter referred to as the Proposed Scheme).

During the Construction Phase, the potential landscape (townscape) and visual impacts associated with the development of the Proposed Scheme have been assessed. This included streetscape disturbance, impacts on property boundaries, removal of trees and vegetation, traffic issues and the general visual intrusion of construction activities due to utility diversions, road resurfacing and road realignments.

During the Operational Phase, the potential landscape (townscape) and visual impacts associated with changes to the physical layout of the street, alteration of views and the visual character and changes to the urban realm have been assessed.

The assessment has been carried out according to best practice and guidelines relating to landscape (townscape) and visual assessment, and in the context of similar large-scale infrastructural projects.

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 will 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, which is described in Chapter 4 (Proposed Scheme Description) has been designed to meet these objectives. The specific objective applicable to this assessment is:

- Ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.

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. In addition, feedback received from the comprehensive consultation programme undertaken throughout the option selection and design development process has been incorporated, where appropriate.

17.2 Methodology

17.2.1 Study Area

The Proposed Scheme has an overall length of approximately 5.7km, and is routed along the R107 Malahide Road from Mayne River Avenue – R107 Malahide Road Junction to the junction with Marino Mart - Fairview and also routed for cyclists via the junction with Malahide Road-Brian Road along Carleton Road, St Aidan's Park, Haverly Road and Marglann Marino, all in the County of Dublin and within the Dublin City Council (DCC) administrative area. From here the Proposed Scheme ties into a separate project, the Clontarf to City Centre Cycle & Bus Priority Project, currently being developed by DCC. The Clontarf to City Centre Cycle & Bus Priority Project will provide segregated cycling facilities and bus priority infrastructure along a 2.7km route that extends from Clontarf Road at the junction with Alfie Byrne Road, to Amiens Street at the junction with Talbot Street in the City Centre. The start of the scheme ties into a separate project being developed by DCC namely, The Belmayne Main Street and Belmayne Avenue Scheme, which provides bus and cycle linkages to Clongriffin Dart Station.

A detailed description of the Proposed Scheme is provided in Chapter 4 (Proposed Scheme Description).

The primary study area is a boundary-to-boundary road / street corridor along the Proposed Scheme, which incorporates the immediately adjoining landscapes, including open spaces, parks, gardens, and other land use areas, together with amenity, landscape / townscape and visual planning considerations. This study area also extends where required to incorporate wider viewpoints to the Proposed Scheme (e.g. views along the Santry River corridor).

17.2.2 Relevant Guidelines, Policy and Legislation

The assessment has been carried out with reference to the following legalisation, policy and guidelines:

17.2.2.1 Legislation

- Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the EIA Directive);
- Planning and Development Act 2000, as amended;
- Planning and Development Regulations 2001, as amended; and
- European Landscape Convention 2000.

17.2.2.2 Policy

- Dublin City Development Plan 2016-2022 (DCC 2016a);
- Dublin City Tree Strategy 2016-2020 (DCC 2016b);
- Dublin City Parks Strategy 2019-2022 (DCC 2019);
- Department of Transport (DoT) National Cycle Policy Framework (DoT, 2009); and
- National Transport Authority (NTA) Greater Dublin Area, Cycle Network Plan (NTA 2013).

17.2.2.3 Guidelines

- Environmental Protection Agency (EPA) Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (hereafter referred to as the EPA Guidelines) (EPA 2017);
- EPA Draft Advice Notes for preparing Environmental Impact Statements (EPA 2015);
- Landscape Institute and the Institute of Environmental Management and Assessment (IEMA) Guidelines for Landscape and Visual Impact Assessment (hereafter referred to as the GLVIA) 3rd edition (Landscape Institute and IEMA 2013);
- Landscape Institute Technical Information Note 05/2017 (Revised 2018) on Townscape Character Assessment (hereafter referred to as the TCA) (Landscape Institute 2018);

- Department of Housing, Planning and Local Government (DHPLG) Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (hereafter referred to as the GEIA) (DHPLG 2018); and
- Landscape Institute Technical Guidance Note 06/2019 on Visual Representation of Development Proposals (hereafter referred to as the VRDP) (Landscape Institute 2019).

While the EPA Guidelines provide a general methodology, impact ratings and assessment structure applicable across all environmental assessments, the GLVIA provides specific guidance for landscape and visual impact assessments. The TCA is a resource for the application of landscape character assessment to townscapes. Therefore, in this Chapter, a combination of the approaches outlined in the EPA Guidelines and in the GLVIA supported by the TCA (Landscape Institute 2018) and the professional experience and expertise of the assessor, is utilised in the landscape and visual assessment.

17.2.2.4 Key Definitions

The following key definitions are relevant to the methodology for the Landscape and Visual Impact Assessment:

Landscape: 'means an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors' (European Landscape Convention 2000).

Townscape: 'the landscape within the built-up area, including the buildings, the relationship between them, the different types of urban open spaces, including green spaces and the relationship between buildings and open spaces' (Landscape Institute and IEMA 2013). Different combinations and spatial distribution of these elements create variations in townscape character. In this assessment 'Townscape' is used to describe built-up areas of a medium to large extents, generally equivalent to neighbourhood scale or larger.

Streetscape: 'The term 'streetscape' refers to the design quality of the street and its visual effect, particularly how the paved area (carriageway and footway) is laid out and treated.' (CABE and ODPM 2002). Streetscape 'is a term used to describe the natural and built fabric of the street' (Torbay Council 2004). Streetscape represents a smaller scale pattern or combination of elements and features than 'townscape'. In this assessment 'streetscape' is used to define built up areas of largely public space within the confines of a street or road corridor.

Landscape Character Assessment: 'is the process of identifying and describing variation in the character of the landscape. It seeks to identify and explain the unique combination of elements and features (characteristics) that make landscapes distinctive' (Natural England 2014).

Landscape Character Types: 'are distinct types of landscape that are relatively homogeneous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation, historical land use, and settlement pattern' (Natural England 2014).

Landscape Character Areas: 'are single unique areas which are the discrete geographical areas of a particular landscape type. Each will have its own individual character and identity, even though it shares the same generic characteristics with other areas of the same type' (Natural England 2014).

Landscape and Visual Impact Assessment: 'is a tool used to identify and assess the significance of and the effects of change resulting from development on both the landscape as an environmental resource in its own right, and on people's views and visual amenity' (Landscape Institute and IEMA 2013).

Townscape Impact Assessment: identifies the changes to townscape character which would result from the Proposed Scheme and assesses the significance of those effects on the townscape as a resource (TCA) (Landscape Institute 2018).

Visual Impact Assessment: is concerned with changes that arise in the composition of available views and the overall effect on the visual amenity of an area (Landscape Institute and IEMA 2013).

Landscape *impact* vs. landscape *effect*: '*Impact*' is defined as the action been taken, whilst '*effect*' is defined as the result (change or changes) of that action, e.g. the 'impact' of the additional green space treatment where a roundabout has been converted to a signalised junction has a significant positive 'effect' on the character of the streetscape.

17.2.3 Data Collection and Collation

Data collection and collation is based on initial desk studies, supported by full route walkovers and augmented by further specific site reviews, along the corridor of the Proposed Scheme, together with the selection and preparation of verified Photomontages of the Proposed Scheme in Figure 17.2 in Volume 3 of this EIAR.

Desk studies, which allow for identification of designated and potential significant / sensitive areas, involved a review of:

- Dublin City Development Plan 2016-2022 (DCC 2016a);
- Dublin City Tree Strategy 2016-2020 (DCC 2016b);
- Dublin City Parks Strategy 2019-2022 (DCC 2019);
- Historical and current mapping and aerial photography (e.g. Ordnance Survey Ireland, Google Earth, Google Maps);
- Mapping of the Proposed Scheme;
- General Arrangement Drawings (refer to Volume 3 of this EIAR), including chainages referenced throughout this Chapter;
- Other reports and documents relating to the baseline environment, including other chapters of this EIAR and in particular, Chapter 4 (Proposed Scheme Description), Chapter 5 (Construction), Chapter 12 (Biodiversity), Chapter 15 (Archaeological & Cultural Heritage) and Chapter 16 (Architectural Heritage);
- Review of baseline information, including road infrastructure audits, arborist survey reports and drone survey imagery; and
- Review of contextual information relating to the development of the Proposed Scheme - Urban Realm Concept Designs (NTA 2020).

Site-based studies, which allow for verification of desk study findings and for analysis of current conditions in the baseline environment, involved:

- Full walkover surveys of the route of the Proposed Scheme;
- Further field surveys to verify conditions at specific areas along the route of the Proposed Scheme; and
- Selection of locations for verified Photomontages of the Proposed Scheme.

The information collected in the desk study and field surveys has been collated and presented in Section 17.3 of this Chapter.

The publicly available datasets listed in Table 17.1 have been consulted in the analysis of the baseline environment. These were accessed in 2020 / 2021.

Table 17.1: Publicly Available Datasets

Source	Name	Description
Ordnance Survey Ireland (OSI)	Geohive	Current and historical mapping
OSI	Geohive	Historical aerial imagery
Google	Google Maps	Mapping and aerial imagery
Microsoft	Bing	Mapping and aerial imagery
EPA	EPA Maps	Environmental datasets
National Parks and Wildlife Service (NPWS)	NPWS Maps and Data	Datasets provides information on national parks, protected sites and nature reserves

Source	Name	Description
Department of Culture, Heritage and the Gaeltacht (DCHG)	Historic Environment Viewer	Database provides access to National Monuments Service Sites and Monuments Record (SMR) and the National Inventory of Architectural Heritage (NIAH)

17.2.4 Appraisal Method for the Assessment of Impacts

As noted under Section 17.2.2 in preparing the Landscape (townscape) and Visual Impact Assessment this Chapter utilises a combination of approaches as outlined in the EPA Guidelines (EPA 2017) and in the GLVIA (Landscape Institute and IEMA 2013), supported by the TCA (Landscape Institute 2018) and the professional experience and expertise of the author.

The EPA Guidelines provide a generalised methodology suitable for guiding the range of environmental assessments that are carried out under the EIA process, whereas GLVIA provides guidance that is specifically relevant to Landscape and Visual Impact Assessment. GLVIA has been used in this assessment to inform the methodology in direct relation to assessing landscape and visual sensitivity, magnitude of change and effects. In order to provide an assessment of effects which is comparable to other types of environmental assessment it is necessary to use the significance criteria specified in the EPA guidelines. A matrix showing the relationship between sensitivity, magnitude and effect significance has been adapted from Figure 3.5 in the EPA Guidelines (EPA 2017) and is shown in Diagram 17.1 Landscape and Visual Impact Assessment Criteria. This matrix differs from the EPA Guidelines in that a 'very high' level of both magnitude and sensitivity has been included, the intention of which is to create an extra degree of definition to help distinguish between impacts that would lead to either Significant, Very Significant and Profound levels of effect. In addition to predicting the significance of the effects, EIA methodology (EPA 2017) requires that the quality of the effects be classified as positive / beneficial, neutral, or negative / adverse.

A detailed description of the Proposed Scheme is provided in Chapter 4 (Proposed Scheme Description). The landscape (townscape) and visual impact assessment has assessed the Proposed Scheme including the provision of the landscape design and urban realms elements.

17.2.4.1 Landscape, Townscape and Streetscape

Existing guidance requires that effects on townscape be assessed separately from the effects on views / visual amenity, although it is accepted that the two subjects are naturally connected.

Landscape for the purposes of the EIA Directive and as defined in Section 17.2.2.4, is an overarching term relating to both rural and built-up (urban) areas. However, use of the term townscape as defined in Section 17.2.2.4, is considered appropriate where it relates to urban or built-up landscapes, such as those relevant to the baseline environment of the Proposed Scheme. For the purposes of this assessment 'townscape' will be used to refer to medium to large scale areas of built-up landscapes, generally equivalent to neighbourhood scale or larger.

In addition, the Proposed Scheme is a corridor-based scheme utilising primarily existing roads or streets within the existing developed urban or built environment. In this regard terms 'street' or 'streetscape', as defined in Section 17.2.2.4 and below, are also important components of the baseline environment for the Proposed Scheme.

'Street' is defined as:

'a multi-functional space, providing enclosure and activity as well as movement. Its main functions are:

- *circulation, for vehicles and pedestrians;*
- *access to buildings, and the provision of light and ventilation for buildings;*
- *a route for utilities;*
- *storage space, especially for vehicles;*
- *public space for human interaction and sociability; everything from parades and protests to chance encounters.*

Virtually all streets in urban areas perform all of these functions, and often the balance between them will vary along the length of the street. Ideally, all these facets of the street can successfully coexist, but all too often it is one function (especially the movement of vehicles) which has been allowed to dominate. Getting the balance right at the right place is critical because streets are the most important part of the public realm, and thus are fundamental to how we live together in towns and cities.’ (CABE and ODPM 2002)

‘Streetscape’ is defined as:

‘The term ‘streetscape’ refers to the design quality of the street and its visual effect, particularly how the paved area (carriageway and footway) is laid out and treated.’ (CABE and ODPM 2002).

‘[Streetscape] is a term used to describe the natural and built fabric of the street’ (Torbay Council 2004).

‘The main indicators of quality, which are the test of successful streetscape, can be listed under six headings:

- *Comfortable and safe for pedestrians and the disabled*
- *A street designed to accommodate all sorts of functions, not dominated by any one function*
- *Visually simple, and free of clutter. Regardless of whether a street is a straightforward or complex space, what matters is the simplicity and clarity of its paving, street furniture, lighting and landscaping*
- *Well cared for, and where utilities or ‘extraneous’ advertising are subordinate to all other street functions*
- *Sympathetic to local character and activity context, in design and detail*
- *Making appropriate ordered provision for access, deliveries and storage of vehicles (CABE and ODPM 2002).*

The importance of soft landscaping in the streetscape is emphasised in the Manual for Streets (Department for Transport, 2007):)

‘Planting adds value; it helps to soften the urban street-scene, creates visual and sensory interest, and improves the air quality and microclimate. It can also provide habitats for wildlife. The aromatic qualities or contrasting colours and textures of foliage are of value to all, and can assist the navigation of those with visual impairment. Flowers and fruit trees add seasonal variety. Planting can provide shade, shelter, privacy, spatial containment and separation. It can also be used to create buffer or security zones, visual barriers, or landmarks or gateway features. Vegetation can be used to limit forward visibility to help reduce vehicle speeds.’ As defined in Section 17.2.2 ‘streetscape’ represents a smaller-scale pattern of elements and features compared to ‘townscape’ and is used to define built-up areas of largely public space within the confines of a street or road corridor. Therefore, this assessment refers to ‘townscape’ in describing the wider urban or built-up landscape, and to ‘streetscape’ in describing the immediate landscape corridor of the Proposed Scheme.

17.2.4.2 Methodology for Assessment of Townscape Effects

Assessment of potential townscape effects involves:

- Classifying the sensitivity of the baseline environment of the townscape resource; and
- Describing and classifying the magnitude of change in the townscape resulting from the Proposed Scheme.

These factors are combined to provide a classification of significance of effects of the Proposed Scheme.

17.2.4.2.1 Methodology for Assessment of Townscape Sensitivity

The sensitivity of the townscape is a function of its existing land use, patterns and scale, enclosure, visual characteristics and value. The nature and scale of the Proposed Scheme is taken into account, as are emerging trends of change (i.e. on-going changes in the environment) and the relevant policy framework. Five categories are used to classify sensitivity, as set out in Table 17.2.

