Clifton Scannell Emerson Associates

EIAR Chapter 15 The Landscape

Suir Island Infrastructure Links

Comhairle Contae Thiobraid Árann
Tipperary County Council

CONSULTING ENGINEERS

Civil Engineering | Structural Engineering | Transport Engineering | Environmental Engineering | Project Management | Health and Safety

Clifton Scannell Emerson Associates Limited,
Consulting Engineers, 3rd Floor The Highline, Bakers Point,
Dun Laoghaire, Co. Dublin, Ireland A96 KW29
T. +353 1 2885006 F. +353 1 2833466 E. info@csea.ie W. www.csea.ie

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15.1 Introduction and Scope

In this section of the EIAR report dhb Architects, in tandem with Landscape Architect Milia Maddock, has conducted a Landscape Character Assessment (LCA) and Visual Impact Assessment (LVIA) for the proposed development based on the required format as outlined by the following Transport Infrastructure Ireland (TII) publications that are referred in more detail under section 15.2 “Methodology”.

This Chapter 15 refers to a specific study area of an urban landscape in which the proposed development consisting of two pedestrian bridges, as infrastructure, are intended to connect two sides of a townscape via an island, a natural feature situated in the centre of the River Suir.

The site of the proposed development is located in the town of Clonmel, County Tipperary as shown in Figure 15-1, and it includes a portion of the River Suir, Suir Island, and the riverbanks on each side, and incorporating both built and natural features. This proposed development is referred to as the Suir Island Infrastructure Links.

In brief, the scope of work of this project for the proposed development involves the development of two pedestrian bridges: The first bridge (North Bridge) is located off a new public plaza at the end of Sarsfield Street and links the town’s historic centre to Suir Island. The second bridge (South Bridge) is a continuation of the route of the first bridge and the proposed promenade, i.e. the link across the Island itself, connecting the Island to Raheen Road on the southern bank of the River Suir beside the entrance to Denis Burke Park.

This link consists of two curved bridges connecting across an existing flood defence berm. Together, these three structures form a meandering line over both arms of the River Suir and Suir Island, linking the southern bank and the Island carpark directly to the Town Centre. With consideration for the requirement to have the proposed bridge structures positioned above the one-in-a-hundred-year flood event, it forms an elevated promenade with new panoramic views, along with other new viewpoints from both the North and South Bridges at their ramp junctions with deck areas.

Overall, the intention of this link will be to improve accessibility for all potential local and visitor users, such as primarily cyclists and pedestrians, and provide amenity value to the area (i.e., receptors as per the TII publications discussed in the next section) while adding a sustainable recreational value to the area.

In the following section 15.2, the primary objective of this chapter in the EIAR report is considered.

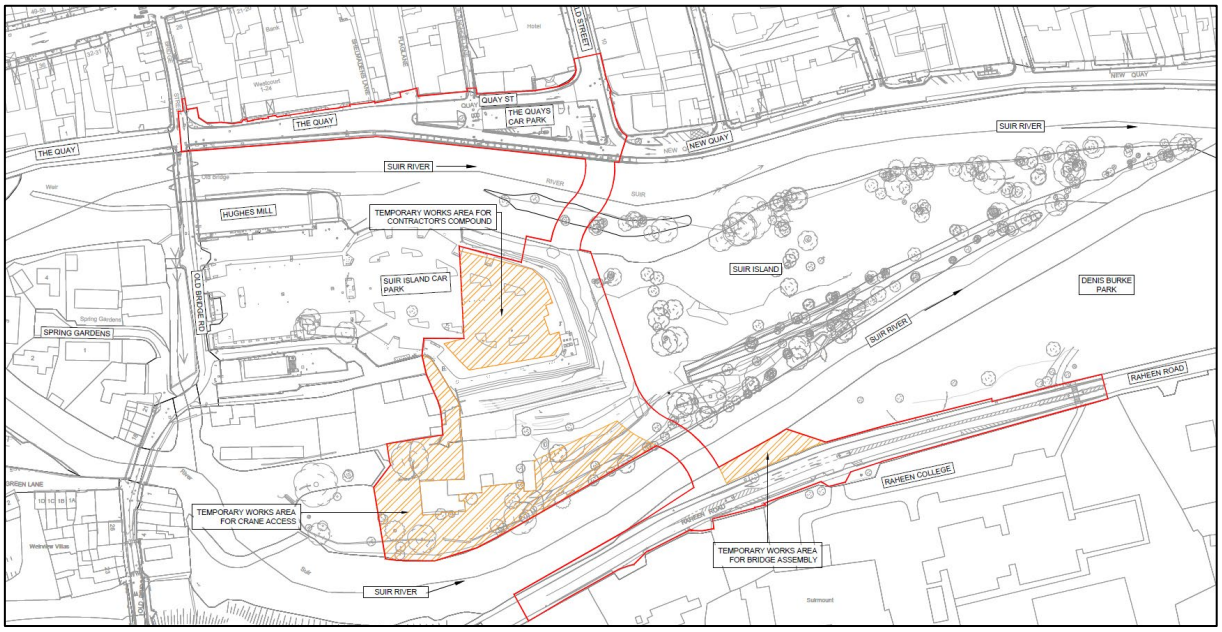


Figure 15-1: Red Line Boundary of the Suir Island Infrastructure Links (SIIL) proposed Development Area

15.2 Methodology

15.2.1 Terminology

This Chapter incorporates and is based on various sources and publications that provide guidelines outlining the methodology as to how best to refer to the changes in the character, fabric, and quality of the landscape as a result of a proposed development. The most common and earliest guidelines were set out and referred to as "Landscape Impacts". The terminology for landscape impacts is defined in the "Guidelines for Landscape and Visual Impact Assessment" (3rd Edition, by The Landscape Institute / Institute of Environmental Assessment published by E & FN Spon, 2013).

Landscape impacts are generally considered to be permanent and include direct impacts on landscape "receptors, (people's) view and visual amenity". The landscape receptors can be either natural, such as flora or fauna, or human such as individual viewers or viewer groups that will experience an impact. The vulnerability to change is measured by the extent to which the landscape receptor is impacted by the change. In addition, below are several other publications listed of which the TII publications (i.e., PE-ENV-01101 & 01102) are the most relevant guidelines for this proposed development as they deal specifically with the environmental impacts of infrastructural development:

- Guidelines on the information to be contained in environmental impact statements, published by the EPA (2002).
- Advice notes on Current Practice in the Preparation of Environmental Impact Statements, published by the Environmental Protection Agency (EPA) (2003).
- Guidelines for Landscape and Visual Impact Assessment 3rd Edition, by The Landscape Institute / Institute of Environmental Assessment published by E&FN Spon (2013).
- Transport Infrastructure Ireland; TII Publication _PE-ENV-01101 (December 2020).
- Transport Infrastructure Ireland; TII Publication _PE-ENV-01102 -TII (December 2020).
- The Draft EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports (EIAR) EPA, 2022.
- Tipperary County Development Plan 2022-2028, Appendix 3, Landscape Character Assessment and Schedule of Views and Routes, Volume 3.

Sources in which this EIAR chapter is primarily based are outlined below :

- PE-ENV-01101 (December 2020) / Title : Landscape Character Assessment (LCA) and Landscape Visual Impact Assessment (LVIA) of specified Infrastructure Projects-Overarching Technical Document.
- PE-ENV-01102 (December 2020) / Title: Title : Landscape Character Assessment (LCA) and Landscape Visual Impact Assessment (LVIA) of Proposed National Roads—Standards.

Primary function of the following publications are:

- PE-ENV-01101: “publication provides guidance on the methodology, scope and processes underlying Landscape and Visual Impact Assessment (LVIA) for specified Infrastructure Projects.”
- PE-ENV-01102: “publication sets out the methodology for the analysis and the production of documents and deliverables in terms of:
    - Landscape Character Assessment (LCA) in the establishment of the landscape baseline for proposed national roads.
    - Landscape and Visual Impact Assessment (LVIA) of proposed routes and projects.”

The term landscape can have an extensive definition, but the general consensus is that the landscape is “a perceived area by people” with a distinctive landscape [having its] own unique character, but the core of any landscape perceived or not is that it has evolved over time due to various natural and human-related factors. (Refer PE-ENV -01102 -see pages 6 & 7). The natural factors encompass many aspects (i.e., geology, hydrology, topography, soils, solar aspect, climate- these in turn dictate vegetation, ecology, wildlife, and biodiversity). None of these aspects are static since they incorporate natural processes and are always in a state of flux, hence the landscape over time changes.

In addition, the human factors are primarily diverse human activities that also contribute to changes in the landscape (i.e., agriculture, pastoral, industrial, recreational, urban development along with infrastructure to support it, etc.), shaped by human nature, human survival needs, economic needs, cultural perceptions and social interactions.

In this EIAR Chapter the primary objective is not the detailed analysis of all these layers of natural and human-made factors that have contributed to site’s landscape both in the past and present. Other Chapters in the EIAR will address the various natural and human-made factors in detail (i.e., Chapter 4 etc.). Yet these factors cannot be ignored and must be understood in order to evaluate and better assess the future of the landscape of this specific site area and in terms of the proposed development.

According to TII publications the Landscape Character is defined as a “distinct recognisable, and consistent pattern of elements or characteristics, which distinguishes one landscape from another.” (TII publication PE-ENV-01102, / Natural England, 2021) This includes the following definitions such as:

- Landscape Character Types, referred to as “distinct types” of landscapes, such as landscapes that share common natural aspects in geology, topography, hydrology, drainage patterns, vegetation, and historic land use and settlement patterns.(i.e., Upland Heaths)
- Landscape Character Areas definition refers to distinctive geographical areas that have similar generic characteristics, but still encompass a distinct identity and/or character. (i.e., “Lough Derg Uplands” (Reference to key definitions in PE-ENV -01102 -Page 6).

Landscape Architect’s primary role in this assessment is to describe, through photos, images/figures and/or tables the unique characteristics and distinctive features both natural and built that combine to convey the distinctiveness of this site area’s Landscape Character Assessment (LCA). Other EIAR Chapters will provide additional baselines for various components of the receiving environment. The process is summarised in TII Figure 2, Section 2 of PE-ENV-01101 (p. 31); see fig.15.2 below. Furthermore, the (LCA) section on definitions includes reference to landscape characters subsets as

perceived by people such as “Townscape” or town landscape compromising the relationship between buildings and open spaces, and different types of urban open spaces. “Seascapes” is a subset landscape referring to “an area of the sea, coastline and land”. “Historic Landscape Characteristic” (HLC) refers to historic aspects of the landscape. For further information on these definitions See p. 7, PE-ENV-01102 document).

The subsequent sections of this Chapter include the process referred to as Landscape and Visual Impact Assessment (LVIA), which is defined as the process to identify and assess the significance of and effects of change resulting from development on both landscape as an environmental resource in its own right and on receptors (people’s) view and visual amenity.” (PE-ENV -01102, p. 7). Note: The term “receptor” is interchangeable with term “amenity users” or “users” in this report.

The Landscape Impact Assessment (LIA) is defined as:” the process of evaluating changes to landscape resulting from a proposed development. “

Visual Impact Assessment (VIA) pertains to the process of evaluating how people (receptors/land users) may perceive and evaluate in visual terms and be affected to the changes that have arisen from the proposed development.” This part of the assessment is hypothetical as the proposed development has not occurred, but based on the base line information and the proposed development design layout that is intended to be implemented if approved. Thus, an attempt is made to project the potential impact as well as the mitigation strategies that can be employed to reduce impacts on the environment and visual effects for the receptors.

There are two basic terms regarding the LVIA process that pertain to “impacts“ and “effects” . The methodology states that these terms must be used consistently through the environmental assessment: Impact is the action being taken and Effect is the result of the impact, the change or changes that have been take on the existing conditions of the environment.

In addition, two other terms used in this assessment are: Landscape Sensitivity and Landscape Capacity.

Landscape Sensitivity refers to: “*the extent to which the inherent (existing) landscape and visual amenity of a landscape are vulnerable to change due to a particular type of proposed development activity. The term is applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor*.”

Landscape Capacity is defined as: “*the degree to which a particular landscape character type or area is able to accommodate change without significant effects on its character, or overall change of the landscape character type. Capacity is likely to vary according to the type and nature of change being proposed*.”

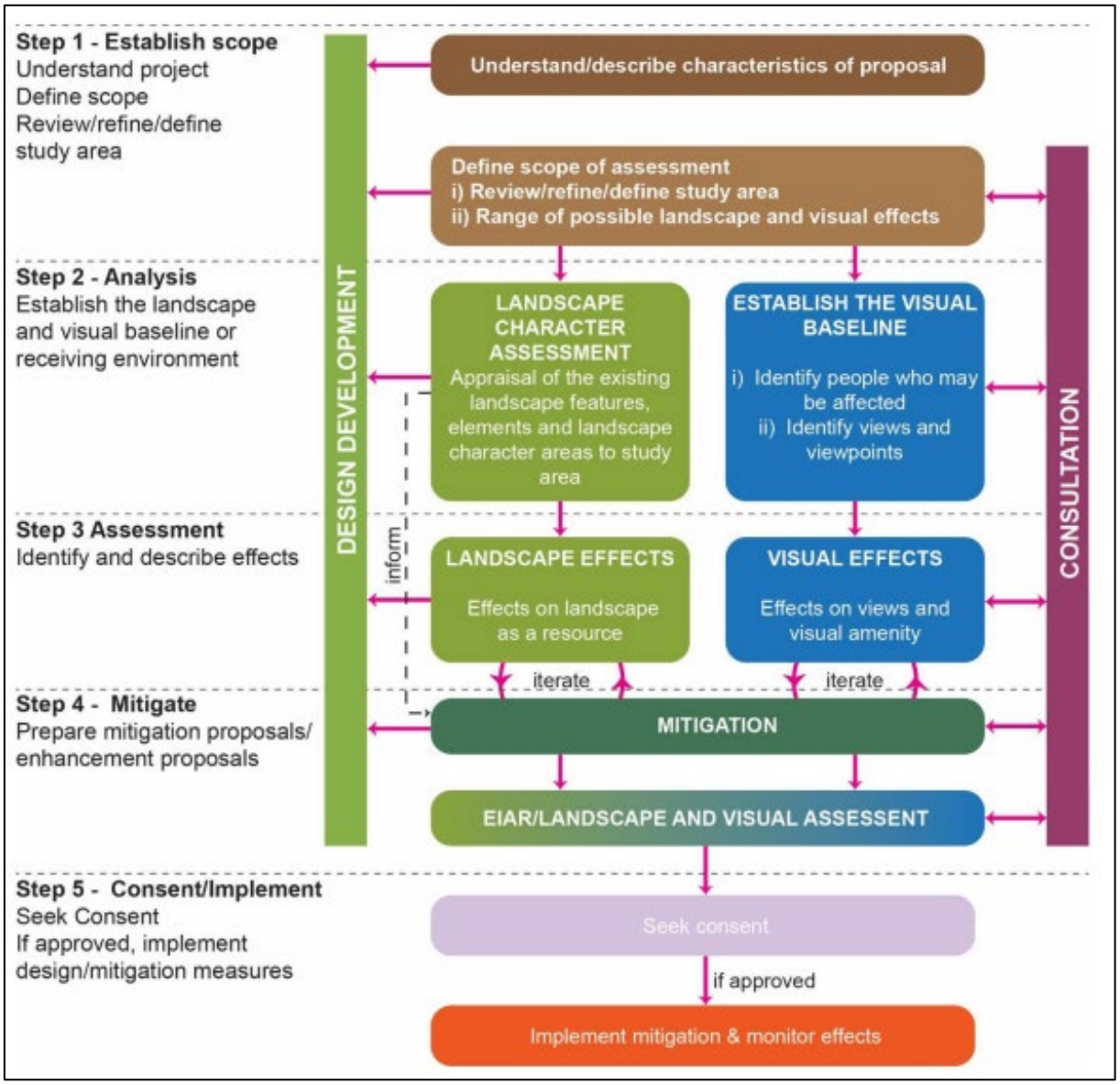


Figure 15-2: Summary of LVIA Process (extract TII Publ. PE-ENV-01101), Figure 2 in Section 2

The tables below illustrate methodology applied. Table 15-1 refers to the degree of impact by the proposed development in terms of noticeable changes to landscape context, character, or features resulting in a significant "effect" on the character and visual environment. Table 15-2 below considers the visual impacts by the development on views for the receptors, such as the degree of noticeable changes in the character of the visual environment, meaning changes to available views of the landscape both built and natural, and the effects of any change on people (i.e., users of the outdoor environment) viewing the landscape.

As per the TII publication PE-ENV-01102 (extract page 19):

The main objectives of assessment in regard to LCA/LVIA process are:

- To avoid or reduce the negative impacts of the final road /infrastructure option on the landscape character and visual environment.
- To accommodate the road project and associated infrastructure project within the landscape context sensitivity and in keeping with the landform and the built, natural and community environment through which it passes.

- To contribute to the quality of the landscape, public spaces, and road-users experience, where possible.

Table 15-1: Extent of the Landscape Impact Assessment with Impacts and Effect by the proposed development on landscape character (LIA)

Impact and changes to the receiving Landscape Character and as an environmental resource arising from a proposed development	
Degree of Impact **- Action Taken**	**Degree of Effect (i.e., the change or changes) due to action taken** **Note: Duration is addressed in Table 15-4**
Profound Impact **(extremely high)**	An effect in terms of character, capacity to accommodate, magnitude, duration, or intensity significantly obliterates sensitive characteristics. There are notable changes in landscape characteristics over an extensive area (70-100%) or a very intensive change over a more limited area.
Very Significant Impact **(very high)**	An effect which, by its character, capacity to accommodate, magnitude, duration, or intensity significantly alters the majority of a sensitive aspect of the environment. There are notable changes in landscape characteristics over a substantial area (50-70%) or a very intensive change over a more limited area.
Significant Impact **(high)**	An effect which, by its character, capacity to accommodate, magnitude, duration, or intensity alters a sensitive aspect of the landscape. There are notable changes in landscape characteristics over a substantial area (30-50%) or an intensive change over a more limited area.
Moderate Impact **(medium)**	An effect which, by its character, capacity to accommodate, magnitude, duration, or intensity alters a sensitive aspect of the landscape. An effect that alters the character of the landscape in a manner that is consistent with existing and emerging trends. There are minor changes over some of the area (up to 30%) or moderate changes in a localised area.
Slight Impact **(low)**	An effect which, by its character, capacity to accommodate, magnitude, duration, or intensity alters a sensitive aspect of the landscape. An effect which causes noticeable changes in the character of the landscape without affecting its sensitivities. There are minor changes over a small proportion of the area or moderate changes in a localised area or changes that are reparable over time.
Imperceptible Impact **(not noticeable)**	An effect which, by its character, capacity to accommodate, magnitude, duration, or intensity alters a sensitive aspect of the landscape. An effect capable of measurement but without noticeable consequences. There are no noticeable changes to landscape context, character, or features.

Note: In Table 15-2 below the key receptors for this project includes residents and visitors of the townscape and specifically those users engaged in recreational activities (i.e., active recreation-walking, cycling, jogging, canoeing and passive recreation-seating, picnics, viewing , strolling etc.) within Suir Island and immediate surroundings (i.e., the riverbanks both built and the natural).

Table 15-2: Extent of the Visual Impact Assessment (inherent character and visual amenity) in terms of Sensitivity – vulnerability to change- for to key specific visual receptors (LVIA)

Degrees of Visual Effect to Landscape Character and as Visual Amenity to key receptors	**Visual amenity (views) available to specific people (i.e., visual receptors/ users) visiting a changed/ altered landscape**
Profound Effects **(extremely high Sensitivity)**	An effect which *obliterates sensitive* landscape inherent characteristics, and the visual amenity (view) is *entirely altered*, obscured, or affected. And its effects on key receptors identified.
Very Significant Effects (very high Sensitivity)	An effect which, by its landscape inherent character, magnitude, duration, intensity or significantly alters *the majority of a sensitive aspect* of the visual amenity (view) of the environment. The proposal affects the majority of the overall visual composition, or visual amenity (view) is so affected that they form a new element in the physical landscape. And its effects on key receptors identified.
Significant Effects **(high Sensitivity)**	An effect which, by its landscape inherent character, magnitude, duration, or intensity *alters a sensitive aspect* of the visual amenity(view) of the environment. The proposal affects a large proportion of the overall visual composition, or views are so affected that they form a new element in the physical landscape. And its effects on key receptors identified.
Moderate Effects **(medium Sensitivity)**	An effect that alters the landscape inherent character of the visual amenity (view) of the environment *in a manner that is consistent with existing and emerging trends.* The proposal *affects an appreciable segment* of the overall visual composition, or there is an intrusion in the foreground of a view. And its effects on key receptors identified.
Slight Effects **(low Sensitivity)**	An effect which causes *noticeable changes* in the landscape inherent character of the visual amenity (view) and of the environment *without affecting its sensitivities.* The *affected view forms only a small element* in the overall visual composition or changes the view in a marginal manner.
Not significant **(very low Sensitivity)**	An effect which causes *noticeable changes* in the landscape inherent character of the visual amenity (view) of the environment *but without noticeable consequences*. The proposal is adequately screened due to the existing landform, vegetation, or constructed features. And its effects on key receptors identified.
Imperceptible Effects **(no change)**	There are no changes to inherent character and visual amenity in the visual landscape. And its effects on key receptors identified.

Alteration of any visual amenity (views) is not only dictated by the proposed development but also dependent on the location of the viewer. Table 15-3 is for assessing and evaluating whether the proposed development *enhances or detracts from the quality of the inherent landscape character*. Table 15-4 conveys the *duration of visual impact* arising from of the proposed development. Changes will occur no doubt due to the changes of the environment, but the intensity of the visual impact on the landscape character and key receptors is the core of this assessment, and this evaluation is conveyed and summarised by the tables below.

Table 15-3: Quality of the Landscape and Visual Impact for the key receptor(s)-(LVIA)

Degrees of Visual Effect to key receptor's	**Receptor's value, susceptibility, and sensitivity**
Neutral Landscape and Visual Impact	Neither detracts from nor enhances the landscape of the receiving environment or view.
Positive Landscape and Visual Impact	Improves or enhances the landscape of the receiving environment or a particular view.
Negative Landscape and Visual Impact	Detracts from the quality of the landscape or view.

Table 15-4: The Duration of the Visual Impact on the landscape and for the key receptor(s) (LVIA)

Duration of Visual Impact	***Duration of visual impact* arising from of the proposed development.**
Temporary Duration	Impacts lasting one year or less
Short-term Duration	Impacts lasting one to seven years
Medium-term Duration	Impacts lasting seven to twenty years
Long-term Duration	Impacts lasting twenty to fifty years
Permanent Duration	Impacts lasting over fifty years

The above tables outlining the terminology and process provide the basic guideline or tool to assess and evaluate the degree of impact in all is potential aspects. Environmental Impact Assessment reports (EIAR) for the landscape section apply the term "study area", and this term refers to the site itself and to landscape context or immediate surroundings in this particular site area that encompasses the physical nature and character of the landscape.

To obtain a comprehensive perception and understanding of the site's surrounding for this proposed development, the study area considered was deemed to extend at least 1.0 km in all compass directions or radius from the centre of the Suir Island proposed development. This is taken to be the Zone of Visual Impacts for the purposes of this study. The locations considered as part of the study area as being particularly relevant are; Route 671 bridge crossing looking east towards Suir Island, the Old Waterford Road Bridge looking west towards the Site area, looking north from Hill View and northwest from the Old Bridge Road, Raheen Road and Denis Burke Park, looking south towards the island from Mary Street, The Quay, New Quay, Sergeant's Lane. The existing views and potential for impact to changes regarding the views from these surroundings is discussed in subsequent sections.

This study area typically includes the existing topography (i.e., elevations, solar aspect and slopes etc.), significant static natural features (i.e., floodplains, hills, cliffs etc.), the vegetation (i.e., woodlands, meadows, wetlands, marshes, estuaries, etc.), the extent of openness and/or enclosure, available and

types of views (i.e., tunnel/confined views, wide/panoramic views, short and long views), and the fabric both built (i.e., bridges, buildings, roadways, etc.), and natural, containing prominent dynamic features (i.e., rivers, streams, watersheds, etc.), and including landmarks (i.e., archaeological ruins, historical structures, focal elements such as art features etc.).

15.2.2 Survey and Guidelines

The preparation of the landscape and visual impact assessment refers to the following:

- Desktop survey of aerial photography, detailed maps, and relevant reports pertaining to the study area. These reports include "Clonmel and Environs Development Plan 2013-2019" and the Environmental Statement prepared by the Planning Authorities Clonmel Borough Council | South Tipperary County. The Clonmel Urban Design Framework Part VIII Planning Report, August 2020. Tipperary County Draft Development Plan 2022 – 2028. In addition, "Suir Island Masterplan Report, 2019 "by Kenneth Hennessy Architects and Appendices (separate documents) "Tree Survey and Preservation Plan" report by Arbor-Care Tree Surveyors Ltd. including a more recent tree survey report by Austen Associates Ltd. (a detailed tree survey within the site development area) and various topographical surveys by Land & Aerial Surveys Ltd.
- The application of a site and photographic survey to record and understand the existing landscape character of the site and its surroundings within the general study area. The field survey consists of site reconnaissance noting the character of the environment, recording significant features and views via photography. The viewpoint locations are presented in subsection 15.3.4 of this chapter.
- The use of plan, section, and elevation drawings of the proposed development to assess and evaluate the degree of impact on the existing site features both built and natural, in conjunction with observations made during the field survey.
- The application of photomontage to compare the before and after states and any changes to the character of the landscape or environment. The photomontage as a tool illustrates the potential impact and magnitude of the proposed development within the existing site conditions as well as on views from both eye level and from higher points in the surroundings if considered appropriate to this proposed development.
- The existing conditions viewpoints and proposed conditions photomontages' viewpoints are presented in subsection 15.4 with a series of Figures 15-4 _#A, #B etc.
- The proposal of mitigation measures relevant to the proposed development site and study area. The objective of the mitigation strategies proposed will be to reduce the perceived potential impacts on both environmental and visual aspects of the development.
- Final assessment is to determine the degree of the impacts with and without amelioration of the proposed development. The visual impacts of the proposed developments are assessed for a 10-year duration, following the completion of the proposed development.

15.3 Landscape Character Assessment (LCA) for Receiving Environment

15.3.1 Site Location and Context (Past and Present Landscape Character)

The site location is within the central portion of Clonmel town, in County Tipperary (Clonmel in Irish-Cluain Meala, meaning "honey meadow" or "Honey Valley") that encompasses a major natural drainage feature, the River Suir, and a significant topographic floodplain valley landform, viz. Suir Island. Tipperary County at the larger scale encompasses many different types of Landscape Characters. At a smaller scale the fertile lowlands are recognised as undergoing more rapid change. Clonmel and environs typifies a settlement in the fertile lowlands.

According to the Tipperary County Development Plan 2022-2028, Table 3.2, page 25, there are three primary derivations of the Landscape Character Areas (LCA) relevant to this site; Architypes, Landscape Character Types and Landscape Character Areas. Our site under the Architype category belongs to “A. The Plains” and is classified as “A1 Lowland Pasture & Arable” under Landscape Character Type. Its Landscape Character Area category is “1. Urban and Fringe Areas” to which the whole of the core area belongs.

In general terms Clonmel’s landscape character can be referred to as “Townscape”, but the site area within Suir Island where the proposed development is to be implemented is typical of “River Valley” Landscape Character within a plain or more specifically a floodplain topography. The site area as landscape shares the basic attributes of a river valley in terms of: “geology, topography, soils, microclimate, drainage patterns, vegetation, historic land use and settlement patterns”. Other than the island as landform, the island is a level floodplain and prone to flooding. The river is the other significant natural feature. These natural and human-made factors are addressed as separate layers in other EIAR chapters, yet these factors are interconnected in terms of dictating the landscape character type and forming the baseline of the receiving environment. Further detailed information of all these natural and human-made factors including plant species, ecology, habitats including biodiversity can be reviewed in the other EIAR chapters.

The Suir River, one of the main features in this receiving environment, rises in north Tipperary, flowing south through Clonmel, Carrick-on-Suir then turning north and east towards Waterford Harbour where it meets the Atlantic Ocean, a distance of 185 kilometres (115 miles). The River Suir forms the southern boundary of the historic town centre of Clonmel and defines the outline of Suir Island. In the site area both the north and south banks are hard, urbanised and defined by “The Quay” (R678) and “The New Quay” roads on the north side, and Raheen Road on the south side. The north and south banks opposite Suir Island are largely formed by concrete walls with flood defence barriers although the edge of the river along Denis Burke Park on the Raheen Rd side consist of a natural bank. The Island has a natural edge on the northern side and a stone lining to most of its bank on the southern side.

