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Chapter 17
Landscape
(Townscape) & Visual

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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 Phase of the Lucan to City Centre 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 practicable.

The design of the Proposed Scheme has evolved through a 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 have been incorporated where appropriate.

17.2 Methodology

17.2.1 Study Area

The Proposed Scheme commences at Junction 3 on the N4 and it is routed via the N4 as far as Junction 7 (M50), and via the R148 along the Palmerstown Bypass, the Chapelizod Bypass, Con Colbert Road and St John's Road West as far as Frank Sherwin Bridge, where it will join the prevailing traffic management regime on the South Quays at Heuston Station. In addition, cycle facilities will be provided from Junction 3 of the N4 along the R136 Ballyowen Road between Hermitage Road and the R835 Lucan Road, and then along the length of the Core Bus Corridor to Junction 2 of the N4. From there cycle facilities are provided along the Old Lucan Road either side of the M50 and through Palmerstown village, to the start of the R148 Chapelizod bypass. Cycle facilities are also provided on the R148 between Con Colbert Road and the end of the corridor at Heuston Station on St John's Road West.

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.

17.2.2 Relevant Legislation, Policy and Guidelines

The assessment has been carried out with reference to the following legislation, 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 (hereafter referred to as the Environmental Impact Assessment (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

- South Dublin Development Plan 2022–2028 (SDCC 2022);
- Dublin City Development Plan 2016-2022 (DCC 2016a);
- Draft Dublin City Development Plan 2022-2028 (DCC 2022);
- 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) Guidelines on the Information to be contained in Environmental Impact Assessment Reports (hereafter referred to as the EPA Guidelines) (EPA 2022);
- 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 (EPA 2022) provide a general methodology, impact ratings and assessment structure applicable across all environmental assessments, the GLVIA (Landscape Institute and IEMA 2013) provides specific guidance for landscape and visual impact assessments. The TCA (Landscape Institute 2018) 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 (EPA 2022) 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 genetic 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 being taken, whilst 'effect' is defined as 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:

- South Dublin Development Plan 2022–2028 (SDCC 2022);
- Dublin City Development Plan 2016-2022 (DCC 2016a);
- Draft Dublin City Development Plan 2022-2028 (DCC 2022);
- 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 (OSI), Google Earth, Google maps);
- Mapping of the Proposed Scheme;

- General Arrangement and Landscape Design 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);
- 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 during 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
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 17.2.2.3 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 2022) and is shown in Diagram 17.1 Landscape and Visual Impact Assessment Criteria. This matrix only differs from the EPA guidelines in that a 'very high' level of both magnitude and sensitivity has been provided, 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 impacts, EIA methodology (EPA 2022) requires that the quality of the impacts 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 Directive 2014/52/EU 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; and*
- *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 17.2.2.4 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 impacts 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 trends of change i.e. ongoing 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

Sensitivity	Description
	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 results in minor change to the character of the townscape 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 2022), as adapted and presented in Diagram 17.1. Details of the adaption from the guidelines is covered in Section 17.2.4.

Determining the significance of impacts that are rational and justifiable is also based on the professional judgement, expertise and experience of the author.

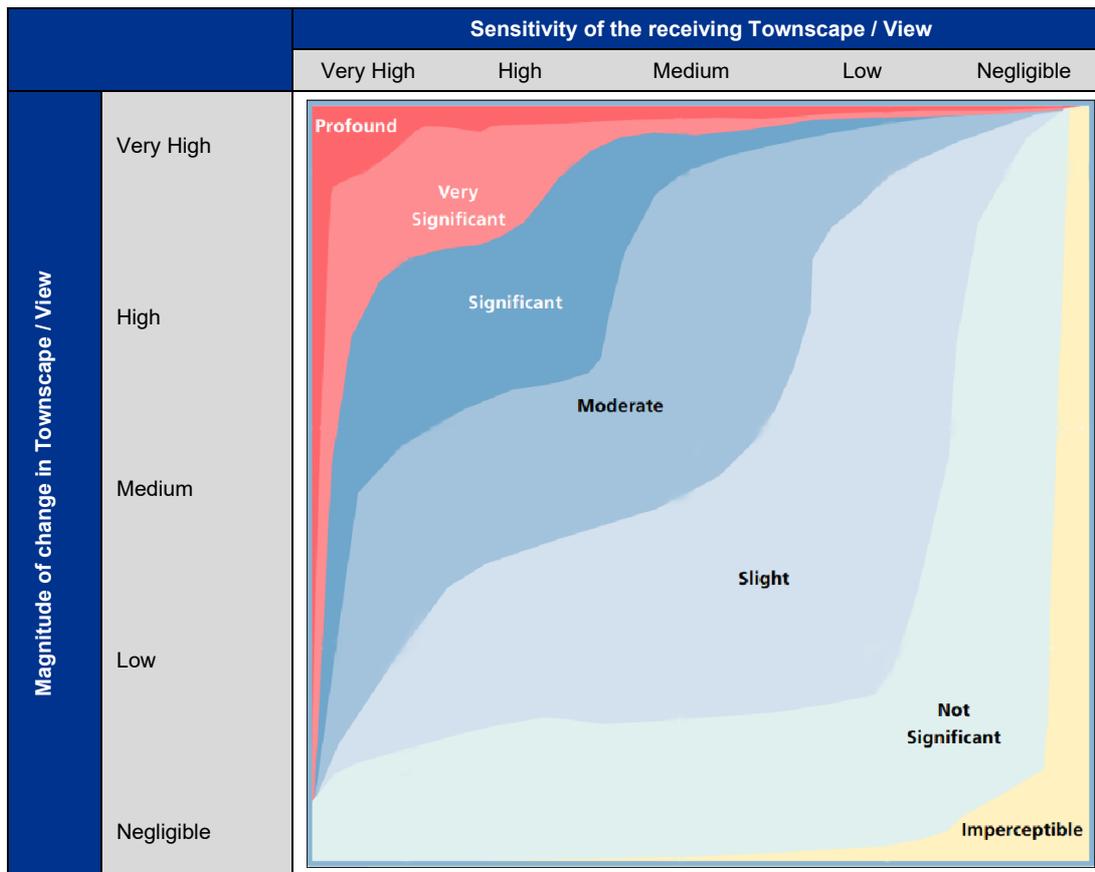


Diagram 17.1: Guide to Classification of Significance of Townscape and Visual Impacts; as adapted from EPA Guidelines (EPA 2022)

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 2022).

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 impact. However the effect of the significant impact may be positive, in that structure enhances the landscape / townscape or visual quality of the baseline environment; may be negative in that it detracts from the baseline 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 impacts 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 urban 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 impacts 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 appreciation of views over the landscape are a key factor contributing to the quality of the activity. Visual receptors less susceptible to change include travellers on road, rail and other transport routes (unless on recognised scenic routes), 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 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 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 changes 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

Sensitivity	Description
	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 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.

17.2.4.5 Quality of Effects

In addition to predicting the significance of the effects, EIA methodology (EPA 2022) 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.

17.2.4.6 Presentation of Construction Effects

As required by the EIA Directive, the assessment should outline the temporary, short-term, medium-term and long-term, effects arising from the Proposed Scheme. Construction effects are described based on a cautionary principal; where effects are expected to be temporary (under 1 year in duration) but have reasonable potential to extend beyond this duration, due to unplanned schedule slippage, effects are described as Temporary / Short-Term. Also, it should be noted, in some cases, where a townscape section is described as experiencing a Temporary / Short-Term effect, this can result from sequential construction along the length of the section, and localised streetscape / visual receptors within that section may only experience temporary effects.

17.2.4.7 Presentation of Operational Effects

The design process of the Proposed Scheme has included integrated landscape measures to avoid, reduce or remediate landscape (townscape) and visual effects wherever practicable. The scheme will become established and increasingly integrated within its landscape (townscape) setting over time, and the potential negative operational effects will be reduced. To illustrate this change in effects, potential Operational effects are outlined for the beginning of the Operational Phase (up to 1 year Post-Construction Phase) and for the beginning of the Long-Term (at 15 years Post-Construction Phase). Predicted residual Operational Phase Effects which have greater than moderate significance, at 15 years Post-Construction Phase, are also outlined.

The Operational Phase effects are presented as follows:

- Potential Operational Phase Effects (early stage - at 1 year post completion of the Construction Phase) – refer to Table 17.8;
- Potential Operational Phase Effects (comparison of effects at 1 year post completion and at 15 years post-Construction Phase) – Refer to Table 17.10; and
- Predicted residual Operational Phase Effects (those effects above moderate significance at 15 years post-Construction Phase) – Refer to Table 17.12.

17.2.4.8 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.

17.2.4.8.1 Photography

17.2.4.8.1.1 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.

17.2.4.8.1.2 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.

17.2.4.8.1.3 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.

17.2.4.8.2 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.

17.2.4.8.3 3D Modelling and Camera Matching

17.2.4.8.3.1 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.

17.2.4.8.3.2 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.

17.2.4.8.3.3 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.

17.2.4.8.3.4 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 view.

17.3 Baseline Environment

17.3.1 Scheme Context

The Proposed Scheme will commence at Junction 3 on the N4 and it will be routed via the N4 as far as Junction 7 (M50), and via the R148 along the Palmerstown Bypass, the Chapelizod Bypass, Con Colbert Road and St John's Road West as far as Frank Sherwin Bridge, where it will join the prevailing traffic management regime on the South Quays at Heuston Station.

The Proposed Scheme is sub-divided into three sub-sections:

- N4 Junction 3 to M50 Junction 7 – N4 Lucan Road;
- M50 Junction 7 to R148 Con Colbert Road – R148 Palmerstown Bypass and Chapelizod Bypass; and
- R148 Con Colbert Road to City Centre - St. John's Road West.

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

17.3.2 Overview of Route of the Proposed Scheme

The Proposed Scheme commences at Junction 3 of the N4 Lucan Road / Lucan Bypass and is directed east towards the City Centre. From the R136 Ballyowen Road junction with the R835 Lucan Road the route runs east along the R835 Lucan Road to the roundabout serving the Lucan Retail Park and also the N4 Lucan Road eastbound on-slip. It is then routed via the N4 (passing the Hermitage Golf Club, Hermitage Medical Clinic and Liffey Valley Shopping Centre) as far as Junction 7 (M50) and via the R148 along Palmerstown Bypass, Chapelizod Bypass, Con Colbert Road, St John's Road West, ending at Frank Sherwin Bridge, where it will join the prevailing traffic management regime on the South Quays. Between the M50 and South Quays, the route follows the River Liffey valley, passing south of the Irish National War Memorial Gardens, north of the grounds of Royal Hospital Kilmainham, south of Heuston Station and north of Dr. Steevens' Hospital.

In addition, cycle facilities will be provided from Junction 3 of the N4 along the R136 Ballyowen Road between Hermitage Road and the R835 Lucan Road, and then along the length of the Core Bus Corridor to Junction 2 of the N4. From there cycle facilities are provided along the Old Lucan Road either side of the M50 and through Palmerstown village, to the start of the R148 Chapelizod bypass. Cycle facilities are also provided on the R148 between Con Colbert Road and the end of the corridor at Heuston Station on St John's Road West.

The Proposed Scheme will include a wide variety of suburban and city landscape, 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 South Dublin County Council Development Plan 2022 - 2028

The SDCC Development Plan 2022 – 2028 (SDCC 2022) is the higher county level planning framework applicable to the western end of the Proposed Scheme.

Chapter 3 Natural and Cultural Heritage sets out policies relation to the protection and enhancement of natural and built heritage, architectural conservation, landscapes, natural heritage sites, tree preservation orders (TPO),

cultural heritage and sites of geological heritage. Policy NCBH7 relates to the protection of the Liffey River Valley and Special Amenity Area Order (SAAO). Zoning Objective 'High Amenity – Liffey Valley' (HA-LV) relates to designated land within the Liffey River Valley to the north of the N4, including parts of the study area, and states that development within this designation should be designed and sited to minimise visual impacts and preserve the amenity value of the river valley including its landscape value and views and vistas of the river valley. Section 3.5.3 of the Development Plan lists Architectural Conservation Areas, noting Lucan Village, Nos. 1-8 Red Cow Cottages and Nos. 1-8 Woodfarm Cottages, and Palmerstown Lower – Mill Complex. Table 3.5 of the Development Plan lists Prospects to be Preserved and Protected within the county. No prospect listed is in proximity to the Proposed Scheme. The Development Plan indicates an objective to Protect and Preserve Significant Views from the eastbound lane of the N4 at the N4 / Fonthill Road Junction looking north towards the Liffey Valley, although this is now almost completely screened by roadside tree planting. Table 3.3 of the Development Plan lists TPOs within the county and includes Dublin County Council Tree Preservation (Quarryvale, Brooklawn) (Liffey Valley No.1) Order 1990. These trees are located north of the N4 at King's Hospital. Appendix 3A of Development Plan includes the Record of Protected Structures. There are number of protected structures distributed along the corridor of the Proposed Scheme from Lucan through to Palmerstown, including the Former Tram Depot and Fonthill Power Station on Lucan Road, The Deadmans Inn, a milestone, and a number of houses at Quarryvale, Buck House, and Mill Lane Lucan (Palmerstown).

Chapter 4 Green Infrastructure sets out policies and objectives in relation to appropriate development, enhancement and protection of green infrastructure networks, including green infrastructure in urban areas, watercourse network, public open space hierarchy and landscape setting and sustainable urban drainage systems (SuDS). Figure 4.4 of the Plan identifies the Liffey Valley Corridor and the M50 as Primary GI Corridors, and Hermitage Golf Course lands are noted as a Core Area. The Landscape Character Assessment (LCA) for South Dublin County was reviewed and updated as part of the County Development Plan review process and is set out in Appendix 9 of the Development Plan. The landscape character assessment defines the Liffey Valley as a distinct landscape character area with key elements including historic and cultural heritage exemplified by Lucan and Palmerstown, and the variety of preserved naturalistic and rural landscapes in the area. The sense of place is noted as being potentially at risk due to urbanisation. The Landscape Character Assessment therefore makes recommendations aimed at preserving that sense of place and relating to conservation, protection and enhancement where possible of those key landscape elements and values. It is noted that *'the N4 provides the primary settlement edge to this character area from the south and due to landscape treatment including planting and stone walls along extensive stretches of this road the settlement edge from the road is often quite well defined.'*

Chapter 5 Quality Design and Placemaking lays out policies and objectives in relation to sustainable urban design and healthy placemaking. Policy QDP3 includes objectives to ensure that the special character of historic village cores (including Palmerstown) are protected and conserved through a full understanding of the archaeological, architectural, urban design and landscape heritage, particular the character and context in Architectural Conservation Areas (ACAs).