Table 17.2: Townscape Sensitivity

Sensitivity	Description
Very High	Areas where the townscape exhibits very strong, positive character with valued elements, features and characteristics that combine to give an experience of unity, richness and harmony. The townscape character is such that its capacity to accommodate change is very low. These attributes are recognised in policy or designations as being of national or international value and the principal management objective for the area is protection of the existing character from change.
High	Areas where the townscape exhibits strong, positive character with valued elements, features and characteristics. The townscape character is such that it has limited / low capacity to accommodate change. These attributes are recognised in policy or designations as being of national, regional or county value and the principal management objective for the area is the conservation of existing character.
Medium	Areas where the townscape has certain valued elements, features or characteristics but where the character is mixed or not particularly strong, or has evidence of alteration, degradation or erosion of elements and characteristics. The townscape character is such that there is some capacity for change. These areas may be recognised in policy at local or county level and the principal management objective may be to consolidate townscape character or facilitate appropriate, necessary change.
Low	Areas where the townscape has few valued elements, features or characteristics and the character is weak. The character is such that it has capacity for change; where development would make no significant change or would make a positive change. Such townscapes are generally unrecognised in policy and the principal management objective may be to facilitate change through development, repair, restoration or enhancement.
Negligible	Areas where the townscape exhibits negative character, with no valued elements, features or characteristics. The character is such that its capacity to accommodate change is high; where development would make no significant change or would make a positive change. Such townscapes include derelict industrial lands, as well as sites or areas that are designated for a particular type of development. The principal management objective for the area is to facilitate change in the townscape through development, repair or restoration.

As adapted from GLVIA (Landscape Institute and IEMA 2013)

17.2.4.2.2 Methodology for Assessment of Magnitude of Change in the Townscape

Magnitude of change is a factor of the scale, extent and degree of change imposed on the townscape by the Proposed Scheme, with reference to its key elements, features and characteristics and the affected surrounding character areas (collectively termed 'townscape receptors'). Five categories are used to classify magnitude of change, as set out in Table 17.3.

Table 17.3: Magnitude of Townscape Change

Magnitude of Change	Description
Very High	Change that is large in extent, resulting in the loss of or major alteration to key elements, features or characteristics of the townscape, and / or introduction of large elements considered totally uncharacteristic in the context. Such development may result in a fundamental change in the character of the townscape and / or streetscape.
High	Change that is moderate to large in extent, resulting in major alteration to key elements, features or characteristics of the townscape, and / or introduction of large elements considered uncharacteristic in the context. Such development may result in a notable change to the character of the townscape and / or streetscape.
Medium	Change that is moderate in extent, resulting in partial loss or alteration to key elements, features or characteristics of the townscape, and / or introduction of elements that may be prominent but not necessarily substantially uncharacteristic in the context. Such development may result in a moderate change to the character of the townscape and / or streetscape.
Low	Change that is moderate or limited in scale, resulting in minor alteration to key elements, features or characteristics of the townscape, and / or introduction of elements that are not uncharacteristic in the context. Such development may result in a minor change to the character of the landscape and / or streetscape.
Negligible	Change that is limited in scale, resulting in no alteration to key elements, features or characteristics of the townscape, and / or introduction of elements that are characteristic of the context. Such development results in no change to the townscape character.

As adapted from GLVIA (Landscape Institute and IEMA 2013)

17.2.4.2.3 Methodology for Assessment of Significance of Effects

To classify the significance of effects, the magnitude of change is measured against the sensitivity of the townscape based on Figure 3.5 in the EPA Guidelines (EPA 2017), as adapted and presented in Diagram 17.1.

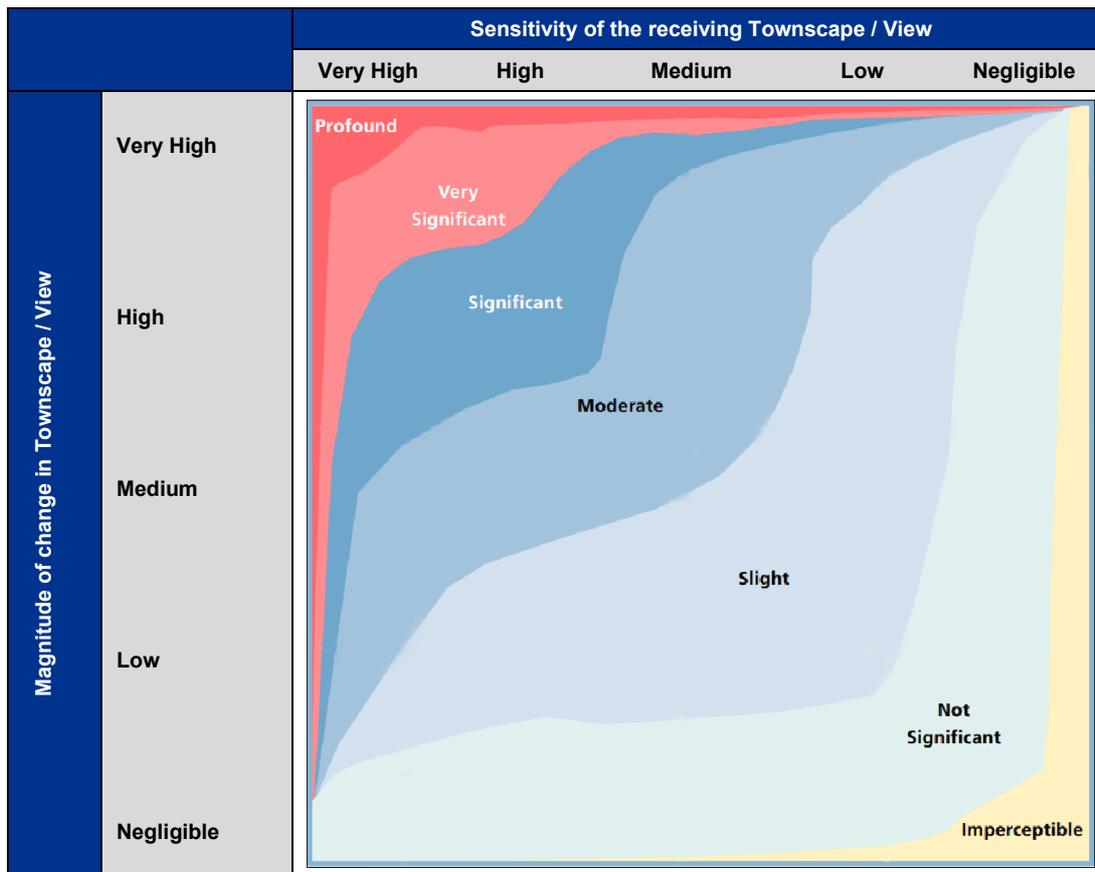


Diagram 17.1: Guide to Classification of Significance of Townscape and Visual Effects

17.2.4.2.4 Quality, Duration and Frequency of Landscape and Visual Effects

Consideration of quality (i.e. positive, neutral, negative), duration (i.e. temporary (lasting up to 1 year); short-term (lasting 1 to 7 years); medium-term (lasting 7 to 15 years); long-term (lasting 15 to 60 years); or permanent (lasting over 60 years)) and the frequency of effects, is as described in Table 3.3 of the EPA Guidelines (EPA 2017).

17.2.4.2.5 Geographical Extents of Townscape and Visual Effects

The geographical area over which the landscape effects will be felt must also be considered. This is distinct from the size or scale of the effect – there may for example be moderate loss of landscape elements over a large geographical area, or a major addition affecting a very localised area. Where townscape or visual receptors cover a large geographical area, it is often necessary to describe the local effect and the overall effect separately. The terms ‘local’, ‘locally’ or ‘localised’ are used within this assessment to denote effects which occur within the relatively small area or section of a receptor in proximity to the Proposed Scheme. The term ‘overall’ is used to describe the effect on the receptor as a whole.

17.2.4.2.6 Significance and Quality of Landscape and Visual Effects

An effect assessed as being significant may also be either positive, neutral or negative. For example, the introduction of a new structure may represent a significant change with an associated significant effect. However, the effect of the significant effect may be positive, in that structure enhances the landscape / townscape or visual quality of the receiving environment; may be negative in that it detracts from the receiving environment; or may be neutral in that despite the significant change, any negative and positive aspects are balanced or cancelled. The potential for significant neutral effects is particularly noted over time, where a development or structure is increasingly accepted as part of the receiving landscape / townscape / view.

17.2.4.3 Views and Visual Amenity

As noted in Section 17.2.2.4 Visual Impact Assessment is concerned with changes that arise in the composition of available views and the overall effect on the visual amenity of an area. This includes effects on protected and designated views as well as on the typical range of views from within the public realm and private areas or properties. As such, the primary study area is a boundary-to-boundary road / street corridor along the Proposed Scheme, which takes in immediately adjoining landscapes, including open spaces, parks, gardens, and other land use areas, together with amenity, landscape / townscape and visual planning considerations.

17.2.4.4 Methodology for Assessment of Visual Effects

Assessment of visual effects involves identifying a number of key / representative viewpoints in the baseline environment of the Proposed Scheme, and for each one of these:

- Classifying the viewpoint sensitivity; and
- Classifying the magnitude of change in the view.

These factors are combined to provide a classification of significance of the effects of the Proposed Scheme on each viewpoint.

17.2.4.4.1 Methodology for Assessment of Sensitivity of the Viewpoint / Visual Receptor.

Viewpoint sensitivity is a function of two main factors:

- Susceptibility of the visual receptor to change. The duration and frequency of exposure informs the susceptibility; a greater length of time or more frequent experience of views results in a receptor being more susceptible to changes in views. The level of awareness of people to views also affects susceptibility; people engaged in activities reliant on appreciation of views are of higher susceptibility than those focused on other activities. Visual receptors most susceptible to change include residents at home, people engaged in outdoor recreation focused on the landscape (e.g. park / walk users), or where the quality of the activity is dependent on the appreciation of views over the townscape. Visual receptors of moderate susceptibility include users of the streetscape such as non-recreational pedestrians and cyclists whose activity is not dependant on appreciation of the views but may have a greater awareness of the townscape by virtue of their slower speed and people engaged in outdoor recreation where the surrounding landscape does not influence the experience, and people in their place of work or shopping. Visual receptors least susceptible to change include travellers on road, rail and other transport routes generally travelling at speed (unless on recognised scenic routes); and
- Value attached to the view. This depends to a large extent on the subjective opinion of the visual receptor but also on factors such as policy and designations which indicate a shared social value (e.g. scenic routes, protected views), or the view or setting being associated with a heritage asset, visitor attraction, place of congregation, or having some other cultural status.

Five categories are used to classify a viewpoint's sensitivity, as set out in Table 17.4.

Table 17.4: Categories of Viewpoint / Visual Receptor Sensitivity

Sensitivity	Description
Very High	Views or viewpoints (views towards or from a townscape feature or area) that are recognised in policy or otherwise designated as being of national value. Designed views which may be from or be directed towards a recognised heritage asset or other important designated feature, where a key management objective for the view is its protection from change. Visual receptors using national trails or nationally recognised public rights of way. Views recognised in art or literature may also be of very high value. The principal management objective for the view is its protection from change which would affect the valued or designated features of the view.
High	Viewpoints or views that are recognised in policy or otherwise designated as being of value, or viewpoints that are highly valued by people that experience them regularly (e.g. views from houses or outdoor recreation amenities focused on the townscape). The composition, character and quality of the view may be such that it is likely to have high value for people experiencing it and is consequently vulnerable to changes which may lower this value. The principal management objective for the view is its protection from change that reduces visual amenity.
Medium	Views that may not have features or characteristics that are of particular value, but have no major detracting elements, and which thus provide some visual amenity. These views may have capacity for appropriate change. Visual receptors may include people with a moderate susceptibility to change engaged in outdoor sports which do not rely on an appreciation of the surrounding landscape / townscape, or road users on minor routes passing through areas of valued townscape character. The principal management objective is to facilitate change to the composition that does not detract from visual amenity, or which enhances it.
Low	Views that have no features of appreciable value, and / or where the composition and character are such that there is little appreciable value in the view. Visual receptors include people involved in activities with no particular focus on the landscape. Visual receptors may include fast moving users of roads/rail through landscapes / townscapes which may or may not contain valued elements or characteristics. For such views the principal management objective is to facilitate change that does not detract from visual amenity or enhances it.
Negligible	Views that have no features of value or where the composition and character may be unsightly (e.g. in derelict landscapes). For such views the principal management objective is to facilitate change that repairs, restores or enhances visual amenity.

As adapted from GLVIA (Landscape Institute and IEMA 2013)

17.2.4.4.2 Methodology for Assessment of Magnitude of change in the View / Viewpoint.

Classification of the magnitude of change takes into account the size or scale of the intrusion of the Proposed Scheme into the view (relative to the other elements and features in the composition (i.e. its relative visual dominance); the degree to which it contrasts or integrates with the other elements and the general character of the view; and the way in which the change will be experienced (e.g. in full view, partial or peripheral view, or in glimpses). It also takes into account the geographical extent of the change, as well as the duration and reversibility of the visual effects. Five categories are used to classify magnitude of visual change to a view, as set out in Table 17.5.

Table 17.5: Categories of Magnitude of Visual Change

Magnitude	Description
Very High	Full or extensive intrusion of the development in the view, or partial intrusion that obstructs valued features or characteristics, or introduction of elements that are completely out of character in the context, to the extent that the development becomes dominant in the composition and defines the character of the view and the visual amenity.
High	Extensive intrusion of the development in the view, or partial intrusion that obstructs valued features, or introduction of elements that may be considered uncharacteristic in the context, to the extent that the development becomes co-dominant with other elements in the composition and affects the character of the view and the visual amenity.
Medium	Partial intrusion of the development in the view, or introduction of elements that may be prominent but not necessarily uncharacteristic in the context, resulting in change to the composition but not necessarily the character of the view or the visual amenity.
Low	Minor intrusion of the development into the view, or introduction of elements that are not uncharacteristic in the context, resulting in minor alteration to the composition and character of the view but no change to visual amenity.
Negligible	Barely discernible intrusion of the development into the view, or introduction of elements that are characteristic in the context, resulting in slight change to the composition of the view and no change in visual amenity.

As adapted from GLVIA (Landscape Institute and IEMA 2013)

17.2.4.4.3 Methodology for Assessment of Significance of Visual Effects

As with townscape effects, classification of the significance of visual effects, involves measurement between the magnitude of change to the view and the sensitivity of the view / viewpoint, as set out in Diagram 17.1.

17.2.4.4.4 Quality of Effects

In addition to predicting the significance of the effects, EIA methodology (EPA 2017) requires that the quality of the effects be classified as positive / beneficial, neutral, or negative / adverse. For townscape to a degree, but particularly for visual effects, this will involve a degree of subjectivity. This is because townscape and visual amenity are perceived by people and are therefore subject to variations in the attitude and values, including aesthetic preferences of the receptor. One person's attitude to the Proposed Scheme may differ from another person's, and thus their response to the effects on the townscape or a view may vary.

Additionally, in certain situations there might be policy encouraging a particular development in an area, in which case the policy is effectively prescribing a degree of townscape and visual change. If the Proposed Scheme achieves the objective of the policy the resulting effect might be considered positive, even if existing townscape character or views are significantly altered. The classification of quality of townscape and visual effects seeks to take these variables into account and provide for a rational and robust assessment.

17.2.4.5 Photomontage Methodology

The methodology for the preparation of Photomontages has regard to the VRDP (Landscape Institute 2019), and is further informed by experience in photomontage production. The Photomontages are prepared as accurate verified photo-realistic views (equivalent to Type 4 as set out in VRDP (Landscape Institute 2019)). The method follows five main steps:

- Photography;
- Survey;
- 3D Modelling and Camera Matching;
- Rendering and Finishing of Photomontages; and
- Presentation.

17.2.4.5.1 Photography

17.2.4.5.1.1 Conditions, Date and Time

Baseline photographs are clear and representative of the relevant context at each location. Wherever possible, photographs are taken with all key elements of the view clearly visible and unobscured by foreground obstructions, such as vehicular or pedestrian traffic, street furniture, trees, signage, etc. Photographs are up to date insofar as possible, and are taken in good clear weather conditions, without precipitation, excessive darkness or shade, or sun glare etc. The date and time of each photograph is recorded, together with camera and lens metadata.

17.2.4.5.1.2 Camera and Camera Set-Up

Baseline photographs have been taken using a digital single-lens reflex (SLR) camera with a full frame sensor. At each viewpoint the camera is positioned on a tripod with the lens 1.65m above ground level (the level of the average adult's eyes), directed at the site and levelled in the horizontal and vertical axes.