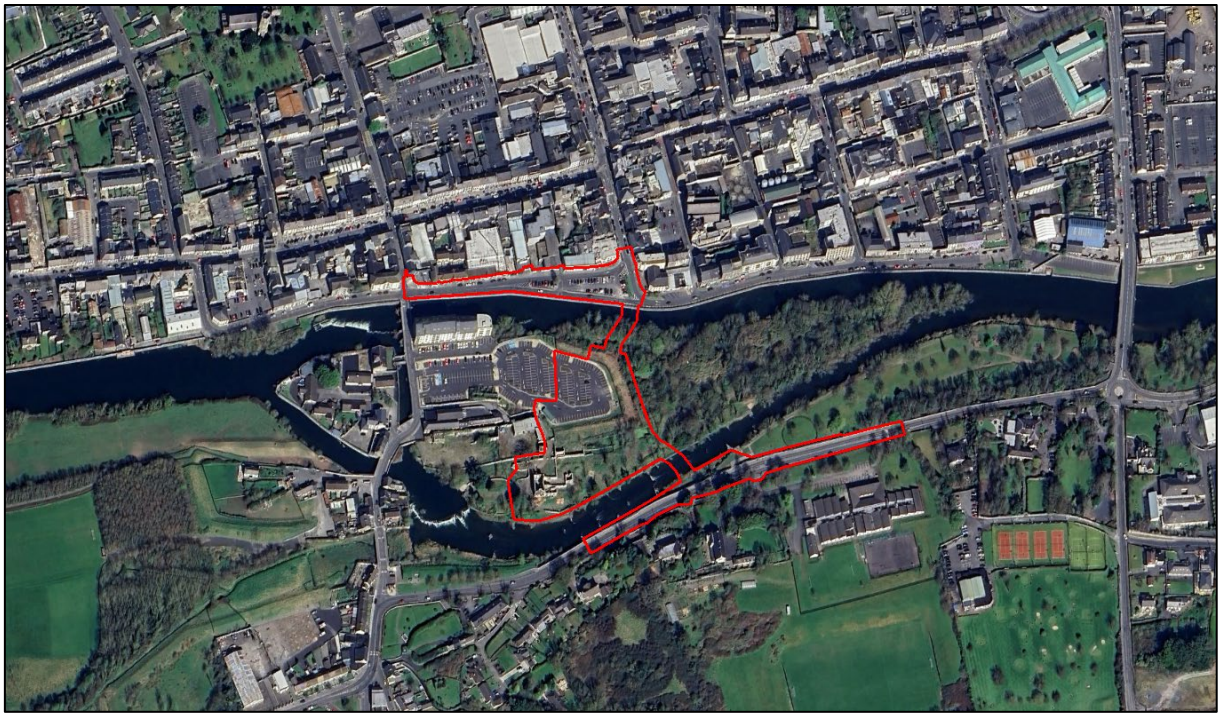


Figure 15-3: Clonmel Town, Suir Island, and the River Suir (source Google Maps, 2022) showing proposed development site area with red outline.

Before reaching Clonmel, the River Suir flows east, where it drains much of the central part of the Suir catchment and also the slopes of Slievenamon by the River Anner. As the river reaches Carrick-on-Suir, it becomes tidal and is joined by a number of tributary rivers.

The River Suir floods the local area of Clonmel whenever there are very heavy rainfalls fall in the upriver catchment (2,173 km2). The eastern and southern parts of Suir Island are prone to flooding. A Flood Forecasting System was completed and installed by the Office of Public Works (OPW), which was used to forecast flooding in January 2008 and 2009. At present, the flood defences consist of earth banks (berms), storm water sewers, pumping stations, elevated fixed barriers (i.e., stone walls) and demountable barriers. Bridges and roads in the worst affected areas are The Old Bridge, The Gashouse Bridge, Coleville Road, Davis Road, and the quays. The Flood Relief Scheme was completed in 2012, providing Clonmel with flood relief up to the one-in-a-hundred-year flood level; evacuation is necessary when flood waters reach one-in-fifty-year flood levels. Its main tributary near and east of Clonmel town centre is the Anner River. Flooding creates constraints in terms of land management and urban development and defines the landscape character.

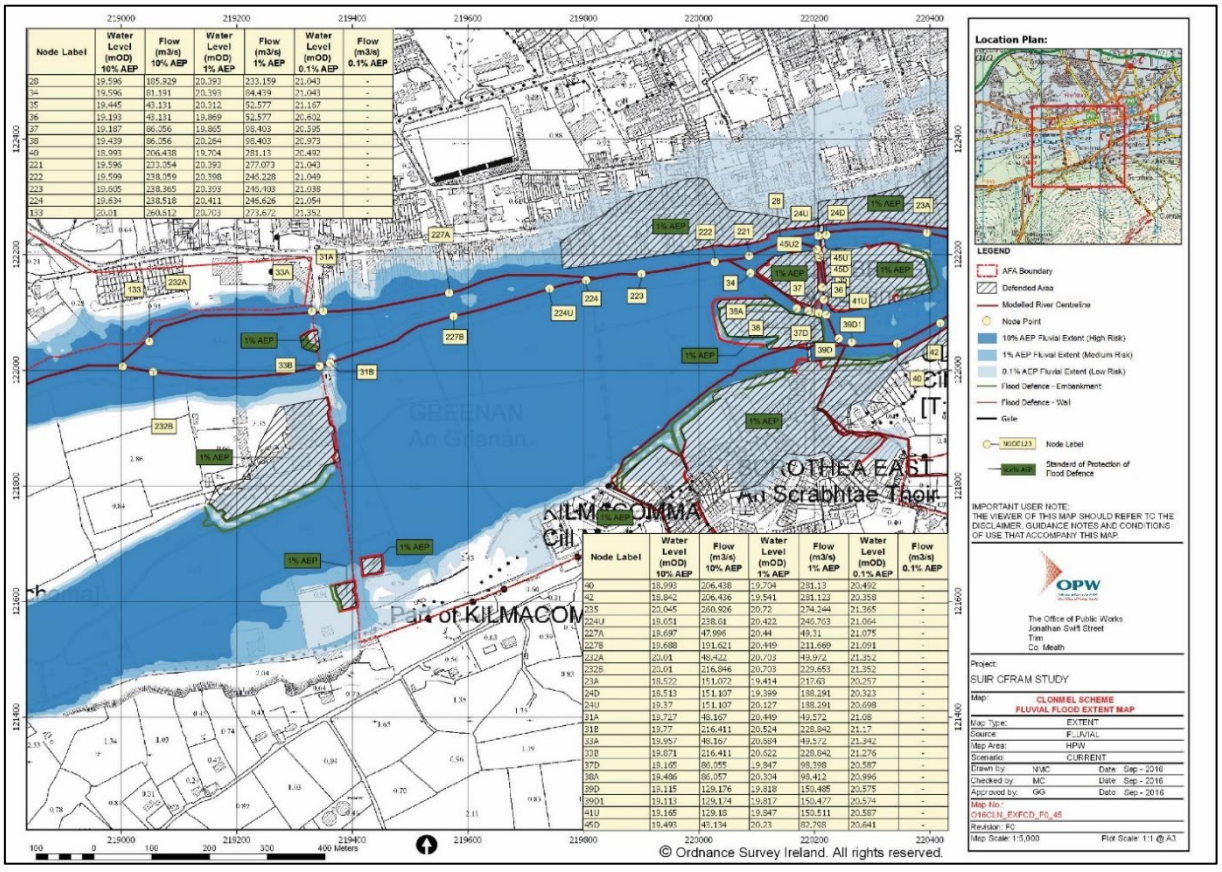


Figure 15-4: Clonmel Flood Defence Scheme Fluvial Flood Extent Map, (source: OPW)

The Lower River Suir is designated is as a Special Area of Conservation (SAC) and includes fresh and saltwater habitats. South of Thurles the river is tidal, while its geology varies. The tributaries include the Lingaun, Anner, Nier, Tar, Aherlow, Multeen and Clodiagh rivers. The Suir and its tributaries flow through the counties of Tipperary, Kilkenny, and Waterford. Upstream of Waterford city, the swinging meanders of the Suir criss-cross the Devonian sandstone rim of hard rocks no less than three times as they leave the limestone-floored downfold below Carrick-on-Suir. In the vicinity of Carrick-on-Suir, the river follows the limestone floor of the Carrick Syncline. Upstream of Clonmel the river and its tributaries traverse Upper Palaeozoic Rocks, mainly the Lower Carboniferous Visean and Tournaisian. The prevalence of

sedimentary formation allowed the River Suir to carve through this valley, forming the landscape we perceive today.

Another natural feature that dictates the character of the landscape is the existing vegetation. The floodplain landscape vegetation character is a direct result of the topography, the underlying geology formations, the drainage patterns, soils, the prevailing flooding of this valley which in turn dictates the plant species and natural plant associations that create diverse habitats, with riparian and alluvial woody species that would include a typical canopy layer of (i.e., White Willow (Salix alba), Rusty Willow (Salix cinerea subsp. oleifolia), Osier (Salix viminalis), Almond Willow (Salix triandra). The groundcover layer of mostly herbaceous species includes the Yellow Iris (Iris pseudacorus), Hemlock Water-dropwort (Oenanthe crocata), Wild Angelica (Angelica sylvestris), Pendulous Sedge (Carex pendula), Meadowsweet (Filipendula ulmaria) and Common Valerian (Valeriana officinalis). Small streams to the river typically contain bryophyte and lichen floras.

Other alluvial woodlands species forming canopy layer include Downy Birch (Betula pubescens), Ash (Fraxinus excelsior), with understorey layer of Hazel (Corylus avellana), Hawthorn (Crataegus monogyna), Holly (Ilex aquifolium), and Blackthorn (Prunus spinosa) and a canopy layer of non-natives species Sycamore (Acer pseudoplatanus) occur where drainage is better, less prone to flooding and therefore drier. The groundcover layerincludes typical species such as Marsh Ragwort (Senecio aquaticus), Purple Loosestrife (Lythrum salicaria), Meadowsweet (Filipendula ulmaria), Ground Ivy (Glechoma hederacea), Hedge Bindweed (Calystegia sepium), Ivy (Hedera helix) and Bramble (Rubus fruticosus agg.). The habitats are varied and include the invasive non-native Japanese Knotweed (Fallopia japonica). Further detailed description of the species, ecology and habitats including biodiversity can be reviewed in the Chapter-5 : Biodiversity, Species and Habitat of this EIAR.

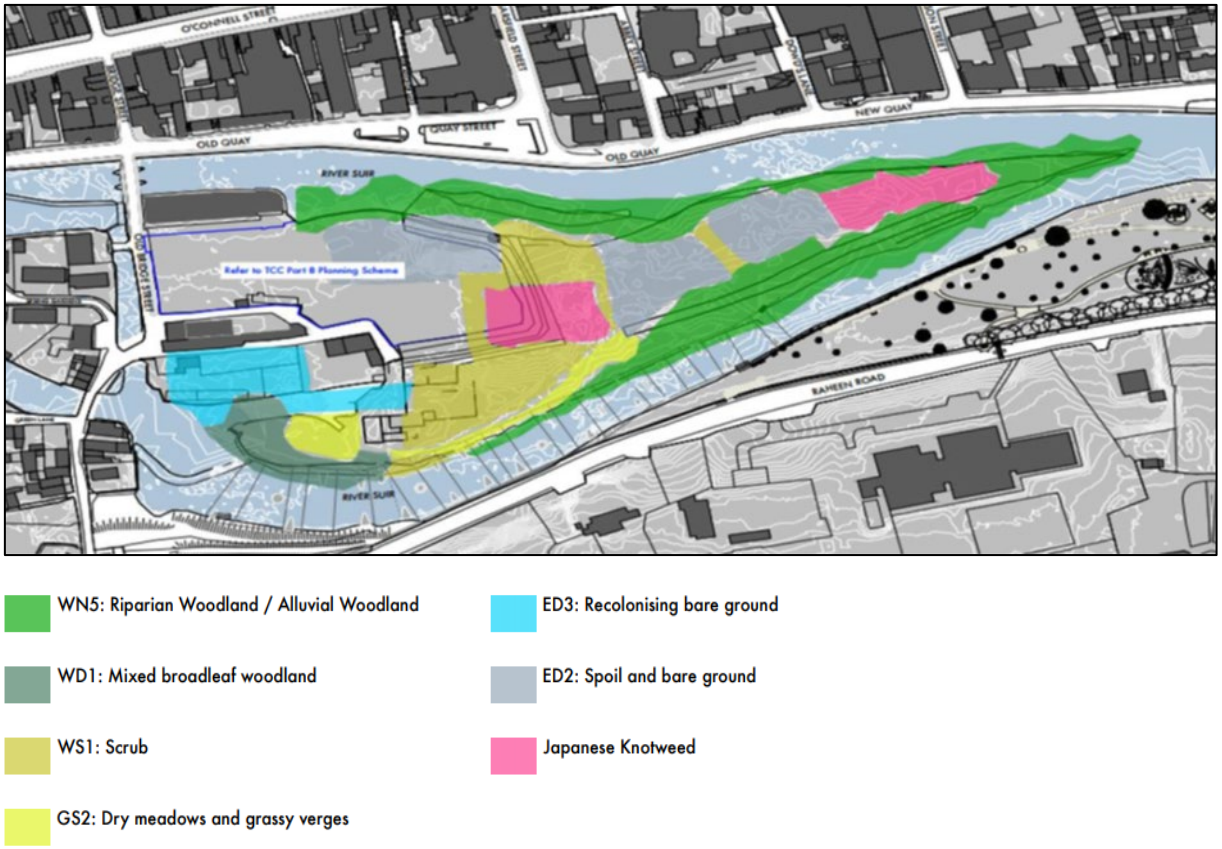


Figure 15-5: Extract from Suir Island Masterplan report showing different types of landscape habitats and their boundaries; Original source: Feehan, J. and Sheridan. H (2009) River Suir Heritage Survey Volume II Natural Heritage.

To understand, assess and evaluate a proposed development's impact on both the built and natural environments the assessment considers the historical evolution of land use patterns. Land use patterns define the landscape character and reflect the non-static nature of the environment whether those changes are a result of human and/or natural forces. However, land use patterns cannot be viewed in isolation because they are dictated by the natural factors in the environment that create opportunities and constraints to human activity.

The landscape character of this site and study area has changed over time. In the past it was once densely vegetated riparian and alluvial woodlands which were eventually cleared by human activity for agriculture and pastoral land use. From a historical perspective the river within this valley became a natural highway to transport goods (i.e., Tow Path), and settlement (i.e., Clonmel town) with its hinterland evolving as a commercial, industrial, and residential land use area requiring the development of infrastructure such as railway, bridges, weirs, quays, and road network. That development also extended into Suir Island, primarily for the milling of grain, and other river islands.

Suir Island's landscape character is characteristic of a floodplain landform, offering a level terrain with low elevations and is approximately 40,750 m2 in area (approx. 4 Ha/10 acres). Suir Island as a landform became incorporated within the town as another area of cultivation, pasture, and later in the 18th century industrial uses including several mills and two main weirs. These weirs were used to create a reliable supply of fast flowing water (mill races) to operate and turn large waterwheels. Hence, the network of mill races. The mills included (i.e., Hughes Mill now converted to an apartment block, Malcolmson Mill, Robert Grubb's Mill, Thomas Grubb's Mill), a site of a former creamery at present a new carpark, and a protected structure the mill's owner house (i.e., Suir Island House), along with gardens.

Furthermore, as a natural landform it provided the opportunity to develop built links (i.e., "Old Bridge") and access between the two riverbanks, thus connecting the different portions of the town along "The Quay to the west and to the east of the Old Bridge "The New Quay". There are also a number of other islands that are clustered near the town centre, including Grubbs Island, Stretches Island, and Little Island. There are two weirs, one along the southern banks of Suir Island, and west of the historic Suir Island House and near the existing Slalom Course. The other weir is to the west of the Old Bridge, at the northern banks of the island.

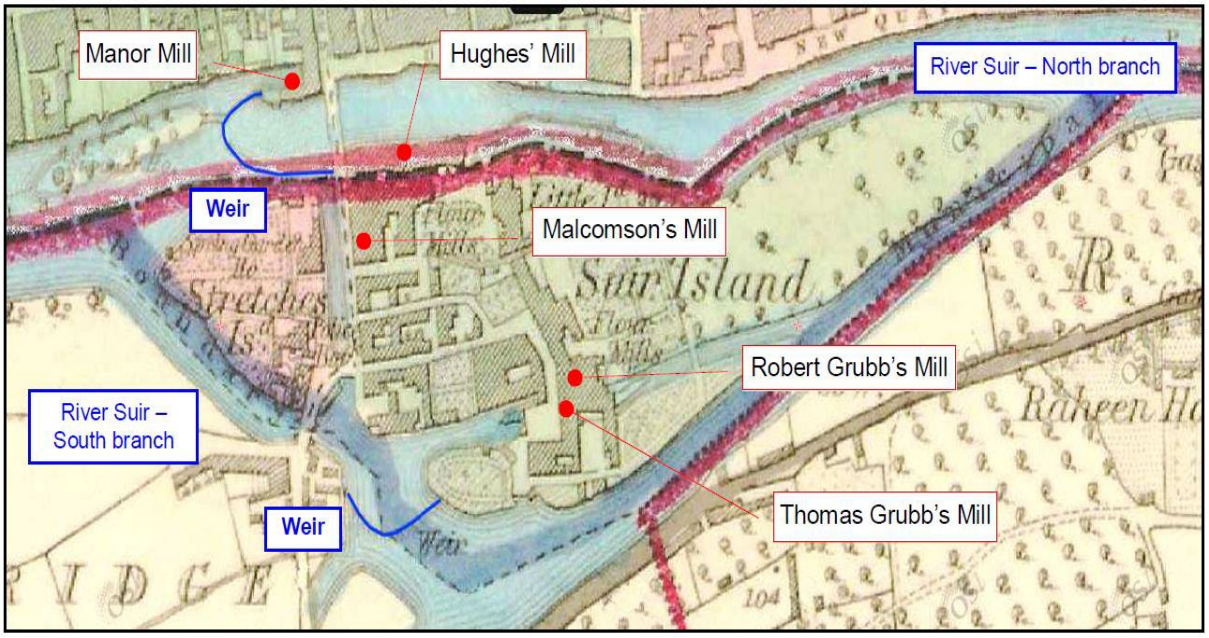


Figure 15-6: Flour Mills on Suir Island (Source: Blackwood Report 2014 & Suir Island Masterplan Report-2019)

Further bridge connection occurs to the west and east of Suir Island. To the east of Suir island is the Gashouse Bridge also known as The Old Waterford Bridge, connecting the riverbanks from O'Connell Terrace on the northern bank (R671) to Raheen Road. Another bridge connection, Convent Bridge, is at least 1 km to the west of Suir Island, connecting Old Dungarvan Road (R665) to Convent Road (R671) towards Connolly Park on the northern riverbank.

However, even with the urban development that is typical of a "Townscape Character Landscape" and the adjacent agriculture land use areas, the core site and study area still retain a "Riparian River Valley and Floodplain Landscape Character" and its low topography is bordered and semi-enclosed by Slievenamon Range in the north-east, and to the south by the hills forming Comeragh Mountains. The topography in the immediate vicinity is relatively low (Suir Island is only 20 m above sea level). The most prominent elevated landform features lie south of Suir Island and include Kilmacomma Hill to the west (211 m above sea level), Holy Year Cross to the south (310 m above sea level) and Long Hill to the south-east (404 m above sea level). The elevations of both River Suir north and south riverbanks vary within the site area but are slightly different in relation to the Suir Island and are approx. 1m higher in the south and 0.1m lower in the north. The topography in the immediate vicinity of River Suir riverbanks slopes upwards towards the town centre, while in contrast the southern riverbank rises to higher elevations forming a relatively steeper topography.

In Tipperary: History and Society (1985), Bridge Street is mentioned as early as 1388, and the laneway east of it in 1424 according to author Bradley. The site "Old Bridge" with three arches from Bridge Street in the 13th century is presumed to be dictated by the fact that the river widens at this point resulting in a shallower river channel, thus easier to build a bridge connection to Suir Island. The western end of Suir Island is called 'Stretches Island' on the earlier maps although the two have become joined in more recent times.

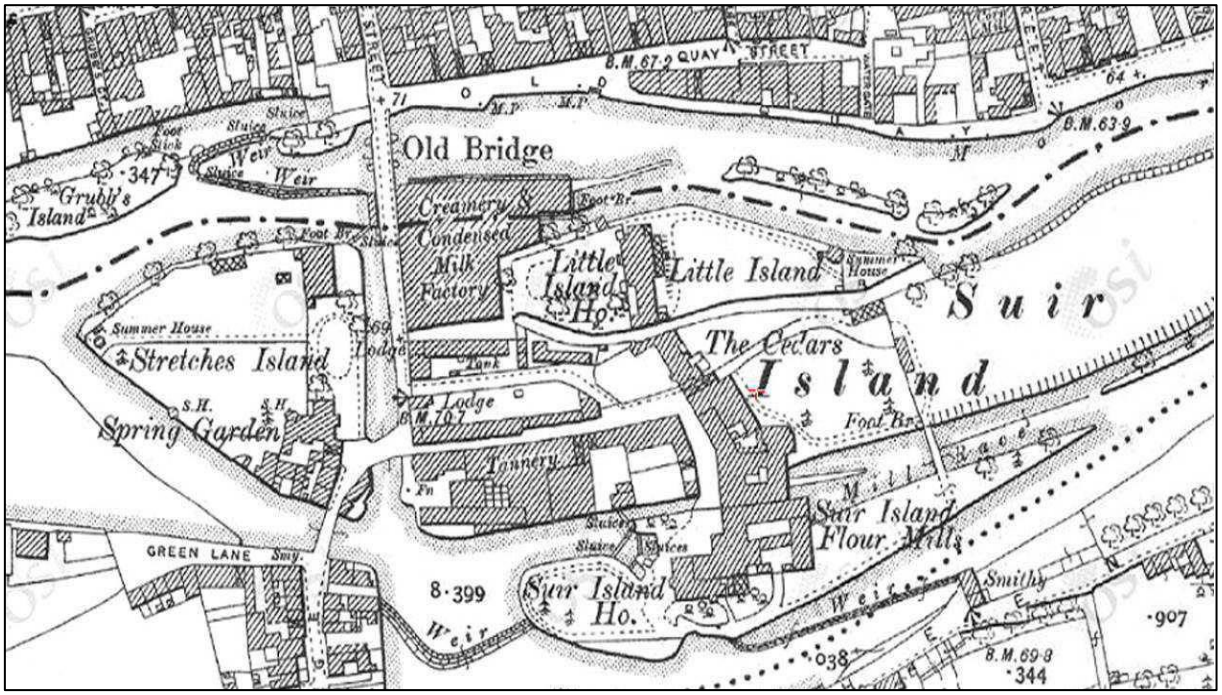


Figure 15-7: Extract from OS 1874 Map (Source: Blackwood Report 2014 & Suir Island Masterplan Report 2019)

In summary, the landscape character we perceive today is made up of many layers such as the geology, topography, hydrology/drainage characteristics and vegetation, and the natural views. In turn human activity adds its own layers (or impacts) on the development of the natural landscape such as agriculture

which includes both cultivation and pastoral uses, urbanisation, commerce/industry, and even recreational needs, which include: (i.e., fishing, boating, cycling, golfing, and walking/hiking in this site's context and immediate surrounding area). These activities define the receptors/land users of this area. Clonmel is the starting point for a number of recreational walking routes including the Heritage Trail, the River Suir Towpath and the new Blueway. There is a canoe Slalom course on the southwestern side of Suir Island adjacent to a weir which adds a further layer of human activity to the river and its banks. See Figure 15-8, illustrating one of the walking routes of the present receptors/users. For further detailed information in this EIAR refer to Chapter 13: Archaeology & Cultural Heritage.

Hence, in terms of overall context of the site the quality of this townscape and river valley landscape area is significant in quality and value for all receptors in regard to both views as visual amenity, recreational value, distinctive landscape site area and ecology.

However, accessibility within the site area to this significant potential amenity is limited at present. The proposed development discussed in the next sections will describe the development and assess its impact and effect on the existing landscape and the receptors.

Figure 15-8: Extract from Suir Island Masterplan Report (2019) showing a current, popular walking route around Suir Island

At present the landscape character of this site and study area reflect this historical evolution of land use patterns in this floodplain valley and is often referred to as "The Plains" as part of the generalised Landscape Character Type area of Tipperary County. The site area is at present still bordered by fields and wooded banks and a well-developed urban fabric. The Lower River Suir is designated as a Special Area of Conservation (SAC). Upstream land use activity can have indirect impact on River Suir water quality and alluvial habitats, including the vegetation (flora), and organisms such as insects and wildlife (fauna) which depend on these habitats.

The "Plains" as referred to in the Tipperary County Development Plan 2022-2023 Volume 3, is described as: "working landscapes containing settlements and services as well as large continuous areas used for

pasture, tillage and peat harvesting. This landscape also contains major rivers and many historic sites. For further information Table 3.1 and 3.2, page 24-25 can be reviewed on description of “The Plains”. Clonmel in which the site area is located and is defined, Landscape Character Area typical of the category allocated to an “Urban and Fringe Area” in Table 4.1, page 29: “ These towns represent the largest settlements….considered to have an urban character that sets them apart from the surrounding rural hinterland. It is also notable that each of these settlements is very much Integral to the character of the Plains….and thus are considered to be Sub-areas of their respective LCAs (See Figures below).

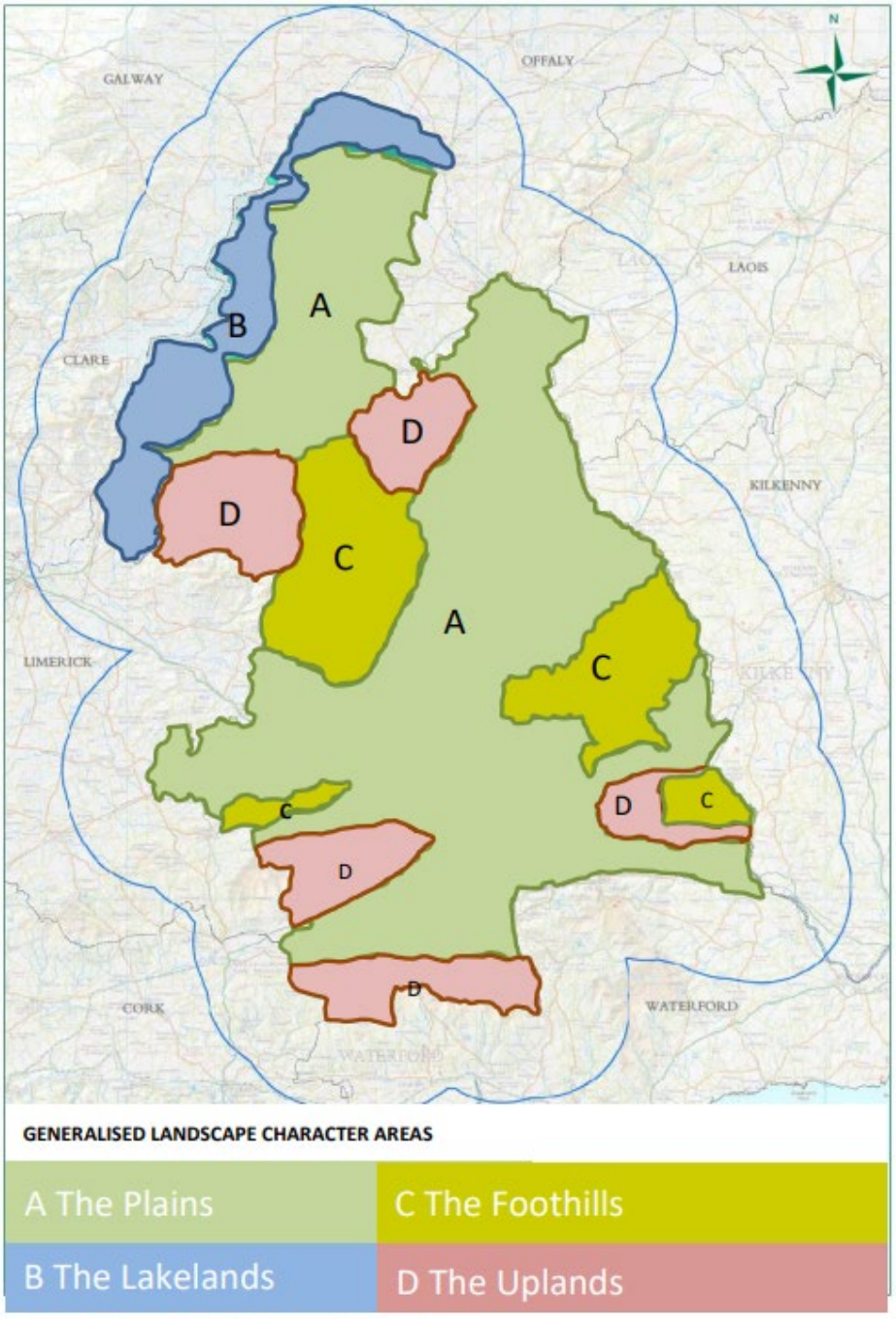


Figure 3.2 Generalised Landscape Character Areas

Figure 15-9: Extract showing General Landscape Character Types, indicating site area (Clonmel) with (A) “The Plains as local LCA map (Source: Tipperary County Development Plan 2022-2028, Volume 3, August 2022).