Chapter 7 Sustainable Movement includes for policies and objectives in relation to public transport, walking and cycling. SM1 Objective 2 supports the delivery of key sustainable transport projects including DART and Luas expansion programmes, BusConnects. SM3 Objective 4 supports accessibility to public transport, increase catchment and maximise permeability through the creation of new and upgrading of existing walking and cycling routes linking to public transport stops. SM3 Objective 9 seeks to ensure that all new public transport corridors are designed to enhance the County's green infrastructure network by ensuring adequate replacement and additional planting of native species and pollinators and to ensure that SuDS approaches are used to deal with surface water run-off. SM3 Objective 10 aims to ensure that all public transport proposals have regard to pertaining environmental conditions and sensitivities including biodiversity, protected species and designated sites and incorporate appropriate avoidance and mitigation measures as part of any environmental assessments.

Table 7.1 of the Plan lists improvements to the existing cycle network and new 'Now', 'Soon' and 'Later' schemes to be progressed over the next 2, 5 and 8 years respectively, The following routes are identified: *N4 to Liffey Valley Shopping Centre and Coldcut Road* and *Lucan Canal Loop* are listed as a 'now' schemes; and *Kennelsfort Road* as a 'Soon' scheme.

Policies in relation to biodiversity as they relate to the Proposed Scheme are discussed in greater detail in Chapter 12 (Biodiversity) of this EIAR. Policies in relation to archaeological and architectural heritage 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 South Dublin County area are:

- *'Objective RES: To protect, provide and / or improve residential amenity'*;
- *'Objective HA-LV: To protect and enhance the outstanding natural character and amenity of the Liffey Valley'* (i.e. majority of lands north of N4);
- *'Objective OS: To preserve and provide for open space and recreational amenities'* (i.e. small areas mainly around Palmerstown);
- *'Objective MRC: To protect, improve and provide for the future development of a Major Retail Centre'* (i.e. Liffey Valley Shopping Centre);
- *'Objective VC: To protect, improve and provide for the future development of Village Centres'* (i.e. Palmerstown Village); and
- *'Objective RW: To provide for and consolidate retail warehousing'*.

17.3.3.2 Dublin City Council Development Plan 2016 - 2022

The DCC Development Plan 2016 – 2022 (DCC 2016a) is the higher county level planning framework applicable to eastern section of the Proposed Scheme.

Figure 4 of the Development Plan indicates a Key Views and Prospects north over Heuston from the Royal Hospital at Kilmainham to the Phoenix Park and east along the Liffey Quays from east of Heuston Station.

Chapter 10 '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 Development Plan highlights the River Liffey as a core green corridor supported by parks, public open spaces etc. Figure 15 identifies the River Liffey as an 'Existing or Previously Proposed Green Route 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 11 Built Heritage and Culture sets out policies relating to preservation, protection and improvement of built heritage, Protected Structures (RPS), Architectural Conservation Areas (ACA) and Conservation Areas, trees in ACAs, zones of archaeological interest and industrial heritage, monuments and Dublin's cultural assets. There are a number of sites, buildings and features of historic and heritage interest located along the corridor of the Proposed Scheme, including an Architectural Conservation Area at Chapelizod and Conservation Areas at Chapelizod, and along the River Liffey corridor (including War Memorial Gardens, Heuston Station and Liffey Quays) north of the Proposed Scheme and at Royal Hospital Kilmainham, Military Road and Dr. Steevens' Hospital south 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) Chapter 16 (Architectural Heritage) respectively of this EIAR.

There is a small Residential Conservation Area at Nos. 688 to 699 and St. John's, Lucan Road, Chapelizod. Protected structures are located at War Memorial Gardens, Clancy Barracks, Royal Hospital Kilmainham, Heuston Station, Dr. Steevens' Hospital. In addition there are a number of smaller protected structures along the Proposed Scheme. Policies in relation to archaeological and architectural heritage 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'*;
- *'Objective Z2: To protect and / or improve the amenities of residential conservation area'*, (e.g. Lucan Road Chapelizod);

- ‘Objective Z5: To consolidate and facilitate the development of the central area, and to identify, reinforce, strengthen and protect its civic design character and dignity’ (Heuston Station);
- ‘Objective Z9: To preserve, provide and improve recreational amenity and open space and green networks’, (i.e. along majority of the route of the Proposed Scheme, including Liffey Valley); and
- ‘Objective Z15: To protect and provide for institutional and community uses’ (e.g. Ballyfermot Training Centre Dr. Steevens’ Hospital).

The draft plan is not currently showing material changes to landscape and visual aspects along the proposed development in the Draft Dublin City Development Plan 2022 – 2028 (DCC 2021).

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 Figures 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) 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 Areas	Baseline Description	Baseline Sensitivity
N4 Junction 3 to M50 Junction 7 (for baseline features refer to Figure 17.1, Sheets 1 to 5 of 14 in Volume 3 of this EIAR)	<p>Townscape Character: Predominantly two-storey residential suburbs, centred on outer-city village of Lucan and emerging town centre at Liffey Valley. Major river valley corridor along northern side of Proposed Scheme with large areas of open space and institutional land use.</p> <p>The road corridor is wide and is a key feature of the townscape. A number of open spaces, historic structures and SAAO area add value but these are physically separated to an extent by adjacent areas of dense tree planting around the road corridor.</p> <p>Streetscape Character: Major suburban dual carriageway corridor connecting to M50 Motorway. Road boundary a mix of walls and plantings, with occasional views to north (at N4 Junction 2 / Fonthill Junction). Pedestrian over bridges at Lucan Retail Park, Mount Andrew and Liffey Valley Shopping Centre. Local single-carriageway suburban roads in the form of Hermitage Road, Ballyowen Road and Old Lucan Road.</p> <p>Key Townscape Features: Traditional suburbs, large landscape areas (e.g. Hermitage Golf Club, Hermitage Medical Clinic) within wider high amenity landscape of River Liffey Valley. Modern town centre development at eastern end.</p> <p>Amenity Designations: No architectural conservation areas or conservation areas. Liffey Valley Special Amenity Area (SAAO) and major open space. Hermitage Golf Club.</p> <p>TPO: Dublin County Council Tree Preservation (Quarryvale, Brooklawn) (Liffey Valley No.1) Order 1990 at King’s Hospital.</p> <p>Tree / Woodland Preservation Objectives: None.</p> <p>Protected Views: View north from N4 at Junction 2 (Fonthill Junction).</p> <p>Protected structures: No. 036 Sureweld International (Former Tramyard / Fonthill Power Station); Nos. 065, 066, 070, 071, 074, 077: Deadmans Inn, Milepost and houses at Quarryvale. (Refer to Chapter 16 (Architectural Heritage) for full details).</p> <p>Other: N/A</p>	Low
M50 Junction 7 to Con Colbert Road (for baseline features refer to Figure 17.1, Sheets 5 to 11 of 14 in Volume 3 of this EIAR)	<p>Townscape Character: Outer city suburbs. Mixed residential with local village at Palmerstown, mixed use retail and services. Major river valley / open space.</p> <p>The R148 road corridor is wide and is a key feature of the townscape. A number of open spaces, historic structures, conservation areas and SAAO area add value but these are physically separated to an extent by adjacent areas of dense tree planting around the road corridor. Some intervisibility with surrounding residential areas. Old Lucan Road passes through an area of suburban character but this is still influenced by the R148 corridor.</p> <p>Streetscape Character: Major suburban dual carriageway corridor connecting east to City Centre from M50 Motorway. Road boundary a mix of walls and railings and often heavy planting, with some views to residential development and north over Liffey Valley. Local single-carriageway suburban roads in the form of Old Lucan Road.</p> <p>Key Townscape Features: Traditional suburbs on southern side of high amenity landscape of River Liffey Valley.</p>	Medium

Proposed Scheme Character Areas	Baseline Description	Baseline Sensitivity
	<p>Amenity Designations: Architectural Conservation Area at Chapelizod and Conservation Areas at Chapelizod, and along the River Liffey corridor. Small Residential Conservation Area at Chapelizod. Liffey Valley Special Amenity Area (SAAO) and major open space along river corridor. Sports grounds at De La Salle / Mount La Salle, Ballyfermot, and small open spaces (mainly planted road edges) along road corridor.</p> <p>TPO: None.</p> <p>Tree / Woodland Preservation Objectives: None.</p> <p>Protected Views: None.</p> <p>Protected structures: No.092: Buck House, Mill Lane Lucan (Palmerstown), and along Old Lucan Road Palmerstown (Refer to Chapter 16 (Architectural Heritage) for full details).</p> <p>Other: Views north / northeast over scenic Liffey Valley.</p>	
<p>Con Colbert Road to Frank Sherwin Bridge (for baseline features refer to Figure 17.1, Sheets 11 to 14 of 14 in Volume 3 of this EIAR)</p>	<p>Townscape Character: Inner city suburbs. Major open space to north, range of residential, modern multi-storey infill development and institutional uses throughout.</p> <p>The townscape has some elements and characteristics likely to be perceived as high value including high quality open spaces and historic structures. Streetscape is of a generally good standard, including some prominent mature trees. The road corridor has a moderate influence on the townscape.</p> <p>Streetscape Character: Major city dual carriageway road leading to Liffey Quays at Heuston Station. Corridor enclosed by walls and development. Some sections of street and median tree planting.</p> <p>Key Townscape Features: Major heavily trafficked widened urban street with mixed uses, including prominent historic buildings and modern infill developments.</p> <p>Amenity Designations: No Architectural Conservation Area. Conservation areas throughout. Major open space at War Memorial Gardens and Royal Hospital Kilmainham.</p> <p>TPO: None.</p> <p>Tree / Woodland Preservation Objectives: None</p> <p>Protected Views: Key View and Prospect north to Phoenix Park from Royal Hospital Kilmainham and east along Liffey Quays from east of Heuston Station.</p> <p>Protected structures: War Memorial Gardens, Clancy Barracks, Royal Hospital Kilmainham, Heuston Station, Dr. Steevens' Hospital and at a number of smaller structures along the Proposed Scheme (Refer to Chapter 16 (Architectural Heritage) for full details).</p> <p>Other: Major approach to City Centre with many key buildings.</p>	<p>Medium / High</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 are 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 sections under separate headings for the 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 Report (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 Development of the Proposed Scheme Design

Consideration of the potential landscape (townscape) and visual impacts have been important in defining the Proposed Scheme design. Following initial assessment of impacts, availability of additional information, as well as public consultation, suggestions and recommendations from local residents, community groups and stakeholders, the scheme has undergone iterative design development with the aim of minimising potential negative impacts as far as practicable. This process has also helped define suitable improvements to the urban realm. The design changes are described in Section 3.4 of Chapter 3 (Consideration of Reasonable Alternatives).

The following are design changes that have been incorporated into the Proposed Scheme design, and which are applicable to this assessment, and have led to a reduction in predicted landscape and visual effects:

- To reduce the potential negative long-term effects from removal of a significant number of trees from the boundary of Hermitage Golf Club, the design was amended to include substantial native replacement tree planting as part of the design, which will result in a net-gain in tree cover over the long-term;
- An alternative option to reduce impacts on the golf course by introducing a two-way cycle track on the south side of the westbound off slip of the N4 at Junction 3 was considered. This would have required the removal of a significant line of mature trees that will impact the rear gardens of 21 residential properties adjacent to the N4 westbound off-slip, including land acquisition from 16 of these properties. In addition, land acquisition and associated tree loss would be required from a further seven residential properties and two commercial properties adjacent to the westbound service road either side of Ballyowen Lane. This option was rejected due to these impacts;
- A number of design alternatives were considered for the new boundary wall to the golf course with a view to minimising the number of trees that would be lost. The final design included in the Proposed Scheme is the alternative that will result in the fewest number of trees lost and comprises a continuous piled retaining wall that will be able to be constructed entirely from the N4;
- To provide an enhanced connection to the recently permitted bus interchange within the shopping centre site, a new pedestrian bridge was proposed over the N4, with associated ramps and steps, providing an enhanced level of pedestrian accessibility across the N4. The inclusion of replacement and additional planting in the surrounding area is proposed to reduce the potential visual impacts of the structure;
- The new ramps and steps on Chapelizod Hill Road serving the proposed bus stops on the Chapelizod Bypass were moved to the southern side of the road, resulting in a reduction in impacts on properties at Chapelizod Court, a reduced height and length of the ramps, as well as reducing the overall loss of open space and trees, with an overall reduction in landscape and visual impacts;
- A large number of submissions to the third round of public consultation raised concerns about the quality and safety of the pedestrian and cyclist facilities through South Circular Road junction. The layout of the junction was amended to reduce the number of general traffic lanes, thus reducing the length of the pedestrian crossings, as well as releasing additional road space for improved cyclist facilities and new planted areas; and
- A landscaping and urban realm proposal has been developed for the proposed bus layby on the south side of St John's Road West in recognition of the importance of the facade of Dr. Steevens' Hospital. Key considerations were the presence of a mature tree at the western end of the hospital lawn and the important view from Heuston Station of the northern facade of the hospital. An alternative arrangement was developed with a new two bay bus lay by in front of the hospital and the existing single in-lane bus stop in front of the Revenue Commissioners building retained which allows retention of the tree. The paving patterns in front of the hospital were designed to follow the building lines to reinforce the central entrance. The proposed glass bus shelter is to be located discretely to the side, so as not to obstruct the approach to or the views of the historic doorway.

17.4.1.3 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 adaptation 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.;
- Temporary and permanent land-take from properties along the Proposed Scheme;
- Establishment / use of temporary Construction Compounds;
- Amendment and adaption of areas of existing verges, roadside and median tree planting and boundaries; and
- Provision of additional areas for SuDS / landscape enhancement and interventions, tree planting, planting, landscape works, etc.