17.2.4.5.1.3 Lenses

Prime lenses (fixed focal length with no zoom function) have been used as this ensures that the image parameters for every photograph are the same and that all photographs taken with the same lens are comparable. Generally within an urban or suburban context, a 24mm prime lens has been used. This lens captures a horizontal field of view of 73° (degrees). This relatively wide field of view is preferred as it shows more of the landscape / townscape context in urban settings. For some viewpoints considering middle to distant intervention, a 50mm prime lens may have been used, capturing a 39° horizontal field of view.

17.2.4.5.2 Survey

The coordinates of each viewpoint / camera position, including the elevation have been measured accurately relative to the topographic survey of the corridor of the Proposed Scheme. For each viewpoint, the coordinates of

several static objects or 'reference points' in the view (e.g. lamp posts, corners of buildings, etc.) have also been measured in a similar manner. The coordinates of the camera and 'reference points' are used later in the process to ensure that the direction of view of the camera in the 3D digital model matches that of the view of the photograph.

17.2.4.5.3 3D Modelling and Camera Matching

17.2.4.5.3.1 Creation of 3D Model

Drawings (roads, hard and soft landscape areas, etc.) have been used to generate a 3D digital model of the Proposed Scheme with sufficient detail for the viewpoint(s). The 3D digital model has then been exported to specialist software to allow for application of materials and textures to the model.

17.2.4.5.3.2 3D Camera Positions

The coordinates of the camera and 'reference points' for each view have been inserted into the 3D digital model, with information on the focal length of the lens and horizontal angle of coverage attributed to each camera / view, and the direction of each view is calculated and aligned so as to match the geometry of the original baseline photograph. Additionally, the date and time have been set to match that of the baseline photograph so as to ensure the sunlight and shadow projections in the renderings generated match those of the baseline photographs.

17.2.4.5.4 Rendering of 3D Model and Finishing Photomontages

For each view a high-resolution render of the Proposed Scheme has been generated. This process allows for the creation of a realistic image of the 3D digital model, as seen from each camera / view position, with sunlight and shadow applied to the model. The render of the Proposed Scheme has then been inserted (or montaged) into the baseline photograph and the composite image edited to take away elements to be removed from the existing baseline to create the photomontage of the Proposed Scheme. Some degree of photo-modelling / photo-manipulation is required in instances where foreground / middle-ground elements are removed (e.g. trees, plantings, etc.) thereby revealing backgrounds which are not captured in the baseline photograph. The intent is to provide a best-fit presentation which assists in illustrating the principal effects of the Proposed Scheme at a stage c. 10 to 15 years post completion of construction.

17.2.4.5.5 Presentation and Viewing

Individual photomontages are presented, in 'as existing' and 'as proposed' versions, on A3 pages in landscape format in Figure 17.2 in Volume 3 of this EIAR. For each photomontage, the viewpoint number, location description, and the date and time of photography have been provided on the page. Given that some views may be based on a wider angle of coverage than a 50mm prime lens, in these instances a further image is provided showing an A3 enlargement (centred on the Proposed Scheme) to equate to the coverage of that lens.

17.3 Baseline Environment

17.3.1 City Context

The Proposed Scheme is sub-divided into two sections:

- Section 1: Mayne River Avenue to Gracefield Road – Malahide Road (further sub-divided into Mayne River Avenue to Belcamp Lane – Malahide Road, and Belcamp Lane to Gracefield Road – Malahide Road); and
- Section 2: Gracefield Road to Marino Mart / Fairview – Malahide Road.

An overview of the Proposed Scheme is provided in Section 17.3.2 and a detailed description of the Proposed Scheme is provided in Chapter 4 (Proposed Scheme Description).

17.3.2 Overview of Route of the Proposed Scheme

The Proposed Scheme will be approximately 5.7km in length commencing at the Mayne River Avenue and the R107 Malahide Road Junction. The Proposed Scheme will then continue south along the R107 Malahide Road, passing Clarehall Shopping Centre and on through the established outer city residential suburbs of Clarehall, Coolock, Artane, Donnycarney and Clontarf to the inner-city residential suburbs of Marino and Fairview. The Proposed Scheme will cross the Santry River corridor south of Coolock Leisure and Retail Centre and pass St. David's Park, Thorndale Park and Maypark at Beaumont / Donnycarney. The Proposed Scheme will pass the prominent landmark of Our Lady of Consolation, Donnycarney, and south thereof passes adjacent to the parkland setting of Clontarf Golf Course to the east and the historic architectural country house and parkland of the Casino Marino to the west. The Proposed Scheme continues south along the R107 Malahide Road through the residential suburb of Marino leading to Fairview where it terminates west of Marino Crescent at the junction with the R105 Marino Mart / Fairview.

The Proposed Scheme is also routed for cyclists via the junction with Malahide Road-Brian Road along Carleton Road, St Aidan's Park, Haverty Road and Marglann Marino, all in the County of Dublin and within the DCC administrative area. From here the Proposed Scheme ties into a separate project, the Clontarf to City Centre Cycle & Bus Priority Project, currently being developed by DCC. The Clontarf to City Centre Cycle & Bus Priority Project will provide segregated cycling facilities and bus priority infrastructure along a 2.7km route that extends from Clontarf Road at the junction with Alfie Byrne Road, to Amiens Street at the junction with Talbot Street in the City Centre. The start of the scheme ties into a separate project being developed by DCC namely, The Belmayne Main Street and Belmayne Avenue Scheme, which provides bus and cycle linkages to Clongriffin Dart Station.

The Proposed Scheme includes a wide variety of suburban and inner-city suburban residential landscapes, townscape and visual features from streetscape boundary and public realm features, to residential and mixed-use zonings, historic landscapes and boundaries, to biodiversity and heritage assets.

17.3.3 Landscape, Townscape and Visual Planning Policy

Landscape, townscape and visual planning policy is set out in the following with reference to the appropriate higher-level county / city development plans, lower-level local area plans and other documents as appropriate.

17.3.3.1 Dublin City Development Plan 2016 - 2022

The Dublin City Development Plan 2016 - 2022 (DCC 2016a) is the higher county level planning framework applicable to the Proposed Scheme.

Chapter 10 of the Development Plan, Green Infrastructure, Open Space and Recreation sets out policies in relation to the provision, importance, protection and enhancement of green infrastructure, landscape, parks and open spaces, rivers, canals and the coastline, biodiversity, trees and sport, recreation and play within the city. The strategic green network as indicated on Figure 14 of the Dublin City Development Plan highlights the Tolka River as a blue / green corridor. DCC has also prepared separate overarching strategies for the protection, management and improvement of trees (DCC 2016b) and parks (DCC 2019) within the city.

Chapter 8 of the Development Plan sets out policies relating to the provision of sustainable transport infrastructure (DCC2016a). Relevant policies include:

- Policy MTO9 – This aims ‘*To develop, within the lifetime of this plan, the Strategic Cycle Network for Dublin city - connecting key City Centre destinations to the wider city and the national cycle network, and to implement the NTA’s Greater Dublin Area Cycle Network Plan to bring forward planning and design of the Santry River Greenway, incorporating strongly integrative social and community development initiatives.*’; and
- Policy MTO10 – This aims ‘*To improve existing cycleways and bicycle priority measures throughout the city, and to create guarded cycle lanes, where appropriate and feasible.*’

Chapter 11 of the Development Plan, Built Heritage and Culture, sets out policies relating to preservation, protection and improvement of built heritage, protected structures, Architectural Conservation Areas (ACA) and Conservation Areas, trees in ACAs, zones of archaeological interest and industrial heritage, monuments and Dublin’s cultural assets (DCC 2016a). There are a number of sites, buildings and features of historic and heritage interest located along the corridor of the Proposed Scheme, including an ACA around the Casino Marino, Conservation Areas along the Santry River and at the Casino Marino, and Residential Conservation Areas and a number of protected structures around Marino at the southern end of the Proposed Scheme. Policies in relation to archaeological and architectural heritage, including definitions of heritage features e.g. protected structures, as they relate to the Proposed Scheme are discussed in greater detail in Chapter 15 (Archaeological & Cultural Heritage) and Chapter 16 (Architectural Heritage) respectively of this EIAR.

The principal land use zonings to either side of the Proposed Scheme within the Dublin City area are:

- ‘*Objective Z1: To protect, provide and improve residential amenities*’; and
- ‘*Objective Z9: To preserve, provide and improve recreational amenity and open space and open space network*’, (e.g. Father Collins’ Park, O’Toole’s GAA, Santry River, St. David’s Park, Maypark, Thorndale Park, Clontarf Golf Course, the Casino Marino, Marino Crescent and Fairview Park).

Other land use zonings include:

- ‘*Objective Z2: To protect and / or improve the amenities of residential Conservation Area*’, (e.g. Marino);
- ‘*Objective Z3: To provide for and improve neighbourhood facilities*’ (e.g. Coolock, Artane, Clontarf West and Marino);
- ‘*Objective Z4: To provide for and improve mixed-services facilities*’ (e.g. Coolock Shopping Centre);
- ‘*Objective Z6: To provide for the creation and protection of enterprise and facilitate opportunities for employment creation*’ (e.g. Malahide Road Business Park, Artane); and
- ‘*Objective Z15: To protect and provide for institutional and community uses.*’ (e.g. Our Lady of Consolation Church and Scoil Chiaráin).

17.3.4 Townscape / Streetscape Character

The townscape and streetscape character of the Proposed Scheme is described in Table 17.6 with reference to landscape, townscape and visual characteristics, features, designations, and sensitivities. The key features are identified on Figure 17.1 in Volume 3 of this EIAR. Protected Structures are generally described within groups e.g. a number of buildings lining a road, but are noted individually where they form unique and prominent features in the townscape or streetscape, or form a less noticeable but intrinsic part of the fabric of the streetscape. Refer to Chapter 15 (Archaeological & Cultural Heritage) and Chapter 16 (Architectural Heritage) respectively of this EIAR, for full details and definitions of protected structures.

Table 17.6: Analysis of Baseline Townscape and Visual Environment of the Proposed Scheme

Proposed Scheme Character Area	Baseline Description	Baseline Sensitivity
Mayne River Avenue to Gracefield Road – Malahide Road		
<p>Mayne River Avenue to Belcamp Lane – Malahide Road (for baseline features refer to Figure 17.1, Sheets 1 to 2 of 9 in Volume 3 of this EIAR)</p>	<p>Townscape Character: Outer city suburbs. Streetscape Character: Major dual carriageway with mixed use developments, shopping centre and undeveloped lands. Recently established street tree planting present to median through much of the area, but also to road edges toward the northern end. Hotel and mixed-use development at Northern Cross with good quality landscape area fronting road. Key Townscape Features: Hotel and mixed-use development at Northern Cross and Clarehall Shopping Centre. Amenity Designations: None. Tree Preservation Orders: None. Tree / Woodland Preservation Objectives: None. Protected Views: None. Protected structures (Selected): No. 4862 a granite milestone with cast iron plaque at Belcamp Lane. (Refer to Chapter 16 (Architectural Heritage) for full details of protected structures). Other: Public realm fronting Hilton Hotel at Northern Cross.</p>	<p>Low / Medium</p>
<p>Belcamp Lane to Gracefield Road – Malahide Road. (for baseline features refer to Figure 17.1, Sheets 2 to 5 of 9 in Volume 3 of this EIAR)</p>	<p>Townscape Character: Outer city suburbs. Primarily established residential throughout. Streetscape Character: Major road corridor, mostly dual carriageway with 2 roundabouts at either end. Primarily residential development to either side, with some stretches of business and commercial development – notably including the established Cadbury Facility. Generally defined by two-storey – and occasionally single storey – semi-detached housing with mature established gardens. Established tree planting a prominent feature along the either side of the road corridor and in median and junctions. Key Townscape Features: Major tree-line dual carriageway road corridor through established primarily residential suburbs, with some commercial and business land uses. Amenity Designations: Open spaces at Buttercup Park, O’Toole’s GAA, Santry River corridor. Tree Preservation Orders: None. Tree / Woodland Preservation Objectives: None. Protected Views: None. Protected structures (Selected): No. 4861 a Moat at Fry-Cadbury Factory. (Refer to Chapter 16 (Architectural Heritage) for full details of Protected structures). Other: Mature trees are an important visual feature along many sections of the road corridor, including within the median, on road verges and roundabouts, within roadside open spaces and properties.</p>	<p>Medium / High</p>
Gracefield Road to Marino Mart / Fairview – Malahide Road		
<p>Gracefield Road to Marino Mart / Fairview – Malahide Road. (for baseline features refer to Figure 17.1, Sheets 5 to 9 of 9 in Volume 3 of this EIAR)</p>	<p>Townscape Character: Inner city suburb. Established residential throughout. Streetscape Character: Major primarily single carriageway road corridor, with short section of dual carriageway. Primarily established residential development or open space / amenity to either side, with short sections of local commercial uses. The northern section is generally defined by two-storey semi-detached housing with mature established gardens. There is a transition to attractive terraced properties south of Clontarf Golf Course and through Marino where Marino Crescent is a striking architectural element. Street side terraces of single-storey properties a feature through Artane. Some modern infill developments are also present. Donnycarney Church is a major road landmark, while the Casino Marino is a nationally important heritage property located off the west side of the road corridor. Established mature tree planting is a prominent feature along the boundary of open spaces, the Casino Marino, Clontarf Golf Course, and institutional properties such as Donnycarney Church, and Nazareth House. Street tree planting less prominent and often of younger age class. Prominent roadside milestone marker at St. David’s. Key Townscape Features: Established inner residential suburb along historic road corridor. Notable residential terraces to south and feature crescent at Marino / Fairview. Prominent parkland and open spaces, including historic heritage property of the Casino Marino. Our Lady of Consolation, Donnycarney is a prominent landmark. Amenity Designations: Open space at St. David’s Park, Thorndale Park and Maypark, the Casino Marino, Marino Crescent Park, Fairview Park. Architectural Conservation Area at the Casino Marino - (Refer to Chapter 16 (Architectural Heritage) for full details).</p>	<p>High</p>

Proposed Scheme Character Area	Baseline Description	Baseline Sensitivity
	<p>Tree Preservation Orders: None.</p> <p>Tree / Woodland Preservation Objectives: None</p> <p>Protected Views: None.</p> <p>Protected structures (Selected: No. 4859 a granite milestone with cast iron plaque at St. David's, No. 4854 a Granite milestone with cast-iron plaque outside Marino Health Centre, No. 4858 the Casino, Marino, Nos. 4893-4917 Nos. 1 to 25 Marino Crescent. (Refer to Chapter 16 (Architectural Heritage) for full details of Protected structures).</p> <p>Other: Significant visually quality / views of mature tree-lined parkland between Clontarf Golf Course and the Casino Marino / Nazareth House. Attractive single and two-storey residential roadside terraces.</p>	

17.4 Potential Impacts

This section presents potential impacts that may occur due to the Proposed Scheme, in the absence of mitigation. This informs the need for mitigation or monitoring to be proposed (refer to Section 17.5). Predicted 'residual' impacts taking into account any proposed mitigation is presented in Section 17.6.

17.4.1 Characteristics of the Proposed Scheme

17.4.1.1 General

The key characteristics of the Proposed Scheme of particular relevance to the townscape and visual assessment are described in the following under the headings Construction Phase and Operational Phase.

The description of the characteristics of the Proposed Scheme is based on the Proposed Scheme drawings in Volume 3 of this EIAR, including those within the Arboricultural Impact Assessment (Appendix A17.1 in Volume 4 of this EIAR).

A detailed description of the Proposed Scheme is provided in Chapter 4 (Proposed Scheme Description) and a detailed description of the Construction Phase of the Proposed Scheme is provided in Chapter 5 (Construction).