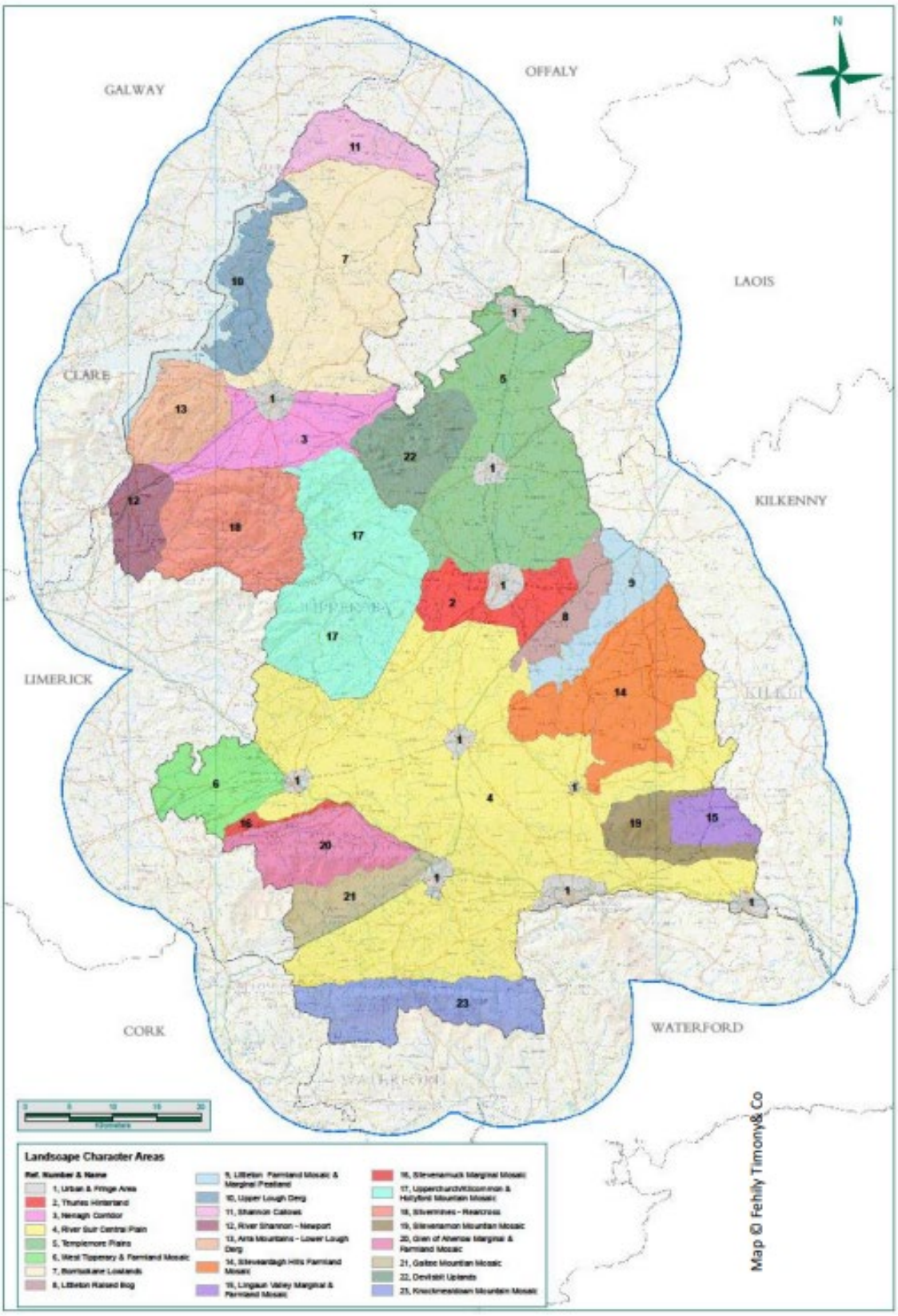


Figure 15-10: Extract showing General Landscape Character Areas-"Urban and Fringe Areas", indicating site area (Clonmel) with (A) "The Plains as local LCA map (Source: Tipperary County Development Plan 2022-2028, Volume 3, August 2022).

15.3.2 Landscape and Planning Context

The *Clonmel and Environs Development Plan 2013-2019* refers to the landscape planning context for this area pertaining to Suir Island. Extracts below illustrate the Council's Objectives in this regard:

(a) Section 7.3.1 Riverside Amenity from Clonmel and Environs Development Plan 2013-2019 and the Environmental Statement referring to the River Suir environmental and recreational value.

The River Suir *……. the full potential of the river as an amenity and recreational asset for the town has not been fully realised to date. The Council will actively pursue the further sustainable and appropriate development and improvement of existing green spaces within the Plan area prioritising Suir Island and the creation of links from Mulcahy Park, Suir Island, and Denis Burke Park.*

(b) Section 7.3.4 Suir Island from Clonmel and Environs Development Plan 2013-2019 and the Environmental Statement referring to the Suir Island environmental and recreational value within its context of adjacent amenity areas:

Suir Island*……. The location of the island within Flood Zone A, within the Lower River Suir cSAC and its central location in Clonmel make it an ideal location as an amenity hub with both formal and informal amenity and recreational facilities to be developed here including the development of non-engine-based water sports between Suir Island and Denis Burke Park.*

(c) Section 7.3.8 Amenity Spaces as part of New Development from Clonmel and Environs Development Plan 2013-2019 and the Environmental Statement referring to the importance of "green spaces", creating and extending amenity areas, and linking open spaces with pedestrian and cycling routes:

Amenity spaces……. as part of a new development will be required to the standards set out in Chapter 9. The focus on new amenity space will be on accessibility, quality, location, and manageability. The green spaces in Clonmel provide a relief from the hardness of the roads, footpaths and buildings and so is an important aspect of urban/suburban life.

Green Corridor concept*……The promotion and provision of a green corridor within the plan area adjacent to the River Suir and at a minimum extending to the location of the flood defences and/or the natural floodplain is required by this Plan and supported by the accompanying SFRA.*

(d) 7.7 Specific Built and Natural Heritage, Amenity and Recreation Actions from Clonmel and Environs Development Plan 2013-2019, (AH1 -10) contains specific references to Suir Island and protection of landscape and visual amenity. The most relevant sections to our report are:

AH 1 As opportunities arise the Council will seek the sustainable development of a multi-use recreational hub at Suir Island to include indoor and outdoor facilities.

AH 2 As opportunities arise, the Council will seek to create links between existing and proposed amenity spaces at Mulcahy Park, Suir Island and Denis Burke Park.

AH 3 To seek to retain and incorporate key landscape features such as trees, stone walls, streams etc into open space and landscape plans for new developments in order to create distinctiveness of landscape and a sense of identity.

AH 4 The Council will investigate opportunities to utilise the River Suir for amenity, environmental value, and economic purposes and to improve its biodiversity value. The Council will continue to work with landowners to allow for the reinstatement/enhancement of the River Suir Towpath and other existing Greenways for the benefit of the public. Should physical works be required as part of reinstatement/ enhancement of the tow path then Appropriate Assessment screening shall be undertaken prior to the undertaking of any works.

AH 8 The Council will require visual impact assessments to demonstrate that proposals for considerable development in areas of significant landscape character including ensure that any development on elevated lands (within the remit of the South Tipperary Local Authorities and/or through consultation with the adjoining Planning Authority) shall not detract from the visual setting of the town. Any development shall have regard to the topography of the site. The proposed development shall have an appropriate /sympathetic approach to design which utilises the existing contours and minimises the amount of cut and fill required.

AH 9 The Council will undertake a survey of healthy mature trees in the Plan Area in order to identify those worthy of ongoing protection in advance of the next statutory plan.

AH 10 The Council will endeavour to prepare Landscape Character Assessment and obtain Habitat Mapping for the Plan Area in order to identify landscapes and habitats worthy of ongoing protection in advance of the next statutory plan.

Figure below illustrates the land use zoning patterns surrounding Suir Island across which the proposed development of the Suir Island link is to be located. It also extends to the riverbanks and town of Clonmel. This map is still applicable at present and shows the western portion as existing and/or recent residential areas (01); *middle portion for new residential development (02), in keeping with zoning the Suir Island Link is within this zoned area* and the eastern portion of the Suir island as an amenity area (09). The map indicates the surrounding land areas both immediate, that is in the vicinity of the site area of the proposed development to the north of the island as primarily the town centre (03), and in contrast the area to the south of the island largely residential, some industrial, and amenity areas of different scales, or open space, all within in larger context, the Environs (10).

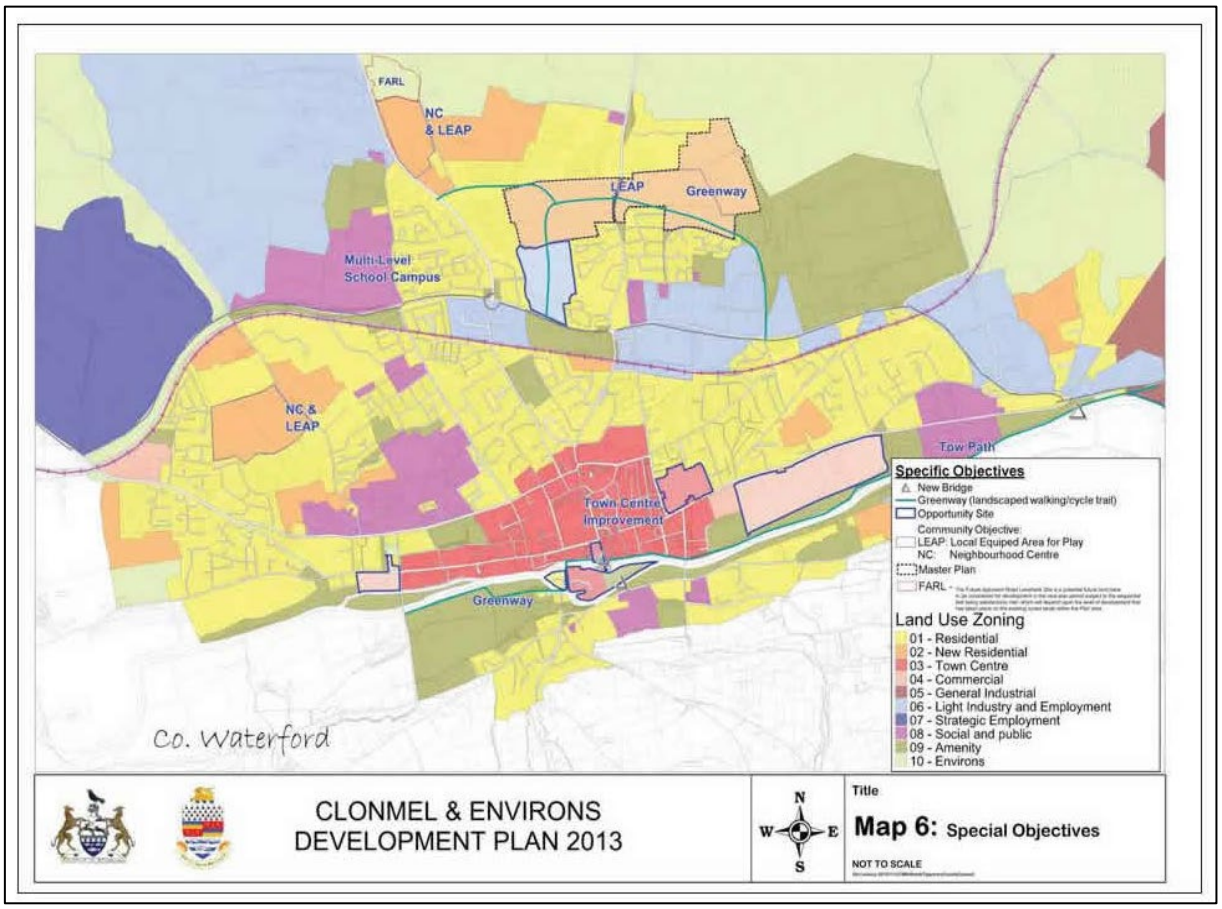


Figure 15-11: showing Land Use Zoning for the site/ study area (Source: "Clonmel and Environs Development Plan 2013-2019")

In summary the management of the County's landscape involves:

- Protecting the landscape from inappropriate and unsustainable development.
- Ensuring adequate protection to sensitive and vulnerable landscapes through
- appropriate policies and objectives.
- Providing for development that will enhance and benefit the receiving.
- environment and is sustainable.
- Protecting and enhancing Vistas and Views of the landscape.
- Providing Amenity and Recreation
- Conserving architectural and natural Heritage, where feasible.
- Protecting special areas of conservation that have been identified, including Tree preservation.
- Removal or control of invasive species

The Clonmel and Environs Development Plan 2013-2019 and the Environmental Statement section 7.5 refers to Views, Prospects and Vistas and states that: "The *Council will ensure that all important views, prospects, and vistas are maintained, enhanced where possible and not obscured by insensitive or poorly designed development."*

15.3.3 Landscape Character Assessment (LCA), Existing Conditions of the Site Area

This section is the appraisal of the existing conditions (LCA), primarily landscape features both hard and soft, to address the landscape character of the study core area or site area, as well as to identify land users/people who may be affected by the proposed development, and to identify existing viewpoints. Some of those viewpoints will be selected to convey the impacts and effects on the landscape as a resource, on views and as a visual amenity for receptors in the subsequent sections of Landscape Impact Assessment (LIA) and Landscape Visual Impact Assessment (LVIA).

The project site's core area where the proposed development is to be located (i.e., as per Figure 15-11 and/or figure 15-14), and its immediate surroundings, includes significant and distinctive existing natural and human-made features forming the landscape. The site's development area is relatively small in scale and local in its extent within the definition of an "Urban and Fringe Landscape Area". The distinctive features of both the natural and built elements are the River Suir, its riverbanks, and Suir Island within the fabric of the urban setting of Clonmel Town. Any landscape character assessment has to include both natural and human-made features, including associated historic and social -cultural factors that dictate or influence the landscape character, and the unique combination of features, all of which can create opportunities and/or constraints. The following section addresses the existing features unique to this site area, both natural and human made.

The Suir Island site area and its immediate context share a number of detailed landscape attributes, i.e. spatial quality; enclosed, semi-enclosed, open; visual quality; scenic/inherent primary character as either hardscape or softscape features; degree of sightlines; panoramic, limited or none; density of softscape; vegetation and/or hardscape features; unique topography/ elevated area; berms, steep or moderate banks; relevant views of historic/ archaeological features, as meaningful landmarks in landscape and the various viewpoints accessible to receptors/users from the site area; all of which contribute to unique qualities inherent in the landscape character or environment.

Viewpoint locations (see Figure 15-12) perceived as potentially critical, therefore significant for any receptors circulating in the vicinity of the site (i.e., local residents and visitors, either as pedestrians, cyclists and vehicular users, including those canoeing on the southwestern portion of the river and riverbanks, and those fishing from the island). These are identified and noted from within the site area and from its immediate surroundings as a visual baseline, prior to changes caused by the proposed development.

The existing conditions of the site and views are best conveyed through site photo field survey accompanied by the description of the environment as outlined below. Viewpoints in Figure 15-12 below (VP Nos. 01-30) illustrated by photos (date-taken: Oct 2021, Noon, height 1.5 m from ground level), relate to the subareas of landscape characters (and the extensive detailed field survey established as part of the landscape and visual baseline and/or receiving environment, in order to better understand the landscape character of the core study area where the proposed development will make changes, i.e. have impacts. The degree of impact and effect will be addressed under the LIA and LVIA sections in this report.

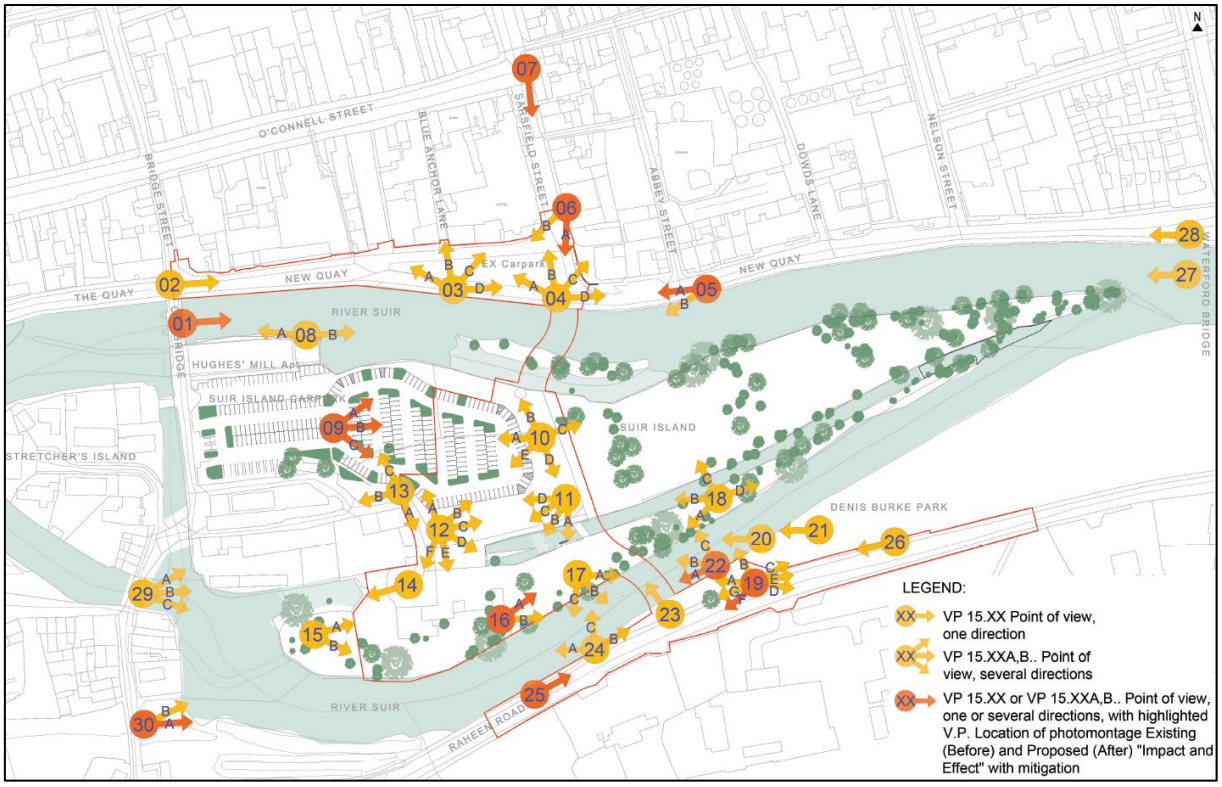


Figure 15-12: the proposed development area (in red site boundary outline with the location of numerical viewpoints considered as the most relevant to this study, showing existing site conditions and views relevant to the receptors. Highlighted viewpoints as shown considered critical/significant for LIA & LVIA

Note that VP 15.14 - 15.17 are taken from within the Suir Island Gardens area. The core site or study area in its present condition is addressed as subareas and/or features to facilitate the landscape character assessment both built or natural as these vary in character and are distinctive such as the site's subareas adjacent to its perimeter: (See Figure below). These are:

- (1) northern riverbank that includes The Quays with perpendicular street or lanes,
- (2) the southern riverbank Raheen Road with both minor and major open spaces such as Denis Burke Park.

(3A) & (3B) the bridges and associated roads across the River Suir with views toward Suir Island such as Old Bridge to the east of the island and Old Waterford Road Bridge-R678 to west of the island, approx. 1 km apart).

The other subareas are within Suir Island:

- (4) carpark area.
- (5) the earth-berm flood barrier adjacent to the carpark.
- (6) adjacent woodland to east of the carpark.

- (7) Suir Island House, related outbuildings, the mills that are all in ruins; and the location of Suir Island Garden.

These subareas of the landscape are reviewed because the proposed development will potentially have an impact on (1) landscape quality/conditions, (2) visual quality/ value and further subsequent sections to the receptors (3) as per TII publ.PE-ENV-01102, Figure 21, page 53. The different viewpoint photos will illustrate the existing baseline landscape character.

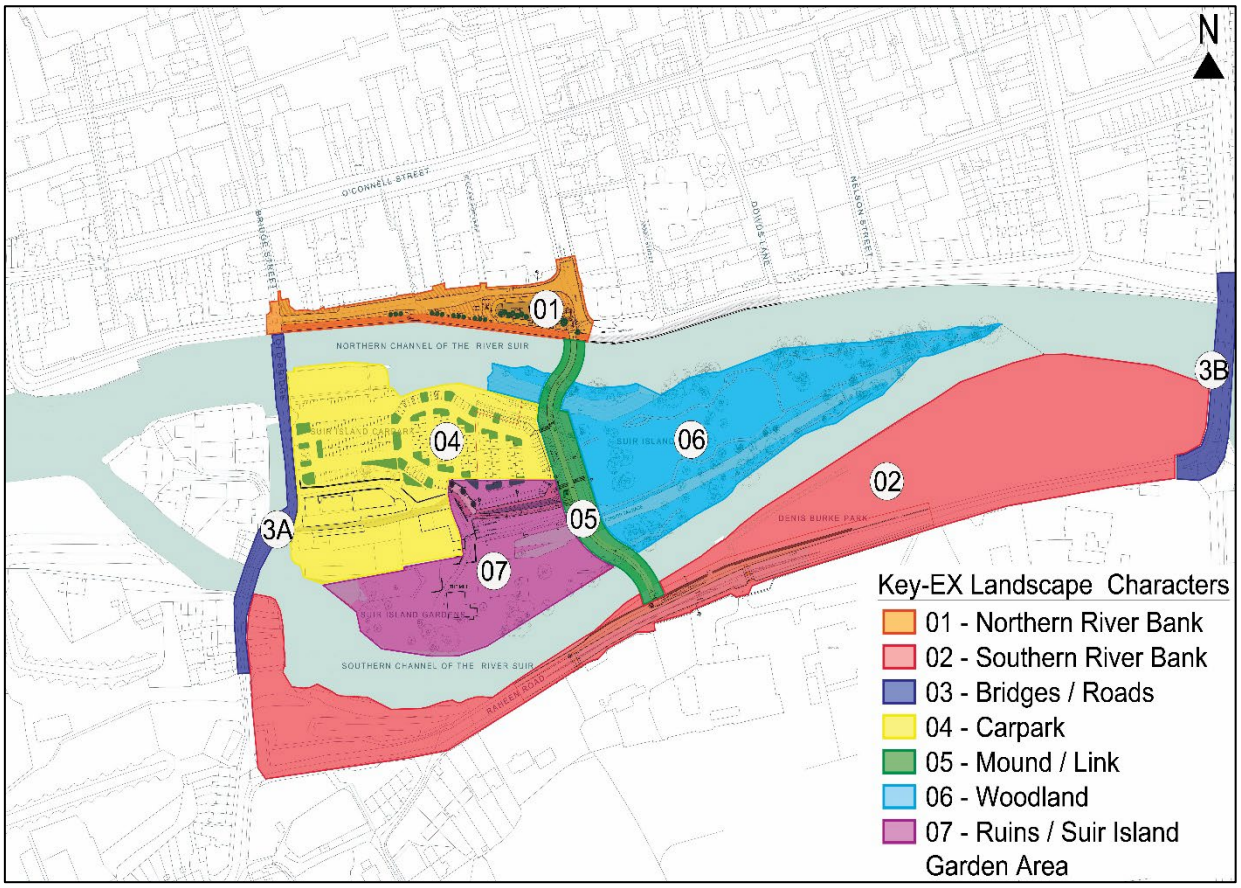


Figure 15-13: Different subareas with distinctive landscape characters at the perimeter and within Suir Island in proximity and adjacent to the proposed development.

The River Suir at this location dictates the landscape character of a typical floodplain and a "River Valley". The riverbanks delineate the river boundary and also in this case define not only the character of the riverbank landscape but also the landscape character adjacent to Suir island the actual site area (northern bridge with plaza and southern bridge to Raheen Road) for the proposed development set in an urban context consistent with the Tipperary County Development Plan. This site area is within a "Urban and Fringe Area", and also forms part of "The Plains" under the archetypal landscape characters.

The riverbanks and bridges crossing the River Suir are important as they are the major circulation routes at present for various receptors/ land users such as local residents and visitors either pedestrians, cyclist or in vehicles, those active in the movement of goods or people (i.e., local school runs) and others pursuing active or passive recreational activities such as canoeing on the river, fishing, strolling, bird-watching, dog walking, playing in adjacent amenity park areas, all in the immediate vicinity of Suir Island or within the island, the site area. (See Figure below)

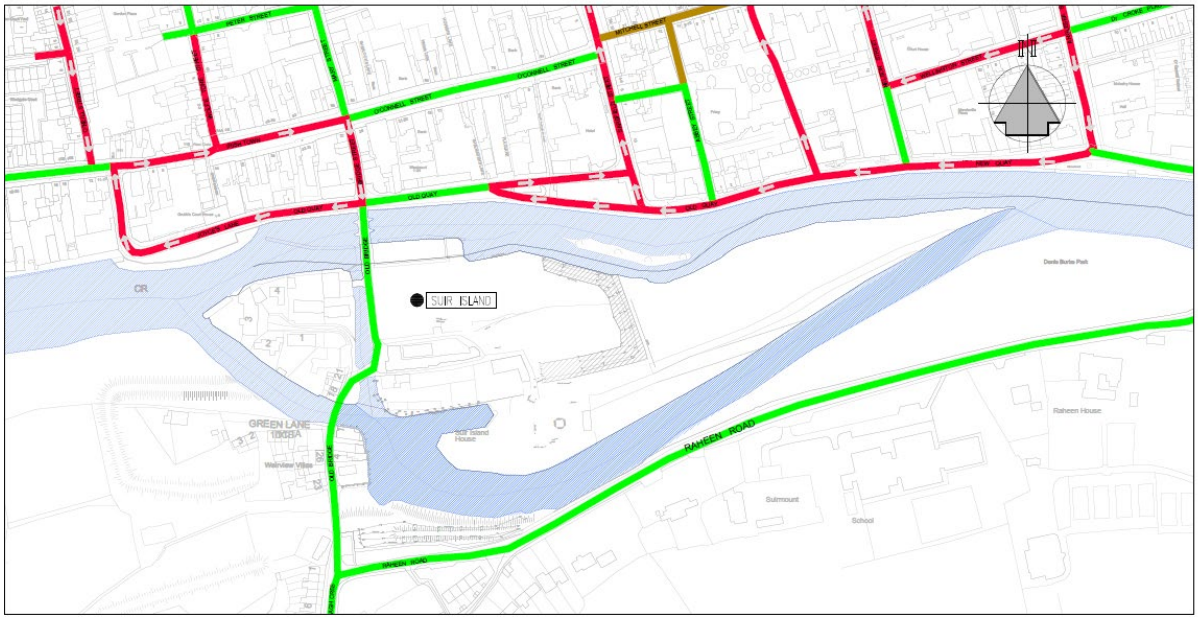


Figure 15-14: showing existing road layout; source Suir Island Masterplan Report-2019

Landscape Character Subareas (1, 2 & 3A & 3B) along the perimeter of Suir Island:

The *Riverbanks* portions in proximity to Suir Island site area are identified as relevant and vary as *distinct landscape characters*, differing in "quality/conditions and as landscape value" but share a common characteristic of banks set in urban fabric.

Landscape Character Subarea (1): At the *northern riverbank* the buildings opposite Suir Island face south with views to the island (for further details see architectural section of the EIAR with relevant photos). The Quay and New Quay Road within the site area and east of the Old Bridge runs parallel to the northern riverbank, as does the stone flood wall barrier. The height of the flood wall barrier prevents sightlines to the river below. However, the existing tree cover on Suir Island is still clearly visible. Five relevant main and minor streets run perpendicular and adjacent to the site area for this development: Mary Street, Bridge Street, Blue Anchor Lane, Quay Street and Sarsfield Street, and further east Abbey Street beyond the site development area. Bridge Street (R678) via Mary Street links with the Old Bridge, crossing the River from the northern bank. It progresses through Suir Island, opposite is Stretch's Island consisting of a complex of residential structures with some street trees and gardens and to its south is Green Lane.

The other major vehicular circulation is Sarsfield Street**,** running perpendicular to the New Quay from the town centre, forming a T-junction. Adjacent to the T-junction to the west is a triangular semi-enclosure by a low concrete wall defining an area for public parking. The western tip of the triangular car park area is decorated with raised planters and one street tree. A series of manholes and a low pumping station enclosure form a physical limit to the proposed plaza works at the Blue Anchor Lane end.

Looking south from the T-junction formed by the intersection of Sarsfield Street (R884) and the New Quay Road is the proposed development site area of the proposed North Bridge and the North Plaza. This includes views towards the Quay Road junction of Bridge Street near the Old Bridge, and also from the Quay Road near Abbey Street. The North Bridge will connect with the proposed promenade link that will be constructed on top of the existing flood defence berm. The berm divides Suir Island running in a north to south alignment across the island, adjacent to a large carpark to the west and to the east of the berm is the dense semi-natural woodland of Suir Island.

Other views with the same orientation at closer proximity reveal the visual quality and environmental character of the existing spatial experience along the New Quay road is 'hard', with little or no vegetation as noted and is not user friendly, or particularly attractive and the ground plane surface provides little differentiation between the pedestrian and vehicular circulation. Its most attractive feature is the view towards the River Suir, which unfortunately due to the high (1,4m) flood wall barrier is limited towards the views of the mature vegetation on the Island's riverbank looking from any point along the New Quay and Sarsfield Street, and from the other parallel adjoining streets/laneway. (See Viewpoints: VP 15.01 to 15.08).

Landscape Character Subarea 2: The River Suir's *southern riverbank is defined essentially by a prominent route, the* Raheen Road (part of it within the site area of development), along with a flood barrier wall that runs parallel and adjacent to the river. Adjacent but not part of the site development area as outline in above Figure 15-1, there are a few elevated private residences on a hill with large gardens overlooking Suir Island, the town of Clonmel, and Denis Burke Park. The adjacent areas close to the site includes the entrance to Raheen College. (See Viewpoints: VP 15.19D & E). The eastern portion of the road lies adjacent to Denis Burke Park, and to the west Raheen Road meets Old Bridge Road, running adjacent to Edel Quinn Park. All of the urban developments and the amenity area in proximity to the site area on this side of the River face north with views to the Island. Raheen Road provides both vehicular and pedestrian circulation, with no designated cycle lane. The southern entry point to the proposed Suir Island link will arrive onto the Raheen Road just west of Raheen College via a landing, ramp, and steps. The location of the South Bridge is dictated by three existing factors, (a) the existing location of the earth berm for the promenade link, (c) the dense woodland to the east of the berm which restricts development and (d) by the height of the flood barrier wall along Raheen Road. Finally, the entry point to South Bridge proposed in proximity to the existing entrance of Denis Burke Park and to the entrance to Raheen College will facilitate access to these recreational and educational facilities. (See Viewpoints: VP 15.25 & 15.26).