The following provide more detail on the key construction characteristics of the Proposed Scheme on a section by section basis:

17.4.1.3.1 N4 Junction 3 to M50 Junction 7 – N4 Lucan Road (for baseline features refer to Figure 17.1, Sheets 1 to 5 of 14 in Volume 3 of this EIAR)

- Works, along the R835 Lucan Road, including temporary land acquisition, with removal of boundary wall and some young planting, and construction of replacement wall with piled foundations to allow retention of adjacent mature trees (Ch.C170 to Ch.C280);
- Works at junction of Ballyowen Road and Lucan Road for lane arrangement, alterations to junction design at N4 Junction 3 and Ballyowen Road including construction of new pedestrian and cyclist bridge replacing the existing footbridge over the N4 with some removal of roadside vegetation (Ch.C0 to Ch.C170 and Ch.B0 to Ch.B250);
- Construction of low retaining wall and removal of tree planting to verge area of N4 / offslip road to Ballyowen Road (Ch.N200 to Ch.N300);
- Works along boundary with Hermitage Golf Club, including temporary and permanent land acquisition from the golf club, resulting in limited impact on existing entrance, and impact on boundary with N4 resulting in loss of boundary planting within the golf course (Ch.A490 to Ch.A930);
- Works on Ballyowen Lane with changes to road surfacing and geometry of junction with N4 service road. Minor works within public open space at Hermitage Park with widening of footpath and changes to access gates Ch.A630 to 730; off chainage);
- Works along boundary with Sureweld International (former Fonthill Power Station / Tramyard) and Hermitage Medical Clinic, including temporary and permanent land acquisition with impact on existing boundaries with N4 and loss of sections of boundary planting (Ch.A930 to Ch.A1270);
- Works to Fonthill Road / N4 Junction 2 with construction of two-way cycle track, pedestrian crossing point and SUDS area with some loss of woodland planting to northwest side of Fonthill Road roundabout junction (Ch.F0 to Ch. F149);
- Temporary land take from grass verge at junction between Old Lucan Road and Fonthill on slip to N4 Junction 2 for Construction Compound LU1a (Ch.F50 to Ch.G10);
- Works along Old Lucan Road at Quarryvale, between N4 Junction 2 and the M50 for provision of enhanced cycle facilities and pedestrian crossings (G0 to Ch.H295); and
- Provision of new bus stops and new pedestrian overbridge to Liffey Valley Shopping Centre. There will be temporary and permanent land acquisition from Liffey Valley Shopping Centre and Block B Liffey Valley Office Campus, with impact on some young tree planting. There will be removal of young / semi-mature trees to the north side of the N4 to accommodate and the bridge footprint. (Ch.A2120 to Ch.A2260).

17.4.1.3.2 M50 Junction 7 to R148 Con Colbert Road – R148 Palmerstown Bypass and Chapelizod Bypass (for baseline features refer to Figure 17.1, Sheets 5 to 11 of 14 in Volume 3 of this EIAR)

- Works along the Old Lucan Road through Palmerstown Village for provision of enhanced cycle facilities and pedestrian crossings (Ch.J0 to Ch.L100);
- Works along Kennelsfort Road Lower including permanent and temporary land acquisition with impact on existing boundaries at No.20 and 22 (Kennelsfort Lodge Hotel) for provision of enhanced cycle facilities (Ch.K0; off chainage);

- Construction of bus stops on Palmerstown Bypass with removal of some roadside tree planting and construction of a SUDS bio-retention area. Siting of Compound LU2 on existing open space to north of R148 Palmerstown Bypass (Ch.3710 to Ch.3760, Ch.3770 to Ch.4000);
- Works at R148 Palmerstown Bypass Junction with Old Lucan Road including land acquisition with impact on existing boundaries at Applegreen Petrol Station (Ch.A4000 to Ch.A4060); and
- Works at Chapelizod Hill Road, within public lands to east and west of N4 for cycle and pedestrian access to new bus stops on the Chapelizod Bypass, with impact on existing roadside woodland / boundary (Ch.A5550 to A5710).

17.4.1.3.3 Con Colbert Road to City Centre – St. John’s Road West (for baseline features refer to Figure 17.1, Sheets 11 to 14 of 14 in Volume 3 of this EIAR)

- Temporary land-take of portion of park adjacent to Liffey Gaels GAA Club for Construction Compound. (Ch.A7450 to Ch.A7530);
- Works at R148 Chapelizod Bypass R833 Con Colbert Road junction including changes to kerblines for provision of cycle infrastructure (Ch.A7800 to Ch.A7950);
- Works to Con Colbert Road / South Circular Road junction including removal of some roadside trees and planting and removal of areas of hard surfacing to accommodate new planting areas (Ch.A8350 to Ch.A8600);
- Works to junction of St John’s Road West and the entrance to Heuston South Quarter (Ch.A9200 to A9320);
- Works along St. John’s Road West including works to footpaths and median outside Heuston Station, and land acquisition at Dr. Steevens’ Hospital with impact on existing bollards / chain boundary, lawn and loss of a single tree (Ch.A9520 to A9600); and
- Works along St John’s Road West to the east of the Luas stop on east facing front of Heuston Station with impact on landscape islands, existing trees, and areas of paving (Ch.A9600 to A9694).

17.4.1.3.4 Construction Compound Areas

Construction Compounds are to be located:

- Construction Compound LU1a: at junction between Old Lucan Road and Fonthill on slip to N4 Junction 2 (Ch.F50 to Ch.G10);
- Construction Compound LU1b: between Old Lucan Road and the N4 (Ch.G380 to Ch.H80);
- Construction Compound LU2: on existing open space to north of R148 Palmerstown Bypass (Ch.A3770 to Ch. A4000); and
- Construction Compound LU3: on existing public open space used by Liffey Gaels GAA sports grounds (Ch.7450 to A7530).

17.4.1.4 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 where traffic management measures are proposed; and
- Changes in streetscape elements, including allocation of carriageway space, provision of cycle and footpath facilities, signage, lighting, surfacing, road marking, etc. along the Proposed Scheme.

17.4.1.4.1 N4 Junction 3 to M50 Junction 7 – N4 Lucan Road (for baseline features refer to Figure 17.1, Sheets 1 to 5 of 14 in Volume 3 of this EIAR)

- Changes along R835 Lucan Road, including permanent land acquisition, with setback boundary wall (Ch.C170 to Ch.C280);
- Changes at junction of R136 Ballyowen Road and R835 Lucan Road and including alterations to junction at N4 Junction 3 westbound offslip and Ballyowen Road with provision of new pedestrian and cyclist bridge replacing the existing footbridge over the N4 (Ch.B0 to Ch.B250);

- Substantial changes to N4 with boundary setback and changes to boundary planting within Hermitage Golf Club including provision of substantial replacement tree planting to restore screening (Ch.A480 to Ch.A940);
- Changes to boundary with Sureweld International (former Tramyard / Fonthill Power Station) and substantial changes to N4 setback boundary and boundary planting within Hermitage Medical Clinic (Ch.A940 to Ch.A1320);
- Changes along Old Lucan Road at Quarryvale, with provision of new two-way cycle track and new pedestrian crossings (G0 to Ch.H295); and
- Provision of new bus stops and a pedestrian overbridge to Liffey Valley Shopping Centre (Ch.A2050 to Ch.A2470).

The following key landscape measures are proposed in this section:

- Provision of sett paving to pedestrian crossing points and junctions on Ballyowen Lane;
- Paving scheme to areas surrounding bus stop on R835 Lucan Road;
- Provision of new entrance and stone wall boundary at Hermitage Golf Club to match existing and new planting along the boundary and internally for shelter and screening, and tall (15m) sports netting for safe operation of the golf course (Ch.A490 to Ch.A930);
- Provision of replacement tree planting at boundary of Hermitage Golf Course with N4 to ensure screening effect is restored (Ch.A1180 to Ch.A1240);
- Paving scheme linked to new pedestrian overbridge at Liffey Valley Shopping Centre and appropriate replacement / additional planting to surrounding areas for screening and improvement of landscape;
- Provision of sett paving to pedestrian crossing points and junctions on Old Lucan Road;
- Provide for boundary reinstatement at former Sureweld International (former Tramyard / Fonthill Power Station) and Hermitage Medical Clinic with replacement tree planting provided where lost to restore screening effect;
- Native tree planting, bulb and wildflower planting to various existing grassland areas; and
- Introduction of SUDS to junction of Fonthill Road and Old Lucan Road, incorporating a planting scheme of ornamental grasses, herbaceous plants and ground cover shrubs.

17.4.1.4.2 M50 Junction 7 to R148 Con Colbert Road – R148 Palmerstown Bypass and Chapelizod Bypass (for baseline features refer to Figure 17.1, Sheets 5 to 11 of 14 in Volume 3 of this EIAR)

- Changes along Old Lucan Road in Palmerstown, with provision of new two-way cycle track and pedestrian crossings (Ch.J0 to Ch.L100);
- Changes at setback boundary at Nos.20 and 22 (Kennelsfort Lodge hotel) Kennelsfort Road Lower (Ch.K0; off chainage);
- Works at Old Lucan Road junction with the Oval including permanent land acquisition with impact on existing boundaries at Applegreen Petrol Station (Ch.A4000); and
- Changes to woodland / planted slopes of N4 at Chapelizod Hill Road including provision of pedestrian access steps and ramps close to Knockmaree Apartments (Ch.A5550 to A5710).

The following key landscape measures are proposed in this section:

- Provision of sett paving to pedestrian crossing points and junctions on Old Lucan Road;
- Provision of block paving scheme to existing shared space at eastern end of Old Lucan Road;
- Provision of formalised pedestrian footpath and new tree and other planting to open space at The Oval;
- Reinstatement of impacted boundaries at Nos. 20 and 22 Kennelsfort Road Lower;
- High-quality stone paving scheme to sections of footpath on Chapelizod Hill Road, and ornamental / native planting to areas surrounding new ramps and stairs;
- Provision for appropriate landscape reinstatement proposals at land adjacent to Knockmaree Apartments to provide for screening from residential properties, ACA and Conservation Area; and

- New tree planting, wildflower planting and planted SUDS to various existing grassland areas along R148 Palmerstown / Chapelizod Bypass.

17.4.1.4.3 R148 Con Colbert Road to City Centre – St. Johns Road West (for baseline features refer to Figure 17.1, Sheets 11 to 14 of 14 in Volume 3 of this EIAR)

- Works to junction of R148 St John's Road West (Ch.A9200 to A9320);
- Changes to landscape setting on north side of Dr. Steevens' Hospital with impact on boundary, extent of lawn, trees and views (Ch.A9520 to A9600).

The following key landscape measures are proposed in this section:

- Provide for full reinstatement of impacted boundaries and grounds adjacent to Liffey Gaels GAA including replacement of grass;
- Provision of concrete paving at entrance to War Memorial Gardens and entrance to Memorial Road linking to new bus stop locations;
- New tree planting to road medians and roadside areas along this section, with a substantial change from hard surfacing to planted areas at the junction of Con Colbert Road / South Circular Road / St John's Road West; and
- Public realm scheme at St John's Road West in the vicinity of Heuston South Quarter, Dr. Steevens' Hospital and Heuston Station, with provision of stone paving, sections of widened footpath and removal of pedestrian guardrails.

17.4.1.4.4 General landscape / townscape and visual measures

In addition to the above works, the following general 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 practicable, new plants will be the same 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 practicable, semi-mature trees will be used in the replanting works throughout the scheme. Where the same or similar species are provided, 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 practicable, 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 subject to discussion between the landowner and the NTA;
- The Proposed Scheme will provide for the planting of new semi-mature street trees to replace removed trees, where practicable, 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 urban 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 urban realm and to opportunities for mitigation of impact on the urban 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);
- 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 negative 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 suburban / urban context of the Proposed Scheme it is considered likely that the road corridors that would have formed part of 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).

There would be a 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 a temporary or short-term (1 to 2 years) townscape streetscape and visual impact through the following:

- Site mobilisation and establishment, fencing and hoarding of Construction Compounds and works areas - including within private areas;
- Site demolition, including removal of boundaries, including boundary fences, walls and plantings within private areas. Removal of ramps, bridge structures, lighting, signage, gantries, kerbs, verges, surfaces, landscape areas, trees and plantings;
- Site activity and visual disturbance from general construction works and the operation of construction machinery both within the site and at the Construction Compounds;
- 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 construction of new carriageways, kerbings, bridges, footpaths and cycleways, bus stops, road gantries, lighting and signage, as well as reinstatement of boundaries / provision of new boundaries and landscape reinstatement works / provision of new landscape, etc.; and
- Decommissioning of works areas and Construction Compounds.

A detailed description of the construction of the Proposed Scheme is provided in Chapter 5 (Construction).

17.4.3.1 Impact on Townscape and Streetscape Character

As set out in Section 17.3.1 the Proposed Scheme is sub-divided into three sections:

- N4 Junction 3 to M50 Junction 7 – N4 Lucan Road;
- M50 Junction 7 to R148 Con Colbert Road – R148 Palmerstown Bypass and Chapelizod Bypass; and
- R148 Con Colbert Road to City Centre – St. John's Road West.

17.4.3.1.1 N4 Junction 3 to M50 Junction 7 – N4 Lucan Road

The baseline townscape is of low sensitivity and construction of the Proposed Scheme will involve demolition, excavation and construction works of sections of kerbs, road carriageways, existing bridges, road gantries, sections of footpaths, junctions, surfacing and parking, drainage features, and utilities, as well as the construction of two new bridges. The Proposed Scheme includes a cyclist and pedestrian overbridge to replace the existing Ballyowen Road pedestrian bridge over the N4, direct impact on the existing stone wall and minor vegetation on the north side of R835 Lucan Road, to the boundary wall along the N4 boundary with Foxhunter pub site, to the boundary and tree planting at Hermitage Golf Club, The Bungalow (adjacent to Hermitage Golf Club), Sureweld

International, and Hermitage Medical Clinic. The works will require the removal of a substantial number of trees, including some of poor quality, along the boundary of Hermitage Golf Club. Although some trees will be retained, this planting provides screening, shelter and a safety buffer to the golf course and, the loss of trees will significantly impact on these functions. There will be substantial tree planting to reinstate the buffer as well as introduction of 15m high sports netting to the Hermitage Golf Club boundary, which over the long term will create a wider buffer than currently exists, and will fully restore and eventually enhance the screening, shelter and safety characteristics of the boundary.

Construction will also involve works along the Old Lucan Road at Quarryvale between Junction 2 of the N4 and the M50 to provide a segregated two-way cycle track and pedestrian crossings. On this section of the N4 new bus stops are proposed, together with a pedestrian overbridge connecting to Liffey Valley Shopping Centre. These works will require localised removal of trees and other vegetation, permanent and temporary land acquisition from Liffey Valley Shopping Centre and Block B of Liffey Valley Office Campus. The construction works along Hermitage Golf Club and Hermitage Medical Clinic will result in alterations to this section of the existing local townscape. The construction works will not alter the overall townscape character along this section of the Proposed Scheme but will result in a temporary increase in construction activity, presence of machinery and visual clutter and loss of some prominent tree planting which will have some notable local effects. The magnitude of change in the baseline environment is high.

The potential townscape / streetscape effect of the Construction Phase is assessed to be Negative, Moderate and Temporary / Short-Term.