17.4.1.2 Construction Phase

The key characteristics of the Proposed Scheme of particular relevance to the townscape and visual assessment during the Construction Phase, include:

- Amendment and adaption of the existing road network throughout, including surfacing, kerbs, footpaths, drainage, lighting, service / utility features, road markings, etc.;
- Amendment and adaption of existing junctions throughout, including surfacing, kerbs, footpaths, traffic controls, lighting, cycle facilities, road markings, etc.;
- Amendment and loss of areas of existing verges, roadside and median tree planting and boundaries throughout;
- Provision of additional areas for SuDS / landscape enhancement and interventions, tree planting, planting, landscape works, etc. throughout;
- Temporary land-take along both sides of Malahide Road and fronting Hilton Hotel for widening of road / footpath corridor with removal of existing trees and setback of existing boundaries (Ch.A3050 - A3180);
- Temporary land-take along west side of Malahide Road for widening of road / footpath corridor and provision of cycle tracks, with setback of existing boundaries (Ch.A3220 - A3310);
- Temporary land-take of lands along west side of Malahide Road for set back of bus stop with setback of existing boundaries (Ch.A3420 - A3450);
- Major works in conversion of existing Malahide Road / Priorswood Road / Blunden Drive roundabout junction (Ch.4000) to signalised cross junction and provision of a bus turnaround to the southern side of Priorswood Road in area of existing grassland, with removal of trees and vegetation, adjustment to kerbs, footpaths, cycle tracks, drainage, lighting, verges and landscape areas, service / utility features, etc.;
- Temporary land-take of open space for provision of footpath / cycle track link (Ch.A4400) to Ayrfield Drive;
- Temporary land-take for minor adjustment of entrance / boundary on corner of open space along Santry River Greenway (Ch.A4870);
- Conversion of Cul-de-Sac at Brookville Park / Bóthar Mhullach Íde to a 'pocket park' open space (Ch.A4900-Ch.A5000);
- Major works in the conversion of existing Malahide Road / Ardlea Road / Gracefield Road (Artane) roundabout junction (Ch.A6050) to signalised cross junction, with some tree removal, adjustment to kerbs, footpaths, cycle tracks, drainage, lighting, verges and landscape areas, service/utility features, etc.;

- Temporary land-take of private space / gardens fronting No.44 and 44a Malahide Road (2 properties) for adjustment of junction and associated footpath, with removal of garden planting and setback of existing boundaries (Ch.A6100);
- Temporary land-take of private space / gardens fronting properties from 'Villa Maria to Maria Philomena, on western side of Malahide Road (8 properties) for widening of the road / footpath corridor with removal of street trees, garden planting and setback of existing boundaries (Ch.A6365 - A6475);
- Temporary land-take of private space / gardens fronting No.1 to 12 Artane Cottages Upper, on eastern side of Malahide Road (12 properties) for widening of road / footpath corridor with removal of garden plantings and setback of the existing boundaries (Ch.A6400 - A6500);
- Permanent land-take of parking area fronting commercial properties on west side of Malahide Road directly north of Kilmore Road junction for widening of road / footpath corridor with removal of street trees and setback of the existing boundaries (Ch.A6480 - A6530);
- Temporary land-take of open space between Malahide Road and Pinebrook Road / St. David's Wood for provision of footpath / cycle track with setback of existing railings and lowering of wall to the edge of Malahide Road. (Ch.A6550 - A6750). Some existing trees to be removed, including semi-mature specimens, with crown lifting to some retained trees. Existing piers at pedestrian entrance to St. David's Wood to be set back;
- Temporary land-take of open space along the front of Maypark (Donnycarney Park), Malahide Road for widening of road / footpath corridor. (Ch.A6800 - A7100). Existing boundary fence, internal boundary footpath and park entrance to be set back. New footpath to be constructed set back within the park parallel to the road;
- Temporary land-take of private space / gardens fronting No.1 to 10 Maypark (10 properties), and No.232, 234, 236 and 238 Malahide Road (even nos. only, 4 properties) for widening of road / footpath corridor with for widening of road / footpath corridor with removal of garden plantings and setback of the existing boundaries (Ch.A7100 - A7275);
- Temporary land-take of private space / gardens fronting Nos.198, 200, 202, 204, 206, 208, 210 and 212 (even nos. only, 8 properties) and No.216, 218, 220, 222, 224 and 226 (6 properties) on eastern side of Malahide Road for widening of road / footpath corridor with removal of garden plantings and setback of the existing boundaries (Ch.A7435 - A7555). Includes works at entrance junction to St. John's Court;
- Reduction in extent of existing median adjacent to Clontarf Golf Course / Nazareth House with loss of median trees (Ch.A7900 - A8030) ;
- Temporary land-take on western side of Malahide Road from private space / gardens fronting Nos.20, 22, 24, 26, 28, 30, 32, 34, 36 and 38, and Nos.48, 50, 52, 54, 56, 58, 60, 62 and 64, and Winston Villa, Malahide Road (20 properties) for widening of road / footpath corridor with removal of garden plantings and setback of existing boundaries (Ch.A8370 - A8550);
- Temporary land-take of private space / gardens fronting No. 1, 3, 5, 7, 9, 11, 13, 15, 17 and 19 Malahide Road (10 properties) for widening of road / footpath corridor with removal of garden plantings and setback of existing boundaries (Ch.A8530 - A8650);
- Amendment and adaption of the existing junction between Malahide Road / Clontarf Road / Marino Mart (at Fairview) and providing for tie in to the DCC Clontarf to City Centre Cycle Scheme, with some street tree removal (Ch.A8670 - A8720); and
- Traffic calming and provision of cycle access along Brian Road / Carleton Road / Haverty Road and Marglann Marino and providing for tie in to the DCC Clontarf to City Centre Cycle Scheme.

17.4.1.2.1 Construction Compound Area

A Construction Compound is to be located on the existing open space at Buttercup Park / Buttercup Crescent (Ch.A3620 – A3960).

17.4.1.3 Operational Phase

The key characteristics of the Proposed Scheme of particular relevance to the townscape and visual assessment during the Operational Phase, include:

- Changes to traffic movements along Proposed Scheme and on adjoining roads;

- Changes in streetscape elements, including signage, lighting, surfacing, road marking, etc. along the Proposed Scheme;
- Provision of improved landscape to open spaces along Malahide Road from Priorswood Road / Malahide Road Junction to Greencastle Road Junction, including open space adjacent to Buttercup Park, with substantial new tree planting, provision of species rich grassland, bulb planting and new hedgerows (Ch.A3650 – A4850)
- Provision of a 'pocket park' open space at Brookville Park / Bóthar Mhullach Íde Cul-de-Sac with tree planting, footpaths and species rich grassland (Ch.A4900-Ch.A5000);
- Provision of new landscape areas at Malahide Road / Ardlea Road / Gracefield Road (Artane) junction (Ch.A6050) with new tree planting, provision of species rich grassland, and ornamentally planted SUDS;
- Reduced area of private space / gardens fronting Nos.44 and 44a Malahide Road (2 properties) (Ch.A6100);
- Reduced area of private space / gardens fronting properties at Villa Maria, Arva, Sunview, Helenville, Upmeads, Saint Gerard's, Iona, and Maria Philomena, Malahide Road (8 properties) (Ch.A6365 - A6475);
- Reduced area of private space / gardens fronting Nos.1 to 12 Artane Cottages Upper, Malahide Road (12 properties) (Ch.A6400 - A6500);
- Removal of parking area fronting commercial properties on the west side of Malahide Road directly north of Kilmore Road junction (Ch.A6480 - A6530);
- Provision of footpath / cycle track and reduced area of soft landscape space between Malahide Road and Pinebrook Road / St. David's Wood (Ch.A6550 - A6750). Existing piers at pedestrian entrance to St. David's Wood to be set back. Provision of replacement planting and continued some effects from loss of mature trees in construction phase;
- Reduced area of open space along the front of Maypark (Donnycarney Park), Malahide Road (Ch.A6800 - A7100), with existing boundary fence, internal boundary footpath and park entrance set back;
- Provision of enhanced public realm at Malahide Road / Collins Avenue and Malahide Road / Elm Road junctions and frontage of Our Lady of Consolation Church, with new soft landscaped areas to east of Elm Road and new tree planting throughout;
- Reduced area of private space / gardens fronting Nos.1 to 10 Maypark (10 properties), and Nos.232, 234, 236 and 238 Malahide Road (4 properties) (Ch.A7100 - A7275);
- Reduced area of private space / gardens fronting Nos.216, 218, 220, 222, 224 and 226 (6 properties) Malahide Road (Ch. A7440 A748);
- Reduced area of private space / gardens fronting Nos.198, 200, 202, 204, 206, 208, 210 and 212 (8 properties) Malahide Road (Ch.A7490 – A7555);
- Reduced area of private space / gardens fronting Nos. 20, 22, 24, 26, 28, 30, 32, 34, 36 and 38, Nos. 48, 50, 52, 54, 56, 58, 60, 62 and 64 Malahide Road, and Winston Villa, Malahide Road (20 properties) (Ch.A8370 - A8550);
- Reduced area of private space / gardens fronting No.1, 3, 5, 7, 9, 11, 13, 15, 17 and 19 Malahide Road (10 properties) (Ch.A8530 - A8650);
- Traffic calming and provision of cycle access along Brian Road / Carleton Road / Haverty Road and Marglann Marino and tie in to the DCC Clontarf to City Centre Cycle Scheme; and
- Improvement to public realm at Malahide Road / Marino Crescent / Clontarf Road Junction, with new narrowed pedestrian crossing points, block paving and tree planting (Ch.8680 – Ch.8730).

In addition to the above works, the following specific landscape / townscape and visual measures are included within the Proposed Scheme:

- Where paving, existing trees, hedges, and/or plantings are removed from temporary acquisition areas, new planting and paving replacements will be provided as appropriate. Where feasible, new plants will be the same or species to those removed. Replacement plant sizes will be those that are readily available and therefore, will be unlikely to match the maturity of plants removed (especially in the case of larger trees) however, where feasible, semi-mature trees will be used in the replanting works throughout the scheme. Being of the same or similar species, maturity similar to that of the existing can be achieved in time;

- New boundaries will be established on the setback line to match the existing boundary. The construction and provision of the new boundaries will take account of the location of existing trees, other plantings, gradients, drainage, property features and access arrangements so as to minimise additional indirect effects. Where feasible, existing railings, gates, cut stone walls and/or piers (or where appropriate, elements of same) to be removed will be reinstated on the new setback boundary line. Details of reinstatement to be subject to discussion with landowners;
- The Proposed Scheme will provide for the planting of new semi-mature street trees to replace removed trees, where feasible, and for improvement of the streetscape environment. Species selected shall be appropriate to the urban street environment and to the characteristics of the specific location;
- Proposals for the treatment of the public realm within the streetscape impacted by the Proposed Scheme will have regard to the existing character of the street or location, to emerging policies, objectives and proposals for the public realm and to opportunities for mitigation of impact on the public realm and the streetscape. Proposals will have regard to historic details and features, to the quality of existing and proposed materials, to the reduction of clutter, ease of legibility, and management and maintenance requirements;
- Landscape proposals will have regard to the recommendations of Chapter 12 (Biodiversity) in relation to opportunities for provision of biodiversity and of Chapter 13 (Water) in relation to opportunities for incorporation of Sustainable Urban Drainage Systems (SuDS).
- Maintenance and monitoring of reinstatement works in public areas will ensure that any defective materials or workmanship will be made good within a period of 12 months from completion of all construction works;
- All aspects of the Proposed Scheme within public areas will revert to on-going management and maintenance in accordance with normal operational practices. This will include hard and soft landscape works and townscape measures, new and reinstated tree and other planting, and new and reinstated surfacing and paving, etc.; and
- Maintenance and monitoring of reinstatement and other works in private areas (e.g. temporary acquisition areas) will ensure that any defective materials or workmanship will be made good within a period of 12 months following completion of Construction Phase.

17.4.2 'Do Nothing' Scenario

With respect to Landscape (Townscape) and Visual, the 'Do Nothing' scenario means that the Proposed Scheme would not proceed and associated changes to the Landscape (Townscape) and Visual environment would not arise. Therefore, landscapes / townscapes and properties along the Proposed Scheme would not experience the impacts that are associated with the Proposed Scheme and their existing setting would experience little or no change in the short to medium-term. Nevertheless, given the urban context of the Proposed Scheme it is considered likely that the road corridor of the Proposed Scheme will continue to experience pressure for reallocation of carriageway space and associated traffic movements in direct response to the increasing demand for alternative modes of transport (i.e. away from private car).

As such, there would be a Slight to Moderate Neutral effect on the Landscape (Townscape) and Visual under the 'Do Nothing' scenario.

17.4.3 Construction Phase

The Construction Phase of the Proposed Scheme will give rise to temporary or short-term (1 to 2 years) townscape streetscape and visual effects through the following:

- Site mobilisation and establishment, fencing and hoarding of Construction Compound and works areas - including within private areas / gardens;
- Site demolition, including removal of boundaries, kerbs, verges, surfaces, landscape areas, trees and plantings – including boundary fences, walls and plantings within private areas / gardens;
- Site activity and visual disturbance from general construction works and the operation of construction machinery both within the site and at the Construction Compound;
- Construction works involving diversion of existing underground / overground services and utilities, provision of new services and utilities, drainage features and connections, etc.;

- Site activity and construction works involved in the construction of new carriageways, kerbings, footpaths, cycle tracks, bus stops and signage, reinstatement of boundaries / provision of new boundaries and landscape reinstatement works / provision of new landscape, etc.; and
- Decommissioning of works areas and Construction Compound.

The Landscape and Visual Impact Assessment for the Construction Phase of the Proposed Scheme is set out in Table 17.7.

17.4.3.1 Impacts on Townscape and Streetscape Character

As set out in Section 17.3.1, the Proposed Scheme is sub-divided into three townscape / streetscape character areas:

- Mayne River Avenue to Belcamp Lane – Malahide Road;
- Belcamp Lane to Gracefield Road – Malahide Road; and
- Gracefield Road to Marino Mart / Fairview – Malahide Road.

17.4.3.1.1 Mayne River Avenue to Belcamp Lane – Malahide Road (for baseline features refer to Figure 17.1, Sheets 1 to 2 of 9 in Volume 3 of this EIAR)

The baseline townscape is of low / medium sensitivity and construction of the Proposed Scheme will involve minimal demolition, excavation and construction works of sections of kerbs, road carriageways, sections of footpaths, junctions, surfacing, drainage features and utilities. There will be temporary land acquisition from commercial property along this section, but the vast majority of works will be within the existing road corridor.

The construction works will not alter the overall townscape or streetscape character along this section of the Proposed Scheme. Change is limited in scale, resulting in minor alteration to elements, features and characteristics of the townscape, and introduction of elements that are not uncharacteristic in the context. The magnitude of change in the baseline environment is low.

The townscape / streetscape effect of the Construction Phase will be Slight / Moderate, Temporary / Short Term, Negative.

17.4.3.1.2 Belcamp Lane to Gracefield Road – Malahide Road (for baseline features refer to Figure 17.1, Sheets 2 to 5 of 9 in Volume 3 of this EIAR)

The baseline townscape is of medium/ high sensitivity. The construction of the Proposed Scheme will give rise to modest changes to the established outer city suburbs – the vast majority of which are contained within the corridor of the existing primarily dual carriageway of the Malahide Road. The Construction Phase involves demolition, excavation and construction works to kerbs, road carriageways, footpaths, junctions, planted areas, surfacing and parking, utilities, construction of SUDS and drainage features. More significant changes will be limited to particular locations, which are contained within the existing road corridor, including the vicinity of the Malahide Road / Priorswood Road / Blunden Drive junction; Buttercup Park (site of Construction Compound), and the vicinity of the Malahide Road / Ardlea Road / Gracefield Road junction which will undergo substantial changes in layout of landscaped areas and features, including changes to pedestrian / cycle circulation routes, loss of trees and replacement / additional tree planting.

The construction works will not alter the overall townscape character along this section of the Proposed Scheme, but there will be an impact on streetscape character with increased visual clutter and activity, particularly at junctions and in adjacent public open space. The change is moderate to large in extent, resulting in a notable alteration to some key elements, features and characteristics of the townscape. The magnitude of change in the baseline environment is medium / high.

The townscape / streetscape effect of the Construction Phase will be Significant, Temporary / Short Term, Negative.