The southern riverbank differs slightly from the northern riverbank in terms of offering landscape quality / *environmental condition* and visual value. The existing spatial experience along Raheen Road still presents a very hard edge similar to the northern riverbank along the Quay, and with few opportunities for views from the road to the river due the flood wall barrier. It is a confined spatial experience with limited views to the Suir Island as a natural landmark along with its past and present infrastructure.

However, along and below the flood barrier wall at the edge of this riverbank the self-seeded vegetation creates a softer, more natural spatial experience and provides views to Suir island. In particular the adjacent Denis Burke Park offers another spatial experience with views both ways along the River and the experience of a landscape that softens the roadway's hard ground plane surface (See Viewpoints: VP 15.22 & 15.26).

In summary, both the *northern and southern riverbank* subareas opposite Suir island share a hard landscape character delineating the riverbank made up of the primarily built features, buildings, vehicular and pedestrian footpaths with few landscape features. The northern riverbank has a denser network of roads such as The Quay, Sarsfield Street, laneways, footpaths, paved minor open spaces, etc., while the southern riverbank is less-dense mix of the same elements of footpaths, main road, etc. and includes green minor open spaces and a major amenity area Denis Burke Park. But in overall terms, these riverbank perimeters are typical urban or townscape landscape characters where architectural features dominate versus softer landscape elements.

Landscape Character Subareas 3A & 3B: The approximate site extent is bounded by two bridges, the Old Bridge (3A) to the west of Suir island and Old Waterford Road Bridge (3B) to east. Both bridges are part of the urban landscape character but differ significantly in detail and scale within the overall context of the landscape and their proximity to Suir Island.

The former is the closest bridge in proximity to Suir Island providing the existing circulation for both pedestrians and vehicles to the Island. The Old Bridge traverses the island's western portion, linking the north and south riverbanks. The *yellow dashed lines* indicate existing vehicular circulation, while *red dashed lines* indicate pedestrian/cyclist circulation. (See Figure below).

As a feature in the urban landscape, the Old Bridge can be perceived as having a rustic character (See Viewpoint: VP 15.08) with its stone walls and arches. The Old bridge is in good condition; its landscape *quality and value* being primarily based on its historical and visual aesthetic qualities, as well evidently for its functional value. The Old Bridge width varies from 4.8 to 5.8 m, with a two-way traffic flow, from south to north connecting the town's two riverbanks. This is the only access to the existing carpark on Suir Island from the western side of the island. The Old Bridge continues south to a junction connection at McDonagh Crescent, and the location of the Edel Quin Park. The northern-end views from the Old Bridge to the site area include Hugh Mills apartment block, The Quay, and northern riverbank of Suir Island, (See Viewpoints: VP 15.01, & 15.02). The northern end of the Old Bridge provides a more enclosed spatial experience due the adjacent buildings along the Quay and vegetation along the Suir Island riverbanks and views to the east are constrained by the existing built features and/or interrupted sightlines due to the presence of the apartment block.

The middle portion, which is not a bridge, but an associated bridge extension road, has views of the large, landscaped carpark and part of the elevated flood earth berm barrier adjacent to the carpark to the east. The spatial experience is less enclosed looking east consisting of a tarmacadam surfaced open space (i.e., carpark) with some landscaped beds to mitigate overall hard-built environment (non-permeable surface that adds more runoff surfaces). The views are less limited, with deeper sightlines across the carpark but then interrupted by earth flood barrier berm and backdrop of dense vegetation further east (i.e., woodland), VPs 15.09.

The southern end of the bridge has views of the southern riverbank looking at Suir Island, and the weir beyond. Sightlines are framed by adjacent buildings, but depending on the receptor's location the river channel alignment is more conspicuous; hence sightlines or views are less limited (i.e., specifically as in VP 15.30 compared VP 15.29) and compared to the northern or middle portion of the bridge.

In contrast, the Old Waterford Road Bridge is in good condition, its landscape *quality and value* are primarily based on its functional value, as a means of efficient transport. The new bridge alignment will not be visible from here. Yet, the existing views from this elevated infrastructure looking east to Suir Island are relevant as the proposed development may alter and impact visually the subsequent LVIA section. (See Viewpoints: VP 15.27 & 15.28). This bridge has open spatial experience compared to the Old Bridge and as an elevated structure it provides less confined sight lines for the *receptors* to see the entire eastern portion of the island with its dense vegetation and looking south to Denis Burke park and looking north to the townscape of Clonmel.

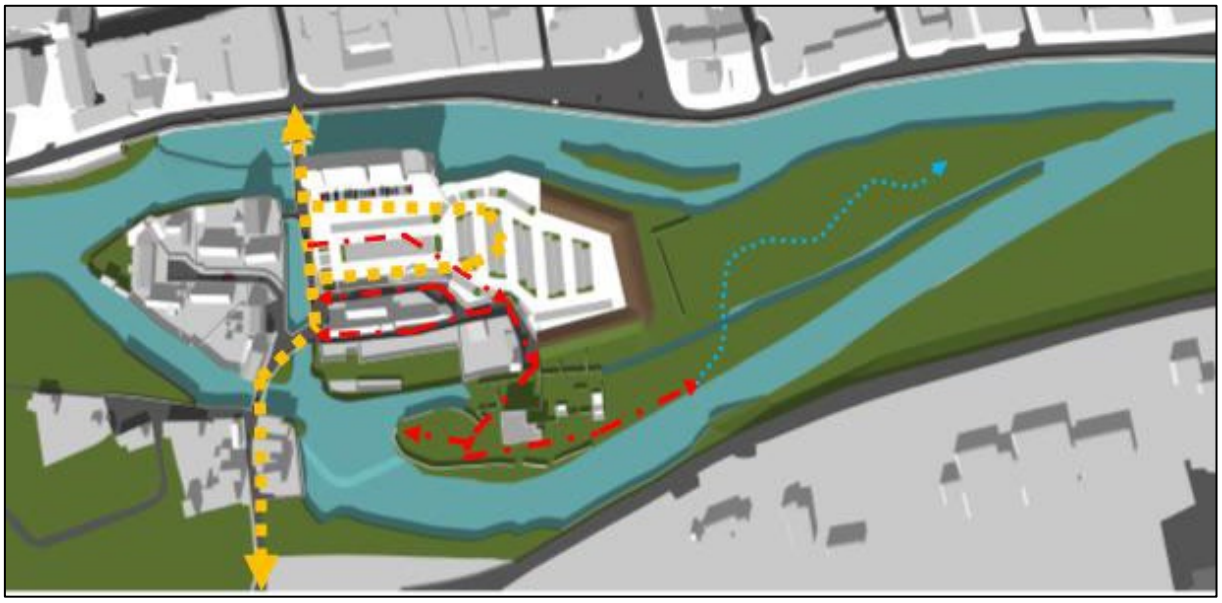


Figure 15-15: Existing access circulation layout of Suir Island (Source: Suir Island Masterplan Report-2019); yellow dashed line indicates vehicular circulation and red dashed lines pedestrian, and the blue dotted lines indicate minor trails within the woodland area.

Landscape Character Sub-areas 4, 5, 6 & 7 within Suir Island area:

Landscape Character Subarea 4: The northwest middle portion of Suir Island comprises predominately hard surfaces with buildings and a large carpark (264 car spaces), and some planting bed areas. The carpark is a tarmacadam surface open space, except for its eastern perimeter, which is enclosed by a distinctive earth berm, approx. 3.5m high, built to act as a flood barrier. The berm vegetation consists of early successional plants or regenerative vegetation (i.e., grass, brambles, gorse, scrub willow), with steep slopes and approximately 2.5-3 m high from the finish grade of the carpark area. Beyond this berm further east, the eastern portion of Suir Island is a large distinctive area that by contrast is in a natural state of vegetative evolution of undergrowth, plant layers, diverse plant species some of which are early (i.e., immature, fast growing, short lived such as Willow) or late successional (mature-slow growing, long lived such as Oak, Beech etc.) plants as noted in the preceding subsections, creating habitats for various fauna and insects. This landscape area has a woodland character with its dense overhead canopy creating intimate enclosed spatial experiences, along with its meandering trail network of desire lines by local users and views from the riverbanks to the River Suir. (See Viewpoints: VP 15.16 to 15.18). Circulation primary routes are illustrated in Figure 15-15 above for vehicular traffic, specifically in regard to the existing carpark, and its receptors are vehicular site users.

The overall landscape character in the north and southwestern portion of *Suir Island* varies substantially**.** The north-western area of the island including Hughes' Mill apartment block and the car park conveys a hard surface spatial experience that is mitigated to a degree by the carpark landscaping, and with long views that are also limited relative to the southwestern area. However, in contrast the spatial experience of both the south-west and eastern portions of the site area of Suir Island are potentially quite attractive, offering a unique landscape character of stone walled ruins and buildings along with the dense mature vegetation, and river views. Both south-west and eastern woodland area convey a picturesque landscape with potential for further landscape improvements, including the creation of the Suir Island Garden proposed amenity space for both visitors and local residents. (See Viewpoints: VP 15.15 to 15.18).

The present Suir Island landscape character site area and its immediate context reflects both the past and more recent human-made land use patterns. The existing site conditions of Suir island in this

subarea-4 in the western and southwestern section and west of the berm of the proposed location of promenade link, consist of remnants of industrial development (i.e., Tannery, and various derelict mill structures) and a recent apartment complex, i.e., the former Hughes' Mill's apartment block, some commercial units, and recently landscaped public carpark accessible from the Old Bridge. The Old Bridge still links the north riverbank via Mary Street and the south bank via Raheen Road. Existing laneways serve as access to the existing car park (Refer to Figure 15-6 & 7).

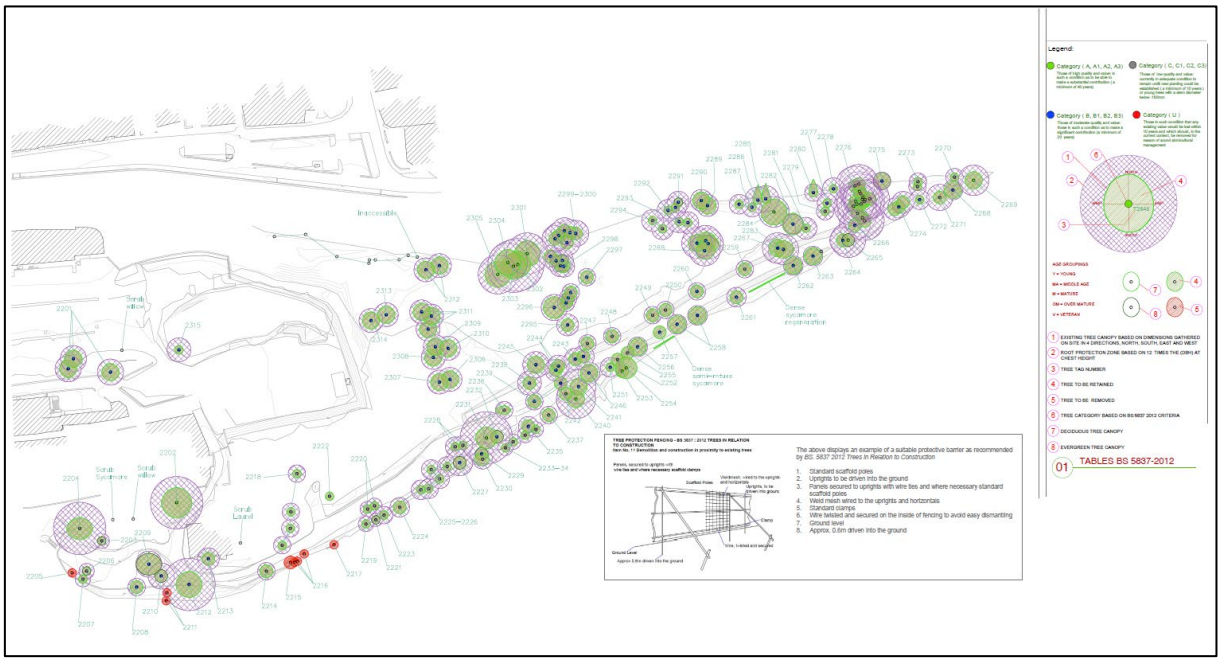


Figure 15-16: Extract from Suir Island Masterplan Report, Appendix G _2019, based on the Tree Survey by Arborists Arborcare in 2017

Figure 15-16 shows the existing tree conditions prior to the proposed development. A more recent tree survey by arborists Austen Associates Nov-2021 was undertaken relevant to this development; note this earlier survey is still applicable in identifying existing tree species and their condition as these are within the site development area in Suir Island.

Landscape Character Sub-area 6: The eastern portion from the existing carpark is mostly undeveloped and the landscape character differs in that it is densely vegetated and overgrown with a range of predominately mature, some semi-mature and a few overmature trees of various deciduous and evergreen species, predominately Sycamore and including Sycamore regeneration trees. *(i.e., of other tree species-Horse Chestnut; Monterey Cypress; Ash; Elm clusters; Yew; Beech; Willow spp.; Poplar; Lime; Scot's Pine; Western Red Cedar; Lawson Cypress).* The eastern portion of this site sub-area is prone to regular flooding, and the island can be submerged during major storms. The dense mature vegetation is adapted to temporary flooding, resulting in floodplain woodland landscape and a distinct landscape character and habitat. The existing floodplain vegetation provides a scaled contrast to the relatively flat topography, with good biodiversity, providing spatial enclosure and soft boundaries. The visual quality and environmental character are enclosed spatial experiences due to some areas of the woodland with dense overhead canopy layer, and portions of this area along the riverbanks offer views to the river contrasting with this sense of enclosure. The tree species for Subarea -6 is reported in two separate surveys by Arborists Arborcare in 2017 that covers the woodland tree species from west to the eastern most perimeter of the island; the most recent tree survey by Austen Associates in 2021, identifies tree groups and trees for southwestern portion of the island and those adjacent to the proposed development bridge/link crossing as shown in both Figures 15-16A & 15-16 B.

Figure 15-17: Extract from arborists Austen Associates Tree Survey drawing , Nov 2021

Refer to original drawings for clarity (Drawings No. 072921_TS_01 (Survey Plan) and 072921_TP_02 (Tree Retention and Protection Plan) included in Appendix 15.1 which contains the arborist report.

The tree survey and reports were undertaken in detail by Arborcare in 2017 and again in November 2021 by Austen Associates for Suir Island to identify species, their location, size, condition, and long-term remedial maintenance, tree removal as per BS 3998:2010 due to the development, tree retention as per BS 5837:2012 and protection standards by a qualified tree surgeon for both reasons of maintaining a record in case tree removals are deemed necessary for either public safety issues and/or due design development requirements. The most recent Arborist appointed did a tree survey and visual condition assessment in order to produce a tree survey and report in accordance with BS 5837-2012. The field survey drawings (mapping) are essential to determine what tree species may require removal and others protection, the method of protection and standards for the above reasons. (For clarity and details refer to original Arborist's drawings and report and Chapter 5 for Biodiversity, Species and Habitats).

In the subsequent section regarding impacts and effects of the proposed development although this dense vegetation is not part of the site area, portions of it adjacent to the construction corridor will be impacted. These trees species and/or tree groups will be referred in detail in the LIA section. This sub-area is mentioned here as it is relevant to the mitigation of any potential environmental and visual impact to the proposed development due to its inherent landscape character and qualities.

Landscape Character of Subarea 7: This subarea of the island south of the historical site of a former Tannery, and directly to the south and southwest of the carpark of Suir will be developed into the new public amenity space of Suir Island Garden. (See Viewpoints: VP 15.12, 15.13, 15.14 & 15.15).

This subarea includes extensive ruins such as Suir Island House (some of which are protected structures), with wall remnants of 18th and 19th century outbuildings mills, and stone boundary walls which contribute to the unique landscape character of this subarea, including a headrace channel and its tailrace. There are remains of mill and tailraces on the southern side of the berm along with the entrance to Suir Island Garden. The open spaces include a variety of tree species consisting of semi-

mature, mature and a few overmature trees (i.e., *Sycamore, Willow spp., Poplar, Ash, Beech, Horse chestnut, Holm Oak, Irish Yew, Lawson Cypress, Lime)* as noted in "Tree Survey report by Arbore care Ltd" and the more recent tree survey report by Austen Associates. Selective removal is noted as having occurred for conservation and maintenance works since the tree survey of 2017.

This southwest portion of Suir Island sub-area is more enclosed in character compared to the open spatial experience of the carpark and is noted to be prone for flooding. It is bordered to the north by existing buildings (the former Tannery site): To the south and northwest portions of the island's riverbank there are views to the river, unlike the carpark area which, enclosed by the berm, restricts sightlines to the river, and from the top of the berm looking east sightlines are again restricted by existing dense woodland (VP 15.10B, VP 15.10C & VP 15.10D). These sightlines from show a sense of openness with views to the river, to the weir, and to the white water for the users of the Slalom Course, and to the southern riverbank along Raheen Road. The existing Slalom Course is accessible from the southern part of the island, but most of the eastern end of the Island is not presently accessible, apart from informal paths and tracks. This sub-area southern boundary is defined by the River Suir and the area is referred to as the *Lower River Suir SAC* in Doherty Environmental Consultants' report, July 2022. The SAC overlaps a section of this site along the millrace to the west of the proposed garden. The habitats as identified in this report refer to stands of "*species-poor herb vegetation",* and list of species is provided.

15.3.4 Existing Views of the Suir Island Link Public Realm Area

This subsection shows the existing immediate views in the vicinity of Suir Island (i.e., the perimeter) and the areas within the Suir Island which potentially maybe altered (changed) by the development; these views correlate to the landscape character sub-areas discussed in previous subsections 15.3.3.

In order to assess the landscape character and potential for any impact, several less proximate viewpoints were covered for the purpose of being thorough. Viewpoints are numerically referred to with some having added letters to indicate panoramic viewpoint location.

Finally, some viewpoints were selected that were assessed as significant in illustrating the proposed development and its potential to impact. These are marked with the symbol (*) in the following pages (i.e., VP*). The viewpoint locations of critical significance identified and shown as photomontage: (i.e., VP 15.01; VP 15.05; VP 15.06; VP 15.07; VP 15.09; VP 15.16; VP 15.19; VP 15.22; VP 15.25).

These significant or critical viewpoints are used to show the existing (before) and proposed (after) landscape changes, shown by the use of photomontages. The photomontages will illustrate and support the text regarding Landscape Impact Assessment (LIA) and Landscape Impact Visual Assessment (LVIA), including receptors, and demonstrate the mitigation measures such as proposed landscape integration with proposed infrastructure where feasible, along with the existing vegetation and with other mitigation measures such as landform, protective structures such as tree guards during the construction phase etc.).

The viewpoints begin on the northern riverbank, from the western and eastern approaches to the North Plaza site and North Bridge. They follow the route sequentially via Suir Island carpark and the southern side of the Island, including the Suir Island Gardens, then onto Raheen Road and Denis Burke Park side.

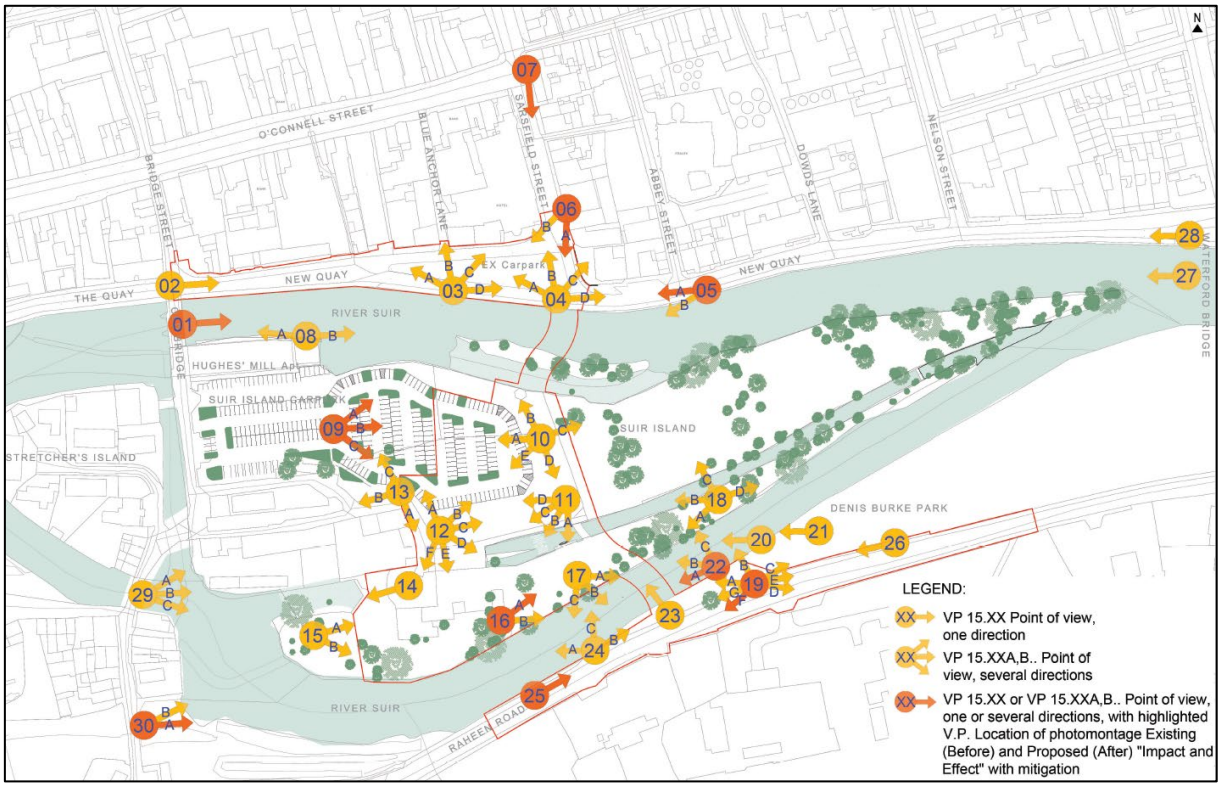


Figure 15-18: Viewpoint location map

Views showing existing state: proposed development location of North Plaza and North Bridge

VP 15.01 From Old Bridge at its northern end looking east towards a portion of the River Suir, Suir Island with existing mature vegetation, and Sarsfield Street, the location of the proposed North Bridge. Hughes' Mill, a former mill building converted to an apartment block is on the right and the stone-clad quay and flood wall barrier is visible on the left-hand side.

VP 15.02 Looking east near the northern end of the Old Bridge towards a section of the New Quay Road, Suir Island with existing mature vegetation on the far right, and Hughes' Mill apartments beyond the stone flood wall barrier in foreground on the right.

VP 15.03A looking northwest at the single mature tree with planters located opposite Blue Anchor Lane, and service structure.

VP 15.03B Looking north at the single mature tree and utility service box located opposite Blue Anchor Lane.

VP 15.03C Looking further northeast at the existing car park area with low concrete walls.

VP 15.03D Looking northeast from New Quay Road at existing carpark terminating at Sarsfield Street entry area, the proposed link for the North Bridge-01. The stone flood wall barrier is visible in the foreground on the right, and Suir Island's riverbank vegetation of mature trees.

VP 15.04A Looking northwest at the existing carpark on New Quay Road with the single tree, location of proposed North Plaza and **VP 15.04B** looking north at Sarsfield Street, the proposed link for the North Bridge.

VP 15.04C Looking northwest at the entry point of Sarsfield Street from New Quay Road. **VP 15.04D** Looking east at New Quay Road, flood wall, and vegetation on Suir Island's riverbank.

VP 15.05A Looking west from New Quay Road opposite Abbey Street towards the dense vegetation on Suir Island. **VP 15.05B** Looking west from New Quay Road towards the proposed North Plaza location and North Bridge crossing point.

VP 15.06A & VP 15.06B Looking south from Sarsfield Street towards Suir Island. The proposed North Plaza and North Bridge steps and platform will be located within the parking areas in the middle-ground.

VP 15.07 Looking south from Sarsfield Street towards the flood wall (at the very end of the perspective) and Suir Island. The access to the new bridge and promenade will be visible from here.

VP 15.08A Looking west from Hughes' Mill apartments towards the Old Bridge and The Quay road, along the northern arm of the Suir.

VP 15.08B From Hughes' Mill looking northeast towards Sarsfield Street junction off The Quay road, single tree at existing car park, and beyond the proposed location of North Bridge.

Views showing existing conditions of Suir Island carpark and proposed locations of promenade and ramp.

VP 15.09A Looking northeast and north from Suir Island carpark towards the elevated earth berm delineating the eastern boundary of the carpark. Beyond the berm is the existing dense mature vegetation forming the woodland on the eastern portion of Suir Island. The proposed promenade connecting the two bridges will run along the top of this berm.

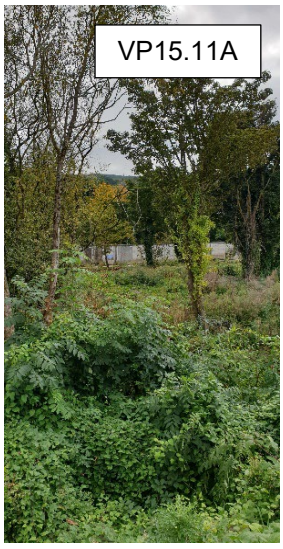
VP 15.09B Looking northeast and north from Suir Island carpark towards the elevated earth berm delineating the eastern boundary of the carpark. Beyond the berm is the existing dense mature vegetation forming the woodland on the eastern portion of Suir Island. The proposed promenade connecting the two bridges will run along the top of this berm.

VP 15.09C Same viewpoint location: Looking east from Suir Island carpark towards the elevated earth berm delineating the eastern boundary of the carpark. The arrival point of the proposed access ramp linking the proposed promenade to the car park area will be visible (behind the container) in this view.

VP 15.10A Looking due west from the top of the earth berm, the location of the proposed promenade, and overlooking carpark and Hughes' Mills' apartment to the far right in the background. The skyline of existing buildings and mature trees forms a strong line of elevated forms, with restricted views, conveying a sense of enclosure looking west.

VP 15.10B & VP 15.10C Same viewpoint location: Looking due north from same location, River Suir is barely visible. Looking due east from same location into Suir island woodland, towards the dense vegetation on the eastern portion of the island.

VP 15.10D Same viewpoint location: Looking due south from same location, the River Suir is barely visible. **VP 15.10E** Looking southwest towards the ruins of Suir Island House in the background, with the earth berm in foreground forming the southern boundary of the carpark. This berm is the location of the proposed ramp linking to the proposed promenade and to the carpark, including the other development “Suir Island Garden” area.



VP 15.11A – VP 15.11D Looking southwest and south from the proposed promenade along the earth berm. The berm turns west at this location. The River Suir is barely visible from here, and views to Suir Island House and outbuilding ruins are very visible.

VP 15.12A & 15.12B Looking northeast and east from the top of the earth berm towards the location of the proposed ramp connecting the existing carpark to the proposed bridge's promenade link. In the far background is the other section of the berm, forming the eastern boundary of the carpark and proposed promenade along with the dense vegetation or woodland of the eastern portion of Suir Island.

VP 15.12C – VP 15.12E Same location and viewpoint, in the foreground are remnants of the outbuildings of Suir Island House and a former Mill Race; this is beside the entrance to the Suir Island Garden area.

VP 15.12F Looking southwest at the ruins of Suir island House and proposed point of entry to Suir Island Gardens .

VP 15.13A & VP 15.13B Location of proposed shared entry point from the carpark to the access ramp to the proposed promenade (to the left of this view), to the Suir Island Gardens' entrance and onwards to Old Bridge via the existing narrow laneway.

VP 15.13C Looking northwest from the proposed entry point to the proposed access ramp onto the promenade link, in the backdrop is the Hughes' Mill apartments and, in the foreground, the existing landscaped carpark.

Views showing existing state: the Suir Island Gardens proposed development location and the southern crossing point of South Bridge

VP 15.14 Looking southwest, with the view being limited by mature trees and a sense of enclosure due to the surrounding buildings and stone boundary walls of the Suir Island Gardens and is adjacent to the entry point of this site area.

VP 15.15A & VP 15.15B Looking north and northeast at the remains of Suir Island House.

VP 15.16A & VP 15.16B Looking northeast towards the ramp access berm linking the proposed promenade to car park on Suir Island, and to the east at the same viewpoint location along the river edge of Suir island.

VP 15.17A - 17C Looking southeast and south further along the riverbank of Suir Island across to the southern riverbank **VP15-17B.** Where the Slalom racecourse markings are visible is the approximate location of the South Bridge crossing point.

VP 15.18A – VP 15.18C Looking west towards Suir Island House and beyond to the existing berm for the proposed ramp access linking to the proposed promenade; both features are barely visible due to the dense undergrowth and trees.

VP 15.18D looking east into eastern portion of the Suir Island's woodland: A typical desire line trail runs along the riverbanks of Suir Island as it appears here.

Views showing existing state: landing point of Bridge-2 on the south bank (Raheen Rd).

VP 15.19A Looking west from the entrance to Denis Burke Park along the south riverbank. The bridge elevation is dictated by the elevation of the riverbank on both sides, but primarily along the south riverbank at Raheen Road where it must surmount the flood barrier wall. The approximate arrival point is at the end of the painted part of the wall on the left of this picture.