17.4.3.1.2 M50 Junction 7 to Con Colbert Road – R148 Palmerstown Bypass and Chapelizod Bypass;

The baseline townscape is of medium sensitivity and construction of the Proposed Scheme involves modest changes generally along sections of the existing major dual-carriageway, with a substantial change at Chapelizod Hill Road. The construction stage involves demolition, excavation and construction works to kerbs, road carriageways, footpaths, junctions, surfacing, parking, drainage features, utilities and removal of a small number of street trees. The works also involve temporary and permanent acquisition of portions of private property at Palmerstown Lodge Hotel (20-22 Kennelsfort Road Lower) and Applegreen Petrol Station. There will be substantial works at Chapelizod Hill Road with removal of existing woodland planting along the R148 Chapelizod Bypass, loss of portions of landscape areas and introduction of a new ramp structure and steps. The construction works will not alter the existing streetscape or townscape character along this section the Proposed Scheme but will result in a temporary increase in construction activity, presence of machinery and visual clutter, and a localised reduction of screening between the R148 and Knockmaree Apartments at Chapelizod Hill Road.

Construction will also involve works along the Old Lucan Road, between the M50 and the start of the Chapelizod Bypass east of Palmerstown Village, and along Kennelsfort Road Lower. At this section, a two-way cycle lane will be constructed along the northern edge of the Old Lucan Road and the eastern edge of Kennelsfort Road Lower. Works will entail narrowing of the carriageway, narrowing footways and reallocating road space from parking, construction of a two-way segregated/ raised cycle track along the northside of the road, construction of paved crossing points and refiguration of traffic lanes throughout.

The magnitude of change in the overall baseline environment is low / medium and locally very high to areas around the R148 Chapelizod Bypass bridge at Chapelizod Hill Road.

The potential overall townscape / streetscape effect of the Construction Phase within this section is assessed to be Negative, Slight / Moderate and Temporary / Short-Term. The effect will be Locally Negative, Significant and Temporary / Short-Term around the R148 bridge at Chapelizod Hill Road.

17.4.3.1.3 Con Colbert Road to City Centre – St. John's Road West;

The baseline townscape is of medium / high sensitivity and construction of the Proposed Scheme involves changes along the majority of the dual carriageway urban road. The construction stage involves demolition, excavation and construction works to kerbs, road carriageways, footpaths, junctions, surfacing and parking, utilities, and drainage features, etc. The construction works involve works on the landscaped area to the front of the Eir Building, 1 Heuston South Quarter and on the existing landscape in front of Dr. Steevens' Hospital, including impact on boundaries, trees and views from the protected structures and streetscape. The construction

works will not alter the existing townscape character along this section of the Proposed Scheme but will result in a temporary increase in construction activity, presence of machinery and visual clutter. The magnitude of change in the baseline environment is high.

The potential townscape / streetscape effect of the Construction Phase on this section is assessed to be Negative, Significant and Temporary / Short-Term.

17.4.3.2 Impact on Streetscape Elements and Visual Impacts

17.4.3.2.1 Architectural Conservation Areas

An Architectural Conservation Area (ACA) is located at Chapelizod Hill Road, where substantial works are proposed along the existing R148 along Chapelizod Hill Road and at the wooded landscape area adjacent to Knockmaree Apartments. The ACA applies to the village centre of Chapelizod and extends to the properties along the southside of the Chapelizod Hill Road and at Nos. 688 to 699 and St. John's along the Old Lucan Road. While not directly impacted the ACA adjoins an area of substantial works for the Proposed Scheme and buffer tree planting between the R148 and the ACA will be reduced. The sensitivity is very high and the magnitude of change in the baseline environment is medium / high.

The potential townscape / streetscape and visual effect of the Construction Phase on the ACA is assessed to be Negative, Significant and Temporary / Short-Term .

17.4.3.2.2 Conservation Areas

Conservation areas extend along the north side of the Proposed Scheme from Chapelizod to South Circular Road and at Heuston Station and Liffey Quays. The Royal Hospital Kilmainham, Military Road and Dr. Steevens' Hospital are also within conservation areas. The construction of the Proposed Scheme will result in substantial localised changes and alterations at Chapelizod Hill Road, at Dr. Steevens' Hospital, and more minor changes east of Heuston Station at St John's Road West. The works will not detract from views to and from the wider conservation areas. The sensitivity is very high and the magnitude of change in the baseline environment is low but locally medium / high at Chapelizod Hill Road and Dr Steevens' Hospital.

The potential townscape / streetscape and visual effect of the Construction Phase on the Conservation Areas is assessed to be Negative, Moderate, Temporary / Short-Term and locally Negative, Moderate / Significant and Temporary / Short-Term at Chapelizod Hill Road and Dr Steevens' Hospital.

17.4.3.2.3 Residential Conservation Areas

Residential Conservation Areas are limited to Nos.688 to 699 and St. John's Old Lucan Road, Chapelizod. These properties are separated from the works area by buffer tree planting along the R148 Chapelizod Bypass and are not directly impacted by the Proposed Scheme. The sensitivity is high and the magnitude of change in the baseline environment is negligible.

The potential townscape / streetscape and visual effect of the Construction Phase on Residential Conservation Areas is assessed to be Neutral, Not Significant and Temporary / Short-Term .

17.4.3.2.4 Protected Structures

A number of Protected Structures are located along the Proposed Scheme. These include a number of structures, including the Deadman's Inn, a milepost and houses (Quarryvale, Sunnyside, Drumlorgan, Condega) at Quarryvale, Old Lucan Road. Works are required along the road corridor and most notably in provision of a new pedestrian bridge over the N4, with associated ramps / steps and removal of vegetation. The works do not directly impact the protected structures but do effect views to and from the properties.

Protected Structures at the eastern end of the Proposed Scheme include Heuston Station and Dr. Steevens' Hospital, where substantial works are proposed in the existing road corridor and on the landscape area fronting Dr. Steevens' Hospital. The sensitivity is very high and the magnitude of change is high. (Refer also to Chapter 16 (Architectural Heritage) for full details on protected structures).

The potential townscape / streetscape and visual effect of the Construction Phase on Protected Structures is assessed to be Negative, Significant and Temporary / Short-Term.

17.4.3.2.5 Amenity Designations

A number of amenities are located along the Proposed Scheme. These include areas of very high sensitivity such as River Liffey SAAO and associated open spaces and parklands, including War Memorial Gardens and the grounds of Royal Hospital Kilmainham. Other amenities such as Hermitage Golf Club, Liffey Gaels GAA grounds / adjacent public open space, and smaller open spaces adjacent to Knockmaree Apartments, and at Dr. Steevens' Hospital are of medium / high or high sensitivity.

The most substantial works within an amenity area occur at Hermitage Golf Club, where the existing N4 boundary and some boundary planting (providing screening, shelter and safety) is removed due to works on the golf course lands. There will be loss of land and construction of a new boundary wall with tall sports netting. The sensitivity is high and the magnitude of change is very high.

The potential townscape / streetscape and visual effect of the Construction Phase on Hermitage Golf Club is assessed to be Negative, Very Significant and Temporary / Short-Term.

The works at the Hermitage Golf Course will have an impact on the High Amenity designation for the Liffey Valley (HA-LV), where there will be the substantial removal of screening trees between the N4 and the amenity area. To a lesser extent the works at the Hermitage Medical Clinic will have an impact, with the removal of screening trees to the boundary with the N4, including a complete removal of a 40m section. However, landscape character at the clinic grounds has been significantly eroded by the presence of the car parking and road infrastructure within the grounds and the changes there will have a minimal effect on the character or amenity value of the HA-LV designation. There will be the establishment of two temporary construction compounds within the designation; one at an area of verge between Fonthill Junction and Lucan Road (LU1a), and another between the N4 and Old Lucan Road associated with construction of the new pedestrian overbridge (LU1b). The compound establishment and bridge construction will result in some tree removal. Overall, the proposed works will result in notable local changes to the designation at the golf course and to a lesser extent to areas of roadside trees with works at clinic and with construction of the new bridge. These impacts will occur on the edge of the designation with limited influence beyond this. The sensitivity is high and the magnitude of change is medium.

The potential townscape / streetscape and visual effect of the Construction Phase on the HA-LV designation is assessed to be Negative, Moderate and Temporary / Short-Term.

There will be a minor works at the open space at Hermitage Park with the widening of an existing footpath and changes to access points. The sensitivity is medium / high and the magnitude of change is low.

The potential townscape / streetscape and visual effect of the Construction Phase on Hermitage Park is assessed to be Negative, Slight and Temporary / Short-Term.

Areas of wooded embankment adjacent to Knockmaree Apartments will be directly impacted with removal of trees and vegetation, and introduction of a new ramp structure. The open space at Dr. Steevens' Hospital will be directly impacted with loss of boundaries, planting, reduced overall area, and the construction of new built elements. The sensitivity is medium / high. The magnitude of change is high / very high.

The potential townscape / streetscape and visual effect of the Construction Phase on this landscape area is assessed to be Negative, Significant and Temporary / Short-Term.

The siting of Construction Compound LU2 will involve removal of semi-mature trees and landscape areas and the introduction of construction activity into a roadside open space with loss some of amenity. The area has minimal recreational value and is essentially an extended verge of the R148. The sensitivity is medium and the magnitude of change is medium / high.

The potential townscape / streetscape and visual effect of the Construction Phase on the open spaces at LU2 is assessed to be Negative, Moderate and Temporary / Short-Term.

The siting of Construction Compound LU3 will involve removal of plantings and landscape area and the introduction of construction activity into the space with loss of amenity. The sensitivity is high and the magnitude of change is high.

The potential townscape / streetscape and visual effect of the Construction Phase on the open spaces at Liffey Gales GAA grounds is assessed to be Negative, Significant and Temporary / Short-Term.

The construction of the Proposed Scheme includes localised works along the landscape corridor of the River Liffey including works adjacent to the War Memorial Gardens and Royal Hospital, however, these amenities are not directly impacted. The magnitude of change is negligible / low.

The potential townscape / streetscape and visual effect of the Construction Phase on the landscape corridor of the River Liffey is assessed to be Negative, Slight / Moderate and Temporary / Short-Term.

17.4.3.2.6 TPOs / Tree Preservation Objectives

A TPO - Dublin County Council Tree Preservation (Quarryvale, Brooklawn) (Liffey Valley No.1) Order 1990 – is located at King's Hospital. The Proposed Scheme does not impact on these trees. The sensitivity is very high and the magnitude of change is negligible.

The potential townscape / streetscape and visual effect on TPOs is assessed to be Neutral, Imperceptible and Temporary / Short-Term.

17.4.3.2.7 Preserved Views / Scenic Views, etc.

Views towards the Liffey Valley are identified for protection north from Junction 2 of the N4, Fonthill. Although the designation exists, in reality the views from the N4 towards the valley are almost entirely screened by roadside tree planting therefore sensitivity is low. Works to the Hermitage Medical Clinic will occur in the foreground of the view with the removal of trees potentially opening up views slightly to the north. The proposed works to the junction will be largely to the slip roads and the Construction Compound LU1a will be located on a space between the junction and the Old Lucan Road, and these works will be mostly screened by roadside tree planting. The sensitivity is low and the magnitude of change is low.

The potential townscape / streetscape and visual effect of the Construction Phase on Preserved Views / Scenic Views is assessed to be Neutral, Slight and Temporary / Short-Term.

17.4.3.2.8 Properties

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

Construction of the Proposed Scheme will involve works to the wooded embankment of the R148 adjacent to Knockmaree Apartments. This will include construction of new built elements, and loss of woodland which has a screening function between the R148 and the properties, and this will result in visual impacts on Knockmaree Apartments. The sensitivity is high and the magnitude of change is high.

The potential visual effect of the Operational Phase on these properties is assessed to be Negative, Significant and Temporary / Short-Term.

Construction of the Proposed Scheme will require the temporary acquisition of portions of land from 17no. non-residential properties to allow construction of the works:

- Land to north side of Old Lucan Road (in the townland of Woodville, Ch.C175 to Ch.C275);
- Car Park south of Lucan Road, Ballydowd (Ch.A335 to Ch.A340)
- Foxhunter Pub site (Ch.A340 to Ch.A375);
- Hermitage Golf Club (Ch.A480 to Ch.A925);
- Sureweld International Ltd. (Ch.A960 to Ch.A1055);

- Hermitage Medical Clinic (Ch.A960 to Ch.A1320);
- Block B at Liffey Valley Office Campus (Ch.A2125 to Ch.A2225);
- Liffey Valley Shopping Centre (Ch.A2225 to Ch.A2260);
- Palmerstown House Pub (Ch.J850 to Ch.J886);
- Clarkeville Art and Flowers (Ch.K0 to Ch.K10);
- Palmerstown Lodge Hotel (Nos. 20 and 22 Kennelsfort Road Lower; Ch.A3680);
- Applegreen Service Station Palmerstown (Ch.A4000);
- City of Dublin Education and Training Centre, Chapelizod Hill Road (A5550 to Ch.A5625);
- Access road and landing to Heuston South Quarter (Ch.A9030 to Ch.A9290); and
- Dr. Steevens' Hospital (Ch.9525 to Ch. A9600).

While some areas are hard standing, other works will involve removal of boundaries, trees, plantings and landscape areas. The sensitivity is medium and the magnitude of change is high / very-high.

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

Four areas will also be temporarily acquired for the Construction Compounds (at space between Old Lucan Road and Fonthill Road, at roadside space between N4 and Old Lucan Road, at roadside open space on north side of R148 Palmerstown Bypass, and at open space at Liffey Gaels GAA grounds). The effects are assessed in Section 17.4.3.2.5.

In addition to those properties directly affected through acquisition (temporary and / or permanent) of private areas, construction of the Proposed Scheme will also result in visual impacts for other residential and non-residential properties located along, fronting and viewing the Proposed Scheme. Overlooking residential properties will be limited to areas along Old Lucan Road where generally less substantial works will occur. Impacts will arise from the provision of Construction Compounds, general disturbance, demolition, excavation and construction works within the public road corridor of the Proposed Scheme. Given the nature of the existing road corridor, views of construction works will be limited. The sensitivity is medium / high and the magnitude of change is medium.

The potential townscape and visual effect of the Construction Phase on these properties is assessed to be Negative, Moderate / Significant and Temporary / Short-Term.

17.4.3.2.9 Trees and Vegetation

Construction of the Proposed Scheme will require removal of existing trees and other plantings at specific locations along the road corridor. Most notably these include the tree belt on the boundary of Hermitage Golf Club, which provides screening, shelter and safety. Trees and plantings are also removed at Hermitage Medical Clinic, along the Old Lucan Road at Quarryvale, Chapelizod Hill Road, and to a lesser degree Dr. Steevens' Hospital and road corridor near Heuston Station. The sensitivity is medium / high and the magnitude of change is high / very high.