17.4.3.1.3 Gracefield Road to Marino Mart / Fairview – Malahide Road (for baseline features refer to Figure 17.1, Sheets 5 to 9 of 9 in Volume 3 of this EIAR)

The baseline townscape is of high sensitivity. The construction works will give rise to major changes within the corridor of the primarily single carriageway of the Malahide Road through these established inner-city suburbs. The Construction Phase involves demolition, excavation and construction works to kerbs, road carriageways, footpaths, junctions, planted areas, property boundaries, front garden areas, surfacing and parking, utilities, and drainage features.

The construction works will not alter the existing townscape character along this section of the Proposed Scheme, but they will include land acquisition and impacts on residential properties with established boundaries, and impacts on protected structures, and other property, open spaces, and mature trees. The magnitude of change in the baseline environment is very high.

The townscape / streetscape effect of the Construction Phase will be Significant / Very Significant, Temporary / Short-Term, Negative.

17.4.3.2 Impacts on Streetscape Elements and Visual Impacts

17.4.3.2.1 Architectural Conservation Areas (ACAs)

The Proposed Scheme will have no effects on existing boundaries of the Casino Marino ACA (also a park / sports ground) which bounds the Malahide Road corridor north and south of Nazareth House. No existing trees will be removed along the boundary with the ACA / open space.

Construction of the Proposed Scheme will not have negative effects on views to or from the ACA / open space. The magnitude of change in the baseline environment is negligible.

The townscape / streetscape and visual effect of the Construction Phase on the architectural conservation area will be Not Significant.

17.4.3.2.2 Conservation Areas

The Proposed Scheme will have no effects on the existing boundaries of the Casino Marino Conservation Area (which bounds the Malahide Road corridor south of Nazareth House). No existing trees will be removed along the boundary with the Conservation Area.

Construction of the Proposed Scheme will have no negative visual effects on the Conservation Area. The magnitude of change in the baseline environment is negligible.

The townscape / streetscape and visual effect of the Construction Phase on conservation areas will be Not Significant.

The Proposed Scheme will have a direct effect in removing a short section of the existing low-quality railing / barrier / concrete wall at the northeast corner of the Santry Conservation Area (and open space/linear park). No existing trees will be removed within the Conservation Area. Construction of the Proposed Scheme will involve amendment and alteration of the existing Malahide Road / Greencastle Road junction without direct effects on the Conservation Area. Construction of the Proposed Scheme will have no negative visual effects on the Conservation Area. The magnitude of change in the baseline environment is negligible / low.

The townscape / streetscape and visual effect of the Construction Phase on the Santry River Conservation Area will be Not Significant / Slight, Temporary / Short-Term, Negative.

17.4.3.2.3 Residential Conservation Areas

Residential Conservation Areas are present at: Corner of Brian Road and Malahide Road; Corner of St. Aidan's Road and Malahide Road; and Corner of Marino Crescent and Malahide Road. The Proposed Scheme will have

no effects on the existing boundaries of Residential Conservation Areas. No existing trees will be removed from Residential Conservation Areas.

Construction works associated with the Proposed Scheme (at junction between Malahide Road / Clontarf Road / Marino Mart) will be visible from No.1 Marino Crescent. The magnitude of change in the baseline environment is low.

The townscape / streetscape and visual effect of the Construction Phase on residential conservation areas will be Slight / Moderate, Temporary / Short-Term, Negative.

17.4.3.2.4 Protected Structures

Refer also to Chapter 16 (Architectural Heritage) for full details on protected structures.

Localised widening of the existing road corridor for the Proposed Scheme will have no direct effects on the two granite milestones with cast iron plaques (RPS No.4862 at Belcamp Lane and RPS No.4854 at Griffith Avenue). Although there will be no direct effects, the setting for these Protected Structures will be affected by the works.

While a third milestone (RPS No.4859), located in the Malahide Road boundary wall at St. David's Wood, is within the works area for the Proposed Scheme, it will not be directly affected by the works. Although there will be no direct effects, the setting for these Protected Structures will be affected by the works. The magnitude of change is medium.

The townscape / streetscape and visual effect of the Construction Phase on these Protected Structures will be Moderate / Significant, Temporary / Short-Term, Negative.

There will be no effects on Casino Marino (RPS No.4858). The magnitude of change is negligible.

The townscape / streetscape and visual effect of the Construction Phase on this Protected Structure will be Not Significant.

There are Protected Structures at No.62 and 64 Malahide Road (RPS No.4852 and 4853). A large number of the private area / gardens fronting Malahide Road are identified for temporary acquisition. The Proposed Scheme will have direct effects on properties through removal and reinstatement of road boundary railing and plinth wall and majority of modern garden / driveways. The Proposed Scheme will have direct effects on properties through removal of mature trees in front garden of adjoining Winston Villa – trees are prominent in view from properties. Construction works along Malahide Road will have visual effects on these Protected Structures. The magnitude of change is high.

The townscape / streetscape and visual effect of the Construction Phase on these Protected Structures will be Significant / Very Significant, Temporary / Short-Term, Negative.

There are Protected Structures at No.1 to 25 Marino Crescent (RPS No.4893 to 4917). Construction works associated with the Proposed Scheme (at junction between Malahide Road / Clontarf Road / Marino Mart) will have visual effects on No.1 Marino Crescent. There may be minor oblique views of the works experienced from other properties on Marino Crescent. The magnitude of change is low.

The townscape / streetscape and visual effect of the Construction Phase on these Protected Structures will be Slight / Moderate, Temporary / Short-Term, Negative.

17.4.3.2.5 Amenity Designations

Works in proximity to open spaces / sports grounds / parks at O'Tooles GAA and Marino Crescent Park will not have any appreciable effects. Existing boundaries will be retained. The magnitude of change is low.

The townscape / streetscape and visual effect of the Construction Phase on O'Tooles GAA and Marino Crescent Park will be Slight, Temporary / Short-Term, Negative.

Works will result in the temporary use and acquisition of large open space / grass area adjacent to Buttercup Park for use as a Construction Compound. Temporary fencing / hoarding will be erected and public excluded. Reinstatement landscaping works will also be undertaken. The magnitude of change is high.

The townscape / streetscape and visual effect of the Construction Phase on open space / grass area adjacent to Buttercup Park will be Significant, Short-Term, Negative.

Works will result in changes at Ayrfield Open Space with the temporary acquisition of small open space / grass area to provide footpath / cycle track link to Ayrfield Drive. Temporary fencing / hoarding will be erected and public excluded. There will be a temporary increase in activity and visual clutter, and a reduction in access and views through the space. The magnitude of change is low.

The townscape / streetscape and visual effect of the Construction Phase on Ayrfield Open Space will be Slight / Moderate, Temporary / Short-Term, Negative.

The Proposed Scheme will have a direct effect on landscape areas / open space within and around existing roundabout junction at Malahide Road / Ardlea Road / Gracefield Road Junction. A small number of existing mainly younger trees will be removed. A new signalised crossroad junction will be constructed. There will be a temporary increase in construction activity and visual clutter. The magnitude of change is medium / high.

The townscape / streetscape and visual effect of the Construction Phase on landscape areas at roundabout junction at Malahide Road / Ardlea Road / Gracefield Road Junction will be Significant, Temporary / Short-Term, Negative.

The works will result in the temporary use and acquisition of linear roadside open space at Pinewood / St. David's Wood with mature trees so as to provide a footpath / cycle track. Temporary fencing / hoarding will be erected and public excluded. Some existing trees will be removed and others crown lifted. Changes will be made to existing levels and runoff from new hard surfaces will be diverted into open space. Existing fence and pedestrian entrance to St. David's Wood will be relocated to a setback location, and existing boundary wall to road will be lowered. Milepost feature (Protected Structure) set in roadside boundary wall – will be retained in situ. There will be a temporary increase in construction activity and visual clutter. The magnitude of change is high.

The townscape / streetscape and visual effect of the Construction Phase on linear roadside open space at Pinewood / St. David's Wood will be Significant / Very Significant, Temporary / Short-Term, Negative.

The Proposed Scheme will require temporary acquisition of a portion of the existing open space / park at Maypark (Donnycarney Park) along full length of the frontage adjoining Malahide Road. Temporary fencing / hoarding will be erected, and public excluded. Access will continue to be available to the majority of the park. There will be a temporary increase in activity and visual clutter, and a reduction in access and views through the space. Works will require removal of existing roadside boundary, entrance and internal footpath. Existing boundary, entrance and footpath will be re-erected / re-established at setback location. The magnitude of change is high.

The townscape / streetscape and visual effect of the Construction Phase on open space / park at Maypark (Donnycarney Park) will be Significant / Very Significant, Temporary / Short-Term, Negative.

There will be no change to Clontarf Golf Course, planting or boundaries. Construction works will be screened from users of the course by boundary vegetation. The magnitude of change is negligible.

The townscape / streetscape and visual effect of the Construction Phase on Clontarf Golf Course will be Not Significant.

The Proposed Scheme will provide for changes to existing pedestrian crossings at the island in Malahide Road / Clontarf Road / Marino Mart Junction. One existing mature plane tree and one existing young oak tree will be removed. The magnitude of change is low / medium.

The townscape / streetscape and visual effect of the Construction Phase on Clontarf Golf Course will be Slight / Moderate, Temporary / Short-Term, Negative.

17.4.3.2.6 Tree Preservation Orders / Tree Preservation Objectives

There are no Tree Preservation Orders / preservation objectives along the Proposed Scheme.

17.4.3.2.7 Preserved Views / Scenic Views, etc.

There are no preserved views / scenic views along the Proposed Scheme.

17.4.3.2.8 Properties

The Proposed Scheme will require the temporary acquisition of portions of private area / front gardens of the following (44 no.) residential properties, which continue to have mature gardens and plantings with established / original boundaries:

- Villa Maria, Arva, Sunview, Helenville, Upmeads, Saint Gerard's, Iona, and Maria Philomena, Malahide Road (8 properties);
- Nos. 1,2, 3, 4, 5, 6 and 7 Maypark, Malahide Road;
- Nos. 232, 234, 216, 218, 226, 212, 210, 202, 200, 198, Malahide Road;
- Nos. 62, 64 and Winston Villa, Malahide Road;
- Nos. 20, 22, 24, 26, 28, 38, Malahide Road; and
- Nos. 1, 3, 5, 7, 9, 11, 13, 15 and 17, Malahide Road.

Access to properties for the owners/occupiers will be maintained as far as reasonably practicable. While there may be temporary constraints to access during the normal hours of work nobody will be required to vacate the properties. Also emergency vehicle access will be maintained.

The works will require the removal of existing roadside boundary walls, railings, entrances gates and hedgerows, together with areas of existing garden plantings garden trees, pavings and garden features. New boundary walls, railings, entrances gates and hedgerows to match existing will be reinstated at setback location, pending detailed design and discussion with landowners. There will be open views / viewing of construction works adjacent and within property. The magnitude of change is very high.

The townscape / streetscape and visual effect of the Construction Phase on these properties will be Very Significant / Profound, Temporary / Short-Term, Negative.

The Proposed Scheme will require temporary acquisition of portions of private area / front gardens of the following (37no.) residential properties, which have already opened-up or significantly modified the front boundaries for parking purposes:

- Nos. 44, 44a, Malahide Road;
- Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 Artane Cottages Upper, Malahide Road;
- Nos. 8, 9, 10 Maypark, Malahide Road;
- Nos. 236, 238; No.204, 206, 208; No.220, 222, 224, Malahide Road;
- No. 48, 50, 52, 54, 56, 58 and 60, Malahide Road;
- No.30, 32, 34, 36, Malahide Road; and
- No. 19, Malahide Road.

Temporary fencing / hoarding will be erected and access to property / driveways will be maintained where practicable. For example repaving of a driveway may require access restrictions for certain periods.

Works will require removal of existing roadside boundary walls, railings, entrances gates and hedgerows, together with areas of existing garden plantings garden trees, pavings and garden features. New boundary walls, railings, entrances gates and hedgerows to match existing will be reinstated at setback location. Open views / viewing of construction works adjacent and within property. The magnitude of change is high.

The townscape / streetscape and visual effect of the Construction Phase on these properties will be Significant / Very Significant, Temporary / Short-Term, Negative.

Construction works associated with the Proposed Scheme will require the temporary acquisition of portions of non-residential properties (e.g. Hilton Hotel, Coolock Village, commercial area at Kilmore Road Junction) directly fronting the Proposed Scheme / Malahide Road. The magnitude of change is medium.

The townscape / streetscape and visual effect of the Construction Phase on these properties will be Moderate / Significant, Temporary / Short-Term, Negative.

In addition to those properties directly impacted through acquisition (temporary and / or permanent) of private areas, construction of the Proposed Scheme will also result in visual effects for other residential and non-residential properties located along, fronting and viewing the Proposed Scheme. Effects will arise from the provision of a Construction Compound, general disturbance, demolition, excavation and construction works within the public road corridor of the Proposed Scheme. The magnitude of change is low.

The townscape and visual effect of the Construction Phase on these properties will be Moderate, Temporary / Short-Term, Negative.

17.4.3.2.9 Trees

The Proposed Scheme will require limited removal of existing trees and plantings at a number of locations along the road corridor, most notably at: Malahide Road / Priorswood Road / Blunden Drive roundabout junction; Malahide Road / Ardlea Road / Gracefield Road (Artane) roundabout junction (Ch.6050); and Open space alongside Pinebrook Road / St. David's Wood; and within private property / gardens acquired on a temporary basis. The magnitude of change is low.

The townscape and visual effect of the Construction Phase on trees and plantings will be Moderate, Short-Term, Negative.

The summary of the landscape and visual impact assessment for the Construction Phase of the Proposed Scheme is set out in Table 17.7.