VP 15.19B & VP 15.19C; Same viewpoint location: The entrance to Denis Burke Park at this location is level with Raheen Road and is elevated above the River Suir's edge as is evident by the ramp descending to the east into Denis Burke Park. The River Suir is visible from this ramp entry point.

VP 15.19D – VP 15.19G Same viewpoint location at Denis Burke Park entrance: Looking southeast towards the entrance to Raheen College: **VP 15.19D & VP 15.19E** Looking to the east along Raheen Road footpath. The proposed South Bridge arrival platform will be to the west of this location, close to the tree in the footpath.

VP 15.20 & VP 15.21 Taken further east from Denis Burke Park entrance near the concrete jetty along the southern bank and again at the concrete jetty as per (VP 15.20), the crossing point of the proposed South Bridge will be quite visible; Slalom markings for approximate location.

VP 15.22A – VP 15.22C Further west from Denis Burke Park entrance along the southern bank at a closer proximity to the proposed crossing location of the South Bridge connection point to the Link. The eastern portion of the Suir Island's woodland (VP 15.22C), is quite a significant landscape feature that will mitigate the visual impact of the proposed development.

VP 15.23 Looking northwest, the view at close proximity to the crossing point of South Bridge along the River Suir's bank (it makes landfall approximately above the weir). The group of willow trees marks the existing flood defence berm location for the proposed promenade.

VP 15.24A to VP 15.24C Looking northwest towards Suir Island House and outbuildings. The higher elevation of the flood barrier wall relative to the stone retaining walls of Suir Island's riverbank is clearly apparent, illustrating the level of the proposed South Bridge within this context.

VP 15.25 Looking east along Raheen Road, towards the location of the proposed steps that will connect to South Bridge. **VP 15.26** Looking west towards the proposed access ramp. The ramp and steps will diverge at the end of the South Bridge, just west of the Denis Burke Park existing entrance, providing access in both directions along Raheen Road and to the park. The permanent flood barrier wall prevents any sightlines to the river and most of Suir Island. The South Bridge will end at flood barrier wall just in the foreground of the existing single sycamore tree and is the point where the proposed ramp and steps will descend from a level platform.

Views east of Suir Island towards the proposed development area

VP 15.27 & VP 15.28 Looking west towards the end point of Suir Island from Old Waterford Bridge (R678), showing a sharp bend to the river along southern and northern riverbanks. Dense existing vegetation along the banks as well as the bend in the River will serve to hide the new bridge structures from this view.

Views southwest of Suir Island towards the proposed development area

VP15.29A & VP15.29B from the Old Bridge at its south end, looking southeast to a view of the River Suir, Suir Island House, river walls, and the river's sharp bend at the Weir beyond (canoe launch area and steps imperceptible). The existing dense vegetation along the Island's riverbank and the area of the Suir Island Garden can be seen. Below: **VP15.29C** showing existing bridge parapet.

VP15.30A & VP 15.30B from the Old Bridge at the furthest southern end, looking eastwards with a view of the River, of Suir Island's southern riverbank, the weir, the canoe launching area with steps, Suir Island House, outbuildings and mill complex, the river walls, existing vegetation, and the River's sharp bend. The mature trees on the Island delineate the Suir Island Garden area.

Summary and Assessment of Existing Views prior to a proposed development

Views from elevated urban receptors along the northern riverbank: Receptors are people driving, walking or cycling, (VP 15.01 – VP 15.10) looking south across to the Suir Island proposed development site area, views are limited at eye-level along the New Quay Road by the permanent flood barrier wall, yet the dense tree canopy layer on Suir Island, the woodland area on the eastern portion of the island, the elevated flood defence berm, and Hughes' Mills apartments, including the Old Bridge, will be visible (VP 15.01 to 15.06 – VP 15.29 & 15.30). The low elevation points of the streets perpendicular to the north riverbank are restricted to an extent by the flood barrier wall, but the more elevated Sarsfield Street long views are framed by the buildings (these are not panoramic, until one reaches the river edge (VP 15.06)). The spatial experience is quite contained to the north, but Suir Island offers a sense of openness and panoramic views across the island. The *visual quality* is predominately made up of hard surfaces particularly along the New Quay Road and side streets, while in contrast Suir Island offers relief with its dense vegetation and mature trees.

Views from within Suir Island are far more enclosed than those on the perimeter of the Island such as the riverbanks (VP 15.16, 15.17 & 15.18), particularly views from the existing carpark due the presence of the elevated flood defence berm, Hughes' Mill apartments and surrounding buildings with tall walls. In the proposed Suir Island Garden development area the views are also limited due the buildings and mature trees (VP 15.10, 15.11 & 15.15); even from the elevated berm, except from VP 15.12. The interior of Suir Island conveys an enclosed intimate spatial experience, yet its visual quality is appealing as a result of the mature vegetation and picturesque ruins echoing its industrial past. Furthermore, this undeveloped area offers the potential for an amenity area of both formal and/or informal landscape character.

Views from elevated residential receptors along the south riverbank looking north to the proposed development site are available, and to a large extent panoramic. However, the elevation along Raheen Road at the same side and location is obstructed by the permanent flood barrier wall (VP 15.25 & 15.26).

At the lowest elevations along the southern riverbank, specifically from Denis Burke Park and below the flood barrier wall, views are not obscured, thus the river and Suir Island are visually accessible. The spatial experience in this part of the site is largely contained by the flood barrier wall, and as the visual quality is quite hard due to the overall predominance of the existing infrastructure, the visual quality is softened by the sporadic existing mature trees and denser vegetation of the woodland to the east on Suir Island. (VP 15.22, 15.23 & 15.24).

15.4 Project Description of the Proposed Development

In summary, this project focuses on improving connectivity for pedestrians and cyclists from Clonmel Town Centre to Suir Island and onwards from Suir Island to Raheen Road, as well as improving accessibility to Suir Island amenities by proposing a link between the northern and southern banks of the River Suir, crossing Suir Island. The figures below show the proposed development. The proposed development design solution in terms of engineering, architectural and landscaping proposals were dictated by the both built and natural opportunities and constraints inherent in this site -*its genius loci.*

The **proposed development** site commences at the *Northern Riverbank* of the Suir River, the location of the proposed North Plaza and North Bridge. The route crosses over the North Bridge from the Quay/New Quay to its landfall point on the north-eastern corner of the flood-defence berm. This berm provides an opportunity for an elevated promenade across Suir Island and already exists as an element of landscape. It crosses from the south-eastern end of this berm to the route's arrival point on the southern bank of the River Suir via the South Bridge. At each end of the route and from the berm on Suir Island there are access points consisting of steps and ramps. (See Figure 15-19 below).

The proposed design and process is dictated by *opportunities and constraints*, both natural and human-made built features. The following text describes some of these aspects for each sub-area within the core study area or site development area.

The proposed development layout is primarily an undulating circulation route across Suir island to echo the River Suir's meandering character, and to better integrate with its surroundings, dictated by the existing flood barrier berm landform and location as well as to convey a spatial experience that reflects the softer natural forms of the river and island. Hence, the link consisting of two bridges on the north and south riverbanks has curved bridges. The main objective is a proposed development that not only provides a link but integrates with the existing context.

The proposed materials for the two bridges will be steel, consisting of caisson sections welded together to form a continuous and uninflected deck between the banks and the berm ends. The colour of the bridge will be chosen to allow it to fade into its background as much as possible – this will be decided at detailed design stage and following a careful study of sample colours on-site, over a four-season period. Energy efficient, sensor-activated lighting to assist pedestrian/cyclist movements at night will be housed continuously in the handrails. The railings along the bridges and promenade will be 1.4 m height, consisting of a timber handrail and mesh infill to meet the safety height design requirement for cyclists.

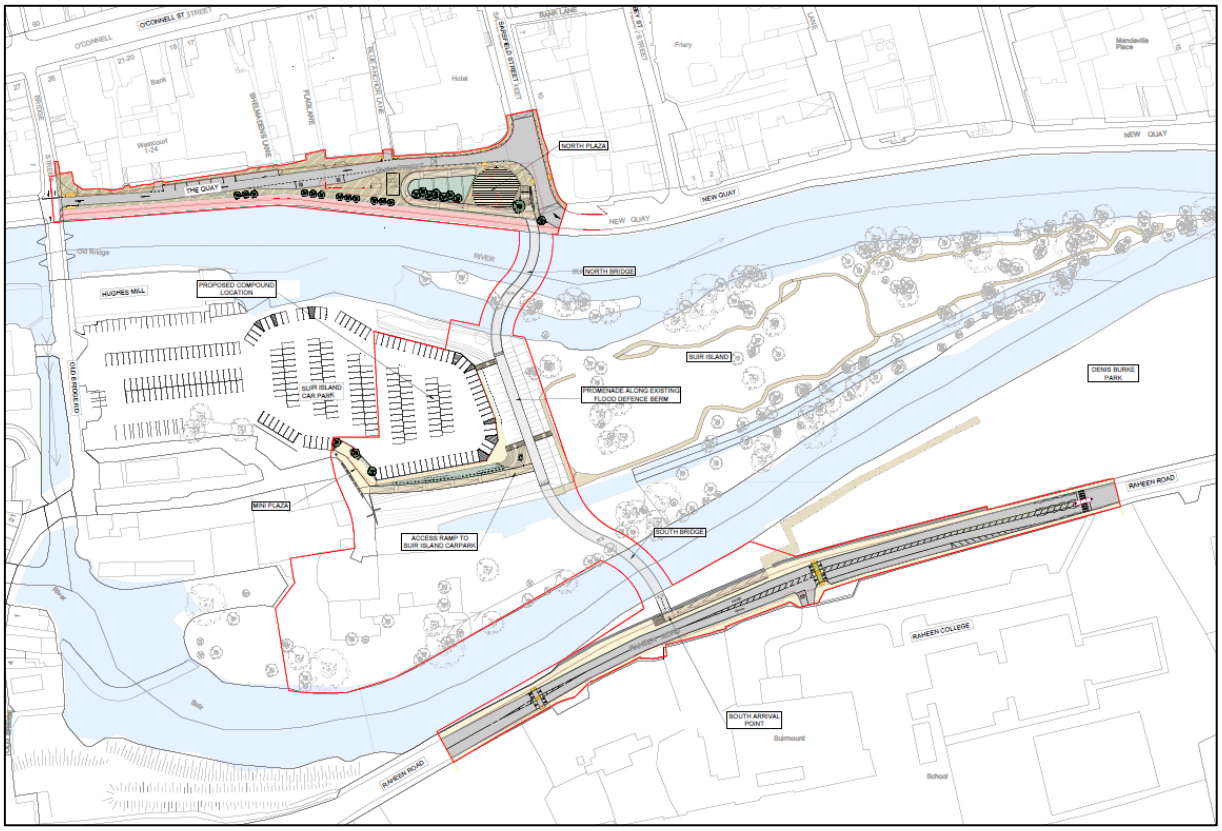


Figure 15-19: The extent of the overall proposed development and photomontage 15-17B, with detail drawing areas 15.17C - 15.17F

The new landscape resulting from this development does not attempt to change any existing elevations and/or landforms in this proposed development. The bridges were elevated to meet existing topographical requirements in order to provide ease of access to at the riverbanks for receptors (land users) and the link was set along the existing flood barrier berm.

In addition, the new planting scheme and selected species being proposed are species that are native and/or naturalised on the site whose characteristics are compatible with river valley, floodplain character and the ecology of this area, including their natural inherent tolerance to temporary flooding, and for the attractive seasonal colour along with their form, scale-mature growth, pollinating and/ or wildlife value *(i.e., Salix alba and vars. (Willows vars.) ; Alnus glutinosa (Common Alder); Betula pubescens (Down Birch); Betula nigra (River Birch); Nyssa sylvatica (Sweetgum); Acer rubra (Red Maple); Ilex aquifolium (Holly); Carpinus betulus (Hornbeam) ; Crataegus vars. (Hawthorns).*

Most of the new tree planting layout will be on the northern riverbank and plaza area as shown below. Large beds in the plaza will include some informal planting of shrubs and trees. The Raheen Road area where the southern bridge is located will remain a hard landscape character in its present state as there is limited space for new planting, and existing vegetation on the river edge suffices. (See Viewpoints: VP 15.20 to 15.22)

The ***northern riverbank*** (Subarea 1) landscape will incorporate new architectural features such as Northern Plaza shown in the image below. It will form a distinctive transition space between the urban centre and its 'hard' fabric and the island environment and its natural setting. The circular space encourages receptors to pause or stroll through or engage with the steps and ramp, forming a new 'gateway' to the aerial bridge link.

Figure 15-20: Photomontage of northern bridge area with Plaza and landscape.

The steps are aligned with Sarsfield Street, becoming an architectural focus as well as a functional connection to the new bridge. Seating is proposed within the perimeter of circular area acting like a low-key amphitheatre, facing the circular space that can be used as a multi-purpose space for performances and/or to fulfil other functions of community activities. Different surface finishes are used to accentuate the difference between vehicular and pedestrian areas, in line with safety and accessibility requirements. The requirement for the new structure to be located above the flood barrier infrastructure along the Quays dictated the deck and structural levels of the bridge.

To soften the predominately existing hard spatial quality the proposed design aims to have large gentle sloping terraced planting bed area for wildflowers or grass clumps of trees, with understory shrubs and/or perennials. The exact species of shrubs, perennials or wildflower meadow mixes will be resolved during final design stage. A linear layout of trees near the riverbank will add a softer environmental and visual quality to spatial experience of this area. At the wide terrace steps connecting and providing access to the ramp and bridge, one specimen tree acting as focal element in landscape is proposed.

The middle portion (Sub-area 5) of the proposed link connecting the two bridges to the north and south of the design layout of the proposed landscape and architectural features is the shown in the second detailed image below. The link with Suir Island will include a soft curving alignment with material elements as referred in the previous paragraphs. Extra planting of trees being considered on the flood-barrier berms was ruled out on operational grounds by the OPW. Nevertheless, the existing flood barrier berm provides an opportunity to locate the link on this berm as it offers an open linear space to do so with a reasonably level connection to the deck level of the northern bridge arm of the link. It also provides a ready-made area of the site that does not have extensive dense existing vegetation and/or other built features of importance that require removal. However, the link and construction zone corridor will require the removal of a number of trees, mainly for the requirements of temporary site access. The exact location and species will be addressed in detail the subsequent construction impact phase of this report. The location of the berm on the Suir Island provided another opportunity for a solution to the location of the northern and southern bridges, and the connection of the riverbanks.

The groundcover plane for flood barrier berm will either be low cut grass to 1 m in height or wildflowers and will require maintenance. Alternatively, self-seeded regeneration plants can be considered, but maintained as well to prevent early successional plant like Willow and Gorse from growing and damaging the flood barrier berm with their roots, and to prevent natural regeneration plants that exceed 1 m in height. This will also apply for the berm section along the access ramp to the carpark. No new trees or shrubs can be proposed for same reasons mentioned in the previous above paragraph.

Additional soil is proposed along the access ramp instead of a concrete retaining wall where soil levels can or need to be raised. This will provide planting bed for the wildflowers or wild self-seeded regeneration plants to grow which is determined acceptable by OPW. (See two Figures Below)

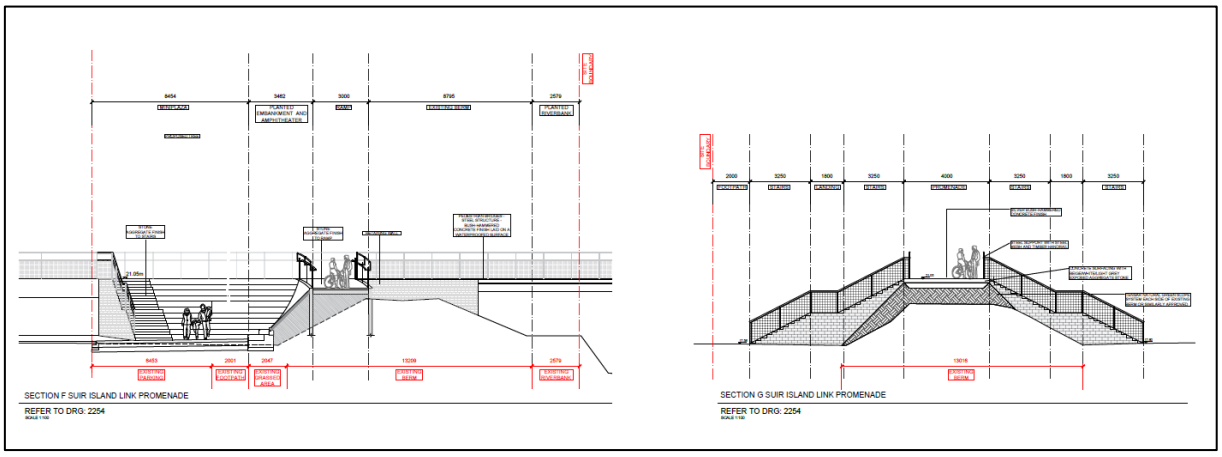


Figure 15-21: Additional soil is proposed along the access ramp on the flood barrier berm and adjacent to the existing car park and Suir Island Garden.

At the southern riverbank (Subarea 2) the three parts of the proposed development with its landscape and architectural features are shown in the images below, and unlike the northern riverbank with its plaza area and the middle portion of the site with its promenade between the bridges, it will remain a hard landscape character similar to existing conditions. Access to the ramp is off Raheen Road in proximity to the Denis Burke Park entrance, which will facilitate and accommodate people, i.e. specifically park users, cyclists, pedestrians along the footpath and those from the local school, to easily access the ramp and avail of the bridges with the link. There is little space for any proposing planting in this portion of the proposed development.

The constraints for this area of the development included existing elevations that dictated the southern bridge height, as well as associated ramps and steps requirements. One mature tree on the footpath along Raheen Road, however, is to be removed; this is identified in the construction impact phase subsection. The opportunity was the crossing location from the ramp to the bridge considered minimised the removal of the existing vegetation to the east, and its distance from the Suir Island Garden area. Thus, the location of this crossing was mitigated by inherent character of the landscape.

For further clarity purposes refer to original architectural/landscape drawings of the proposed design layout. (Drawing No. SII-DHB-GEN-ZZ-DR-A-2000 to SII-DHB-GEN-ZZ-DR-A-2110).

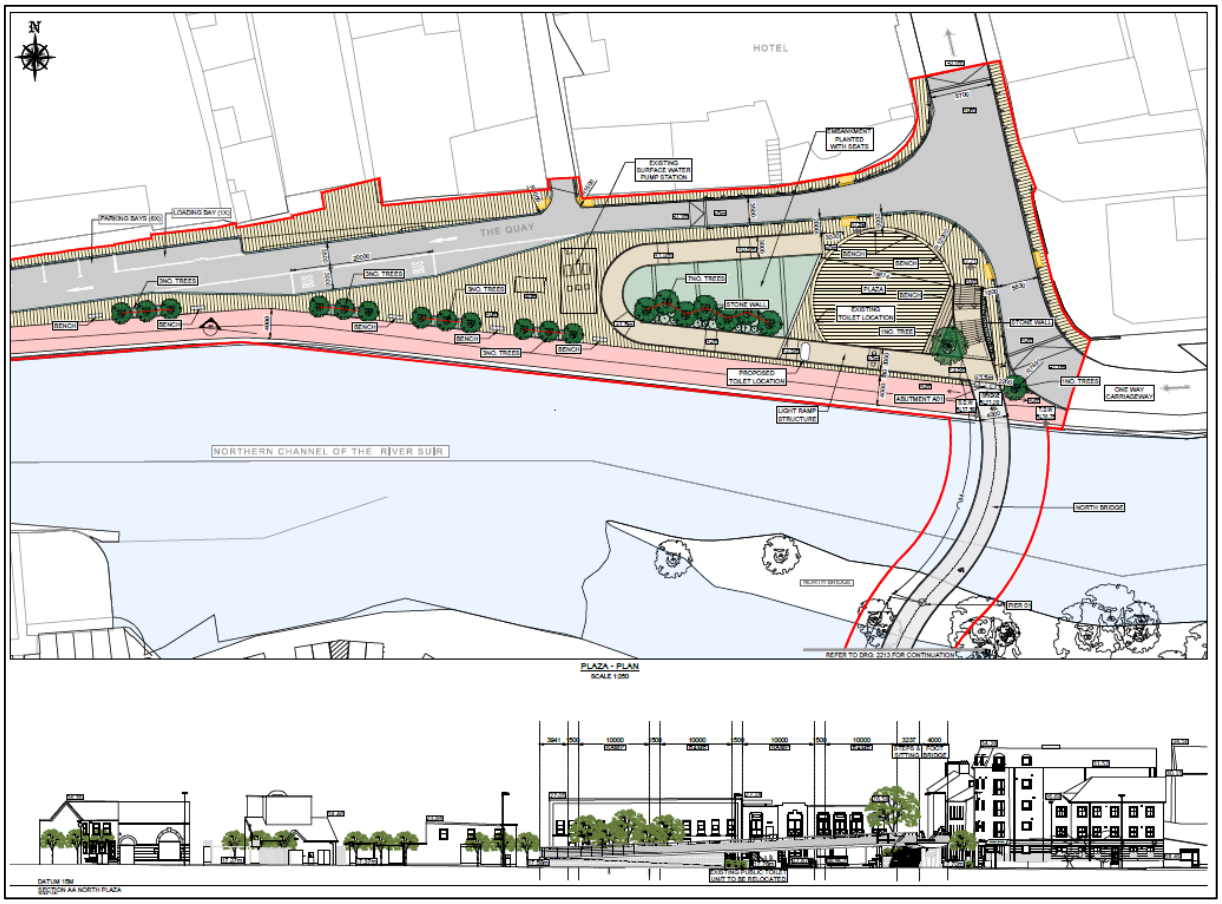


Figure 15-22: The proposed development areas as detail drawing area showing proposed architectural and landscape design scheme of the northern bridge, associated ramp, steps, plaza and landscape.

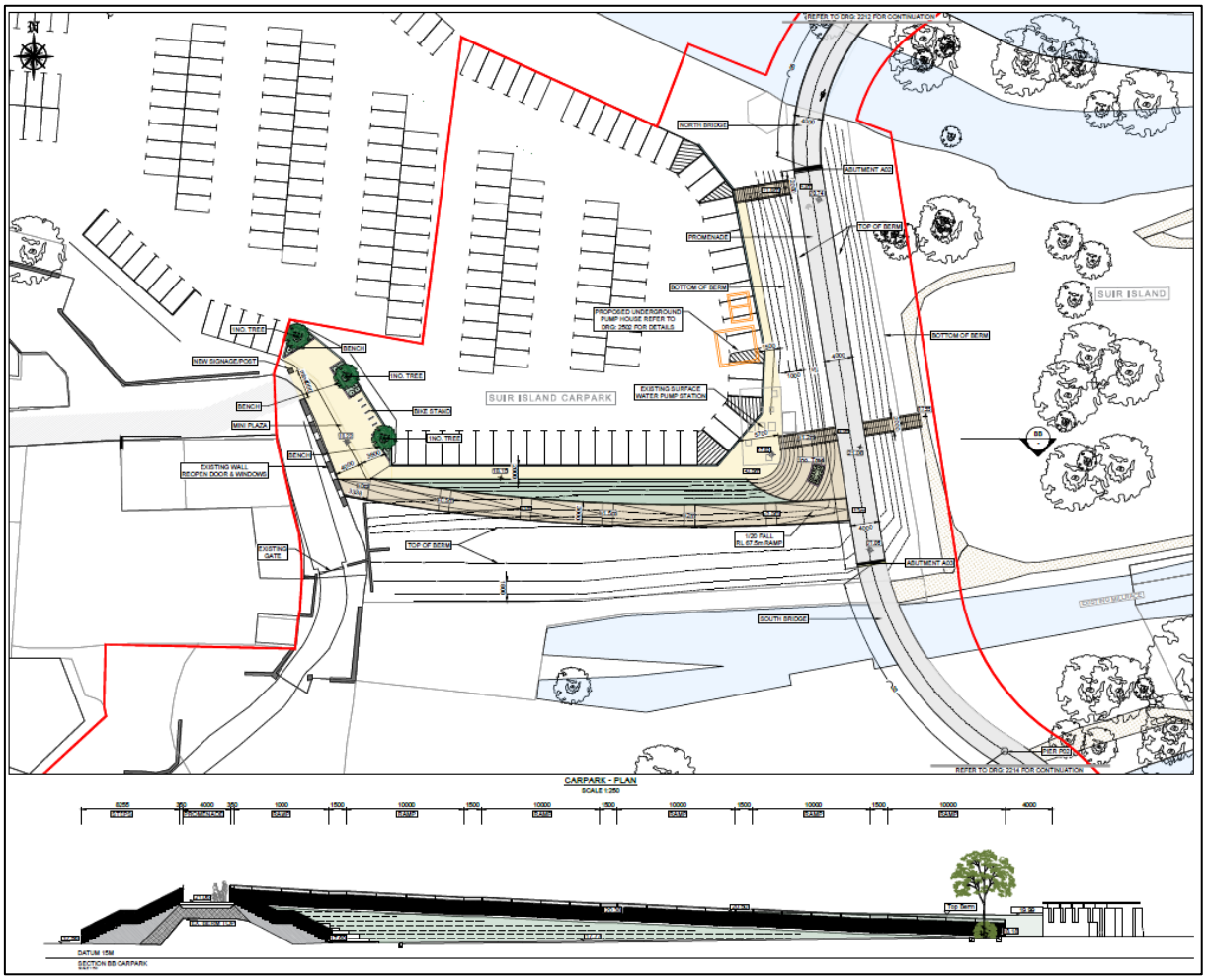


Figure 15-23: Proposed architectural and landscape design scheme for the Suir Island link promenade on the berm and the associated ramps to the existing carpark and entry area of Suir island Gardens.

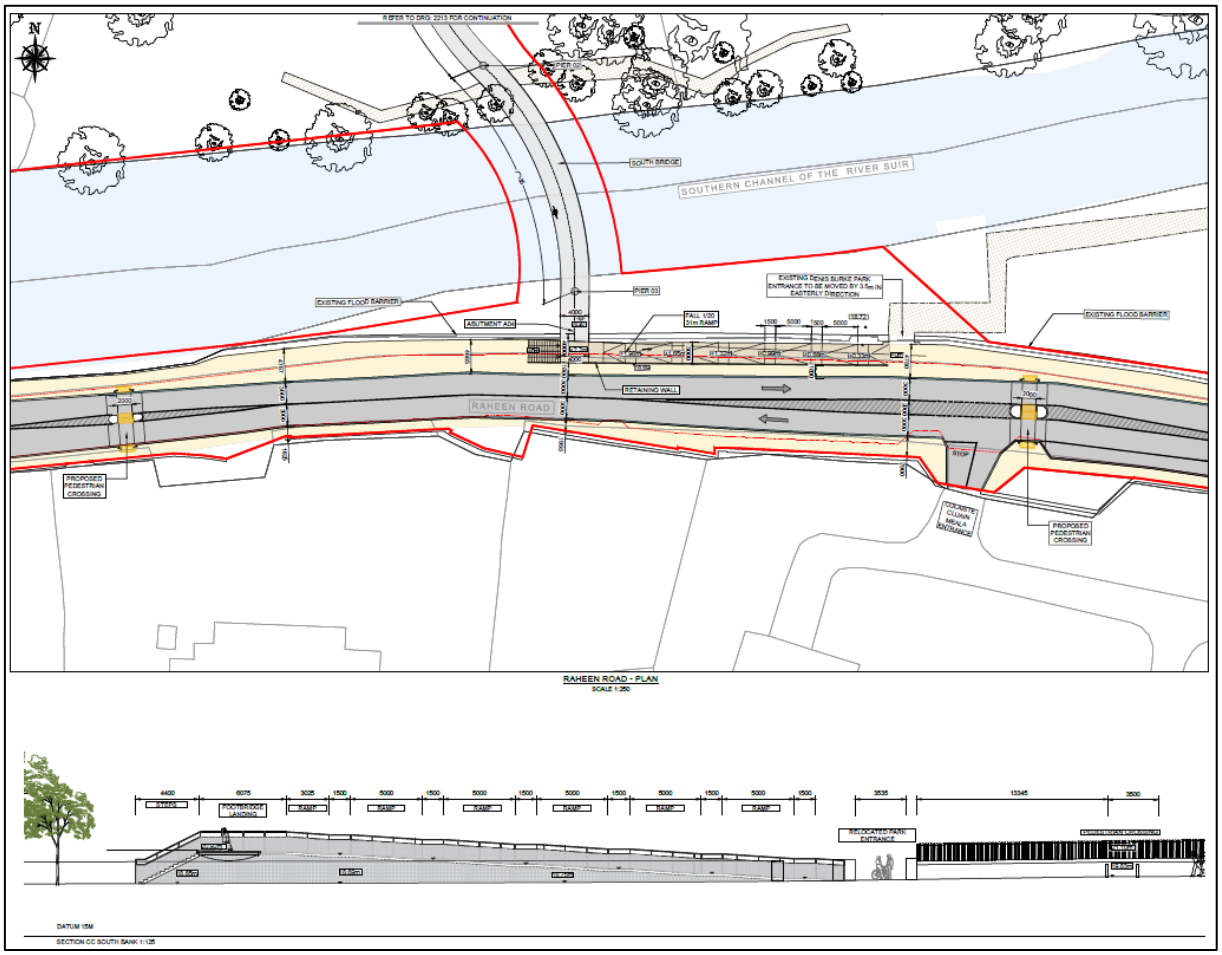


Figure 15-24: Proposed architectural and landscape design scheme for the Raheen Road southern bridge landing with access ramp and steps.