The potential townscape and visual effect of the Construction Phase on trees and plantings is assessed to be Negative, Significant / Very Significant and Temporary / Short-Term.

The summary of the landscape / townscape 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 Townscape Sensitivity	Magnitude of Change	Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts
Townscape and Streetscape Character				
	N4 Junction 3 to M50 Junction 7 – N4 Lucan Road For proposed changes see Section 17.4.3.1.1	Low	High	Negative Moderate Temporary / Short-Term
	M50 Junction 7 to R148 Con Colbert Road – R148 Palmerstown Bypass and Chapelizod Bypass For proposed changes see Section 17.4.3.1.2	Medium	Low / Medium Overall / Locally Very High at Chapelizod Hill Road	Negative Slight / Moderate Overall; and Negative Significant Temporary / Short-Term Locally
	Con Colbert Road to City Centre – St. John’s Road West For proposed changes see Section 17.4.3.1.3	Medium / High	High	Negative Significant Temporary / Short-Term
Streetscape Characteristics and Visual Impacts				
Architectural Conservation Areas (ACA)	For proposed changes see Section 17.4.3.2.1	Very High	Medium / High	Negative Significant Temporary / Short-Term
Conservation Areas	For proposed changes see Section 17.4.3.2.2	Very High	Low Overall and Locally Medium / High at Chapelizod Hill Road and Dr Steevens’ Hospital	Negative Moderate Temporary / Short-Term Overall; and Negative Moderate / Significant Temporary / Short-Term Locally
Residential Conservation Areas	For proposed changes see Section 17.4.3.2.3	High	Negligible	Neutral Not Significant Temporary / Short-Term
Protected structures	For proposed changes see Section 17.4.3.2.4	Very High	High	Negative Significant Temporary / Short-Term
Amenity Designations	Hermitage Golf Club For proposed changes see Section 17.4.3.2.5	High	Very High	Negative Very Significant Temporary / Short-Term
	Liffey Valley High Amenity	High	Medium	Negative Moderate Temporary / Short-Term
	Hermitage Park For proposed changes see Section 17.4.3.2.5	Medium / High	Low	Negative Slight Temporary / Short-Term
	Open space adjacent to Knockmaree Apartments / and at Dr Steevens’ Hospital For proposed changes see Section 17.4.3.2.5	Medium / High	High / Very High	Negative Significant Temporary / Short-Term
	Open space north of R148 (Construction Compound LU2) For proposed changes see Section 17.4.3.2.5	Medium	High	Negative Moderate Temporary / Short-Term

Townscape Receptor	Proposed Change	Baseline Townscape Sensitivity	Magnitude of Change	Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts
	Open space at Liffey Gaels GAA Grounds For proposed changes see Section 17.4.3.2.5	High	High	Negative Significant Temporary / Short-Term
	River Liffey SAAO, Public Open Space, War Memorial Gardens. For proposed changes see Section 17.4.3.2.5	Very High	Negligible / Low	Negative Slight / Moderate Temporary / Short-Term
TPOs / tree Protection Objectives	For proposed changes see Section 17.4.3.2.6	Very High	Negligible	Neutral Imperceptible Temporary / Short-Term
Preserved Views / Scenic Views etc.	For proposed changes see Section 17.4.3.2.7	Low	Low	Neutral Slight Temporary / Short-Term
Properties	Knockmaree Apartments For proposed changes see Section 17.4.3.2.8	High	High	Negative Significant Temporary / Short-Term
	Other non-residential properties (excluding public open spaces) included in permanent acquisition For proposed changes see Section 17.4.3.2.8	Medium	High / Very High	Negative Significant Short-Term
	Properties not included in temporary acquisition or with minimal direct contact For proposed changes see Section 17.4.3.2.8	Medium / High	Medium	Negative Moderate / Significant Temporary / Short-Term
Trees and Vegetation	For proposed changes see Section 17.4.3.2.9	Medium / High	High / Very High	Negative Significant / Very Significant Temporary / Short-Term

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 physical and visual character of the corridor of the existing road/street;
- Changes in traffic, pedestrian and cycle movements;
- Modification of areas of private property / 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 are features of the Proposed Scheme, it is not anticipated that these aspects in themselves will give rise to significant landscape, townscape or visual effects. Changes in road corridors, including in traffic signalisation, signage, and in carriageway / parking allocation and traffic movements are a common and regular aspect of active road and traffic management for urban roads and streets. Therefore, these changes may be considered part and parcel of on-going or regular changes that may be expected to occur, and do occur, from time to time in any urban streetscape environment and such changes are considered as a low or negligible magnitude of change.

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

17.4.4.1 Impact on Townscape and Streetscape Character

As set out in Section 17.3.1 the Proposed Scheme is sub-divided into three sections:

- N4 Junction 3 to M50 Junction 7 – N4 Lucan Road;
- M50 Junction 7 to R148 Con Colbert Road – R148 Palmerstown Bypass and Chapelizod Bypass; and
- R148 Con Colbert Road to City Centre – St. John's Road West.

17.4.4.1.1 N4 Junction 3 to M50 Junction 7 – N4 Lucan Road

The baseline townscape is of low sensitivity and operation of the Proposed Scheme will involve modest changes to the existing road infrastructure but with substantial changes along the boundary with Hermitage Golf Club, where the existing largely non-native tree planting will have been removed during construction, and the stone boundary wall set back. A section of 15m high sports netting provided to the boundary as a safety measure will be a prominent visual feature visible from the N4 and the golf club. Native tree planting will be reinstated to the boundary and internally within the golf club grounds to restore the screening effect, and over time this will establish to a band of trees, wider than that which currently exists that will provide an adequate buffer between the N4 and the golf club, and which will aid in screening the sports netting. A SUDs area will be provided to the junction of Fonthill Road including planting of ornamental grasses, herbaceous plants and ground cover shrubs, which will improve the streetscape in this location. There will be a new cyclist and pedestrian overbridge replacing the existing Ballyowen Road pedestrian bridge over the N4 which will be close in appearance to the existing bridge. There will also be a new pedestrian overbridge provided over the N4, between the Old Lucan Road and Liffey Valley Shopping Centre, which will be visually prominent but not uncharacteristic in the context. The construction of the bridge will have resulted in loss of existing tree planting, but this is compensated through replacement tree planting, as well as additional shrub and tree planting to the southern side of the N4 in an area of existing grassland, which will also aid in integrating the structure into the townscape. There will be the provision of new crossing points along Old Lucan Road using sett paving, which will have a positive impact on pedestrian accessibility and the visual appeal of the local streetscape. The Operational Phase will not appreciably alter the overall existing townscape character across this section of the Proposed Scheme, but there will be localised changes to streetscape character. The overall effect would be initially negative due to trees removed during construction, but this effect will be reduced over time as the substantial replacement and additional planting matures, leading to an overall positive effect in the long-term. The magnitude of change in the baseline environment is medium.

The potential townscape / streetscape and visual effect of the Operational Phase on this section is assessed to be Negative, Slight and Short-Term becoming Positive, Slight, Long-Term.

17.4.4.1.2 M50 Junction 7 to R148 Con Colbert Road – R148 Palmerstown Bypass and Chapelizod Bypass

The baseline townscape is of medium sensitivity and operation of the Proposed Scheme will involve some changes to townscape / streetscape characteristics, most notably at Chapelizod Hill Road where there will be continued effects from removal during construction of wooded areas to the edge of the R148 and the provision of a new access ramp and steps to the bus stops on the R148 Chapelizod Bypass. The negative impacts from tree loss at this location will be partially compensated by the proposed replacement planting scheme including some ornamental planting, as well as an improved paving scheme including natural stone. There will be improvements to the streetscape of Old Lucan Road with the provision of crossing points in sett paving and an improved paving scheme to the shared space area at the eastern end. There will also be improvements to some sections of R148 Palmerston Bypass, and to the junction of R148 Chapelizod Bypass and Con Colbert Road with substantial new tree planting. The Operational Phase will not appreciably alter the existing townscape character along this section of the Proposed Scheme but there will be notable localised improvements to the streetscape in some locations. The magnitude of change in the baseline environment is medium.

The potential townscape and streetscape effect of the Operational Phase on this section is assessed to be Neutral, Moderate and Short-Term becoming Positive, Moderate, Long-Term.

17.4.4.1.3 R148 Con Colbert Road to City Centre – St. John's Road West

The baseline townscape is of medium / high sensitivity and operation of the Proposed Scheme will involve generally modest changes along the existing major road infrastructure. The most notable impacts will be at Dr. Steevens' Hospital where changes include reduction of existing lawn / landscape area for provision of a bus stop and an extension of the roadside footpath into a public paved area accommodating a cycle track and bus shelter. Although there will be an impact on the setting of the hospital, the setback boundary and paved area will be aligned to the geometry of the hospital grounds layout, will include a paved stone feature aligned to the entrance path. There will also be provision of new trees within the hospital's grounds to consolidate the new boundary.

There will be provision of new grass medians, and tree planting to the existing medians and roadside areas along Con Colbert Road / St. John's Road West, which will result in a net gain in trees and vegetation along this section. At the junction of Con Colbert Road, St. John's Road West and South Circular Road there will be a substantial improvement to the streetscape with the introduction of new planting and grassland areas to existing hard surfaced areas. The Operational Phase of the Proposed Scheme will not appreciably alter the overall townscape character along this section of the Proposed Scheme but there will be an improvement to the character of the streetscape which will become more pronounced as the proposed planting matures. The magnitude of change in the baseline environment is low / medium.

The potential townscape / streetscape and visual effect of the Operational Phase on this section is assessed to be Positive, Slight / Moderate and Short-Term becoming Positive, Moderate, Long-Term.

17.4.4.2 Impact on Streetscape Elements and Visual Impacts

17.4.4.2.1 Architectural Conservation Areas

An ACA is located at Chapelizod Hill Road, near to where substantial changes are proposed along the existing R148 Chapelizod Bypass at the rear of Knockmaree Apartments, including loss of areas of buffer planting between the R148 and the ACA during the Construction Phase, with some replacement tree planting. The sensitivity is very high and the magnitude of change is medium.

The potential townscape / streetscape and visual effect of the Operational Phase on the ACA is assessed to be Negative, Moderate and Short-Term becoming Negative, Slight / Moderate, Long-Term.

17.4.4.2.2 Conservation Areas

Conservation Areas extend along the north side of the Proposed Scheme from Chapelizod to South Circular Road and at Heuston Station and Liffey Quays. The Royal Hospital Kilmainham, Military Road and Dr. Steevens' Hospital are also conservation areas. The operation of the Proposed Scheme will result in localised changes at Chapelizod Hill Road, Dr. Steevens' Hospital and at St John's Road West. The works will not detract from views to and from the wider conservation areas. The sensitivity is very high and the magnitude of change in the baseline environment is medium / low.

The potential townscape / streetscape and visual effect of the Operational Phase on the Conservation Areas is assessed to be Negative, Moderate and Short-Term becoming Neutral, Moderate, Long-Term.

17.4.4.2.3 Residential Conservation Areas

Residential Conservation Areas are limited to Nos.688 to 699 and St. John's Old Lucan Road Chapelizod. These areas are separated from the Proposed Scheme by buffer planting along the R148 and they will not be directly impacted. The sensitivity is high and the magnitude of change in the baseline environment is negligible.

The potential townscape / streetscape and visual impact of the Operational Phase on Residential Conservation Areas is assessed to be Neutral, Not Significant and Long-Term.

17.4.4.2.4 Protected Structures

A number of protected structures are located along the Proposed Scheme. These include a number of structures, including the Deadman's Inn, a milepost and houses (Quarryvale, Sunnyside, Drumlorgan, Condega) at Quarryvale, Old Lucan Road. Changes in the vicinity of these structures include provision of a new pedestrian

bridge over the N4, with associated ramps / steps and removal of vegetation. The bridge will not directly impact the protected structures but would affect views to and from the properties. The establishment of proposed replacement and additional planting will reduce the effects over the long-term.

Proposals at Dr. Steevens' Hospital will result in a permanent loss of landscape / lawn area to the front. There will be provision of some compensatory planting and a paving scheme considerate to the layout of the hospital grounds which will aid in integrating the proposals into the setting of the hospital. The sensitivity is very high and the magnitude of change is medium (refer also to Chapter 16 (Architectural Heritage)).

The potential townscape / streetscape and visual effect of the Operational Phase on these Protected Structures is assessed to be Negative, Moderate / Significant and Short-Term, becoming Neutral, Moderate, Long-Term.

Proposals at Heuston Station will provide an enhanced urban realm scheme to the adjacent streetscape of St. John's Road West with new tree planting and greening of existing median which will have a positive impact on the setting of this protected structure. The sensitivity is very high and the magnitude of change is low (refer also to Chapter 16 (Architectural Heritage)).

The potential townscape / streetscape and visual effect of the Operational Phase on these Protected Structures is assessed to be Positive, Slight / Moderate and Short-Term becoming Positive, Moderate, Long-Term.

17.4.4.2.5 Amenity Designations

A number of amenities are located along the Proposed Scheme. These include areas of very high sensitivity such as River Liffey SAAO and associated open spaces and parklands, including War Memorial Gardens and the grounds of Royal Hospital Kilmainham. Other amenities such as Hermitage Golf Club, Liffey Gaels GAA grounds / adjacent public open space, and smaller open spaces at Chapelizod Court / Knockmaree Apartments, and at Dr. Steevens' Hospital are of medium / high or high sensitivity.

The Operational Phase of the Proposed Scheme will have the most substantial changes at Hermitage Golf Club, where the existing N4 boundary and boundary plantings are removed, and the boundary set back reducing the width of the tree belt screening the N4. However, once established the proposed replacement planting will restore the screening effect. The sensitivity is high and the magnitude of change is high.

The potential townscape / streetscape and visual effect of the Operational Phase on Hermitage Golf Club is assessed to be Negative, Significant and Short-Term becoming Positive, Moderate, Long-Term.

The changes at the Hermitage Golf Course, Hermitage Medical Clinic and at the new pedestrian bridge, will have an impact on the High Amenity designation for the Liffey Valley (HA-LV), where there will be continuing effects from the removal of screening trees between the N4 and the amenity area during the Construction Phase. Changes at the clinic and the bridge will have a minimal effect as the landscape character of the has been significantly eroded by the presence of car parking and road infrastructure. Overall, the proposed works will result in notable local changes to the designation at the golf course with limited impacts elsewhere. Proposed tree planting will reinstate the screening to the boundary with the N4 and will neutralise the effects over the medium to long-term. The sensitivity is high and the magnitude of change is medium.