Table 17.7: Summary of Potential Construction Phase Impacts

Townscape Receptor	Proposed Change	Baseline Sensitivity	Magnitude of Change	Significance and Quality of Townscape Effects
Townscape and Streetscape Character				
	Mayne River Avenue to Belcamp Lane – Malahide Road. For proposed changes see Section 17.4.3.1.1	Low / Medium	Low	Slight / Moderate Temporary Negative
	Belcamp Lane to Gracefield Road – Malahide Road. For proposed changes see Section 17.4.3.1.2	Medium / High	Medium / High	Significant Temporary / Short-Term Negative
	Gracefield Road to Marino Mart / Fairview – Malahide Road. For proposed changes see Section 17.4.3.1.3	High	Very High	Significant / Very Significant Temporary / Short-Term Negative
Streetscape Characteristics and Visual Effects				
ACAs	Casino Marino For proposed changes see Section 17.4.3.2.1	Very High	Negligible	Not Significant
Conservation Areas	Casino Marino For proposed changes see Section 17.4.3.2.2	Very High	Negligible	Not Significant
	Santry River For proposed changes see Section 17.4.3.2.2	High	Negligible / Low	Not Significant / Slight Temporary / Short-Term Negative
Residential Conservation Areas	Corner of Brian Road and Malahide Road / Corner of St. Aidan's Road and Malahide Road / Corner of Marino Crescent and Malahide Road. For proposed changes see Section 17.4.3.2.3	High	Low	Slight / Moderate Temporary / Short-Term Negative
Protected Structures (Selected)	Mileposts For proposed changes see Section 17.4.3.2.4	Medium	Medium	Moderate / Significant Temporary / Short-Term Negative
	Casino, Marino (RPS No.4858) For proposed changes see Section 17.4.3.2.4	Very High	Negligible	Not Significant
	Houses No.62 and 64 Malahide Road (RPS No.4852 and 4853). For proposed changes see Section 17.4.3.2.4	Very High	High	Significant / Very Significant Temporary / Short-Term Negative
	Houses No.1 to 25 Marino Crescent (RPS No.4893 to 4917). For proposed changes see Section 17.4.3.2.4	Very High	Low	Slight / Moderate Temporary / Short-Term Negative
Amenity Designations	O'Toole's GAA; Marino Crescent Park For proposed changes see Section 17.4.3.2.5	High	Low	Slight Temporary / Short-Term Negative

Townscape Receptor	Proposed Change	Baseline Sensitivity	Magnitude of Change	Significance and Quality of Townscape Effects
	Land adjacent to Buttercup Park (Site for Construction Compound) For proposed changes see Section 17.4.3.2.5	Medium	High	Significant Short-Term Negative
	Ayrfield Open Space For proposed changes see Section 17.4.3.2.5	Medium	Low	Slight / Moderate Temporary / Short-Term Negative
	Malahide Road / Ardlea Road / Gracefield Road Junction For proposed changes see Section 17.4.3.2.5	Low / Medium	Medium / High	Significant Temporary / Short-Term Negative
	Pinebrook / St. David's Wood For proposed changes see Section 17.4.3.2.5	High	High	Significant / Very Significant Temporary / Short-Term Negative
	Maypark (Donnycarney Park) For proposed changes see Section 17.4.3.2.5	High	High	Significant / Very Significant Temporary / Short-Term Negative
	Clontarf Golf Course For proposed changes see Section 17.4.3.2.5	High	Negligible	Not Significant
	Island in Malahide Road / Clontarf Road / Marino Mart Junction For proposed changes see Section 17.4.3.2.5	Low	Low / Medium	Slight / Moderate Temporary / Short-Term Negative
Tree Preservation Orders / Tree Protection Objectives	None	N/A	N/A	N/A
Preserved Views / Scenic Views etc.	None	N/A	N/A	N/A
Properties	Part of properties in permanent acquisition which have mature gardens and plantings with established boundaries For proposed changes see Section 17.4.3.2.8	High	Very High	Very Significant / Profound Temporary / Short-Term Negative
	Part of properties in permanent acquisition which have already opened up, or significantly modified the front boundaries for parking purposes For proposed changes see Section 17.4.3.2.8	Medium	High	Significant / Very Significant Temporary / Short-Term Negative
	Non-residential properties included in temporary acquisition (e.g. Hilton Hotel, Coolock Village, commercial area at Kilmore Road Junction) For proposed changes see Section 17.4.3.2.8	Medium	Medium	Moderate / Significant Temporary / Short-Term Negative
	Properties not included in temporary acquisition or with minimal direct contact For proposed changes see Section 17.4.3.2.8	Medium / High	Low	Moderate Temporary / Short-Term

Townscape Receptor	Proposed Change	Baseline Sensitivity	Magnitude of Change	Significance and Quality of Townscape Effects
				Negative
Trees and Vegetation	For proposed changes see Section 17.4.3.2.9	Medium / High	Low	Moderate Short-Term Negative

17.4.4 Operational Phase

The Operational Phase of the Proposed Scheme will give rise to townscape, streetscape and visual effects through the following:

- Alterations in the corridor of the existing road/street;
- Changes in traffic, pedestrian and cycle movements;
- Modification of areas of private property / gardens / boundaries; and
- Adjustments to other areas / boundaries.

These effects may be temporary, short-term, medium-term, long-term or permanent.

While alterations in the road corridor and changes in traffic, pedestrian and cycle movements will be features of the Proposed Scheme, it is not anticipated these aspects will give rise to significant landscape, townscape or visual effects. Changes in road corridors, including in traffic signalisation, signage, and in carriageway allocation and traffic movements are a common and regular aspect of active road and traffic management in urban roads and streets. Therefore, such aspects may be considered as a dynamic part of the receiving streetscape environment.

17.4.4.1 Impacts on Townscape and Streetscape Character

As set out in Section 17.3.1 the Proposed Scheme is sub-divided into three townscape / streetscape character areas:

- Mayne River Avenue to Belcamp Lane – Malahide Road;
- Belcamp Lane to Gracefield Road – Malahide Road; and
- Gracefield Road to Marino Mart / Fairview – Malahide Road.

17.4.4.1.1 Mayne River Avenue to Belcamp Lane – Malahide Road

The baseline townscape is of low / medium sensitivity. The Operational Phase of the Proposed Scheme will give rise to minor changes outside of established outer city suburbs – the vast majority of which are contained within the corridor of the existing dual carriageway of the Malahide Road. The Operational Phase will not alter the overall existing townscape / streetscape character along the Proposed Scheme. The magnitude of change in the baseline environment is negligible.

The effect of the Operational Phase will be Imperceptible.

17.4.4.1.2 Belcamp Lane to Gracefield Road – Malahide Road

The baseline townscape is of medium / high sensitivity. The Operation Phase of the Proposed Scheme will give rise to minor changes within these established outer city suburbs – the vast majority of which are contained within the corridor of the existing primarily dual carriageway of the Malahide Road. The Operational Phase of the Proposed Scheme will not alter the overall townscape character but will have some positive effects on the existing streetscape character along this section of the Proposed Scheme through provision of improved landscape to open spaces along Malahide Road from Priorswood Road / Malahide Road Junction to Greencastle Road Junction, including open space adjacent to Buttercup Park, and Malahide Road / Ardlea Road / Gracefield Road

(Artane) junction, as well as new 'pocket park' at Brookville Park. Proposals involve new tree planting and provision of species-rich grassland throughout these spaces. The magnitude of change in the baseline environment is low.

The effect of the Operational Phase will be Slight, Long-Term, Positive.

17.4.4.1.3 Gracefield Road to Marino Mart / Fairview – Malahide Road

The baseline townscape is of high sensitivity. The Operational Phase of the Proposed Scheme will give rise to moderate to major changes within the corridor of the primarily single carriageway of the Malahide Road through these established inner city suburbs. The Proposed Scheme will increase the overall width of road corridor and tend to accentuate the significance of the road infrastructure with some further loss of remaining indigenous character. However, there will be localised improvements to public realm most notably at Malahide Road / Collins Avenue and Malahide Road / Elm Road junctions and frontage of Our Lady of Consolation Church. The magnitude of change in the baseline environment is moderate.

The effect of the Operational Phase will be Moderate, Long-Term, Negative.

17.4.4.1.4 Architectural Conservation Areas (ACAs)

The Operational Phase of the Proposed Scheme will have no perceivable effects on the Casino Marino ACA (also a park / sports ground) which bounds the Malahide Road corridor north and south of Nazareth House.

Operation of the Proposed Scheme will have no negative effects on views to or from the ACA / open space. The magnitude of change in the baseline environment is negligible.

The townscape / streetscape and visual effect of the Operational Phase on the architectural conservation area will be Not Significant.

17.4.4.1.5 Conservation Areas

The Operational Phase of the Proposed Scheme will have no perceivable effects on the Casino Marino Conservation Area (which bounds the Malahide Road corridor south of Nazareth House).

Operation of the Proposed Scheme will have no negative visual effects on the Conservation Area. The magnitude of change in the baseline environment is negligible.

The townscape / streetscape and visual effect of the Operational Phase on conservation areas will be Not Significant.

The Operational Phase of the Proposed Scheme will have no perceivable effect on the Santry River Conservation Area (and open space/linear park). The Operational Phase of the Proposed Scheme will have no negative visual effects on the Conservation Area. The magnitude of change in the baseline environment is negligible.

The townscape / streetscape and visual effect of the Operational Phase on conservation areas will be Not Significant.

17.4.4.1.6 Residential Conservation Areas

Residential Conservation Areas are present at: Corner of Brian Road and Malahide Road; Corner of St. Aidan's Road and Malahide Road; and Corner of Marino Crescent and Malahide Road. The Operational Phase of the Proposed Scheme will have no perceivable effects on the Residential Conservation Areas. The magnitude of change in the baseline environment is negligible.

The townscape / streetscape and visual effect of the Operational Phase on residential conservation areas will be Not Significant.

17.4.4.1.7 Protected Structures

Refer also to Chapter 16 (Architectural Heritage) for full details on protected structures.

Two granite milestones with cast iron plaques will be reinstated (RPS No.4862 at Belcamp Lane and RPS No.4854 at Griffith Avenue) and will not be directly affected by the Proposed Scheme. A third milestone (RPS No.4859), located in the Malahide Road boundary wall at St. David's Wood, is within the works area for the Proposed Scheme. It will not be directly affected by the Proposed Scheme but its context will be slightly altered through changes to the adjoining wall. The change is limited in scale. The magnitude of change is low.

The townscape / streetscape and visual effect of the Operational Phase on these Protected Structures will be Not Significant, Long-Term, Negative.

There will be no effects on Casino Marino (RPS No.4858) due to the distance and visual separation from the proposed changes. The magnitude of change is negligible.

The townscape / streetscape and visual effect of the Operational Phase on this Protected Structure will be Not Significant.

There are protected Structures at No.62 and 64 Malahide Road (RPS No.4852 and 4853). A small portion of front boundary of private area / garden will be permanently acquired. New boundaries to match existing will be established on setback alignment. A small portion of front boundary of private area / garden permanently acquired. The change is limited in scale and does not perceptibly affect the characteristics of the protected structures. The magnitude of change is low.

The townscape / streetscape and visual effect of the Operational Phase on Protected Structures will be Moderate, Long-Term, Negative.

There are Protected Structures at No.1 to 25 Marino Crescent (RPS No.4893 to 4917). The Operational Phase of the Proposed Scheme has no perceptible effects on these protected structures or their setting. The magnitude of change is negligible.

The townscape / streetscape and visual effect of the Operational Phase on Protected Structures will be Not Significant, Long-Term, Negative.

17.4.4.1.8 Amenity Designations

The Operational Phase of the Proposed Scheme will have no perceptible effects on open space at O'Toole's GAA and Marino Crescent Park. The magnitude of change is negligible.

The townscape / streetscape and visual effect of the Operational Phase on O'Tooles GAA and Marino Crescent Park will be Not Significant, Long-Term, Negative.

The Operational Phase will provide positive changes to the open space / grass area adjacent to Buttercup Park. There will be improved access routes and increase planting resulting a more usable space. The magnitude of change is medium.

The townscape / streetscape and visual effect of the Operational Phase on open space / grass area adjacent to Buttercup Park will be Moderate, Long-Term, Positive.

Ayrfield Open Space will remain as open space with additional footpath / cycle track link to Ayrfield Drive. The change is limited in scale and characteristic in the context, with a beneficial impact on access. The magnitude of change is low.

The townscape / streetscape and visual effect of the Operational Phase on Ayrfield Open Space will be Slight, Long-Term, Positive.

The Operational Phase of the Proposed Scheme will result in a change from Malahide Road / Ardlea Road / Gracefield Road Junction (Artane Roundabout) to a signalised crossroad junction. There will be a direct effect on landscape areas / open space within and around existing roundabout junction, due to change in extents and location of landscaped areas. A small number of existing mainly younger trees will be removed and replacement planting provided. The Proposed Scheme will result in a loss of some areas of soft landscaping, but substantial replanting of landscape areas and trees. The magnitude of change is low.

The townscape / streetscape and visual effect of the Operational Phase on landscape areas at roundabout junction at Malahide Road / Ardlea Road / Gracefield Road Junction will be Moderate, Long-Term, Positive.

The linear roadside open space at Pinewood / St. David's Wood will remain as open space with new footpath / cycle track link. There will be a continued loss of some existing trees, which are mainly semi-mature specimens. There will be a benefit to the usability of the space through creation of the new foot and cycle paths and from raising of tree crowns to improve visibility and perception of safety. The milepost feature (Protected Structure) in the roadside boundary wall will be retained in situ, and there will be an alteration of height of retaining wall to the edge of the road. The magnitude of change is high.

The townscape / streetscape and visual effect of the Operational Phase on the linear roadside open space at Pinewood / St. David's Wood will be Moderate, Long-Term, Positive.

The Proposed Scheme will require an area of permanent acquisition from Maypark (Donnycarney Park) along the full extent of the boundary with Malahide Road. The existing boundary, entrance and footpath and new planting will be re-erected / re-established at a setback alignment along the new footpath edge. The change is moderate in extent with the partial loss of a key element (land area) but the character of the open space will be relatively unchanged. The magnitude of change is medium.

The townscape / streetscape and visual effect of the Operational Phase on the open space / park at Maypark (Donnycarney Park) will be Moderate, Long-Term, Negative.

There will be no change to Clontarf Golf Course, planting or boundaries. Operation will be screened from users of the course by boundary vegetation. There will be no impact on key elements, features or characteristics. The magnitude of change is negligible.

The townscape / streetscape and visual effect of the Operational Phase on Clontarf Golf Course will be Not Significant.

Operation of the Proposed Scheme will result in changes to road and pavement layout to the island in Malahide Road / Clontarf Road / Marino Mart Junction, with continued effects resulting from the loss of two existing trees in the Construction Phase, one mature, and provision of two new replacement trees. The loss of the mature tree is a major alteration to a key element of this space, and although a replacement is provided, the loss will not be mitigated until the replacement has matured over the long-term. The magnitude of change is high.

The townscape / streetscape and visual effect of the Operational Phase on the island in Malahide Road / Clontarf Road / Marino Mart Junction, will be Moderate, Long-Term, Negative.

17.4.4.1.9 Tree Preservation Orders / Tree Preservation Objectives

There are no Tree Preservation Orders / preservation objectives along the Proposed Scheme.

17.4.4.1.10 Preserved Views / Scenic Views, etc.

There are no preserved views / scenic views along the Proposed Scheme.

17.4.4.1.11 Properties

The Proposed Scheme will require small area of permanent acquisition of private area / front gardens of the following (41no.) residential properties, which have mature gardens and plantings with established boundaries:

- Villa Maria, Arva, Sunview, Helenville, Upmeads, Saint Gerard's, Iona, and Maria Philomena, Malahide Road (8 properties);
- Nos. 1, 2, 3, 4, 5, 6 and 7 Maypark, Malahide Road;
- Nos. 232, 234, 216, 218, 226, 212, 210, 202, 200, 198, Malahide Road;
- Nos. 62, 64 and Winston Villa, Malahide Road;
- Nos. 20, 22, 24, 26, 28, 38, Malahide Road; and
- Nos. 1, 3, 5, 7, 9, 11, 13, 15 and 17, Malahide Road.

New boundary walls, railings and entrances gates will be reinstated at setback location. Overall, there would be a relatively small loss of private / garden area which will result in a partial loss of landscape amenity space, but there would be no notable change to the key characteristics of these properties. The magnitude of change is medium.

The townscape / streetscape and visual effect of the Operational Phase on these properties will be Moderate / Significant, Long-Term, Negative.

Proposed Scheme will require a small area of permanent acquisition of private area / front gardens of the following (37no.) residential properties, which have already opened-up, or significantly modified the front boundaries for parking purposes:

- No.44 and 44a, Malahide Road;
- Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 Artane Cottages Upper, Malahide Road;
- No.8, 9, 10 Maypark, Malahide Road;
- No.236, 238; No.204, 206, 208; No.220, 222, 224, Malahide Road;
- No. 48, 50, 52, 54, 56, 58 and 60, Malahide Road; and
- No. 19 Malahide Road.

New boundary walls, railings and entrances gates to match existing will be reinstated at setback location. Overall, there will be a small loss of private / garden area resulting a minor loss of landscape amenity space but there would be no notable effect on the key characteristics of these properties. The magnitude of change is medium.

The townscape / streetscape and visual effect of the Operational Phase on these properties will be Slight / Moderate, Long-Term, Negative.

The Operational Phase of the Proposed Scheme will have no adverse effects on non-residential properties (e.g. Hilton Hotel, Coolock Village, commercial area at Kilmore Road Junction) directly fronting the Proposed Scheme / Malahide Road. There will be no impact on key elements, features or characteristics of these properties. The magnitude of change is negligible.

The townscape / streetscape and visual effect of the Operational Phase on these properties will be Not Significant.

The Operational Phase of the Proposed Scheme will have no adverse impacts on other residential and non-residential properties located along, fronting and viewing the Proposed Scheme with minimal direct contact. There will be no impact on key elements, features or characteristics of these properties. The magnitude of change is negligible.

The townscape and visual effect of the Operational Phase on these properties will be Not Significant.