15.4.1 The Visual Characteristics of the Proposed Development (Photomontage) Showing before and after views.

The images below are photomontages showing the existing (before) site conditions and the proposed (after) site conditions with the proposed development. The intention is that photomontages will convey the visual characteristics of the proposed development in the existing context and the site. These images are based on the selected viewpoints in preceding section deemed to be significant.

In addition, the photomontages will be useful in assessing further the landscape impact and effect as a resource and visual amenity, including effect on the receptors.

For ease of reference for the following pages on viewpoints locations Figure 15-18 is shown again below.

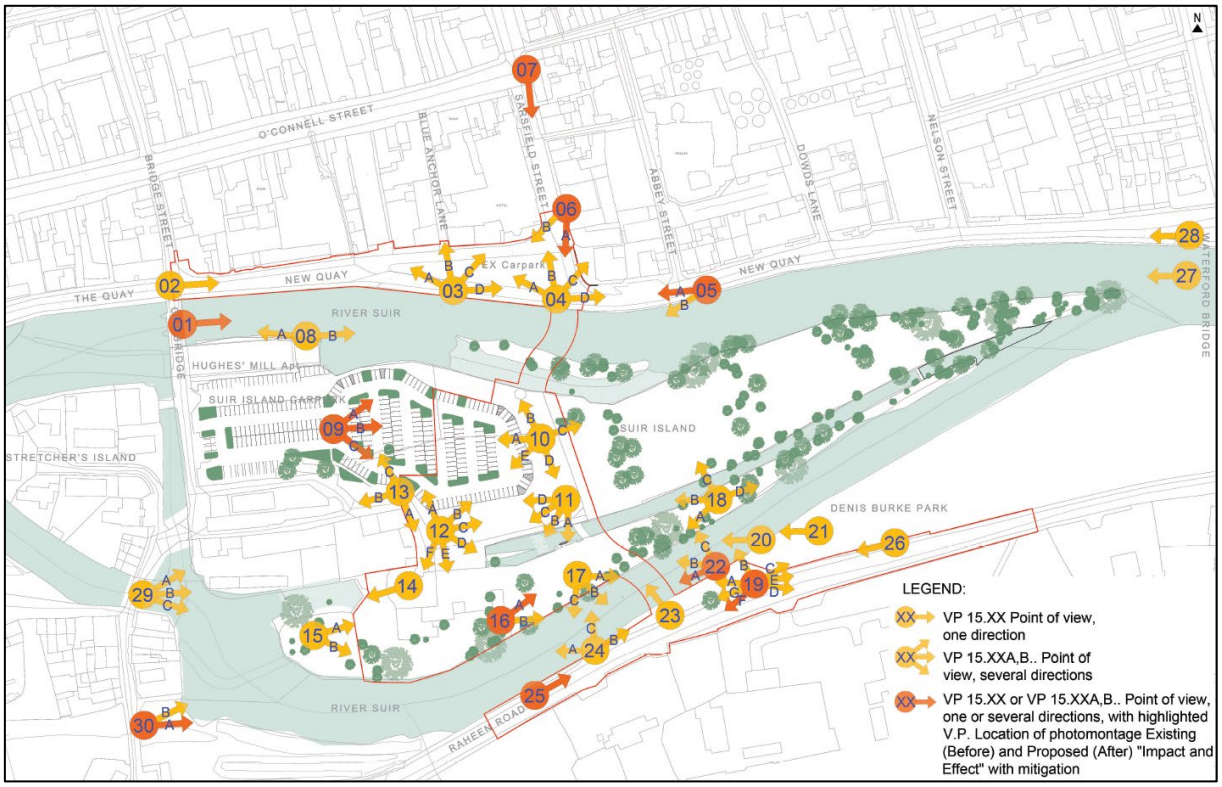


Image 15.4_01A, From the Old Bridge, the northern end of the bridge. Looking East (Existing view).

Photomontage 15.4_01B, From the Old Bridge, the northern end of the bridge. Looking East (Proposed view): VP 15.01.

Image 15.4_02A, From the south end of Old Bridge looking east (Existing view).

Photomontage 15.4_02B, From the south end of Old Bridge looking east (Proposed view); VP 15.30 (A).

Image 15.4_03A, From the top of Sarsfield Street looking south (Existing view).

Photomontage 15.4_03B, From the top of Sarsfield Street looking south (Proposed view); VP 15.07.

Image15.4_04A From the bottom of Sarsfield Street looking south (Existing view).

Photomontage 15.4_04B From the bottom of Sarsfield Street looking south (Proposed view); VP15.06 (A).

Image 15.4_05A From the bottom of Abbey Street looking West (Existing view).

Photomontage 15.4_05B From the bottom of Abbey Street looking West (Proposed view); VP 15.05 (A).

Image 15.4_06A From Suir Island Carpark looking East (Existing view).

Photomontage 15.4_06B From Suir Island Carpark looking East (Proposed view); VP 15.09 (A,B, & C).

Image 15.4_07A From the Suir Island Garden looking East (Existing view).

Photomontage Images 15.4_07B From the Suir Island Garden looking East (Proposed view); VP 15.16 (A).

Image 15.4_08A From Denis Burke Park entrance looking West (Existing view).

Photomontage 15.4_08B From Denis Burke Park entrance looking West (Proposed view). Location of Viewpoint VP 15.19 (F).

Image 15.4_09A From Denis Burke Park entrance looking West (Existing view).

Photomontage 15.4_09B Near Denis Burke Park entrance looking West at bottom of flood barrier wall, the riverbank. (Proposed view). Location of Viewpoint VP 15.22 (A).

Image 15.4_10A From Denis Burke Park entrance looking East (Existing view).

Photomontage 15.4_10B From Denis Burke Park entrance looking East (Proposed view). Location of Viewpoint VP 15.25.

15.5 Landscape and Visual Impact Assessment (LVIA)

15.5.1 Landscape Impact Assessment (LIA) on the inherent Landscape Character as a Resource

In this Section, Tables 15-1 to 15.4 under the previous section on Methodology and Definitions regarding terms used to define impact and effect are applied for the Landscape and Visual Impact Assessment (LVIA). Table 15-1 (LIA): *"The **Landscape Impact Assessment (LIA**)* is defined as the process: *"of evaluating changes to the landscape as a resource arising from a proposed development.* Table 15-2 (VIA): ***Visual Impact Assessment (VIA**)* is defined as the process: *"of evaluating how people's (i.e., receptors) way of experiencing the qualities of a place in visual terms may be specifically affected by changes arising from the proposed development".* Table 15-3 & 15-4 are relevant to both assessments.

For further clarification and for the purpose of this report the terms used in Table 15-1 and Table 15-4 Magnitude, Scale/size and Duration are defined by the European Academy of Law (ERA) as follows:

- **Magnitude** (Table 15-1 is defined as: *the severity of the potential impact.* It indicates whether such an impact is irreversible or reversible. If the adverse effect of a project can be mitigated, then the magnitude of the impact cannot be considered as very high.
- ***Scale /size*** (Table 15-1) refers to the zone of influence of the impact because the impact can be site-specific or limited to the project area, occur locally or regionally and the impact can be national.
- **Duration** (Table 15-4) establishes that the impact needs to be established in order to be able to classify it. For example, an impact which arises after the project completion and lasts only for three to nine years may be classified as a short-term impact.

The Landscape Impacts Assessment (LIA) section refers the existing landscape and the proposed development which includes architectural and landscape features (i.e., two bridges, the link promenade, the Northern Plaza area, access ramps on the north and south riverbanks, the ramp access to the existing carpark and the separate "Suir Island Garden" area based on engineer design requirements.

The primary sub areas of identified within study core or site area of development include: the Northern Bridge sub-area (1), The Link connecting the two bridges as a Subarea (5) traversing Suir Island; the Southern Bridge Subarea (2) along and from Raheen Road. Regarding potential impacts during Construction phase and the Operational phase (post-construction) associated sub-areas previously identified are not discussed except those directly adjacent to the development such as Carpark Subarea (4) and the Woodland Subarea (6). Specific details regarding theses subareas such as removal, prevention and mitigation are reviewed separately in those subsections. (Refer to Figure 15-13)

In this section the *impact or action taken,* and the *degree of changes or effect* is outlined, followed by an assessment on the landscape features and characteristics to determine the landscape capacity to accommodate change and therefore the degree of significance to change; during construction/operational and post construction.

The Northern Bridge (Subarea -1): the *Northern Riverbank* with the proposed *Northern Bridge* and its associated Plaza, ramps, steps, and landscape is within an existing inherent landscape character and as an environmental resource that functions to serve the town of Clonmel, and its primary value as a landscape in urban context provides vehicular and pedestrian circulation, and parking. The proposal will function in the same way, except for the parking spaces currently along the Quay which it is proposed to remove and which will be re-accommodated in the Suir Island carpark.

Impact: The proposed development design concept solution for the engineer, architecture and landscape features will entail the following actions to be taken (i.e., impact):

- Removal of existing ground plan surfaces/materials
- Removal of minor existing infrastructure (i.e., low concrete walls)
- Removal of the existing parking layout.
- Removal of a few planting bed areas of grass and few shrubs; no trees in paved area of site
- Removal of trees*, at the minor spit of land surrounded by water, a mid-way Island within the river and along the northern riverbank of Suir Island - addressed in construction impact subsection.
- Removal and/or relocation to signs
- Removal and/or relocation of associated services to be reinstated for the proposed development.
- Removal of the existing parking layout.
- Retention of the overall general vehicular and pedestrian access and circulation (i.e., main roads, lanes)
- Retention of the permanent flood barrier walls along the River Suir
- Retention of the existing general structures adjacent to the urban open space (i.e., buildings).
- Retention and/or minimal loss of views to the River and Suir Island, and surrounding context where feasible within the proposal - refer to subsection on Visual Impact.

Effect: The proposal will result in the following alterations / changes (i.e., effects):

- Changes due to new major structures (i.e., Northern Bridge, associated access ramp/steps)
- New access from the northern riverbank via Suir Island to link the northern and southern riverbanks.
- Alterations due to the associated minor structures, such as adding (i.e., large planting beds, paved plaza area, with new tree planting, seating, signage, paved materials, walls, lighting)
- Changes to both pedestrian, vehicular, cyclists' circulation layout and access
- Changing and unifying the ground plane by repeated use of paving materials
- Change to the area's form, scale, shape, and layout.
- Retention but a new layout to access to the river edge.
- New additional tree planting, shrubs, wildflower - perennials.

Extract from Table 15.1

Degree of Impact - action taken	**Degree of effect (i.e., the change or changes) due to action taken** **Note: Duration categories are addressed in the Table 15-4 and definition as outlined above**
Moderate Impact (medium)	An effect which, by its character, capacity to accommodate, magnitude, duration, or intensity alters a sensitive aspect of the landscape. An effect that alters the character of the landscape in a manner that is consistent with existing and emerging trends. There are minor changes over some of the area (up to 30%) or moderate changes in a localised area; in this removal of existing trees.

Extract from Table 15.4

Duration of Visual Impact	***duration of visual impact* arising from of the proposed development.**
Permanent Duration	Impacts lasting over fifty years

Conclusion: The inherent *landscape character* and *as an environmental resource* will still be in keeping with the original site area urban character and townscape, and as landscape character area within the category of an "Urban and Fringe Area". Section 15.3.1 and Figure 15-10. Although the inherent urban landscape character shall be altered, it will be replaced with another urban landscape character with new additional amenities an environmental benefit to local users and visitors, including the improvement of circulation and access for pedestrian and cyclist.

1. The existing landscape *capacity to accommodate change* is high and therefore **the impact moderate (medium).**
2. The *magnitude* **is irreversible**, but the *new features mitigate* the impact/effects by the proposed design solutions: an overall spatial experience that provides a multi-functional purpose gathering space for community interaction and/or performances along with more seating; a unifying ground plane with repeated similar materials/features creating a distinctive identity within an urban complex; more contrast between architectural and landscape features;

providing a connection between the riverbanks via Suir Island; creating an amenity access/ circulation for pedestrian and cyclist access receptors.

3. *Size/Scale* remain the same, the zone of influence of the **impact is limited** to this project subarea. As per definition of size/scale of a proposed development's impact/effect.
4. The *Duration* is **permanent** (Impacts lasting over fifty years) to this project subarea, initial existing urban landscape is altered but within the category of impact/effects as set out in the table below. As per definition for duration and Table 15-4.

The Link/Promenade Subarea 5 and associated subareas 4, 6 & 7: The existing inherent landscape character and its qualities as an environmental resource function to serve the town of Clonmel. Its primary value as a built landscape feature in this urban context is providing a flood barrier berm. The associated areas adjacent to this berm are the large carpark (Sub-area 4) in the west with vehicular and pedestrian circulation and parking, (VP 15.09A-C and VP 15.10A) including Hughes' Mill Apartment block (VP 15.13C) and to the east the existing dense woodland of floodplain vegetation (Sub-area 6).

The proposed development will include the provision of an elevated structure to form corridor link connecting the riverbanks of the town of Clonmel, with the Northern and Southern Bridges, set on a flood barrier berm (VP 15.09A to C and VP 15.10A to E). These proposed features are intended to provide additional pedestrian and cycling circulation acting as an amenity recreational feature. The existing car park will not be altered, nor will the woodland, nor the Suir Island Garden (Sub-area 7), with the exception of the removal of some trees to accommodate the proposed infrastructure to be addressed in detail in the construction phase subsection. The visual impact is discussed in following subsection (VIA) for these subareas.

Impact: The proposed scheme design concept solution for the engineer, architecture and landscape features will entail the following actions to be taken i.e. impacts:

- Retention of existing elevations of existing flood barrier berm, with minor level changes of additional soil
- Retention of adjacent of the existing parking layout.
- Removal of trees along the flood barrier berm to the northeast side southwest side of the berm in Suir Island and within the construction zone area – refer to detail description in construction impact subsection.

Retention and/or relocation of associated services to be reinstated for the proposed development.

- Retention of the permanent existing flood barrier berm structure within Suir Island
- Retention and/or minimal loss of views to the River and Suir Island, and surrounding context where feasible within the proposal - refer to subsection on Visual Impacts.

Effect: The proposal will result with the following alterations / changes (i.e., effects):

- Changes due to a new major structure (i.e., elevated Link structure and associated access ramp)
- New access connecting via Suir Island the northern and southern riverbanks.
- Link associated features in terms of railing, surface, signage, and lighting alterations within the landscape)
- New additional wildflower - perennials on the existing berm.

Extract from Table 15.1

Degree of Impact-action taken	Degree of effect (i.e., the change or changes) due to action taken Note: Duration categories are addressed in the Table 15-4 and definition as outlined above
Moderate Impact (medium)	An effect which, by its character, capacity to accommodate, magnitude, duration, or intensity alters a sensitive aspect of the landscape. An effect that alters the character of the landscape in a manner that is consistent with existing and emerging trends. There are minor changes to the area (up to 30%) or moderate changes in a localised area; in this removal of existing trees.

Extract from Table 15.4

Duration of Visual Impact	***Duration of Visual Impact*** **arising from the proposed development.**
Permanent Duration	Impacts lasting over fifty years

Conclusion: The inherent *landscape character* and *as an environmental resource* will still be in keeping with the original site area's urban character and quality of townscape, and as landscape character area within the category of an "Urban and Fringe Area", and within the distinct character of Suir Island's existing features. Section 15.3.1 and Figure 15-10. There will be moderate disturbance to the landscape character, though the flood barrier berm is retained. Some topsoil will be added near associated ramp. Any trees removed are Category C (see section 15.5.2 for details of tree species) to accommodate the design development requirements.

1. The existing landscape *capacity to accommodate change* is high and therefore **the impact moderate (medium).**
2. The *magnitude* is **irreversible**, but the *new features mitigate* the impact/effects by the proposed design solutions: providing a connection between the riverbanks via Suir Island; creating an amenity access/ circulation for pedestrian and cyclist receptors; specifically, as there no major alterations to existing built and natural features as outlined above, with the exception of a few trees to meet the design requirements (i.e., access and circulation, structural integrity).
3. *Size/Scale* remain the same, the zone of influence of **the impact is limited** to this project subarea. As per definition of size/scale of a proposed development's impact/effect.
4. The *Duration* is **permanent impact** (Impacts lasting over fifty years) to this project subarea, initial existing urban landscape is altered but within the category of impact/effects as set out in the table below. As per definition for duration and Table 15-4.

The Southern Bridge (Subarea 2): The southern riverbank along Raheen Road with the proposed Southern Bridge and associated ramp/steps are within an existing inherent landscape character and its quality as an environmental resource that functions to serve the town of Clonmel, and its primary value as a landscape in urban context provides vehicular and pedestrian circulation. The proposal will function in a similar way.

Impact: The proposed scheme design concept solution for the engineer, architecture and landscape features will entail the following actions to be taken (i.e. impact) :

- Removal of existing ground plan surfaces/materials
- Removal of minor existing infrastructure (i.e., low concrete walls)
- Realignment of the main Raheen Road
- Removal of one tree along footpath of Raheen Road -referred in a detail description construction impact subsection and four trees along the southern riverbank of Suir Island- detail description construction impact subsection.
- Removal and/or relocation of signs
- Removal and/or relocation of associated services to be reinstated for the proposed development.
- Retention of the overall general vehicular and pedestrian access and circulation (i.e., main roads, footpaths) and to river edge via Denis Burke Park area
- Retention of the permanent flood barrier walls along the River Suir
- Retention and/or minimal loss of views to the River and Suir Island, and surrounding context where feasible within the proposal-refer subsection Visual Impact.

Effect-The proposal will result with the following alterations / changes (i.e., effects):

- Changes due to new major structures, i.e. Southern Bridge with associated access ramp/steps.
- New access from the southern riverbank via Suir Island to link the southern and northern riverbanks.
- Alterations due to the associated minor structures such as adding (i.e., new paving, railings, signage, lighting)
- Changes to pedestrian, vehicular, cyclists' circulation, layout and access
- Changing and unifying the ground plane by use of various paving materials
- Change to the area's form, scale, shape, and layout.

Extract from Table 15.1

Degree of Impact - action taken	**Degree of Effect (i.e., the change or changes) due to action taken** **Note: Duration categories are addressed in the Table 15-4 and definition as outlined above.**
Moderate Impact (medium)	An effect which, by its character, capacity to accommodate, magnitude, duration, or intensity alters a sensitive aspect of the landscape. An effect that alters the character of the landscape in a manner that is consistent with existing and emerging trends. There are minor changes to the area (up to 30%) or moderate changes in a localised area; in this removal of existing trees.

Extract from Table 15.4

Duration of Visual Impact	***Duration of Visual Impact* arising from the proposed development.**
Permanent Duration	Impacts lasting over fifty years

Conclusion: The inherent *landscape character* and *as an environmental resource* will still be in keeping with the original site area's urban character and townscape, and its landscape character area within the category of an "Urban and Fringe Area". Section 15.3.1 and Figure 15-10. The Southern Bridge crossing over the River Suir and a portion of the Suir Island will add another new urban feature to this area. This alters the landscape character to an extent but is still consistent with the urban environment of this area.

1. The existing landscape's *capacity to accommodate change* is high and therefore **the impact moderate (medium).**
2. The *magnitude* is **irreversible,** but the *new features mitigate* the impact/effects by the proposed design solutions: providing a connection between the riverbanks via Suir Island; creating an amenity access/ circulation for pedestrian and cyclist access receptors, while retaining footpath access along the main road.
3. *Size/Scale* remain the same, the zone of influence of the **impact is limited** to this project subarea. As per definition of size/scale of a proposed development 's impact/effect.
4. The *Duration* is **permanent impact** (Impacts lasting over fifty years) to this project sub-area, initial existing urban landscape is altered but within the category of impact/effects as set out in the table below. As per definition for duration and Table 15-4.

Potential Night-time Impacts to Landscape Character and to its quality as an Environmental Resource-(LIA)

The proposed new lighting for the entire proposed development will consist of handrail lighting, i.e. low strip lighting and low wattage LED, lighting each half of the deck only, with minimal lighting impact on the environment and landscape. These lights will be activated by motion sensors, so that the bridges and walkways will only be illuminated when people are present. In addition, the existing public lighting will not be removed from along the banks within the site development area. The function of the new lighting for this development is to assist the users of Suir Island Infrastructure Link in terms of access and circulation during night-time.

Extract from Table 15.1

Degree of Impact - action taken	**Degree of Effect (i.e., the change or changes) due to action taken** **Note: Duration categories are addressed in the Table 15-4 and definition as outlined above.**
Slight Impact **(low)**	An effect which, by its character, capacity to accommodate, magnitude, duration, or intensity alters a sensitive aspect of the landscape. An effect which causes noticeable changes to landscape context, character, or features. There are minor changes over a small proportion of the area or moderate changes in a localised area or changes that are reparable over time.

Extract from Table 15.4

Duration of Visual Impact	***Duration of Visual Impact* arising from the proposed development.**
Permanent Duration	Impacts lasting over fifty years

Conclusion: Public lighting whether it is an additional feature or a continuation of an existing system effectively alters the landscape character and as an environmental resource. Thus, any additional lighting can be considered as an intrusion or alteration, but the degree or extent impact for this landscape

character, its context, and existing features as described above can be perceived as a *slight impact (low)* due the selection of lighting type, its design, location and distribution.

15.5.2 Construction Phase LIA

This subsection addresses the landscape impact by proposed development during the construction stage. The figure below illustrates the exact proposed pier and abutments that will have an impact on the existing vegetation.

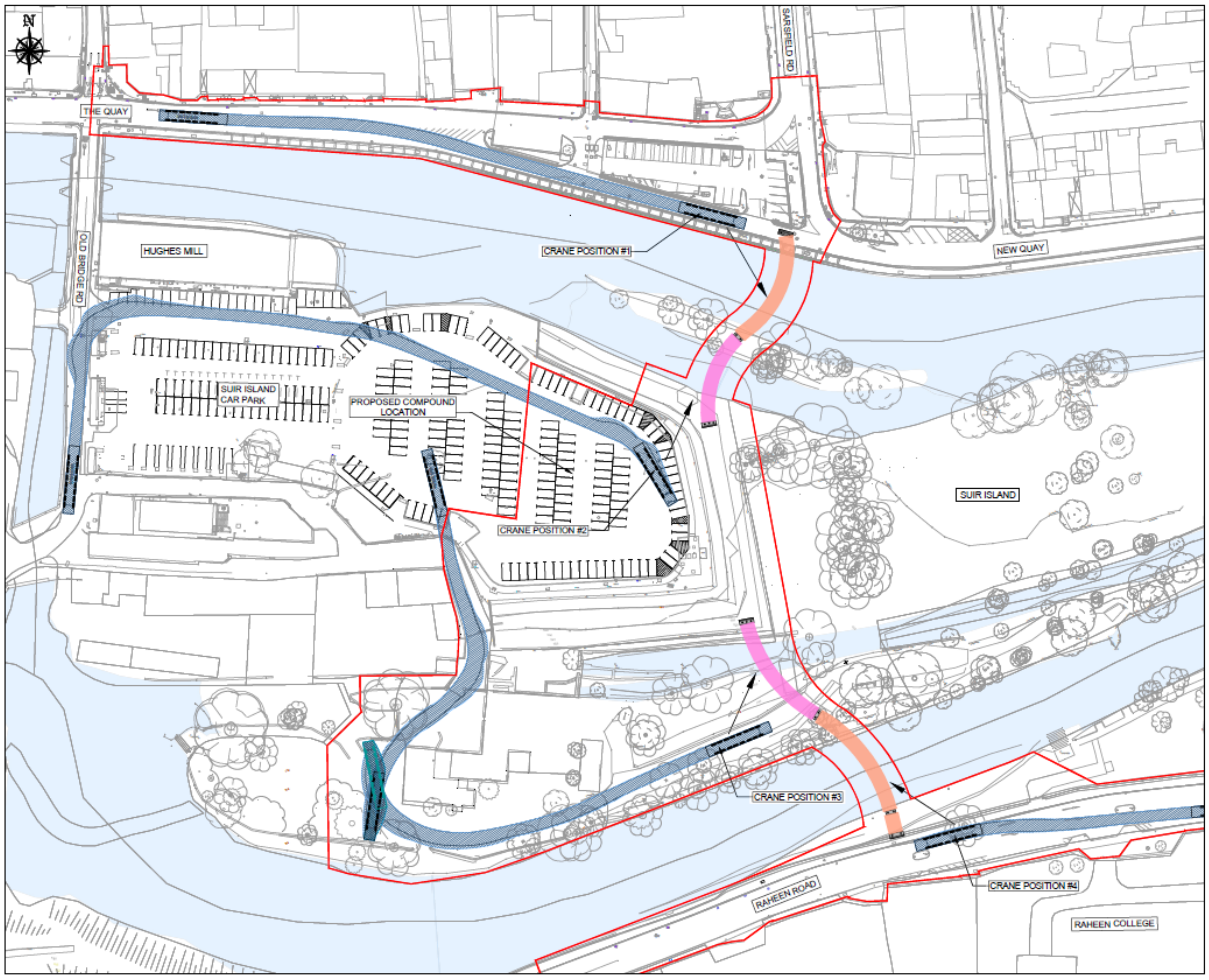


Figure 15-25: The proposed development areas as detail drawing area showing Northern and Southern bridges, with Links to the existing flood barrier berm with proposed pier locations. Pier locations shall entail tree removals.

Summary of proposed bridge construction methodology as per Marc Mimram/CSEA Engineers:

Foundations:

- Construction of cased bored piles to avoid the use of bentonite.
- The foundations will be built in the dryer summer months to allow access to the piers in the flood plains.
- Paths are to be provided on the island for access to the piles of construction machinery.
- Concreting will be done with ready-to-use concrete.

Piers:

The piers will be concrete on the floodable height and then steel above to limit the environmental impact of the work. (P1, A2, A3, P2 and A4) Piers where trees will have to be removed, therefore a landscape impact. *Trees or groups of trees that will require removal with these areas are based on the Austen Associates tree survey schedule and drawings, see below.*

Decks:

- The steel structures are prefabricated in the factory and brought in sections in wide-load convoys by road.
- The sections are assembled on three sites distributed as following:
  - North on the plaza.
  - on the island at the parking level.
  - on the south bank, west of Denis Burke Park. A temporary assembly platform is to be expected.
- The footbridges will be lifted by cranes in sections of approximately 30m onto their final piers.
- For the North footbridge, a crane lifts half of the footbridge from the plaza and another crane lifts the other half from the parking lot.
- For the South footbridge, a crane lifts half of the footbridge from the south bank and another crane lifts the other half from the parking lot.

Projected Site facilities:

- Site installations are planned for the car park.
- Construction Site -1, at Northern Bridge (Subarea-1)
- Construction Site -2, at existing carpark (Subarea-4)
- Construction Site-3, at Raheen Road near Denis Burke Park minor entrance
- Requirement for temporary access points for haul roads, plant, and equipment such as cranes
- Site installations
- On-site storage
- Spoil areas
- Temporary circulation-routed for access between RPA fencing and within the designated construction corridor
- Parking of construction vehicles
- Construction shed offices and other facilities for construction workers
- Construction fencing and access for construction compound

During construction, preventative measures will be required to reduce landscape impact. This is addressed in Section 15.7 on Mitigation Measures.

The landscape changes include tree removal necessitated by the proposed development, to be considered as part of the landscape impact assessment. The trees to be removed and impacted by the development during construction are outlined in red (see Figures below); the tree survey identifies individual trees and tree groups in the Arborist's schedule /drawing, except in reference to the tree schedule where species are noted by the arborist and in other cases individual trees.

Tree removal shall be according to standard arborist's practice as set out in BS 3998: 2010. Further detail description is in the arborist's tree survey report by Austen Associates (24-11-2021).

The *northern riverbank* with **Northern Bridge** (Subarea 1) will entail tree groups no. 5 and 6 as per Austen Associates tree survey report/drawings. Group 6 consists of trees on the spit of land (near the northern bank of the Island). This group includes- a mature Horse chestnut *Aesculus hippocastanum*, Sycamore *Acer pseudoplatanus, Ash Fraxinus excelsior* and Beech *Fagus sylvatica.* These qualify as Category C trees, i.e., low in conservation, historical or commemorative value, and Group 5, consisting

of the Canopy layer of mature Sycamore *Acer pseudoplatanus*, Horse chestnut *Aesculus hippocastanum*, and understory Cherry Laurel *Prunus laurocerasus*, growing along the north riverbank of Suir Island, again as Category C trees.

The Link/Promenade (Subarea 5) along flood barrier berm will impact on one group of trees; Group No. 2, consisting of multi-stem Willows *Salix spp.,* growing near the millrace, and adjacent to the end of the berm where the link connects to the Southern Bridge. These are also Category 2 trees, low in conservation, historical or commemorative value.
The Southern Bridge (Subarea 2) crossing over Suir River will require the removal of four trees numbers 0069-0072 along the south riverbank of Suir Island consisting of mature Sycamore *Acer pseudoplatanus* (Category 2). In addition, one tree, a mature Category 2 Sycamore *Acer pseudoplatanus* along Raheen Road will be removed to accommodate the construction of the proposed Bridge, associate ramp, and steps. This is necessitated by the requirement to locate the ramp here as well as to provide a footpath of compliant width. Currently this tree is blocking the footpath.