The potential townscape / streetscape and visual effect of the Operational Phase on the HA-LV designation is assessed to be Negative, Moderate and Short-Term becoming Neutral, Slight / Moderate, Long-Term.

There will be a minor change at the open space at Hermitage Park with the widening of an existing footpath and changes to access points which will improve pedestrian access through the space. The sensitivity is medium / high and the magnitude of change is low.

The potential townscape / streetscape and visual effect of the Operational Phase on Hermitage Park is assessed to be Positive, Slight and Long-Term.

The Operational Phase of the Proposed Scheme will include a substantial change to the small open space / wooded embankment adjacent to Knockmaree Apartments and to the western side of the R148 Chapelizod Bypass with continuing effects resulting from the substantial removal of trees and vegetation during the Construction Phase, and introduction of new ramps and steps to the bus stops on the R148. There will be an

increase in pedestrian access and the provision of some replacement planting but there will be an overall increase in built form and a loss of vegetation, resulting in a negative effect. The effect will be neutralised with the growth of replacement planting over the long-term. The sensitivity is medium / high and the magnitude of change is medium / high.

The potential townscape / streetscape and visual effect of the Operational Phase on this open space is assessed to be Negative, Significant and Short-Term reducing to Neutral, Moderate, Long-Term.

The open spaces at LU2 and LU3 (Liffey Gaels GAA grounds) will be reinstated after the use for Construction Compounds during the Construction Phase. There will be the provision of additional tree planting to the boundary at Liffey Gaels which will aid in screening from the adjacent roads. The sensitivity is medium / high and the magnitude of change is low.

The potential townscape / streetscape and visual effect of the Operational Phase on open space at LU2 and Liffey Gaels GAA grounds is assessed to be Neutral, Slight and Short-Term becoming Positive, Moderate, Long-Term.

The operation of the Proposed Scheme includes changes along the landscape corridor of the River Liffey including the adjacent War Memorial Gardens and Royal Hospital Kilmainham, however, the amenities will not be directly impacted. There will be improvements to the setting of these amenities which will lead to positive effects in the long-term. The sensitivity is very high and the magnitude of change is low.

The potential townscape / streetscape and visual effect of the Operational Phase on these amenities in the River Liffey corridor is assessed to be Neutral, Slight and Short-Term becoming Positive, Slight, Long-Term.

There will be notable changes to the open space fronting Dr. Steevens' Hospital, which is directly impacted by the introduction of new built elements such as bus shelters, set back of boundaries, loss of plantings and overall area during the Construction Phase. There will be some replacement tree and shrub / hedge planting to and some public realm improvements to the setting. The sensitivity is medium / high and the magnitude of change is high.

The potential townscape / streetscape and visual effect of the Operational Phase on the open space at Dr. Steevens' Hospital is assessed to be Negative, Moderate / Significant and Short-Term becoming Neutral, Moderate, Long-Term.

17.4.4.2.6 TPOs / Tree Preservation Objectives

A TPO - Dublin County Council Tree Preservation (Quarryvale, Brooklawn) (Liffey Valley No.1) Order 1990 – is located at King's Hospital. The Proposed Scheme does not impact on these trees. The sensitivity is very high and the magnitude of change is negligible.

The potential townscape / streetscape and visual impact of the Operation Phase on TPO is assessed to be Neutral, Imperceptible, Long-Term.

17.4.4.2.7 Preserved Views / Scenic Views, etc.

A view is identified for protection north from N4 at Junction 2, Fonthill, however, the existing view is almost completely screened by roadside tree planting and therefore sensitivity is low. The Proposed Scheme involves modest changes to the junction and reinstatement of verge area used for a Construction Compound. There is potential for a slight opening up of the view with removal of tree planting at the Hermitage Medical Clinic, although the boundary wall will be raised and proposed planting will reinstate this screening over the medium to long-term. The sensitivity is low and the magnitude of change is low.

The potential townscape / streetscape and visual effect of the Operational Phase on preserved views / scenic views is assessed to be Neutral, Slight and Short-Term becoming Neutral, Imperceptible, Long-Term.

17.4.4.2.8 Properties

Operation of the Proposed Scheme will involve changes to the wooded embankment of the R148 adjacent to Knockmaree Apartments. This will include introduction of new built elements, and loss of woodland which has a screening function between the R148 and the properties, and this will result in visual impacts on Knockmaree

Apartments. The negative effect resulting from the loss of trees will be reduced over time with the growth of replacement planting over the long-term, but the screening effect will not be fully restored. The sensitivity is high and the magnitude of change is medium / high.

The potential visual effect of the Operational Phase on these properties is assessed to be Negative, Moderate / Significant and Short-Term becoming Negative, Slight, Long-Term.

Operation of the Proposed Scheme will require permanent acquisition from other non-residential properties (excluding public open spaces) to allow construction of the works:

- Land to north side of Old Lucan Road (in the townland of Woodville, Ch.C175 to Ch.C275);
- Car Park south of Lucan Road, Ballydowd (Ch.A335 to Ch.A340);
- Wow Burger/ Elephant and Castle Restaurant (Ch.A340);
- Foxhunter Pub site (Ch.A340 to Ch.A375);
- Hermitage Golf Club (Ch.A480 to Ch.A925);
- Sureweld International Ltd. (Ch.A960 to Ch.A1055);
- Hermitage Medical Clinic (Ch.A960 to Ch.A1320);
- Block B at Liffey Valley Office Campus (Ch.A2125 to Ch.A2225);
- Liffey Valley Shopping Centre (Ch.A2225 to Ch.A2260);
- Palmerstown Lodge Hotel and Nos. 20 and 22 Kennelsfort Road Lower (Ch.A3680);
- Applegreen Service Station Palmerstown (Ch.A4000); and
- Dr. Steevens' Hospital (Ch.9525 to Ch. A9600).

While some areas are hard standing, other works will involve loss of trees, plantings and landscape areas during the Construction Phase and setback of boundaries, the effects of which will continue into the Operational Phase. There will be reinstatement of trees and plantings where feasible which will contribute to a reduction of effects over the long-term. The sensitivity is medium and the magnitude of change is high.

The potential townscape / streetscape and visual effect of the Operational Phase on these properties is assessed to be Negative, Moderate and Short-Term becoming Negative, Slight / Moderate, Long-Term.

In addition to those properties directly effected through permanent acquisition of areas, the Operational Phase of the Proposed Scheme will also result in visual impacts for other residential and non-residential properties located along, fronting and viewing the Proposed Scheme. Given the nature of the existing road corridor, views of changes will be limited. While there will be some views which will experience reduced visual amenity there will also be improvements to some views through the proposed public realm improvements, the positive effects of which will occur generally over the long-term. The sensitivity is medium / high and the magnitude of change is low.

The potential visual effect of the Operational Phase on these properties is assessed to be Negative, Slight and Short-Term becoming Neutral, Slight, Long-Term

17.4.4.2.9 Trees and Vegetation

A substantial number of trees will have been removed during the Construction Phase. The Operational Phase of the Proposed Scheme will not impact directly on additional trees but the negative effects will remain until replacement planting is established. There is also substantial additional tree planting proposed into various open spaces, road medians and roadside areas, which will lead to an overall positive effect in the long term. The sensitivity is medium / high. The magnitude of change is low, but locally high at Hermitage Golf Club and at spaces adjacent to R148 Chapelizod Bypass/ Chapelizod Hill Road. Replacement tree planting will reduce effects over time, particularly at Hermitage Golf Club where the effect will be positive in the long-term.

The potential townscape / streetscape and visual effect of the Operational Phase on trees and plantings across the scheme is assessed to be Negative, Slight, Short-Term becoming Positive, Slight / Moderate, Long-Term.

The potential townscape / streetscape and visual effect of the Operational Phase on trees and plantings at Hermitage Golf Club is assessed to be Negative, Significant, Short-Term becoming Positive, Moderate, Long-Term.

The potential townscape / streetscape and visual effect of the Operational Phase on trees and plantings at spaces adjacent to R148 / Chapelizod Hill Road is assessed to be Negative, Significant, Short-Term becoming Negative, Moderate, Long-Term.

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

17.4.4.3 Summary of Predicted Operational Phase Impacts

The summary of the landscape and visual impact assessment for the Operational Phase, at 1-year post completion of the Construction Phase of the Proposed Scheme, is set out in Table 17.8.

17.4.4.3.1 Potential Benefits

Where there are landscape measures incorporated in the design of the Proposed Scheme 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 routes, pedestrian crossings, improved or more visually appealing hard surfacing, street furniture and planting. Over the long-term, the negative effects associated with the removal of mature trees along many sections of the scheme will reduce with the growth of replacement and additional planting. There will be an overall improvement in streetscape character across the full scheme upon the establishment of vegetation over the long-term, most notably at the landscape area between N4 and Fonthill Road, along Old Lucan Road, and along some sections of Palmerstown Bypass, Con Colbert Road and St John's Road West with the introduction of new tree / ornamental planting, high quality paving and improved pedestrian and cycle accessibility.

The summary of the landscape and visual effect assessment at the early stage of the Operational Phase, (at 1-year post completion of the Construction Phase), of the Proposed Scheme is set out in Table 17.8. Operational effects following the establishment of proposed planting at 15-year post completion of the Construction Phase are shown in Table 17.10.

Table 17.8: Summary of Potential Operational Phase Impacts (at 1 year post completion of Construction Phase)

Townscape Receptor	Proposed Change	Baseline Townscape Sensitivity	Magnitude of Change	Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts
Townscape and Streetscape Character				
	N4 Junction 3 to M50 Junction 7 – N4 Lucan Road For proposed changes see Section 17.4.4.1	Low	Medium	Negative Slight Short-Term
	M50 Junction 7 to R148 Con Colbert Road – R148 Palmerstown Bypass and Chapelizod Bypass For proposed changes see Section 17.4.4.1.2	Medium	Medium	Neutral Moderate Short-Term
	Con Colbert Road to City Centre – St. John’s Road West For proposed changes see Section 17.4.4.1.3	Medium / High	Low / Medium	Positive Slight / Moderate Short-Term
Streetscape Characteristics and Visual Impacts				
Architectural Conservation Areas (ACA)	For proposed changes see Section 17.4.4.2.1	Very High	Medium	Negative Moderate Short-Term
Conservation Areas	For proposed changes see Section 17.4.4.2.2	Very High	Medium / Low	Negative Moderate Short-Term
Residential Conservation Areas	For proposed changes see Section 17.4.4.2.3	High	Negligible	Neutral Not Significant Short-Term
Protected structures	Deadman’s Inn, a milepost, houses at Quarryvale and Dr. Steevens’ Hospital For proposed changes see Section 17.4.4.2.4	Very High	Medium	Neutral Moderate / Significant Short-Term
	Heuston Station For proposed changes see Section 17.4.4.2.4	Very High	Low	Positive Slight / Moderate, Short-Term
Amenity Designations	Hermitage Golf Club For proposed changes see Section 17.4.4.2.5	High	High	Negative Significant Short-Term
	Liffey Valley High Amenity	High	Medium	Negative Moderate Short-Term
	Hermitage Park	Medium / High	Low	Positive Slight Short-Term
	Open Space adjacent to Knockmaree Apartments For proposed changes see Section 17.4.4.2.5	Medium / High	Medium / High	Negative Significant Short-Term
	Open Space north of R148 (Construction Compound LU2) Liffey Gaels GAA For proposed changes see Section 17.4.4.2.5	Medium / High	Low	Neutral Slight Short-Term

Townscape Receptor	Proposed Change	Baseline Townscape Sensitivity	Magnitude of Change	Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts
	River Liffey SAAO, Public Open Space, War Memorial Gardens. For proposed changes see Section 17.4.4.2.5	Very High	Low	Neutral Slight Short-Term
	Dr Steevens' Hospital For proposed changes see Section 17.4.4.2.5	Medium / High	High	Negative Moderate / Significant Short-Term
TPOs / tree Protection Objectives	For proposed changes see Section 17.4.4.2.6	Very High	Negligible	Neutral Imperceptible Short-Term
Preserved Views / Scenic Views etc.	For proposed changes see Section 17.4.4.2.7	Low	Low	Negative Slight Short-Term
Properties	Permanent acquisition from land adjacent to Knockmaree Apartments For proposed changes see Section 17.4.4.2.8	High	Medium / High	Negative Moderate / Significant Short-Term
	Other non-residential properties (excluding public open spaces) included in permanent acquisition For proposed changes see Section 17.4.4.2.8	Medium	High	Negative Moderate Short-Term
	Properties not included in acquisition or with minimal direct contact For proposed changes see Section 17.4.4.2.8	Medium / High	Low	Negative Slight Short-Term
Trees and Vegetation	Trees and Vegetation Generally For proposed changes see Section 17.4.4.2.9	Medium / High	Low	Negative Slight Short-Term
	Hermitage Golf Club For proposed changes see Section 17.4.4.2.9	Medium / High	High	Negative Significant Short-Term
	Adjacent to R148 / Chapelizod Hill Road For proposed changes see Section 17.4.4.2.9	Medium / High	High	Negative Significant Short-Term

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_LA-0006_XX_00-DR-ES-0001 to BCIDA-ACM-ENV_LA-0006_XX_00-DR-ES-0030 in the Arboricultural Impact Assessment (Appendix D of Preliminary Design Report));

- 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_LA-0006_XX_00-DR-ES-0001 to BCIDA-ACM-ENV_LA-0006_XX_00-DR-ES-0030 in the Arboricultural Impact Assessment (Appendix D of Preliminary Design Report) and Landscape General Arrangements (BCIDA-ACM-ENV_LA-0006_XX_00-DR-LL-0001 to 0031 in Volume 3 of this EIAR);
- The Arboricultural Assessment prepared for the Proposed Scheme will be fully updated by the appointed contractor 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 17.4.4.2.8), 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 17.4.4.3.8), appropriate measures will be put in place by the appointed contractor to provide for protection of features, trees and vegetation to be retained, and 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. Where boundary features, gates, railings, archways of heritage importance (and which contribute to landscape value) are to be affected by the works, mitigation measures should follow those outlined in Chapter 16 (Architectural Heritage); and
- Appropriate access to amenities and public open spaces shall be maintained by the appointed contractor.