17.4.4.1.12 Trees

The Proposed Scheme will require limited removal of existing trees and vegetation at a number of locations along the road corridor during the Construction Phase and this loss will remain in the Operational Phase. There will be replacement planting where feasible along the Proposed Scheme as well as additional planting to open spaces; most notably there will be substantial new tree planting at land adjacent to Buttercup Park. The magnitude of change is low / medium.

The townscape and visual effect of the Operational Phase on trees and plantings will be Moderate, Medium to Long-Term, Positive.

The Landscape and Visual Impact Assessment for the Operational Phase of the Proposed Scheme is set out in Table 17.8.

17.4.4.1.13 Potential Benefits

Where the measures incorporated in the Proposed Scheme are carried out effectively there is potential for a beneficial effect to the fabric and character of the receiving landscape / townscape. Measures include for improvements to the streetscape in several locations along the Proposed Scheme, including new or improved footpath and cycle tracks or cycle routes, improved or more visually appealing paving / surfacing, street furniture and planting, including opportunities for incorporation of biodiversity and SuDS. In some cases, this can create a net benefit compared to the baseline landscape, such as the Belcamp Lane to Gracefield Road section of the townscape, the open space adjacent to Buttercup Park, the open space at Pinebrook / St. David's Wood, the open space at Ayrfield Drive and the open spaces at Malahide Road / Ardlea Road / Gracefield Road Junction. These have been considered and described in Section 17.4.1 and effects are listed in Table 17.8.

Table 17.8: Summary of Potential Operational Phase Impacts

Townscape Receptor	Proposed Change	Baseline Sensitivity	Magnitude of Change	Significance and Quality of Townscape Effects
Townscape and Streetscape Character				
1. Mayne River Avenue to Gracefield Road – Malahide Road				
	- Mayne River Avenue to Belcamp Lane – Malahide Road. For proposed changes see Section 17.4.4.1.1	Low / Medium	Negligible	Imperceptible
	- Belcamp Lane to Gracefield Road – Malahide Road. For proposed changes see Section 17.4.4.1.2	Medium / High	Low	Slight Long-Term Positive
2. Gracefield Road to Marino Mart / Fairview – Malahide Road. For proposed changes see Section 17.4.4.1.3				
Streetscape Characteristics and Visual Effects				
ACAs	Casino Marino For proposed changes see Section 17.4.4.1.4	Very High	Negligible	Not Significant, Long-Term, Negative
Conservation Areas	Casino Marino For proposed changes see Section 17.4.4.1.5	Very High	Negligible	Not Significant, Long-Term, Negative
	Santry River For proposed changes see Section 17.4.4.1.5	High	Negligible	Not Significant, Long-Term, Negative
Residential Conservation Areas	Corner of Brian Road and Malahide Road / Corner of St. Aidan's Road and Malahide Road / Corner of Marino Crescent and Malahide Road. For proposed changes see Section 17.4.4.1.6	High	Negligible	Not Significant, Long-Term, Negative
Protected Structures	Mileposts For proposed changes see Section 17.4.4.1.7	Medium	Low	Not Significant, Long-Term, Negative
	Casino, Marino (RPS No.4858) For proposed changes see Section 17.4.4.1.7	Very High	Negligible	Not Significant, Long-Term, Negative
	Houses No.62 and 64 Malahide Road (RPS No.4852 and 4853). For proposed changes see Section 17.4.4.1.7	Very High	Low	Moderate, Long-Term, Negative
	Houses No.1 to 25 Marino Crescent (RPS No.4893 to 4917). For proposed changes see Section 17.4.4.1.7	Very High	Negligible	Not Significant, Long-Term, Negative
Amenity Designations	O'Toole's GAA; Marino Crescent Park For proposed changes see Section 17.4.4.1.8	High	Negligible	Not Significant, Long-Term, Negative
	Land adjacent to Buttercup Park (Site for Construction Compound) For proposed changes see Section 17.4.4.1.8	Medium	Medium	Moderate Long-Term Positive
	Ayrfield Open Space For proposed changes see Section 17.4.4.1.8	Medium	Low	Slight Long-Term Positive
	Malahide Road / Ardlea Road / Gracefield Road Junction For proposed changes see Section 17.4.4.1.8	Low / Medium	Low	Moderate Long-Term Positive

Townscape Receptor	Proposed Change	Baseline Sensitivity	Magnitude of Change	Significance and Quality of Townscape Effects
	Pinebrook / St. David's Wood For proposed changes see Section 17.4.4.1.8	Medium	Medium	Moderate Long-Term Positive
	Maypark (Donnycarney Park) For proposed changes see Section 17.4.4.1.8	High	Medium	Moderate Long-Term Negative
	Clontarf Golf Course For proposed changes see Section 17.4.4.1.8	High	Negligible	Not Significant
	Island in Malahide Road / Clontarf Road / Marino Mart Junction For proposed changes see Section 17.4.4.1.8	Low	High	Moderate Long-Term Negative
Tree Preservation Orders / tree Protection Objectives	None	N/A	N/A	N/A
Preserved Views / Scenic Views etc.	None	N/A	N/A	N/A
Properties	Part of properties in permanent acquisition which have mature gardens and plantings with established boundaries For proposed changes see Section 17.4.4.1.11	High	Medium	Moderate / Significant Long-Term Negative
	Part of properties in permanent acquisition which have already opened-up, or significantly modified the front boundaries for parking purposes For proposed changes see Section 17.4.4.1.11	Medium	Medium	Slight / Moderate Long-Term Negative
	Non-residential properties included in temporary acquisition (e.g. Hilton Hotel, Coolock Village, commercial area at Kilmore Road Junction) For proposed changes see Section 17.4.4.1.11	Medium	Negligible	Not Significant Long-Term Negative
	Properties not included in temporary acquisition or with minimal direct contact For proposed changes see Section 17.4.4.1.11	Medium / High	Negligible	Not Significant Long-Term Negative
Trees and Vegetation	For proposed changes see Section 17.4.4.1.11	Medium / High	Low / Medium	Moderate Medium to Long-Term Positive

17.5 Mitigation and Monitoring Measures

This Section describes mitigation and monitoring measures which are proposed to ameliorate, remediate or reduce significant landscape (townscape) and visual impacts from the Construction and Operational Phases wherever possible.

17.5.1 Construction Phase

A series of mitigation and management measures are proposed to avoid, reduce or remediate, wherever practicable significant negative landscape (townscape) and visual effects of the Construction Phase of the Proposed Scheme. These measures are to be applied across the scheme wherever necessary to avoid disturbance of landscape features or characteristics to be retained. Generally, the effect rating post-mitigation will be the same as pre-mitigation, however the measures proposed should still be applied as necessary to manage the potential effects of construction activities. A summary of predicted Construction Phase effects following the implementation of mitigation and monitoring measures is listed in Table 17.9.

- Trees and vegetation to be retained within and adjoining the works area will be protected in accordance with the British Standard Institution (BSI) British Standard (BS) 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' (BSI 2012). Works required within the root protection area (RPA) of trees to be retained will follow a project-specific arboricultural methodology for such works, which will be prepared by a professional qualified arborist. For details of trees to be retained refer to Tree Protection Plans (BCIDA-ACM-ENV_ZZ-0001_XX_00-DR-LL-0001 to 0021 in the Arboricultural Impact Assessment (Appendix A17.1 in Volume 4 of this EIAR));
- Wherever practicable, trees and vegetation will be retained within the Proposed Scheme. Trees and vegetation identified for removal will be removed in accordance with 'BS 3998:2010 Tree Work – Recommendations' (BSI 2010) and best arboricultural practices as detailed and monitored by a professional qualified arborist. For details of trees and vegetation to be removed refer to Tree Protection Plans (BCIDA-ACM-ENV_ZZ-0001_XX_00-DR-LL-0001 to 0021 in the Arboricultural Impact Assessment (Appendix A17.1 in Volume 4 of this EIAR)) and Landscape General Arrangements (BCIDA-ACM-UBR_ZZ-0001_XX_00-DR-LL-9001 in Volume 3 of this EIAR);
- The Arboricultural Assessment prepared for the Proposed Scheme will be fully updated at the end of the Construction Phase and made available, with any recommendations for on-going monitoring of retained trees during the Operational Phase;
- Where properties are subject to permanent and / or temporary acquisition (as listed in Section 17.4.3.2.8 and Section 17.4.4.1.11), an inventory of boundary details and accesses, planting, paving, and other features that may be disturbed or removed will be prepared by the appointed contractor prior to commencement of construction works; and
- Where properties are subject to permanent and / or temporary acquisition (as listed in Section 17.4.3.2.8 and Section 17.4.4.1.11), appropriate measures will be put in place by the appointed contractor to provide for protection of features, trees and vegetation to be retained, for continued access during construction and for adequate security and screening of construction works. All temporary acquisition areas will be fully decommissioned and reinstated at the end of the Construction Phase or at the earliest time after the reinstatement works are completed to the satisfaction of the NTA.

In addition to the above measures, construction works will be managed by the preparation of a Construction Environmental Management Plan (CEMP) - refer to Appendix A5.1 in Volume 4 of the EIAR. This provides the environmental management framework to be adhered during construction of the Proposed Scheme.

Table 17.9: Summary of Predicted Construction Phase Impacts Following the Implementation of Mitigation and Monitoring Measures

Townscape Receptor	Proposed Change	Baseline Sensitivity	Magnitude of Change	Significance and Quality of Townscape Effects
Townscape and Streetscape Character				
1. Mayne River Avenue to Gracefield Road – Malahide Road.				

Townscape Receptor	Proposed Change	Baseline Sensitivity	Magnitude of Change	Significance and Quality of Townscape Effects
-	Mayne River Avenue to Belcamp Lane – Malahide Road. For proposed changes see Section 17.4.3.1.1	Low / Medium	Low	Slight Temporary Negative
-	Belcamp Lane to Gracefield Road – Malahide Road. For proposed changes see Section 17.4.3.1.2	Medium / High	Medium / High	Moderate Temporary / Short-Term Negative
2.	Gracefield Road to Marino Mart / Fairview – Malahide Road. For proposed changes see Section 17.4.3.1.3	High	High	Significant Temporary / Short-Term Negative
Streetscape Characteristics and Visual Effects				
ACA	Casino Marino For proposed changes see Section 17.4.3.2.1	Very High	Negligible	Not Significant
Conservation Areas	Casino Marino For proposed changes see Section 17.4.3.2.2	Very High	Negligible	Not Significant
	Santry River For proposed changes see Section 17.4.3.2.2	High	Negligible	Not Significant / Slight Temporary / Short-term Negative
Residential Conservation Areas	Corner of Brian Road and Malahide Road / Corner of St. Aidan's Road and Malahide Road / Corner of Marino Crescent and Malahide Road. For proposed changes see Section 17.4.3.2.3	High	Low	Slight / Moderate Temporary / Short-term Negative
Protected Structures	Mileposts For proposed changes see Section 17.4.3.2.4	Medium	Medium	Moderate Temporary / Short-term Negative
	Casino, Marino (RPS No.4858) For proposed changes see Section 17.4.3.2.4	Very High	Negligible	Not Significant
	Houses No.62 and 64 Malahide Road (RPS No.4852 and 4853). For proposed changes see Section 17.4.3.2.4	Very High	High	Significant Temporary / Short-term Negative
	Houses No.1 to 25 Marino Crescent (RPS No.4893 to 4917). For proposed changes see Section 17.4.3.2.4	Very High	Low	Slight Temporary / Short-term Negative
Amenity Designations	O'Toole's GAA; Marino Crescent Park For proposed changes see Section 17.4.3.2.5	High	Low	Slight Temporary / Short-term Negative
	Land adjacent to Buttercup Park (Site for Construction Compound) For proposed changes see Section 17.4.3.2.5	Medium	High	Moderate Short-term Negative
	Ayrfield Open Space	Medium	Low	Slight Temporary / Short-term

Townscape Receptor	Proposed Change	Baseline Sensitivity	Magnitude of Change	Significance and Quality of Townscape Effects
	For proposed changes see Section 17.4.3.2.5			Negative
	Malahide Road / Ardlea Road / Gracefield Road Junction For proposed changes see Section 17.4.3.2.5	Low / Medium	Medium / High	Moderate Temporary / Short-term Negative
	Pinebrook / St. David's Wood For proposed changes see Section 17.4.3.2.5	High	High	Significant Temporary / Short-term Negative
	Maypark (Donnycarney Park) For proposed changes see Section 17.4.3.2.5	High	High	Significant Temporary / Short-term Negative
	Clontarf Golf Course For proposed changes see Section 17.4.3.2.5	High	Negligible	Not Significant
	Island in Malahide Road / Clontarf Road / Marino Mart Junction For proposed changes see Section 17.4.3.2.5	Low	Low / Medium	Slight Temporary / Short-term Negative
Properties	Part of properties in permanent acquisition which have mature gardens and plantings with established boundaries For proposed changes see Section 17.4.3.2.8	High	Very High	Very Significant Temporary / Short-term Negative
	Part of properties in permanent acquisition which have already opened up, or significantly modified the front boundaries for parking purposes For proposed changes see Section 17.4.3.2.8	Medium	High	Significant Temporary / Short-term Negative
	Non-residential properties included in temporary acquisition (e.g. Hilton Hotel, Coolock Village, commercial area at Kilmore Road Junction) For proposed changes see Section 17.4.3.2.8	Medium	Medium	Moderate Temporary / Short-term Negative
	Properties not included in temporary acquisition or with minimal direct contact For proposed changes see Section 17.4.3.2.8	Medium / High	Low	Slight / Moderate Temporary / Short-term Negative
Trees and Vegetation	For proposed changes see Section 17.4.3.2.9	Medium / High	Low	Slight / Moderate Short-term Negative

17.5.2 Operational Phase

The design process of the Proposed Scheme has considered the potential for negative landscape / townscape and visual effects. Opportunities to avoid, reduce or remediate these have been taken wherever feasible, and landscape measures are integrated within the design as far as possible. Therefore, no mitigation or monitoring measures are proposed for the Operational Phase and the potential operational effects will remain unchanged - refer to Table 17.9 for a summary of the predicted operational effects. It should be noted, that wherever feasible, the Proposed Scheme proposes improvements of key locations of the townscape / streetscape leading to some positive effects, as described in Section 17.4.4.

It is acknowledged that in some case mitigation of effects on townscape and visual characteristics is neither possible nor practicable – for example, it is not possible to provide landscape mitigation for the loss of land from private properties, or to provide mitigation for loss of mature trees in the short / medium-term, and these effects are residual.

17.5.2.1 Review of Photomontages

Photomontages have been prepared from key or illustrative viewpoints to give an indication of changes and potential effects resulting from the Proposed Scheme during the Operational Phase after the implementation of the scheme. The proposed views are shown with proposed planting at approximately 10 to 15 years post-completion of the Construction Phase. This section describes the existing view available from the chosen viewpoint and the Proposed Scheme changes as illustrated in the photomontage. The Photomontages have been prepared in accordance with the methodology set out in Section 17.2.4.5 and are included in Figure 17.2 in Volume 3 of this EIAR.

17.5.2.1.1 Photomontage View 01 South along Malahide Road (Kilmore Road Junction)

17.5.2.1.1.1 View 01: As Existing

Figure 17.2.1.1 shows the existing view taken from Malahide Road looking north-east towards the roundabout leading to Ardlea Road and Gracefield Road. The road is composed of three lanes, the west side of the road going towards the roundabout, has a single lane and the east side has a lane for general traffic and a bus lane. On the right side of the view, there are single-storey cottage-style terraced housing with front gardens which are enclosed with red brick walls with gated entrances for off-road parking. An advisory cycle lane is present to the left (west) with a separation of lanes towards the background, into separate lanes for buses and general traffic. In the middle ground there are several lampposts combined with telephone poles with wires crossing the roadway several times. Larger street trees occupy the background as the streetscape widens and a further separation of a short cycle lane is visible. There are moderate amounts of street trees and garden trees visible along the road, with trees to front gardens along the left being particularly prominent. The trees have a positive impact on streetscape. A service station with bright signage, and residential properties further along Malahide Road form the background to the view. The character is of a suburban road corridor, with moderate levels of greening provided by regular trees to adjacent residential properties and established street trees.