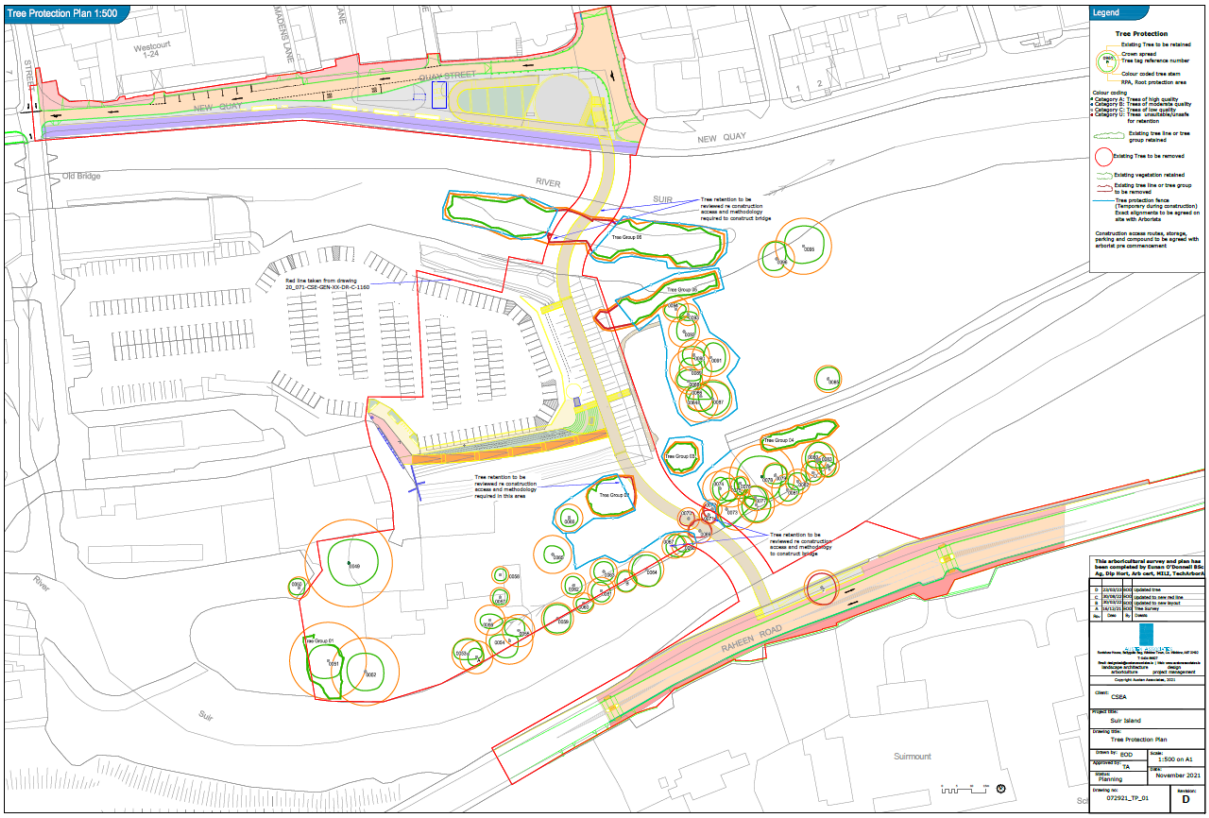


Figure 15-26: Tree Survey Drawing from the Austen Associates Ltd.- 2021

The figure above shows potential removal of tree and vegetation, therefore an impact shown in red heavy outline where Suir Island Northern and South Bridges with Link promenade on the flood barrier berm traverses Suir Island, and minor island to the north. Refer to original drawings for clarity of text.

Accessibility may be reduced during the construction period, but its effects will be *short-term* for all the receptors identified in the previous sections. In general, users such as local residents, visitors, vehicular users, and specifically those using Denis Burke Park and crossing the Raheen Road to the school will experience some temporary disruption to movement and to views from the existing access point to the east of the ramp, as will persons fishing on the river edge below the flood barrier wall and Raheen Road, Subareas 1, 2 and 4 will be temporarily altered along with construction areas 1, 2, and 3 as shown in the Figure above, both in terms of landscape character and visually into construction compound environments.

Conclusion: The physical changes will be of *moderate impact* that will occur during construction such as requiring new access points to move construction vehicles/ traffic and the removal of trees in order install the supporting piers, regrading landforms as required. These changes to the landscape character essentially within urban complex are "*consistent with existing and emerging trends", but the capacity to accommodate change does alter a sensitive aspect of the landscape, tree removals and existing built fabric.*

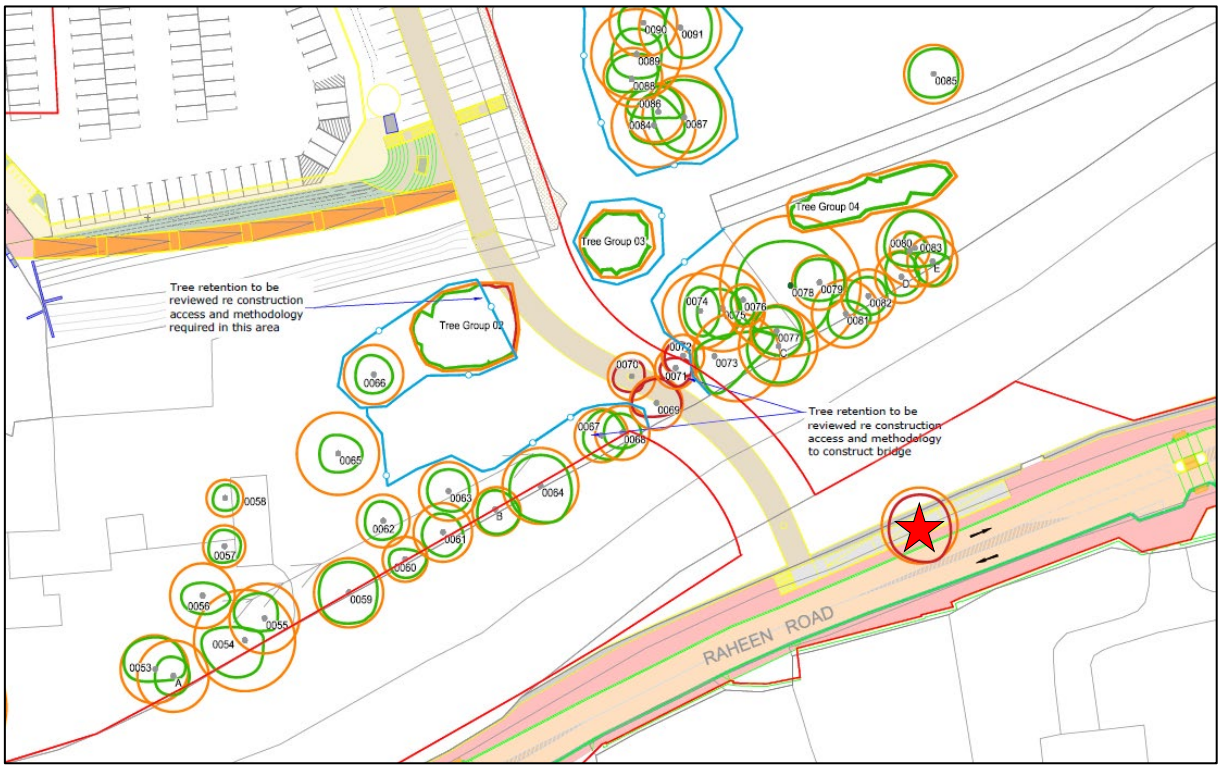


Figure 15-27: Raheen Road tree removal (red asterisk)

The figure above shows the potential removal of tree and vegetation, and specifically one tree along Raheen Road for the South Bridge (Subarea-2) with Link promenade on the flood barrier berm which traverses River Suir. Refer to original drawings for clarity of text.

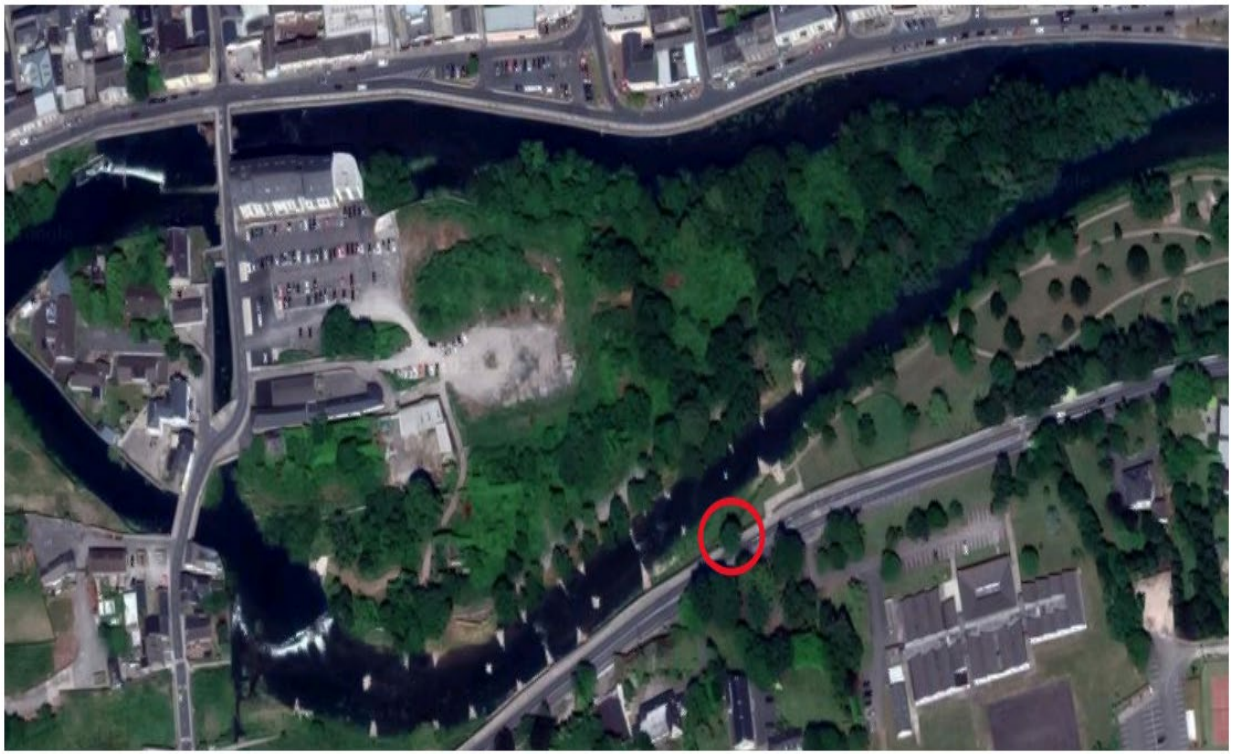


Figure 15-28: Google Maps Streetview photo showing single tree location and impact along Raheen Road

Figure 15-29: Photo showing single mature tree at Raheen Road west of the Denis Burke Park access.

Extract from Table 15-1

Degree of Impact-action taken	Degree of Effect (i.e., the change or changes) due to action taken Note: Duration categories are addressed in the Table 15-4 and definition as outlined above.
Moderate Impact (medium)-	An effect which, by its character, capacity to accommodate, magnitude, duration, or intensity alters a sensitive aspect of the landscape. An effect that alters the character of the landscape in a manner that is consistent with existing and emerging trends. There are minor changes to the area (up to 30%) or moderate changes in a localised area; in this removal of existing trees; reason trees loss Category C..

Extract from Table 15.4

Duration of Visual Impact	*Duration Of Visual Impact* arising from the proposed development.
Short-term Duration	Impacts lasting one to seven years

Conclusion: The inherent *landscape character* and its quality *as an environmental resource* will still be in keeping with the original site area urban character and townscape, and as landscape character area within the category of an "Urban and Fringe Area". Section 15.3.1 and Figure 15-10.

1. The existing landscape *capacity to accommodate change* is high and therefore **the impact moderate (medium).**
2. The *magnitude* is **irreversible,** but the *new features mitigate* the impact/effects by the proposed design solutions: providing a connection between the riverbanks via Suir Island; creating an amenity access/ circulation for pedestrian and cyclist access receptors, while retaining footpath access along the main road, in addition to new urban environment for the community and visitors(i.e., Plaza and with new landscape of additional trees) .
3. *Size/Scale* remain the same, the zone of influence of the **impact is limited** to this project subarea. As per definition of size/scale of a proposed development's impact/effect.

The *Duration* is **short-term** (impact lasting one to seven years) to this project subarea during construction phase, of the proposed development; initial existing urban landscape is altered but within the category of impact/effects as set out in the table below. As per definition for duration and Table 15-4. The duration is time for new plan's root system to establish which is typically within the first five growing seasons, and minimum of twenty for the new plants to mature.

15.5.3 Operational Phase LIA

The permanent impact phase of the proposed development lifecycle is typically referred to as the Operations and Maintenance Phase. The main objective during this phase is for the local authority to; (1) use the facility/infrastructure for its intended purpose; (2) need to operate and maintain functionality of the facility/infrastructure. This phase is also referred to as to as Facility Management (FM), the local authority has two options to carry out the facility management services, either to appoint a 3rd party company or use their own internal employees for operation and maintenance activities.

During this phase, activities that which will include, but not limited to:

- the maintenance of equipment;

- the replacement of materials and equipment that require replacement; and
- minor renovations to allow for revisions of facility use.

The operational phase is vital specifically in maintaining not just the facility/infrastructure as stated above, but also the continuous maintenance of the landscape and the environment of this site area to ensure that the proposal development shall continue to maintain the lowest possible landscape impact, protect and/or enhance the inherent landscape character as initially intended in the design solution. To accomplish this objective the following processes must be implemented:

- Maintenance program for all landscape features (i.e., trees, planting beds area, grass areas)
- An annual budget allocation to ensure that both the existing and as proposed landscape is appropriately maintained and to replace of features that have failed due to natural causes and/or vandalism. Without a budget allocation and resources, the existing and proposed landscape and the environment as resource shall be compromised.

Maintenance typical and specific to this site should include:

- Watering regime during dry periods;
- Resowing wildflower and/or grass beds;
- Securing or replacing tree ties and stakes;
- Replacing plants that have failed or been damaged;
- Clearing debris (dumping), litter, removing graffiti;
- Replacing mulch in tree pits or beds as required;
- Removal of unwanted weeds not conducive to the general appearance /biodiversity of wildflower bed or that might undermine the flood barrier berm (i.e., self-seeded Willow, Sycamore, Japanese Knotweed etc.);
- Post construction remedial pruning to maintain the health of plants and form; and
- Inspection of plants, specifically trees that might be failing and be a safety issue to the public; requires arborist's assessment every 5 years or after a major storm or flooding.

Conclusion: The inherent *landscape character* and *as an environmental resource* will still be in keeping with the original site area urban character and townscape, and as landscape character area within the category of an "Urban and Fringe Area" as highlighted in Section 15.3.1 and Figure 15-10.

1. Hence, the existing landscape *capacity to accommodate change* is high and therefore **the impact moderate (medium).**
2. The *magnitude* is **irreversible,** but the *new features mitigate* the impact/effects by the proposed design solutions: providing a connection between the riverbanks via Suir Island; creating an amenity access/ circulation for pedestrian and cyclist access receptors, while retaining footpath access along the main road, in addition to new urban environment for the community and visitors (i.e., Plaza and with new landscape of additional trees).
3. *Size/Scale* remain the same, the zone of influence of the **impact is limited** to this project subarea. As per definition of size/scale of a proposed development 's impact/effect.
4. The *Duration* is **permanent term** (impact lasting over fifty years) to this project subarea during construction phase, of the proposed development; initial existing urban landscape is altered but within the category of impact/effects as set out in the table below. As per definition for duration and Table 15-4. The duration is time for new plan's root system to establish which is typically

within the first five growing seasons, and minimum of twenty for the new plants to mature but the associated on-going maintenance for both built and natural features can last well over fifty years.

Extract from Table 15-1

Degree of Impact-action taken	**Degree of Effect (i.e., the change or changes) due to action taken** **Note: Duration categories are addressed in the Table 15-4 and definition as outlined above.**
Moderate Impact (medium)-	An effect which, by its character, capacity to accommodate, magnitude, duration, or intensity alters a sensitive aspect of the landscape. An effect that alters the character of the landscape in a manner that is consistent with existing and emerging trends. There are minor changes to the area (up to 30%) or moderate changes in a localised area; in this removal of existing trees; reason trees loss Category C..

Extract from Table 15.4

Duration of Visual Impact	***Duration Of Visual Impact* arising from the proposed development.**
Permanent Duration	Impacts lasting over fifty years

It would be the intention that the project's post-constructional phase would last as long as the working lifespan of the infrastructure, in other words, quite possibly for a number of years following handover. The receptor's perceptions will quickly adapt to see the project elements as 'just' another human-made addition to the views, much like the existing bridges or the flood wall. No additions or expansions of these elements are being proposed and the landscape around it will continue establishing itself and maturing, providing more visual screening of the elements particularly within Suir Island itself. Maintenance of the infrastructure may require regular pruning of branches and shrubs and in years to come, the preventative removal of trees that may encroach on the deck's structure.

15.5.4 Visual Impact Assessment (VIA) on Landscape Views in terms of Visual Amenity and Receptor Sensitivity

This subsection refers to the potential Visual Impact due to the proposed development, the impact on the existing views and as a visual amenity to the receptors. **Visual Impact Assessment (VIA)** pertains to "*the process of evaluating how people (receptors/land users) may perceive and evaluate in visual terms and be affected to the changes that have arisen from the proposed development*." As per TII Publ.PE-ENV_01102.

The receptors as identified previously vary and mainly include local residents and visitors, but their activities determine how they differ, and how they may react to the alterations of the landscape and views caused by the proposed development. For simplicity, and clarity this assessment of the various receptors is defined by their activities (i.e., passive such as fishing, birdwatching, strollers, or walkers, those seeking a place to picnic, rest /seating to observe their surroundings etc., or active recreational users such kayakers. Other receptors include cyclists, joggers, skaters, etc, and vehicle-drivers who are traveling through rather than stopping or visiting.

The assessment is based on field survey, relevant photos, and photomontages of before and after site conditions for different subareas within or in proximity to the development area in order to determine the extent or degree of a visual impact on specific views considered significant (or sensitive) viewing points and how receptors might *"perceive and evaluate in visual terms and be affected to the changes".*

As in the previous section, the assessment will evaluate the receptors' reactions to changes for the main Subareas 1, 2 and 5 of the proposed development (i.e.., Northern Bridge, the Link Promenade, and Southern Bridge and their associated infrastructure such as the ramps and steps), with some reference to viewpoints from adjacent Subareas 3, 4 and 7 were considered relevant while 6 is reviewed in the subsequent Cumulative Impact Assessment Effect section.

This assessment is subjective, as the landscape architect is projecting how the different receptors might react. And perception is dictated by observer's location, angle of view and distance to a feature. The degree of visual impact and effects is based on Tables 15.2 *Extent of the Visual Impact Assessment (inherent character and visual amenity*). For Sensitivity to Key Specific Visual Receptors, see section on Methodology and relevant subsections; Table 15.3- "Quality of the Landscape and Visual Impact for the key receptor(s)" and Table 15-4 *The Duration of the Visual Impact on the landscape and for the key receptor(s)" (VIA)*.

The North Bridge (Subarea 1): as a proposed infrastructure located along southern riverbank of Clonmel town is within a landscape character defined as an "Urban and Fringe Area; thus, as an existing visual amenity this site sub-area is typical of Urban and Fringe Area landscape character.

The existing conditions of this site subarea and viewpoints (VP 15.01 to VP 15.07) clearly illustrate the landscape character prior to any proposed development and being primarily a hardscape with few amenities, no 'natural' landscape, no unifying theme of materials, with only limited views due to the flood barrier stone wall (approx. 1.4m high) and with tall buildings along the side of the Quay. However, the area currently provides, and will continue to do so, pedestrian and vehicular circulation along the river edge of Clonmel town as stated in previous existing section of the site description.

The existing quality or spatial landscape experience can be interpreted as inherently negative to any receptor's sensitivity. But this aspect is countered by the existing views that offer some degree of respite from the hard urban features, such as the backdrop of existing mature vegetation on Suir Island (VP 15.06) and the deep sightlines to the horizon beyond of the elevated pastoral topography (VP 15.07). Both viewpoints demonstrate the existing visual quality can be to a degree positive in this respect.

Image 15-7B and Photomontages : 15.4-03A and 15.4-03B; 15.4_04A and 15-4_04B illustrate the location and scale of the proposed development and its alterations (impact/effect) on the landscape and views, including the relative visual impact dictated by the receptor or observers' distance and angle of view from the proposed structure (i.e., VP 15.06 versus VP 15.07).

The proposed Northern Bridge as a new elevated structure in the landscape/environment interrupts the sightlines and the horizon looking south, but the view is not altered or lost as the existing vegetation retained on Suir Island and the view to the hill beyond are still visible. Furthermore, the elevated structure will provide higher viewpoints to the receptors as shown in Figure 15-18. Therefore, as a visual amenity it provides a new positive viewpoint experience of Suir Island, the town fabric, and the river.

Photomontages : 15.4_05A and 15.4_05B looking west from Abbey Street show the Northern Bridge crossing with one foundation on the spit of land just off the northern island bank. The view is altered due the elevated structure but not to the extent that views to the Suir Island landscape are obscured or blocked, given that the proportion of the structure its relatively light mass within this urban context. Thus, as a visual amenity the view is its retained for the key receptors.

Photomontages: 15.4_01A and 15.4_01B, looking east from the Old Bridge demonstrates that the *visual impact* at this location and at further distance from the proposed development is not high because the

elevated structure appears to be part of the urban environment, the backdrop of existing vegetation integrates the structure as well visually.

Photomontages 15.4_02A and 15.4_02B, viewpoint 15.30 location from the Old Bridge (Subarea -3A) looking east, although not within the development area, provide another angle of view of the River Suir, Suir Island and southern portion of the island (i.e., proposed garden area bound to the south by "Lower River Suir SAC" as per Doherty Environmental Report). More importantly for this subsection the photos before and after show that at this location and distance the Southern Bridge crossing is barely visible. The bridge as a structure is well integrated by the existing surrounding environment and vegetation, hence the visual impact is moderate or even slight from this vantage point and of low sensitivity to receptors.

In addition, in terms of spatial quality experience and visual amenities the new features of hard and soft unifying materials, the new amenities such as seating within the multi-use "Plaza", the inclusion of planting beds containing wildflower, perennials, or even grass, and new circulation separating pedestrians and vehicles) will provide a *positive spatial quality of experience for the key receptors* (i.e., pedestrian, cyclists, and drivers in vehicles, both local and visitors, either walking or driving to a destination or to enjoy the new infrastructure, its facilities and amenities in conjunction with the new landscape).

Extract from Table 15.2 - The North Bridge (Subarea-1)

Degrees of Visual Impact/ Effect to Landscape Character and as Visual Amenity to key receptors	**Visual amenity (views) available to specific people (i.e., visual receptors/ users) visiting a changed/ altered landscape**
Moderate Effects **(medium Sensitivity)**	An effect that alters the landscape inherent character of the visual amenity (view) of the environment *in a manner that is consistent with existing and emerging trends.* The proposal *affects an appreciable segment* of the overall visual composition, or there is an intrusion in the foreground of a view. And its effects on key receptors identified.

Extract from Table 15.3 - The North Bridge (Subarea-1)

Degrees of Visual Effect to key receptor's	**Receptor's value, susceptibility, and sensitivity**
Neutral Landscape and Visual Impact	Neither detracts from nor enhances the landscape of the receiving environment or view.

Extract from Table 15.4 - The North Bridge (Subarea-1)

Duration of impact on the Landscape Character and Visual Amenity	**Duration of impact on the Landscape Character and Visual Amenity arising from of the proposed development, and for key receptors.**
Permanent Duration	Impacts lasting over fifty years

Conclusion: The extent of the Visual Impact Assessment (inherent character and visual amenity) in terms of "Sensitivity" for to key specific visual receptors for this subarea, will result in views changing with *moderate effect* because the proposed structure interrupts the previous sightlines to Suir Island

depending on the relative position of the viewer, but the existing landscape on Suir Island and beyond is still in view and to some extent reduces the visual impact /effect of the landscape character and as visual amenity to key receptors, thus *as a visual amenity of moderate effect , and medium sensitivity* to receptors

1. The Visual Impact / effect is **moderate (medium sensitivity) for the landscape visual amenity (views) and of a medium sensitivity to receptors.**
2. The degree of visual effect to key receptors and alterations of the landscape neither detracts from nor enhances the landscape of the receiving environment or view, therefore **neutral.**
3. The magnitude is **irreversible but mitigated** as noted above.
4. The duration is **permanent.**

The Link Promenade (Subarea 5): As a proposed element of infrastructure located on the existing flood barrier berm and adjacent to a landscaped existing carpark (Subarea-4) and existing woodland to the east (Sub-area 6) is within a landscape character defined as an "Urban and Fringe Area"; thus, as an existing visual amenity this site this sub-area is typical of an Urban and Fringe Area landscape character.

The existing conditions of this site sub-area and viewpoints (VP 15.09A, B & C; VP 15.10A, B, C, D, & E; VP 15.11A, B, C, & D; VP 15.12A,B, C, D, E & F) clearly illustrate the landscape character and views as it currently is before any proposed development.

In contrast, the photomontages 15.4-16A & 16B and 15.4-17A & 17B demonstrate the extent of the alterations to the landscape character and views, potential visual impact to the receptors (i.e., vehicular users, pedestrian, and cyclist, including visitors of Suir island Garden (Subarea 7).

The photomontages 15.4_16A & 15.4_16B show that the proposed link and associated ramp barely interrupt the existing horizon, and therefore the views to the existing woodland to the east, the horizon beyond with the hills in the backdrop and the adjacent Suir Island Garden as perceived from the existing carpark are not altered significantly.

The additional new planting proposed such as the wildflowers will add a visual amenity of seasonal colour and biodiversity for pollinators, insects and wildlife compared to the landscape that at present is mostly grass and a thicket of self-seeded shrubs and perennials, including brambles. New trees are not possible in the flood barrier berm, this limits any mitigation measures regarding a new tree line or additional vertical contrast to the ground plane

Extract from Table 15.2 - The Link promenade (Subarea-5)

Degrees of Visual Impact/ Effect to Landscape Character and as Visual Amenity to key receptors	**Visual amenity (views) available to specific people (i.e., visual receptors/ users) visiting a changed/ altered landscape**
Moderate Effects **(medium Sensitivity)**	An effect that alters the landscape inherent character of the visual amenity (view) of the environment *in a manner that is consistent with existing and emerging trends.* The proposal *affects an appreciable segment* of the overall visual composition, or there is an intrusion in the foreground of a view. And its effects on key receptors identified.

Extract from Table 15.3 - *The Link promenade (Subarea-5)*

Degrees of Visual Effect to key receptor's	**Receptor's value, susceptibility, and sensitivity**
Neutral Landscape and Visual Impact	Neither detracts from nor enhances the landscape of the receiving environment or view.

Extract from Table 15.4 - The Link promenade (Subarea-5)

Duration of impact on the Landscape Character and Visual Amenity	**Duration of impact on the Landscape Character and Visual Amenity arising from of the proposed development, and for key receptors.**
Permanent Duration	Impacts lasting over fifty years

Conclusion: The extent of the Visual Impact Assessment (inherent character and visual amenity) in terms of "Sensitivity" to key specific visual receptors for this sub-area, will result in views that will change with *moderate effect* due to the addition of the glass guarding to the existing height of the flood barrier berm. In addition, the existing vegetation (not any proposed mitigation measure, such as new planting) does reduce the visual impact by absorbing and softening these additions to the berm, therefore *as a visual amenity of moderate effect , and medium sensitivity* to receptors.

For this viewpoint the visual impact is:

1. The Visual Impact / effect is moderate (medium sensitivity) for the landscape visual amenity (views) and of a medium sensitivity to receptors.
2. The degree of visual effect to key receptors and alterations of the landscape neither detracts from nor enhances the landscape of the receiving environment or view, therefore neutral.
3. The magnitude is irreversible but mitigated as noted above.
4. The duration is permanent.

The photomontage 15.4_17A & 15.4_17B shows the Link Promenade as it departs the flood barrier berm and proceeds across the southern riverbank over the eastern most portion of Suir Island Garden (Subarea-7). The elevated structure alters the landscape character substantially as a new physical presence within the woodland landscape. As shown in this photomontage it will interrupt the views to the woodland by blocking a minor portion of the tree line, and /or canopy.

However, the structure although elevated does not completely obliterate the woodland presence and the sightlines are maintained to a degree. In addition, this part of the structure will be acting as a gateway to the existing woodland trial (VP 15.18D) and the access to woodland will be still maintained, including the trail's connection to the eastern portion of Suir Island. (VP 15.18A, B, C & D)

The visual impact for receptors will have a different visual and spatial experience at this location. This structure will be noticeable from Suir Island Garden area, looking east. The existing tree line and individual trees retained will effectively reduce the impact visually, by softening the harder outline of the elevated structure.

Extract from Table 15.2 - Link-promenade as it departs the flood barrier berm

Degrees of Visual Impact/ Effect to Landscape Character and as Visual Amenity to key receptors	**Visual amenity (views) available to specific people (i.e., visual receptors/ users) visiting a changed/ altered landscape**
Moderate Effects **(medium Sensitivity)**	An effect that alters the landscape inherent character of the visual amenity (view) of the environment *in a manner that is consistent with existing and emerging trends.* The proposal *affects an appreciable segment* of the overall visual composition, or there is an intrusion in the foreground of a view. And its effects on key receptors identified.

Extract from Table 15.3 - Link-promenade as it departs the flood barrier berm

Degrees of Visual Effect to key receptor's	**Receptor's value, susceptibility, and sensitivity**
Neutral Landscape and Visual Impact	Neither detracts from nor enhances the landscape of the receiving environment or view.