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 Townscape Sensitivity	Magnitude of Change	Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts
Townscape and Streetscape Character				
	N4 Junction 3 to M50 Junction 7 – N4 Lucan Road For proposed changes see Section 17.4.3.1.1	Low	High	Negative Moderate Temporary / Short-Term
	M50 Junction 7 to R148 Con Colbert Road – R148 Palmerstown Bypass and Chapelizod Bypass For proposed changes see Section 17.4.3.1.2	Medium	Low / Medium Overall / Locally Very High at	Negative Slight / Moderate Overall; and Negative Significant

Townscape Receptor	Proposed Change	Baseline Townscape Sensitivity	Magnitude of Change	Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts
			Chapelizod Hill Road	Temporary / Short-Term Locally
	Con Colbert Road to City Centre – St. John’s Road West For proposed changes see Section 17.4.3.1.3	Medium / High	High	Negative Significant Temporary / Short-Term
Streetscape Characteristics and Visual Impacts				
Architectural Conservation Areas (ACA)	For proposed changes see Section 17.4.3.2.1	Very High	Medium / High	Negative Significant Temporary / Short-Term
Conservation Areas	For proposed changes see Section 17.4.3.2.2	Very High	Low Overall and Locally Medium / High at Chapelizod Hill Road and Dr Steevens’ Hospital	Negative Moderate Temporary / Short-Term Overall; and Negative Moderate / Significant Temporary / Short-Term Locally
Residential Conservation Areas	For proposed changes see Section 17.4.3.2.3	High	Negligible	Neutral Not Significant Temporary / Short-Term
Protected structures	For proposed changes see Section 17.4.3.2.4	Very High	High	Negative Significant Temporary / Short-Term
Amenity Designations	Hermitage Golf Club For proposed changes see Section 17.4.3.2.5	High	Very High	Negative Very Significant Temporary / Short-Term
	Liffey Valley High Amenity	High	Medium	Negative Moderate Temporary / Short-Term
	Hermitage Park For proposed changes see Section 17.4.3.2.5	Medium / High	Low	Negative Slight Temporary / Short-Term
	Open space adjacent to Knockmaree Apartments / and at Dr Steevens’ Hospital For proposed changes see Section 17.4.3.2.5	Medium / High	High / Very High	Negative Significant Temporary / Short-Term
	Open space north of R148 (Construction Compound LU2) For proposed changes see Section 17.4.3.2.5	Medium	High	Negative Moderate Temporary / Short-Term
	Open space at Liffey Gaels GAA Grounds For proposed changes see Section 17.4.3.2.5	High	High	Negative Significant Temporary / Short-Term
	River Liffey SAAO, Public Open Space, War Memorial Gardens. For proposed changes see Section 17.4.3.2.5	Very High	Negligible / Low	Negative Slight / Moderate Temporary / Short-Term
TPOs / tree Protection Objectives	For proposed changes see Section 17.4.3.2.6	Very High	Negligible	Neutral Imperceptible Temporary / Short-Term

Townscape Receptor	Proposed Change	Baseline Townscape Sensitivity	Magnitude of Change	Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts
Preserved Views / Scenic Views etc.	For proposed changes see Section 17.4.3.2.7	Low	Low	Neutral Slight Temporary / Short-Term
Properties	Knockmaree Apartments For proposed changes see Section 17.4.3.2.8	High	High	Negative Significant Temporary / Short-Term
	Other non-residential properties (excluding public open spaces) included in permanent acquisition For proposed changes see Section 17.4.3.2.8	Medium	High / Very High	Negative Significant Short-Term
	Properties not included in temporary acquisition or with minimal direct contact For proposed changes see Section 17.4.3.2.8	Medium / High	Medium	Negative Moderate / Significant Temporary / Short-Term
Trees and Vegetation	For proposed changes see Section 17.4.3.2.9	Medium / High	High / Very High	Negative Significant / Very Significant Temporary / Short-Term

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 practicable, and landscape measures are integrated within the design as far as possible. It should be noted, that wherever practicable, the Proposed Scheme proposes improvements of key locations of the townscape / streetscape, as described in Sections 17.4.1.4 and 17.4.4. Therefore, while no mitigation or monitoring measures are proposed for the Operational Phase, the scheme will become established and increasingly integrated within its landscape (townscape) setting, and the potential negative operational effects will be reduced. A comparative summary of Predicted Operational Phase effects, at both 1-year post-Construction Phase and following establishment of landscape measures at 15 years post-Construction Phase, is presented in Table 17.10.

However, it is acknowledged that in some cases 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.

Table 17.10: Summary of Predicted Operational Phase Impacts (at 1 and 15 years post-Construction Phase)

Townscape Receptor	Proposed Change	Baseline Townscape Sensitivity	Magnitude of Change	Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts	Significance and Quality of Effects / Impacts (with establishment of landscaping at 15 years post-construction)
Townscape and Streetscape Character					
	N4 Junction 3 to M50 Junction 7 – N4 Lucan Road For proposed changes see Section 17.4.4.1	Low	Medium	Negative Slight Short-Term	Positive Slight Long-Term
	M50 Junction 7 to R148 Con Colbert Road – R148 Palmerstown Bypass and Chapelizod Bypass For proposed changes see Section 17.4.4.1.2	Medium	Medium	Neutral Moderate Short-Term	Positive Moderate Long-Term
	R148 Con Colbert Road to City Centre For proposed changes see Section 17.4.4.1.3	Medium / High	Low / Medium	Positive Slight / Moderate Short-Term	Positive Moderate Long-Term
Streetscape Characteristics and Visual Impacts					
Architectural Conservation Areas (ACA)	For proposed changes see Section 17.4.4.2.1	Very High	Medium	Negative Moderate Short-Term	Negative Slight / Moderate Long-Term
Conservation Areas	For proposed changes see Section 17.4.4.2.2	Very High	Medium / Low	Negative Moderate Short-Term	Neutral Moderate Long-Term
Residential Conservation Areas	For proposed changes see Section 17.4.4.2.3	High	Negligible	Neutral Not Significant Short-Term	Neutral Not Significant Long-Term
Protected structures	Deadman's Inn, a milepost, houses at Quarryvale and Dr. Steevens' Hospital For proposed changes see Section 17.4.4.2.4	Very High	Medium	Neutral Moderate / Significant Short-Term	Neutral Moderate Long-Term
	Heuston Station For proposed changes see Section 17.4.4.2.4	Very High	Low	Positive Slight / Moderate, Short-Term	Positive Moderate Long-Term
Amenity Designations	Hermitage Golf Club For proposed changes see Section 17.4.4.2.5	High	High	Negative Significant Short-Term	Positive Moderate Long-Term
	Liffey Valley High Amenity	High	Medium	Negative Moderate Short-Term	Neutral Slight / Moderate Long-Term
	Hermitage Park	Medium / High	Low	Positive Slight Short-Term	Positive Slight Long-Term
	Open Space adjacent to Knockmaree Apartments For proposed changes see Section 17.4.4.2.5	Medium / High	Medium / High	Negative Significant Short-Term	Neutral Moderate Long-Term

Townscape Receptor	Proposed Change	Baseline Townscape Sensitivity	Magnitude of Change	Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts	Significance and Quality of Effects / Impacts (with establishment of landscaping at 15 years post-construction)
	Open Space north of R148 (Construction Compound LU2) Liffey Gaels GAA For proposed changes see Section 17.4.4.2.5	Medium / High	Low	Neutral Slight Short-Term	Positive Moderate Long-Term
	River Liffey SAAO, Public Open Space, War Memorial Gardens. For proposed changes see Section 17.4.4.2.5	Very High	Low	Neutral Slight Short-Term	Positive Slight Long-Term
	Dr Steevens' Hospital For proposed changes see Section 17.4.4.2.5	Medium / High	High	Negative Moderate / Significant Short-Term	Neutral Moderate Long-Term
TPOs / tree Protection Objectives	For proposed changes see Section 17.4.4.2.6	Very High	Negligible	Neutral Imperceptible Short-Term	Neutral Imperceptible Long-Term
Preserved Views / Scenic Views etc.	For proposed changes see Section 17.4.4.2.7	Low	Low	Neutral Slight Short-Term	Neutral Imperceptible Long-Term
Properties	Permanent acquisition from land adjacent to Knockmaree Apartments For proposed changes see Section 17.4.4.2.8	High	Medium / High	Negative Moderate / Significant Short-Term	Negative Slight Long-Term
	Other non-residential properties (excluding public open spaces) included in permanent acquisition For proposed changes see Section 17.4.4.2.8	Medium	High	Negative Moderate Short-Term	Negative Slight / Moderate Long-Term
	Properties not included in acquisition or with minimal direct contact For proposed changes see Section 17.4.4.2.8	Medium / High	Low	Negative Slight Short-Term	Neutral Slight Long-Term
Trees and Vegetation	Trees and Vegetation Generally For proposed changes see Section 17.4.4.2.9	Medium / High	Low	Negative Slight Short-Term	Positive Slight / Moderate Long-Term
	Hermitage Golf Club For proposed changes see Section 17.4.4.2.9	Medium / High	High	Negative Significant Short-Term	Positive Moderate Long-Term
	Adjacent to R148 / Chapelizod Hill Road For proposed changes see Section 17.4.4.2.9	Medium / High	High	Negative Significant Short-Term	Negative Moderate Long-Term

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 well-established planting. 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 17.2.4.8 and are included in Figure 17.2 in Volume 3 of this EIAR.

17.5.2.1.1 Photomontage View 01: View from Southeast along Old Lucan Road (at Woodies Roundabout)

View 01: Existing

Figure 17.2.1.1 shows the existing view from R835 Lucan Road immediately to the north of the roundabout junction connecting to Hermitage Golf Club and Lucan Retail Park. The view looks west along the single carriageway Lucan Road towards the junction with Ballyowen Road. An overgrown stone wall / tall hedgerow to the north side of the road, with mature deciduous trees and a narrow grass verge to the base, fills a large proportion of the frame and is the dominant landscape feature in the view. Concrete footpaths are present to both sides of the road and line markings on the approach to the roundabout are visible in the foreground. Tall utilitarian lighting poles are visible along the north side of the road and traffic lights, and road signage and a bus stop are visible clustered around the Ballyowen Road junction in the distance. The boundary fencing and hedge to the adjacent retail units to the south are just outside of the field of view to the left. The character of the view is of a partially developed regional road on the rural-urban fringe.

View 01: As Proposed

Figure 17.2.1.2 shows the proposed view from R835 Lucan Road immediately to the west of the roundabout junction connecting to Hermitage Golf Club and Lucan Retail Park. The road is widened to the north, with loss of some hedgerow shrubs but retention of mature trees. A new dual-lane cycle path, footpath and new stone wall is shown to the northern edge of the road with loss of narrow grass verge. Road markings have changed to allow a new eastwards bus lane on the north side of the road. Other streetscape elements remain unchanged. The proposed view represents a slight change with greater visual prominence of built elements; the prominence of the new wall, cycle lanes and the loss of vegetation changes the character to a minor degree and is slightly detrimental to visual amenity. However, the retention of mature trees ensures that the most valued landscape elements are retained in the view. Although it will be visually prominent, the new wall will be in natural stone with dimensions and masonry style to match existing which will ensure some continuity of character.

17.5.2.1.2 Photomontage View 02: View from East from south side of N4 (close to service station)

View 02: As Existing

Figure 17.2.2.1 shows the existing view looking west from a pedestrian overbridge which crosses the N4 Lucan Road between Mount Andrew Court and the footpath along the northern side of the N4. The view shows an elevated perspective looking down onto the N4 from the southern end of the bridge. The eight lanes of the N4 form the primary feature in the lower portion of the view. To the northern edge of the road, the tall stone wall and mixed woodland band to the boundary of the adjacent Hermitage Golf Club forms the background to the view. Tall utilitarian road lighting columns are prominent at regular intervals along the northern edge of the road, intersecting the tree canopies which overhang the road footpath. Part of the ramp structure leading to the northern end of the pedestrian bridge is visible to the far right of the view. The character of the view is predominantly built-up, and is strongly informed by the road corridor and also to an extent by the adjacent golf course.

View 02: As Proposed

Figure 17.2.2.1 shows the existing view looking west from a pedestrian overbridge which crosses the N4 Lucan Road between Mount Andrew Court and the footpath along the northern side of the N4. The primary change to the view is the creation of a two-way cycle track to the northern side of the road and the realignment of the footpath and the boundary wall to Hermitage Golf Club. A reduction in the width of the woodland band to the boundary of the golf course is shown, with existing trees along the front edge of the woodland band having been removed and

existing trees further back in becoming more visible. Proposed tree planting at a well-established stage is shown within the block. Tall (15m) sports netting is shown as a new feature in the distance along a section of the boundary of the golf course. A new shared surface is also introduced on the southern side of the N4. There would be no appreciable change in character or visual amenity of the view.

17.5.2.1.3 Photomontage View 03: View from West towards N4 pedestrian over bridge

View 03: As Existing

Figure 17.2.3.1 shows the existing view looking east towards Hermitage Golf Club from the southern footpath along N4 Lucan Road north of Hermitage Way. The view shows the southern four lanes of the N4 and a service road in the foreground, and the stone wall boundary and woodland band along the southern edge of Hermitage Golf Club forms the background. The lanes and footpath to the northern side of the N4 are screened behind the concrete dividing barrier. Tree canopies between the southern edge of the N4 and residential areas form the edge of the view to the right. The pedestrian overbridge from Mount Andrew Court over the N4 is visible in the distance to the east. The character of the view is of a predominantly built-up large road corridor with adjacent mixed woodland.

View 03: As Proposed

Figure 17.2.3.2 shows the proposed view looking east towards Hermitage Golf Club from the southern footpath along N4 Lucan Road north of Hermitage Way. The primary changes to the view are the realignment of the boundary wall, installation of tall (15m) sports netting and a reduction in the width of the woodland band to the boundary of the golf course. A cycle track is shown provided to the service road in the foreground. There will be a minor increase in the prevalence of built form in the view and a loss of overall visible vegetation, although this will change over time with maturation of proposed replacement tree planting. There will be no appreciable change in character, although the sports netting will reduce the visual amenity to a minor degree.

17.5.2.1.4 Photomontage View 04: View from East along Old Lucan Road

View 04: As Existing

Figure 17.2.4.1 shows the existing view from Old Lucan Road looking west along this single carriageway local road. A single footpath exists along the road on the right of the view, passing by mainly concealed entrances to adjoining residential properties. To the south side of the road, on the left of the view, can be seen a small outbuilding associated with the adjacent pump station, which is separated from the road by a stone wall with black steel bar railings. A thick utilitarian galvanised lighting column carrying electrical cables along the south side of the road is a prominent feature on the left of the view. Roadside trees present on both sides of the road fill much of the view, and a group of several moderate sized deciduous trees on the south side of the road forms the central focus of the view. The N4 is present to the left of the frame but is well screened by existing vegetation, with very minor filtered views of road signage. The character of the view is one of a small local road with ample adjoining tree cover and some detracting infrastructural features.