17.5.2.1.1.2 View 01: As Proposed

Figure 17.2.1.2 shows the proposed view from the same viewpoint during the Operational Phase. The primary changes to the viewpoint are the widening of the road on both sides, the introduction of segregated cycle tracks, the loss and reinstatement of garden boundaries, and notable loss of trees and garden vegetation. There is also the introduction of a new bus lane to the left of the road.

Cycle tracks have been introduced with red tarmac surfacing and footpaths are reinstated with poured concrete finish as existing. The new view is more open, with less features of visual interest, and more visually dominated by the road corridor, due mainly to loss of the trees on the west side of the road. There will be a notable change to the character and visual amenity of the view, although this would be mitigated over time by the growth of replacement planting to some gardens.

17.5.2.1.2 Photomontage View 02: South along Malahide Road (Elm Mount Road Junction)

17.5.2.1.2.1 View 02: As Existing

Figure 17.2.2.1 shows the existing view taken from Malahide Road next to the junction with Elm Mount Road looking south-west. This section of Malahide Road is composed of two lanes for general traffic and two bus lanes, and a signalised junction with various junction road markings and traffic signals. There are two lanes for general traffic to Elm Mount Road and the road is bordered by mown verges / grassland. In the foreground to the right is a masonry wall bordering Thorndale Park with some small tree canopies overhanging the wall and footpath. In the middle ground on the right side there is four-terraced two-storey houses with painted boundary walls and front facing driveways adjoining the road. On the left side of the view is Maypark enclosed with a black steel fence and pedestrian gate. The park is mainly amenity grassland with a substantial row of medium/large mature trees along the edge of the road which are of importance. There are also mature trees further along the road within residential gardens that help to soften the streetscape. There is a pedestrian traffic crossing from the park to Elm Mount Road. The character is of a suburban junction with the presence of adjacent Mayfield Park and mature trees providing good levels of greening to the streetscape.

17.5.2.1.2.2 View 02: As Proposed

Figure 17.2.2.2 shows the proposed view from the same viewpoint during the Operational Phase. The primary changes are the widening of the road to the southeast, the loss and reinstatement of the boundary wall and railing to the edge of Maypark and the introduction of a new road layout including a new bus lane and a cycle track to each side of the road. Changes have also been made to the paving in the foreground with a widening of pavement at the turning point onto Elm Mount Road, and a new marked pedestrian crossing. The new cycle tracks have a red tarmac texture and are segregated from traffic by an elevated kerb in parts. In the foreground on the left side looking south, the road and pathway have been widened with the like-for-like reinstatement of the Maypark boundary with a new designated raised kerb cycle track, grass verge containing the existing park trees and a new gate entrance to the park. The existing lights, traffics lights and signs are located on the new verge. All trees visible in the view are retained, and visibility of the park is maintained. There would be no perceivable change to the character or visual amenity of the view.

17.5.2.1.3 Photomontage View 03: North along Malahide Road (opposite junction with Clancarthy Road)

17.5.2.1.3.1 View 03: As Existing

Figure 17.2.3.1 shows the existing view taken from Malahide Road looking northeast towards Maypark. The viewpoint was taken adjacent to the Circle K petrol station and a row of retail premises on Malahide Road (out of the frame to the left). In the foreground are several semi-detached, terraced and detached two-storey houses with front gardens that are generally converted to parking. The garden boundary walls are white-painted brick with a pebble dash finish in places with un-gated entrances. On the right side there is a row of utilitarian lighting columns with two posts carrying overhead services. The road surface has been updated recently with two lanes for general traffic and a bus lane on both sides. There are no cycle lanes present in the viewpoint. In the distance, trees within gardens further along the road, and in Maypark have a positive greening effect on the streetscape. The character is of a suburban residential road corridor with low levels of greenery in the vicinity, with some attractive established trees visible in the distance.

17.5.2.1.3.2 View 03: As Proposed

Figure 17.2.3.2 shows the proposed view from the same viewpoint during the Operational Phase. The primary change to the view is the widening of the road on the right (southeast) side. Property boundary walls have been removed and reinstated in a similar style. On the right side of the road a segregated cycle track has been added separated from the road by a continuous kerb and surfaced in red tarmac. Some shrubs and hedges have been removed and reinstated within front gardens along the right side of the road, both in the foreground and middle ground. The left side of the road has a minor reduction to the footpath width with addition of a segregated cycle track in red tarmac. There is no visible loss of trees within the view. There would be no perceivable change to the character or visual amenity of the view.

17.5.2.1.4 Photomontage View 04: North along Malahide Road (Collins Avenue Junction)

17.5.2.1.4.1 View 04: As Existing

Figure 17.2.4.1 shows the existing view taken on Malahide Road looking northeast towards the junction with Saint John's Court. On the right side of the road there are a few terraced houses with front gardens mainly converted to parking. The gardens are bounded by a series of low walls with a mixture of gated and ungated gateways. Several shrubs, hedgerows and small trees are visible in the front gardens. The road has a slight bend to the left, with two lanes for general traffic and two outer bus lanes. Our Lady of Consolation Church, Donnycarney and mature adjacent trees are prominent in the background. The character is of a suburban residential road corridor with low levels of greenery in the vicinity, with some attractive established trees and a landmark church visible in the distance.

17.5.2.1.4.2 View 04: As Proposed

Figure 17.2.4.2 shows the proposed view from the same viewpoint during the Operational Phase. The primary changes are the widening of the road on the southeast side resulting in a loss of approximately a two-metre strip of front gardens to residential properties, including loss and reinstatement of minor garden vegetation. The utility and lighting poles have been relocated to accommodate the widening. The road has been altered with segregated cycle tracks to both sides. The changes do not impact on views of the church. There would be no perceivable change to the character or visual amenity of the view.

17.5.2.1.5 Photomontage View 05: South along Malahide Road (between Charlemont Road and Crescent Place)

17.5.2.1.5.1 View 05: As Existing

Figure 17.2.5.1 shows the existing view taken from Malahide Road looking south towards the junction with Marino Crescent and Clontarf Road. The road is composed of two general traffic lanes, a south bound bus lane and a northbound advisory cycle lane. The viewpoint has several single-storey terraced houses with semi-basements on the left (east) side of the road, that have low wall boundaries to front gardens with a mix of gates and pillar entrances and some minor hedges. To the right side of the road are several front gardens with well-established shrub and hedge plantings. There are no major trees to the foreground but tree cover increases towards the background with prominent trees at Fairview Park. There is a bus stop and public bin to the right in the middle distance. The lampposts are staggered on both sides of the road. The character is of a minor suburban residential road corridor with low-density terraced housing and good levels of greening to gardens on the right and in the distance.

17.5.2.1.5.2 View 05: As Proposed

Figure 17.2.5.2 shows the proposed view from the same viewpoint during the Operational Phase. The primary changes are the widening of the road with removal and reinstatement of boundary walls, in similar style, on the left. This has minor impacts to existing front garden vegetation. The bus stop and street lighting have been minorly relocated. The road lanes have been altered to replace the northbound cycle lane with a bus lane. There would be no perceivable change in the character or visual amenity of the view.

17.5.2.1.6 Photomontage View 06: View from North along Malahide Road (opposite Marino Crescent)

17.5.2.1.6.1 View 06: As Existing

Figure 17.2.6.1 shows the existing view taken from Malahide Road adjacent to Marino Crescent. The view is looking north on the right (east) side of the roadway. At this point the road is composed of two general traffic lanes with a turning lane into Marino Crescent in the foreground. The left side has a cycle lane which merges with the bus lane towards the background. In the foreground on the right is the boundary wall and railing to the end terrace of Marino Crescent, and behind this is an adjoining small retail unit. The viewpoint on the right side is visually cluttered with a billboard and shop front signage. On the left side of the road there is a row of two-storey semi-detached houses with front gardens and several large hedges to the boundaries. The retail units on the right

obstruct the road view in the distance. The character is of a minor suburban mixed-use road corridor with semi-detached housing and good levels of greening to gardens.

17.5.2.1.6.2 View 06: As Proposed

Figure 17.2.6.2 shows the proposed view from the same viewpoint as Section 17.5.2.1.1 during the Operational Phase. The primary changes are the widening of the road to the west with loss and reinstatement of garden boundaries and hedges. In the foreground the footpath has been substantially widened. The northbound cycle lane has been replaced with a bus lane. There would be no perceivable change in the character or visual amenity of the view.

17.6 Residual Impacts

17.6.1 Construction Phase

Mitigation of landscape (townscape) and visual impacts during the Construction Phase is focused on ensuring the protection of elements to be retained (e.g. mature trees) and providing for a degree of visual screening of particular aspects of the works. Construction Phase effects are temporary or short-term in nature and the proposed mitigation measures will be effective at ensuring adequate protection to features that are not identified for permanent removal as part of the works. However, it is acknowledged that for the most part effective Construction Phase mitigation for the majority of impacts on townscape and visual characteristics is not practicable – for example, during the Construction Phase it is not possible to mitigate for the impact of the removal of mature trees to facilitate works. Therefore, for the most part, significant Construction Phase impacts remain unchanged in the post-mitigation and monitoring scenario as set out in Table 17.10.

Table 17.10: Summary of Construction Phase Residual Impacts

Townscape Receptor	Proposed Change	Baseline Sensitivity	Magnitude of Change	Significance & Quality of Townscape Effects
Townscape and Streetscape Character				
Mayne River Avenue to Gracefield Road – Malahide Road.				
	Belcamp Lane to Gracefield Road – Malahide Road. For proposed changes see Section 17.4.3.1.2	Medium / High	Medium / High	Moderate Temporary / Short-Term Negative
	Gracefield Road to Marino Mart / Fairview – Malahide Road. For proposed changes see Section 17.4.3.1.3	High	High	Significant Temporary / Short-Term Negative
Streetscape Characteristics and Visual Effects				
Protected Structures	Mileposts For proposed changes see Section 17.4.3.2.4.	Medium	Medium	Moderate Temporary / Short-term Negative
	Houses. No.62 and 64 Malahide Road (RPS No.4852 and 4853). For proposed changes see Section 17.4.3.2.4.	Very High	High	Significant Temporary / Short-term Negative
Amenity Designations	Land adjacent to Buttercup Park (location for Construction Compound). For proposed changes see Section 17.4.3.2.5	Medium	High	Moderate Short-term Negative
	Malahide Road / Ardlea Road / Gracefield Road Junction. For proposed changes see Section 17.4.3.2.5	Low / Medium	Medium / High	Moderate Temporary / Short-term Negative
	Pinebrook / St. David's Wood. For proposed changes see Section 17.4.3.2.5	High	High	Significant Temporary / Short-term Negative
	Maypark (Donnycarney Park). For proposed changes see Section 17.4.3.2.5	High	High	Significant Temporary / Short-term Negative
Properties	Part of properties in temporary acquisition which have mature gardens and plantings with established boundaries For proposed changes see Section 17.4.3.2.8	High	Very High	Very Significant Temporary / Short-term Negative
	Part of properties in temporary acquisition which have already opened up, or significantly modified the front boundaries for parking purposes For proposed changes see Section 17.4.3.2.8	Medium	High	Significant Temporary / Short-term Negative
	Non-residential properties included in temporary acquisition (e.g. Hilton Hotel, Coolock Village, commercial area at Kilmore Road Junction). For proposed changes see Section 17.4.3.2.8	Medium	Medium	Moderate Temporary / Short-term Negative

17.6.2 Operational Phase

Residual landscape / townscape and visual effects during the Operational Phase are further influenced by the ongoing development, establishment and maturing of landscape / townscape and visual measures, as described in Section 17.5.2. A summary of Operational Phase impacts is outlined in Table 17.11.

Table 17.11: Summary of Operational Phase Residual Impacts

Townscape Receptor	Proposed Change	Baseline Sensitivity	Magnitude of Change	Significance & Quality of Townscape Effects
	Gracefield Road to Marino Mart / Fairview – Malahide Road. For proposed changes see Section 17.4.4.1.3	High	Medium	Moderate Long-Term Negative
Streetscape Characteristics and Visual Effects				
Protected Structures	Houses No.62 and 64 Malahide Road (RPS No.4852 and 4853).	Very High	Low	Moderate Long-Term Negative
Amenity Designations	Malahide Road / Ardlea Road / Gracefield Road Junction. For proposed changes see Section 17.4.4.1.8	Low / Medium	Low	Moderate Long-Term Positive
	Land adjacent to Buttercup Park. For proposed changes see Section 17.4.4.1.8	Medium	Medium	Moderate Long-Term Positive
	Pinebrook / St. David's Wood. For proposed changes see Section 17.4.4.1.8	High	Low	Moderate Long-Term Positive
	Maypark (Donnycarney Park). For proposed changes see Section 17.4.4.1.8	High	Medium	Moderate Long-Term Negative
	Island in Malahide Road / Clontarf Road / Marino Mart Junction. For proposed changes see Section 17.4.4.1.8	Low	Medium	Moderate Long-Term Negative
Properties	Part of property in permanent acquisition which have mature gardens and plantings with established boundaries For proposed changes see Section 17.4.4.1.11	High	Medium	Moderate / Significant Long-Term Negative
Trees and Vegetation	For proposed changes see Section 17.4.4.1.12	Medium / High	Low / Medium	Moderate Medium to Long-Term Positive

17.7 References

- British Standards Institution (BSI) (2012) BS 5837:2012 'Trees in relation to in relation to design, demolition and construction. Recommendations'.
- British Standards Institution (BSI) (2010). BS 3998:2010 'Tree Work – Recommendations'.
- CABE and ODPM (2002). Paving the way: How we achieve clean, safe and attractive streets: a research project.
- Council of Europe (2000). European Landscape Convention 2000.
- Department of Culture, Heritage and the Gaeltacht (2020/21). Database provides access to National Monuments Service Sites and Monuments Record (SMR) and the National Inventory of Architectural Heritage [Online] Available from webgis.archaeology.ie/historicenvironment/
- Department of Housing, Planning and Local Government (2018). Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment.
- Department for Transport (2007). Manual for Streets.
- Dublin City Council (DCC) (2016). Dublin City Development Plan 2016-2022.
- Environmental Protection Agency (EPA) (2017). Draft Guidelines on the Information to be contained in Environmental Impact Assessment Reports.
- Environmental Protection Agency (EPA) (2015). Draft Advice Notes for preparing Environmental Impact Statements.
- EPA (2020/21). EPA Maps [Online] Available from gis.epa.ie/EPAMaps
- Fingal County Council (FCC) (2017). Fingal Development Plan 2017-2023.
- Google (2020/21). Google Maps [Online] Available from www.google.com/maps
- Landscape Institute and the Institute of Environmental Management and Assessment [IEMA] (2013). Guidelines for Landscape and Visual Impact Assessment 3rd edition.
- Landscape Institute (LI) (2018). Landscape Institute Technical Information Note 05/2017 (Revised 2018) on Townscape Character Assessment.
- Landscape Institute (LI) (2019). Technical Guidance Note 06/2019 on Visual Representation of Development Proposals.
- Department of Transport [DoT] (2009). Department of Transport National Cycle Policy Framework.
- Microsoft (2020/21). Bing Maps [Online] Available from www.bing.com/maps
- National Parks and Wildlife Service (2020/21). Datasets provides information on national parks, protected sites and nature reserves [Online] Available from www.npws.ie/maps-and-data
- Natural England (2014). An Approach to Landscape Character Assessment.
- National Transport Agency (NTA) (2013). Greater Dublin Area, Cycle Network Plan.
- National Transport Authority (NTA) (2020). Urban Realm Concept Designs.

National Transport Authority (NTA) (2021). Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors.

OSI (2020/21). OSI Current and historical mapping [Online] Available from map.geohive.ie/mapviewer.html

OSI (2020/21). OSI Historical aerial imagery [Online] Available from map.geohive.ie/mapviewer.html

Torbay Council (2004). Torbay Streetscape Guidelines.

Directives and Legislation

Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the EIA Directive).

S.I. 30 of 2000 – Planning and Development Act (2000).

S.I. 600 of 2001 – Planning and Development Regulations (2001).