View 04: As Proposed

Figure 17.2.4.2 shows the proposed view from Old Lucan Road looking west along this single carriageway local road. The primary change in the view is the loss of the group of trees and introduction of a new pedestrian bridge over the N4, within the centre of the view, to the south side of Old Lucan Road. The bridge consists of a utilitarian design with a long pedestrian ramp structure extending east towards the viewer. A portal gantry with road signage can be seen behind the bridge rising above the level of the bridge and forming a visually prominent feature. The proposals will increase the amount of utilitarian built form and visual clutter within the view. This will affect the character of the view and have a detrimental impact on visual amenity. However, the introduction of replacement tree planting between the road and the bridge helps to reduce the visual effects through screening the structure.

17.5.2.1.5 Photomontage View 05: View from East from Liffey Valley

View 05: As Existing

Figure 17.2.5.1 shows the existing view taken from a verge off a section of the Fonthill Road to the north of Liffey Valley Shopping Centre. The view looks westwards over the N4 Lucan Road from an elevated position. In the foreground to the left of the frame is the Fonthill Road and a cycle path and footpath which follows the northern edge of the road. Behind this is a medium-rise modern office building at Liffey Valley Office Campus partially screened by a band of medium sized trees. A large mown grass area occupies the centre of the view sloping downwards from the road towards a tall concrete wall forming the edge of the N4. A few isolated trees are visible in the grass area, and a dense band of tree planting forms the background behind the N4 to the right of the view. Tall utilitarian road lighting columns are prominent built features in the view. The character is one of a developed functional landscape around a major road corridor with adjacent grassland and tree planting.

View 05: As Proposed

Figure 17.2.5.2 shows the proposed view from a section of the Fonthill Road to the north of Liffey Valley Shopping Centre. The primary changes to the view are the introduction of a new pedestrian bridge and portal gantry with road signage crossing the N4 in the middle distance in the centre of the view, and the loss of trees to the northern side of the N4 to accommodate the bridge ramp structure. The bridge consists of a utilitarian design with pedestrian ramp structures extending into open space to either side of the N4. To the northern side of the N4 the ramp is a long, tall steel structure on thin pillars set against a background of mature trees. To the southern side of the N4 the ramps are set into the ground and are mainly distinguishable by the presence of boundary wall and railings, although a small proportion of the ramp surface is visible. The proposals would add visual clutter and would be a visual detractor in the view, however, they do not extend above the skyline and would be seen in the form of other substantial built form, namely the N4, lighting poles and adjacent Liffey Valley Office Campus building. The loss of the taller specimens of trees may be noticeable but the continuity of the tree cover across the background would not be broken.

17.5.2.1.6 Photomontage View 06: View from North from Victoria Quay

View 06: As Existing

Figure 17.2.6.1 shows the existing view from a pedestrian island on the junction of St John's Road West and Victoria Quay looking south along St John's Road West an urban dual carriageway. In the foreground is the pedestrian island and the slip lane connecting to Victoria Quay. Beyond this is a planted area of shrubs, grassland and small cherry trees which partially screens the eastern façade of the Heuston Station building (protected structure) to the right of the view. To the left of the view a group of mature plane trees on the east side of the road are a significant landscape feature. In the distance can be seen Dr. Steevens' Hospital building (protected structure) with its prominent turret forming a focal point within the view. The scene is generally uncluttered with a small number of utilitarian lighting columns, bollards and traffic signs located throughout the view. The character is of a substantial road corridor within a green and historic urban setting.

View 06: As Proposed

Figure 17.2.6.2 shows the proposed view from a pedestrian island on the junction of St John's Road West and Victoria Quay looking south along St John's Road West an urban dual carriageway. The view shows a new road layout with rearranged lanes and a new cycle path to the west side of the road on the right side of the view which cuts into the existing planted area with loss of trees and like-for-like replacement trees. A new lighting column and new traffic signals are introduced to the view. The proposals would not appreciably change the character or the visual amenity of the view or interfere with visibility of the protected structures.

17.5.2.1.7 Photomontage View 07: View from North across St. John's Road towards north elevation of Dr. Steevens' Hospital

View 07: As Existing

Figure 17.2.7.1 shows the proposed view from St John's Road West at Heuston Station looking across the road to the south. The focus of the view is Dr. Steevens' Hospital, a protected structure. Landscaped areas with formal arrangements of lawns, trees and shrubs, visible to the front of the building have a positive contribution to the setting of the building and to the overall streetscape. A chain and post boundary separates this area from the roadside footpath. An ornamented lighting column can be seen to the southern edge of the road to the left of the

view. In the foreground is the road and concrete central reservation with galvanised pedestrian guardrails which detract from the visual amenity of the view. The character is of a historic landmark building within a spacious landscape setting adjacent to a substantial urban road corridor.

View 07: As Proposed

Figure 17.2.7.2 shows the proposed view from St John's Road West looking across the road to the south. The view shows a change to the road layout with a movement of the central median, introduction of two new bus stops and a new cycle track and paved area in the foreground. Land is acquisitioned from the Dr Steevens' Hospital grounds to accommodate the new bus stop on the southern side of the road and a new bus shelter, hedge and tree planting is introduced in front of the building. The bus shelter slightly obscures the historic hospital building but this is minimised by the glass panel construction. The central median has been removed. There is slight change in the character of the view and a positive impact on visual amenity through the removal of the central median with the safety guardrail. The new tree planting helps to further 'green' the streetscape, however, it should be noted that the proposed trees are shown without leaf with minimal screening of the historic hospital building. The screening effect will increase outside of the winter period reducing visibility of the façade which is a valued feature in the streetscape.

17.5.2.1.8 Photomontage View 08: View from North across Chapelizod Hill Road

View 08: As Existing

Figure 17.2.8.1 shows the existing view from Chapelizod Hill Road looking up the steep incline of the road to the south-west up to where it passes under the R148 Chapelizod Bypass via a concrete bridge structure. The view focuses on the left side of the road (eastern side) where the wooded embankment of the R148 is bounded by a railing with stone piers that connects to the concrete wing wall of the bridge. The road, which is one-way southbound, is narrowed by two kerb-extensions with galvanised pedestrian guardrails and road signage. There is a concrete footpath to each side of the road.

View 08: As Proposed

Figure 17.2.8.2 shows the proposed view from Chapelizod Hill Road looking up the steep incline of the road to the south-west up to where it crosses under the R148 Chapelizod Bypass via a concrete bridge. The primary changes to the view are the extension of the R148 road bridge outwards to the north towards the viewer, the addition of a ramp access to the left (east) side of Chapelizod Hill Road and the addition of a contra-flow cycle track to the right (west) side of the road, segregated with high-visibility bollards. Young / semi mature tree planting and boundary railing has been removed to allow the ramp construction. Metal handrails and steel bar fencing, which match the existing provision in Chapelizod village, and cast in-situ concrete walls enclose the ramp, with new shrub and tree planting providing partial screening. The ramp is integrated into the buffer planting edge using a green wall system to create a soft interface with the existing context while helping to retain existing tree planting. The wing wall of the bridge structure has been removed and the new façade of the bridge is finished with a fluted textured concrete. Footpaths have been in part up upgraded with a new natural stone surface to match the existing in Chapelizod village centre and the kerb extension to the west has been removed, along with all the pedestrian guardrails. There is no appreciable change to the character of the view. There is a minor loss of visual amenity through the removal of tree planting, however, this is offset by the introduction of new planting and improvements to the appearance of the paving and bridge.

17.6 Residual Impacts

17.6.1 Construction Phase

Mitigation of landscape (townscape) and visual impacts during the Construction Phase is focused on ensuring protection of elements to be retained (e.g. mature trees) and providing for a degree of visual screening of particular aspects of the works (e.g. the Construction Compounds). 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 mitigation of Construction Phase impacts on townscape and visual characteristics is neither possible nor

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 17.11.

Table 17.10: Summary of Predicted Construction Phase Residual Effects (Moderate or Higher)

Townscape Receptor	Proposed Change	Baseline Townscape Sensitivity	Magnitude of Change	Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts
Townscape and Streetscape Character				
	N4 Junction 3 to M50 Junction 7 – N4 Lucan Road For proposed changes see Section 17.4.3.1.1	Low	High	Negative Moderate Temporary / Short-Term
	M50 Junction 7 to R148 Con Colbert Road – R148 Palmerstown Bypass and Chapelizod Bypass For proposed changes see Section 17.4.3.1.2	Medium	Locally Very High at Chapelizod Hill Road	Significant Temporary / Short-Term Locally
	R148 Con Colbert Road to City Centre – St. John's Road West For proposed changes see Section 17.4.3.1.3	Medium / High	High	Negative Significant Temporary / Short-Term
Streetscape Characteristics and Visual Impacts				
Architectural Conservation Areas (ACA)	For proposed changes see Section 17.4.3.2.1	Very High	Medium / High	Negative Significant Temporary / Short-Term
Conservation Areas	For proposed changes see Section 17.4.3.2.2	Very High	Low Overall and Locally Medium / High at Chapelizod Hill Road and Dr Steevens' Hospital	Negative Moderate; and Moderate / Significant Temporary / Short-Term Locally
Protected structures	For proposed changes see Section 17.4.3.2.4	Very High	High	Negative Significant Temporary / Short-Term
Amenity Designations	Hermitage Golf Club For proposed changes see Section 17.4.3.2.5	High	Very High	Negative Very Significant Temporary / Short-Term
	Liffey Valley High Amenity	High	Medium	Negative Moderate Temporary / Short-Term
	Open space adjacent to Knockmaree Apartments / and at Dr Steevens' Hospital For proposed changes see Section 17.4.3.2.5	Medium / High	High / Very High	Negative Significant Temporary / Short-Term
	Open space north of R148 (Construction Compound LU2) For proposed changes see Section 17.4.3.2.5	Medium	High	Negative Moderate Temporary / Short-Term
	Open space at Liffey Gaels GAA Grounds For proposed changes see Section 17.4.3.2.5	High	High	Negative Significant Temporary / Short-Term
Properties	Knockmaree Apartments For proposed changes see Section 17.4.3.2.8	High	High	Negative Significant Temporary / Short-Term

Townscape Receptor	Proposed Change	Baseline Townscape Sensitivity	Magnitude of Change	Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts
	Other non-residential properties (excluding public open spaces) included in permanent acquisition For proposed changes see Section 17.4.3.2.8	Medium	High / Very High	Negative Significant Short-Term
	Properties not included in temporary acquisition or with minimal direct contact For proposed changes see Section 17.4.3.2.8	Medium / High	Medium	Negative Moderate / Significant Temporary / Short-Term
Trees and Vegetation	For proposed changes see Section 17.4.3.2.9	Medium / High	High / Very High	Negative Significant / Very Significant Temporary / Short-Term

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 residual Operational Phase Effects (rated moderate or greater) following establishment of landscape measures at 15 years Post-Construction Phase, is presented in Table 17.12.

Table 17.11: Summary of Predicted Operational Phase Significant Residual Impacts (Moderate or Higher)

Townscape Receptor	Proposed Change	Baseline Townscape Sensitivity	Magnitude of Change	Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts (at 15 years post-construction)
Townscape and Streetscape Character				
	M50 Junction 7 to R148 Con Colbert Road – R148 Palmerstown Bypass and Chapelizod Bypass For proposed changes see Section 17.4.4.1.2	Medium	Medium	Positive Moderate Long-Term
	Con Colbert Road to City Centre – St. John’s Road West For proposed changes see Section 17.4.4.1.3	Medium / High	Low / Medium	Positive Moderate Long-Term
Streetscape Characteristics and Visual Impacts				
Conservation Areas	For proposed changes see Section 17.4.4.2.2	Very High	Medium / Low	Neutral Moderate Long-Term
Protected structures	Deadman’s Inn, a milepost, houses at Quarryvale and Dr. Steevens’ Hospital For proposed changes see Section 17.4.4.2.4	Very High	Medium	Neutral Moderate Long-Term
	Heuston Station For proposed changes see Section 17.4.4.2.4	Very High	Low	Positive Moderate Long-Term
Amenity Designations	Hermitage Golf Club For proposed changes see Section 17.4.4.2.5	High	High	Positive Moderate Long-Term

Townscape Receptor	Proposed Change	Baseline Townscape Sensitivity	Magnitude of Change	Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts (at 15 years post-construction)
	Liffey Valley High Amenity	High	Medium	Neutral Slight / Moderate Short-Term
	Open Space adjacent to Knockmaree Apartments For proposed changes see Section 17.4.4.2.5	Medium / High	Medium / High	Neutral Moderate Long-Term
	Open Space north of R148 (Construction Compound LU2), Liffey Gaels GAA For proposed changes see Section 17.4.4.2.5	Medium / High	Low	Positive Moderate Long-Term
	Dr Steevens' Hospital For proposed changes see Section 17.4.4.2.5	Medium / High	High	Neutral Moderate Long-Term
Trees and Vegetation	Hermitage Golf Club For proposed changes see Section 17.4.4.2.9	Medium / High	High	Positive Moderate Long-Term
	Adjacent to R148 / Chapelizod Hill Road For proposed changes see Section 17.4.4.2.9	Medium / High	High	Negative Moderate Long-Term

17.7 Conclusion

As described in Chapter 3 (Consideration of Reasonable Alternatives) of this EIAR and noted at Section 17.4.1.2 of this Chapter, the Proposed Scheme has been subject to an iterative design development process which has sought insofar as practicable to avoid or reduce negative impacts, including townscape and visual impacts. Nevertheless, the Proposed Scheme will give rise to some degree of townscape and visual effect, most notably during the Construction Phase. These impacts arise especially where there is temporary and / or permanent acquisition of lands associated with residential or other properties including amenities, and where tree removal is required. The Proposed Scheme includes for replacement of disturbed boundaries, reinstatement of the Construction Compound, return of temporary acquisition areas, and for additional tree and other planting where possible along the Proposed Scheme.

In the Operational Phase localised residual effects will remain for properties experiencing permanent land acquisition and in the loss of trees particularly at Chapelizod Hill Road. There will be overall positive effects for all sections of the scheme as the Proposed Scheme provides for improvements in the urban realm, which will provide positive long-term effects for the townscape and visual character, most notably along Old Lucan Road, along sections of the R148 and at the junction of Con Colbert Road and South Circular Road. The Proposed Scheme will represent a less car-centric urban realm providing for a significantly enhanced level of service for public transport and for pedestrian / cycle connectivity.

17.8 References

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