Extract from Table 15.4 - Link-promenade as it departs the flood barrier berm

Duration of impact on the Landscape Character and Visual Amenity	**Duration of impact on the Landscape Character and Visual Amenity arising from of the proposed development, and for key receptors.**
Permanent Duration	Impacts lasting over fifty years

Conclusion: The extent of the Visual Impact Assessment (inherent character and visual amenity) in terms of "Sensitivity" to key specific visual receptors for this subarea, will result with views that will change with a *moderate effect* because the elevated structure in this location does not reduce the depth of the existing sightlines towards the woodland significantly and the existing trees retained in the foreground of the structure will soften the hard outlines further. Views to the edge of the riverbank and the river will still be apparent, but these are already limited by the flood barrier wall along Raheen Road (VP 15.16A & B). In addition, the elevated structure looking west has new benefits for the receptors providing a higher vantage point from which they can view far more of the land area towards the west including the Suir Island Garden, the existing horizon beyond the town fabric, landscape, and topography, therefore *as a visual amenity of moderate effect, and medium sensitivity* to receptors.

1. The Visual Impact / effect is **moderate (medium sensitivity) for the landscape visual amenity (views) and of a significant sensitivity to receptors** as a new prominent contrasting foreground element that differs substantially from the existing inherent landscape.
2. The degree of visual effect to key receptors and alterations of the landscape neither detracts from nor enhances the landscape of the receiving environment or view, therefore **neutral;** due the benefits and /or subtle changes mitigated by existing landscape features.
3. The magnitude is **irreversible but mitigated** as noted above.
4. The duration is **permanent.**

The Southern Bridge Subarea-2: As a proposed element of infrastructure with its associated ramp and steps located along Raheen Road is within the Clonmel town fabric a landscape character defined

as an Urban and Fringe Area; thus, as an existing visual amenity this site subarea is typical of an Urban and Fringe Area landscape character. Photos looking west most relevant to visual, or view assessment are (VP 15.19A; VP 15.19G; VP 15.20: VP 15.21; VP 15.26; from the river edge or bank along Raheen Road VP 15.22A; VP 15.24A). Photos looking east include VP 15.24C and VP 15.26). These show the existing views where potential visual impact can occur due to the proposed development.

The photomontages 15.4_08A & 08B; 15.4_09A & 09B and 15.4_10A & 10B show the extent that the proposed elevated structure the Southern Bridge, with its ramps and steps along Raheen Road will alter the existing landscape and views.

The first photomontage 15.4_08A & 08B in the report looking west shows the proposed ramp access to the bridge commencing near Denis Burke Park entrance. The view looking west towards Raheen Road, and the footpath are interrupted by the ascending ramp, although the view has been altered. The receptors will still have a visual connection with the straight main road; thus their orientation is not disrupted.

The second photomontage 15.4_09A & 09B looking west at a different location shows the Southern Bridge as it crosses over the River Suir between existing trees along Suir Island riverbank, most of which will be retained (some trees will be removed, refer to subsection 15.5). The existing trees in the foreground act as a gateway for the bridge circulation layout. It is imperative to prevent and protect these existing trees as identified in Austen Associates tree survey report or to replace these trees if during site works, they are damaged. In addition, if feasible within the construction zone corridor, and to reinforce the existing vegetation as a landscape buffer, additional trees will be added where feasible with the exception of the flood barrier berm. This additional planting will preserve the visual amenity and landscape character of the island. The foreground vegetation consisting of early successional plants (i.e., Willow) along the riverbank adjacent to the flood barrier wall, will further provide existing natural features to soften the visual impact of the proposed bridge. The existing background trees effectively soften the hard outline of the bridge but also block views to the ruins. Therefore the sightlines to Suir Island Garden are limited. Furthermore additional tree planting is being considered for this area by the landscape architect (see “Ti.02” Design Rationale, July 2022 and associated document/drawings).

The third photomontage 15.4_10A & 10B looking east shows the actual access point to the bridge via the proposed steps along the revised footpath and Raheen Road. As referred to earlier a single tree (i.e., mature Sycamore, Category C) is being proposed for removal to accommodate the design requirements of the ramp to the bridge.

Extract from Table 15.2 - The Southern Bridge Subarea - 2

Degrees of Visual Impact/ Effect to Landscape Character and as Visual Amenity to key receptors	**Visual amenity (views) available to specific people (i.e., visual receptors/ users) visiting a changed/ altered landscape**
Moderate Effects **(medium Sensitivity)**	An effect that alters the landscape inherent character of the visual amenity (view) of the environment *in a manner that is consistent with existing and emerging trends.* The proposal *affects an appreciable segment* of the overall visual composition, or there is an intrusion in the foreground of a view. And its effects on key receptors identified.

Extract from Table 15.3 - The Southern Bridge Subarea - 2

Degrees of Visual Effect to key receptor's	Receptor's value, susceptibility, and sensitivity
Neutral Landscape and Visual Impact	Neither detracts from nor enhances the landscape of the receiving environment or view.

Extract from Table 15.4 - The Southern Bridge Subarea - 2

Duration of impact on the Landscape Character and Visual Amenity	Duration of impact on the Landscape Character and Visual Amenity arising from of the proposed development, and for key receptors.
Permanent Duration	Impacts lasting over fifty years

Conclusion: The extent of the Visual Impact Assessment (inherent character and visual amenity) in terms of "Sensitivity" to key specific visual receptors for this subarea, will result with views that will change with a *moderate effect* because the existing landscape character was urban and hard surfaces predominated with exception of opposite side of the main road with mature vegetation which will not be disturbed or removed, both this sides of the road shall maintain the inherent urban landscape character and its original visual amenity will prevail, therefore *as a visual amenity of moderate effect , and medium sensitivity* to receptors.

For this viewpoint the visual impact is:

1. The Visual Impact / effect is **moderate (medium sensitivity) for the landscape visual amenity (views) and of a significant sensitivity to receptors** as a new prominent contrasting foreground element along the river in both westerly and/or easterly views and as new feature (structure) it does differs substantially from the existing inherent landscape and as visual amenity to receptors. By contrast the associate ramp and steps along Raheen Road are in keeping with the inherent urban landscape pedestrian and vehicular circulation.
2. The degree of visual effect to key receptors and alterations of the landscape neither detracts from nor enhances the landscape of the receiving environment or view, therefore **neutral;** due the benefits and /or subtle changes mitigated by existing landscape features.
3. The magnitude is **irreversible but mitigated** as noted above.
4. The duration is **permanent.**

Potential Night-time Impacts to Landscape Character and to its quality as an Environmental Resource-(LIA)

The proposed new lighting for the entire proposed development will consist of handrail lighting, i.e. low strip lighting and low wattage LED, lighting each half of the deck only, with minimal lighting impact on the environment and landscape. These lights will be activated by motion sensors, so that the bridges and walkways will only be illuminated when people are present. In addition, the existing public lighting will not be removed from along the banks within the site development area. The function of the new lighting for this development is to assist the users of Suir Island Infrastructure Link in terms of access and circulation during night-time.

Extract from Table 15.1 - Potential Night-time Impacts

Degree of Impact-action taken	Degree of effect (i.e., the change or changes) due to action taken Note: Duration categories are addressed in the Table 15-4 and definition as outlined above.
Slight Impact **(low)**	An effect which, by its character, capacity to accommodate, magnitude, duration, or intensity alters a sensitive aspect of the landscape. An effect which causes noticeable changes to landscape context, character, or features. There are minor changes over a small proportion of the area or moderate changes in a localised area or changes that are reparable over time.

Extract from Table 15.4 - Potential Night-time Impacts

Degrees of Visual Effect to key receptor's	Receptor's value, susceptibility, and sensitivity
Neutral Landscape and Visual Impact	Neither detracts from nor enhances the landscape of the receiving environment or view.

Conclusion: Public lighting whether it is an additional feature or a continuation of an existing system effectively alters the landscape character and as an environmental resource. Thus, any additional lighting can be considered as an intrusion or alteration, but the degree or extent impact for this landscape character, its context, and existing features as described above can be perceived as a *slight impact (low)* due the selection of lighting type, its design, location and distribution.

15.5.5 Construction Phase VIA

During on-site implementation stage the extent of the Visual Impact (the inherent character and visual amenity) in terms of Sensitivity to key specific visual receptors will be caused by the construction activities. The construction of the various components of this proposed development includes two bridges, the Link Promenade, associated ramps and steps, including changes to landscape character by the introduction of new elements such as planting bed areas, new tree pit installations along Northern Plaza/Bridge (Subarea 1), soil levelling, pier construction, tree removals, protective fencing for existing trees, and other associated aspects that are all referred to in subsection 15.5.2.

The proposed features on the southern riverbank (Subarea 1) of Clonmel town will include the Northern Bridge, the Plaza, the landscape, the ramps, and steps along The Quay Road. The area of development specifically will be between Quay Street in alignment with Northern Bridge and Sarsfield Street to the south extending to the Old Bridge south of the bridge construction. This area also includes many smaller lanes perpendicular to The Quay.

Any construction within this area will be visible to local and visiting receptors particularly pedestrians either local or as visitors availing amenities in the area. Construction fencing *will impede views significantly* of this area and views towards Suri Island if the fencing is solid, less so if an open wire fence either way the views and visual amenity to a degree will be altered *significantly* , *negative*, but this impediment will be *short-term.*

In Subarea 5 the location of the proposed Link Promenade structure is on the existing flood barrier berm. Some of the existing carpark area to the west of the berm will be used temporarily as a construction compound.

Construction fencing and construction vehicular traffic and associated facilities will affect the existing views for receptors specifically those entering the carpark portion that will not be used as a compound and the local residents (Hughes' Mill apartment block and offices) whose views of the woodland canopy line as a visual amenity will be disrupted and impeded *significantly, and negative* but only for duration of the construction phase, therefore *short-term.*

The riverbank along Raheen Road (Subarea-2), the location of the proposed access point of the Southern Bridge with ramp and steps is the least sensitive to visual impacts as it was designed as infrastructure, with little or no vegetation except in its lower riverbank areas.

The construction activity will *significantly* reduce views, obscuring sightlines towards Suir Island but not entirely as beyond the construction zone area, parts the riverbank of Suir Island will still be visible as will both the west and easterly horizons along Raheen Road. Accessibility may be reduced, thus *negative*, but its effects will be *short-term* for all the receptors identified in the previous sections and specifically for users of Denis Burke Park entering at the existing access point to the east of the ramp and for persons fishing on the river edge below the flood barrier wall and Raheen Road). In the absence of mitigation, the effect on the local and regional environment is likely to be *long-term, significant, and negative for all subareas, including public lighting.*

15.5.6 Operational Phase VIA

The operational phase or post construction is vital specifically in maintaining not just the facility/infrastructure as stated above, but also the continuous maintenance of the landscape and the environment of this site area to ensure that the proposal development implemented shall continue to maintain a lowest possible visual impact, to protect and/or enhance the inherent views as initially intended in the design solution and maintain a very low sensitivity to receptors. To accomplish this objective the following process must be applied, and this phase is of permanent duration over fifty years and on-going:

- Maintenance of infrastructure to preserve standards of safety and/or appearance
- Removal of graffiti
- Replacement of failed structures due natural factors and/or vandalism
- Replacement of trees having failed due to natural forces and/or vandalism
- Replacement of failed public lighting
- Maintenance of planting beds either grass and/or perennial beds-wildflowers
- Maintenance to prevent self-seeded trees (i.e.., Willow and Sycamore) and/or other plants that can undermine the flood barrier berm structure
- Resurfacing ramps, steps and /or paved areas as needed
- Replacement of all built or natural features damaged by flooding

With appropriate mitigation measures implemented and maintained, the visual impact shall be *permanent* (i.e., as maintenance is an on-going requirement), *moderate and neutral*. In the absence of mitigation, such as a maintenance programme, the effect on the local and regional environment is likely to be still *permanent duration, but significant and negative.*

15.6 Cumulative Impact Assessment

Cumulative effects are described as *"The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects." (EPA Guidelines-2017 & TII Publication page 62, PE-ENV-01102).* The other project relevant to this report is the Suir Island Garden area in the south eastern part of Suir Island, referred in this report as Subarea 7, and the existing conditions or baseline for this area of the island is described in section 15.3.3.; including relevant photos showing existing viewpoints (VP 15.10E; VP 15.11A-D; VP 15.12E-F; VP 15.13A-B; VP 15.14;VP 15.15A-B; VP 15.16A-B; VP 15.17A-C; VP 15.18A-D) which show the inherent landscape character and provide a baseline

for both landscape and visual assessment. The Suir Island Garden proposed development will be located adjacent to the proposed Suir Island Infrastructure Links (SIIL) development.

- Note: "*A comprehensive review of all other projects occurring in the vicinity of the proposed development has been completed by undertaking a review of the Tipperary County Council online planning applications portal and identifying all recently approved and live planning applications in the vicinity of the River Suir, upstream and downstream of the proposed development site.*
- *Relevant project identified during this review are listed in* ***Section 1.15 of the EIAR Chapter 1 Introduction*** *and are examined for their potential to result in significant effects to the Lower River Suir SAC.*
- *In addition to the planning application projects to Tipperary County Council as listed in Appendix 2.1, Tipperary County Council have also applied for Part VIII planning for the refurbishment of the Suir Island Gardens located adjacent to the proposed Suir Island Infrastructure Links development. The Part VIII Planning Application for the Suir Island Gardens development was approved in October 2022.*"

The Suir Island Garden proposed development was described in detail and assessed by Doherty Environmental Consultants in a report dated July 2022. In summary the proposed garden design will include paths, play areas/units and additional tree planting (approx. 40 new trees) and is located within a complex of industrial and architectural heritage remnants, reflecting the 18th century industrial period of Suir Island that once consisted of mills, millrace/watercourse, factories, warehouses, outbuildings, and Suir Island House (Protected Structure) with other relevant structures, including walls, steps and paving. These built features, although in ruins, convey a unique and distinctive landscape character and provide a visual amenity. Access to this site area is via the existing carpark and lane (VP 15.13B) to the north and shall be retained and developed to more appropriate standards by the designer. Below is a summary from the consultants for the design of this development.

Within the red line site boundary, there is a development proposal adjacent to the Suir Island Infrastructure Links Scheme proposed development. The Suir Island Gardens proposed development is currently under consideration via the Part 8 planning application process. The nature and extent of the proposed development works at Suir Island Gardens is as follows:

- Renovation of existing gardens;
- Provision of lawns and landscape planting to include the provision of trees, hedges and shrubs;
- Seating and picnic areas;
- Hard and soft pathways;
- New entrance gate with adjoining wall cladding;
- Children's play areas with associated equipment;
- Securing of Suir Island House (A Protected Structure) with decorative steel plates at ground floor level;
- Feature lighting to include internal and external lighting at Suir Island House (A Protected Structure);
- Signage;
- Ancillary site development works that shall include site drainage, provision of water supply for the play area and for wash down purposes, provision of electrical supply for the feature lighting, and removal and reconstruction of approximately 19 metres of boundary wall; and
- All associated site and landscaping works.

Figure 15-30: Proposed Development Site Plan for Suir Island Garden drawing by Dermot Foley Landscape Architects, 2022.

15.6.1 Landscape Impact Assessment for Suir Island Gardens (Subarea-7/ LIA)

The Suir Island Garden proposed development (Subarea 7) as per this report is a separate application by Dermot Foley Landscape Architects and associated consultants. The Suir Island Infrastructure Link (SIIL) proposed development is adjacent to this development within Suir Island. (VPs 15.12E to F; VPs 15.13A to B; VP 15.14; VPs 15.15A to B; VPs 15.16A to B; VPs 15.17A to C; VPs-18A to D) provide a glimpse into the existing landscape character of this area.

The Suir Island Infrastructure Link (SIIL) proposed development potential *visual impact* has three significant structural features, (1) the ramp giving access from the existing car park and Suir island Garden entrance (VP 15.13A and Photomontage 15.4-06B, VP 15.18A to C) to The Link-promenade and (2) The Link extension within Suir Island that connects to the Southern Bridge. The third structure is (3) the Southern Bridge that crosses over River Suir connecting and terminating at Raheen Road. (Photomontages 15.4_07B and 09B).

The ramp associated with the Link Promenade does *not extensively alter* the landscape character except as new infrastructure lying on top of an existing flood barrier berm. New planting of meadow grass and/or wildflowers is proposed instead of the existing self-seed perennials and shrubs in keeping with the low maintenance approach, aesthetic /pollinating value and the requirement to safeguard the structural integrity of flood barrier berm as discussed in previous section 15.4 - project description. (Photomontage 15.4_07B)

The Link Promenade and the extension of The Link within Suir Island that connects to the Southern Bridge is an elevated structure that could be perceived as a significant hardscape element thus changing the landscape character, but the existing landscape is able to accommodate this new foreground feature as seen by receptors of Suir Island Garden area (i.e., visitors of Suir Island Garden, both local and visitors availing of the amenities offered by this proposal and includes children in the play areas).

The Southern Bridge crossing over the River Suir from Suir Island's southern riverbank and then onto Raheen Road is a significant hardscape feature within the landscape but it can be perceived as part of

the "Urban Fringe Area", and therefore not a high significant impact/effect in the inherent landscape area. (Photomontage 15.4_09B)

Extract from Table 15.1 - Suir Island Garden Subarea -7 at the ramp, The Link extension, and Southern Bridge (LIA)

Degree of Impact-action taken	**Degree of effect (i.e., the change or changes) due to action taken** **Note: Duration categories are addressed in the Table 15-4 and definition as outlined above**
Moderate Impact (medium)	An effect which, by its character, capacity to accommodate, magnitude, duration, or intensity alters a sensitive aspect of the landscape. An effect that alters the character of the landscape in a manner that is consistent with existing and emerging trends. There are minor changes to the area (up to 30%) or moderate changes in a localised area; in this removal of existing trees.

Extract from Table 15.4 - Suir Island Garden Subarea -7 at the ramp, The Link extension, and Southern Bridge (LIA)

Duration of impact on the Landscape Character and Visual Amenity	**Duration of impact on the Landscape Character and Visual Amenity arising from of the proposed development, and for key receptors.**
Permanent Duration	Impacts lasting over fifty years

Conclusion: The inherent landscape character and its quality as an environmental resource will still be in keeping with the original site area urban character and townscape, and as landscape character area within the category of an "Urban and Fringe Area," and within distinct character of Suir Island's existing features. (See Section 15.3.1 and Figure 15-10). There will be moderate disturbance to the landscape character as the existing landscape has the capacity to accommodate the new build features with moderate effect on natural and built features of the existing landscape.

1. The existing landscape's capacity to accommodate change is high and therefore **the impact moderate (medium).**
2. The *magnitude* is **irreversible**, but the *new features mitigate* the impact/effects by the proposed design solutions: providing a connection between the riverbanks via Suir Island; creating an amenity access/ circulation for pedestrian and cyclist receptors; specifically, as there are no major alterations to existing built and natural features as outlined above, with the exception of a few trees to meet the design requirements (i.e., access and circulation, structural integrity).
3. *Size/Scale* remain the same, the zone of influence of **the impact is limited** to this project subarea. As per definition of size/scale of a proposed development 's impact/effect.
4. The *Duration* is a **permanent impact** (Impacts lasting over fifty years) on this project sub-area; initial existing urban landscape is altered but within the category of impact/effects as set out in the table below. As per definition for duration and Table 15-4.

15.6.2 Visual Impact Assessment for Suir Island Gardens (Subarea-7/ VIA)

The Suir Island Infrastructure Link (SIIL) proposed development potential *visual impact* has *three significant structural features* as noted in subsection of the Landscape Impact 15.6.1: (1) the ramp giving access from the existing car park and Suir island Garden entrance (VP 15.13A) to The Link-promenade and (2) The Link the extension within Suir Island that connects to the Southern Bridge. The third structure is the (3) Southern Bridge that crosses over River Suir connecting and terminating at Raheen Road. (Photomontages 15.4_07B and 09B). Within the proposed Suir Island Garden development area the

views are also limited due the buildings and mature trees (VP 15.09, 15.13 & 15.14); even from the elevated berm, except from VP 15.12. The interior of Suir Island conveys an enclosed intimate spatial experience, yet its visual quality is appealing as a result of the mature vegetation and picturesque ruins echoing its industrial past. Furthermore, this undeveloped area offers the potential for an amenity area of both formal and/or informal landscape character.

The first structure with a potential visual impact, the ramp (Subarea 5) is located on flood barrier berm that lies to the north of the site development area for the garden along mill watercourse. The flood barrier berm slopes south towards the watercourse and is part of Suir Island Garden area. (Photomontage 15.4_06B)

The ramp is visually discreet from the top of the flood barrier berm and well-integrated along its slope as it falls towards the ruin to the east. The existing and proposed vegetation of wildflowers and any self-seeded perennials on both sides of the berm shall integrate the ramp structure.

No trees can be planted on both sides of the berm for reasons already discussed. This constraint of not being able to propose tree planting has pros and cons. An overhead canopy layer of trees could offer a more intimate spatial experience, depending on the tree species selected. Tree planting could mitigate further the ramp's visual impact by reducing the visibility of the structure if this was an appropriate feasible landscape solution, but omitting the trees also provides more open views towards Suir Island Garden and the river beyond looking south, a benefit to receptors (i.e., cyclist and pedestrians using the proposed infrastructure). The ramp on the berm will not affect vehicular users/receptors nor local residents in the surrounding as this berm already exists and limits sightlines into Suir Island Garden area.

The second structure is the portion of the Link Promenade crossing within Suir Island and eventually the southern riverbank of the island where it connects with the Southern Bridge. This will be far more apparent than the berm to receptors (i.e., visitors of Suir Island Garden, both local and visitors availing the amenities offered by this proposal and includes children in the play areas). Its elevated form however, crossing above trunk height and among the tree canopy will be absorbed and integrated by the existing woodland vegetation backdrop, hence it can be perceived as *moderate visual impact,* with *medium sensitivity* to the receptors/or amenity users. (Photomontage 15.4_07B).

This elevated structure of the Link Promenade does not impede circulation or access to the existing adjacent woodland and creates a gateway, or transition point within the landscape that can be perceived as positive spatial experience. In addition, this part of the Link Promenade as an elevated structure of bridge over river will offer a beneficial high vantage point for views east and west over the River and beyond.

Extract from Table 15.2 - Suir Island Garden Subarea - 7 at the ramp and link extension (VIA)

Degrees of Visual Impact/ Effect to Landscape Character and as Visual Amenity to key receptors	**Visual amenity (views) available to specific people (i.e., visual receptors/ users) visiting a changed/ altered landscape**
Moderate Effects **(medium Sensitivity)**	An effect that alters the landscape inherent character of the visual amenity (view) of the environment *in a manner that is consistent with existing and emerging trends.* The proposal *affects an appreciable segment* of the overall visual composition, or there is an intrusion in the foreground of a view. And its effects on key receptors identified.

Extract from Table 15.3 - Suir Island Garden Subarea - 7 at the ramp and link extension (VIA)

Degrees of Visual Effect to key receptor's	Receptor's value, susceptibility, and sensitivity
Neutral Landscape and Visual Impact	Neither detracts from nor enhances the landscape of the receiving environment or view.

Extract from Table 15.4 - Suir Island Garden Subarea - 7 at the ramp and link extension (VIA)

Duration of impact on the Landscape Character and Visual Amenity	Duration of impact on the Landscape Character and Visual Amenity arising from of the proposed development, and for key receptors.
Permanent Duration	Impacts lasting over fifty years

Conclusion: The extent of the Visual Impact Assessment (inherent character and visual amenity) in terms of "Sensitivity" to key specific visual receptors for this subarea, will result in views that will change with a *moderate effect* based on the comments above.

For this viewpoint the visual impact is:

1. The Visual Impact / effect is **moderate (medium sensitivity) for the landscape visual amenity (views) and of a medium sensitivity to receptors.**
2. The degree of visual effect to key receptors and alterations of the landscape neither detracts from nor enhances the landscape of the receiving environment or view, therefore **neutral.**
3. The magnitude is **irreversible but mitigated** as noted above.
4. The duration is **permanent.**

The third structure, the **Southern Bridge Subarea 2** along with the extended the Link Promenade connection lies south of Suir Island riverbank (VIA).

The Southern Bridge is an integral part of the extend elevated link referred to previously, and Photomontages 15.4_07B and 09B show how these structures are interconnected, the transition between them is smooth and imperceptible. The bridge is within the sightlines of the receptors of Suir Island Garden and users of the River Suir (i.e., local and visitors, children who play in the area, local canoeists, persons fishing) this visual quality is not discreet but can be perceived as countered or mitigated by the existing tree canopy and further reduced by additional new planting. Photomontage 15.4_07A of the existing landscape shows how the trees effectively reduce any highly significant visual impact/effect. Furthermore, the elevated structure of the bridge over the river will offer a beneficial high vantage point views for local/visitor viewers either pedestrian and/or cyclists.

Extract from Table 15.2 - Suir Island Garden Subarea -7 at Southern Bridge (VIA)

Degrees of Visual Impact/ Effect to Landscape Character and as Visual Amenity to key receptors	Visual amenity (views) available to specific people (i.e., visual receptors/ users) visiting a changed/ altered landscape
Moderate Effects **(medium Sensitivity)**	An effect that alters the landscape inherent character of the visual amenity (view) of the environment *in a manner that is consistent with existing and emerging trends.*

	The proposal *affects an appreciable segment* of the overall visual composition, or there is an intrusion in the foreground of a view. And its effects on key receptors identified.

Extract from Table 15.3 - Suir Island Garden Subarea -7 at Southern Bridge (VIA)

Degrees of Visual Effect to key receptor's	**Receptor's value, susceptibility, and sensitivity**
Neutral Landscape and Visual Impact	Neither detracts from nor enhances the landscape of the receiving environment or view.

Extract from Table 15.4 - Suir Island Garden Subarea -7 at Southern Bridge (VIA)

Duration of impact on the Landscape Character and Visual Amenity	**Duration of impact on the Landscape Character and Visual Amenity arising from of the proposed development, and for key receptors.**
Permanent Duration	Impacts lasting over fifty years

Conclusion: The extent of the Visual Impact Assessment (inherent character and visual amenity) in terms of "Sensitivity" to key specific visual receptors for this sub-area will result in views that will change with a *moderate effect*, therefore *as a visual amenity of moderate effect, and medium sensitivity* to receptors.

1. The Visual Impact / effect is **moderate (medium sensitivity) for the landscape visual amenity (views) and of a significant sensitivity to receptors** as a new prominent contrasting foreground element along the river in both westerly and/or easterly views and as new feature (structure) it does differs substantially from the existing inherent landscape and as visual amenity to receptors. By contrast the associate ramp and steps along Raheen Road are in keeping with the inherent urban landscape pedestrian and vehicular circulation.
2. The degree of visual effect to key receptors and alterations of the landscape neither detracts from nor enhances the landscape of the receiving environment or view, therefore **neutral;** due the benefits and /or subtle changes mitigated by existing landscape features.
3. The magnitude is **irreversible but mitigated** as noted above.
4. The duration is **permanent.**

15.7 Proposed Mitigation Measures

Mitigation refers to measures to: avoid, reduce, remedy, or compensate for the landscape and visual impacts, to be considered at all stages of the project life cycle as per PE-ENV_01102 Publication, page 62. According to the Academy of European Law (ERA) definition of mitigation measures: "Mitigation measures provide for a system to reduce, avoid, or offset the potential adverse environmental consequences of development activities. Their objective is to maximise project benefits and minimise undesirable impacts. Such mitigation measures can be in the form of preventative, corrective or compensatory measures. Prevention means that the potential impact is prevented or reduced before it occurs. Corrective measures reduce the impact to a level which is acceptable. If preventative or corrective measures fail, then compensatory measures are applied. They will compensate for the unavoidable impact." The receptors for all subareas identified encompass local residents and visitors, mostly pedestrians and cyclists passing through to a destination. It includes vehicular users, and array

of other passive and active recreational users such as strollers, birdwatchers, persons picnicking, those canoeing, leisure cyclists, joggers, skaters, dog-walkers etc.)

15.7.1 Design Phase (Preliminary and Detailed Design)

The design concepts at the preliminary and final design stages *considered to mitigate the environmental and visual impact of this proposed development* as a new infrastructure within the existing landscape was designed with the following main objective, "to integrate into the existing environment, reduce impacts both environmentally and visually." Design mitigation must reflect the landscape character for the site and for each sub-area and consider human activity, the built and natural features and/ or processes. This was achieved by considering several design solutions and selecting the preferred alternative by:

- Reducing the bridge's section (width) as much as possible.
- Making the structure as light as possible. The necessity for a robust guarding is being offset against a guarding design that allows for maximum transparency, again to lighten the bridges' visual impacts on the receiving landscapes.
- Considering different alternative layout routes. Selecting the preferred route for the bridge locations and linking these to the existing infrastructure where possible (i.e., the flood barrier berm on the Island; the flood wall on the Raheen Road and footpath)
- Linking with the existing pedestrian circulations, as the proposed development primary objective other than connecting the riverbanks of Clonmel Town, is also aiming to improve the access and circulation for receptors such as pedestrians and cyclists without having to share their movement through the landscape with vehicles as they do at present with the Old Bridge and Waterford Bridge.
- Improving access and circulation to various parts of the site development area with associated ramps and steps are part of the mitigation measures (i.e., carpark, northern urban riverbank, southern riverbank, and access to Suir i=Island Garden) for receptors such as pedestrians, cyclists including those with kinetic limitations.
- Landscape Concept drawing, followed by more detail drawings indicating new planting formal or informal layout where feasible, compatible with landscape character areas and appropriate to the site conditions.
- Coordination with Suir Island Garden design team to ensure how best mitigate environment impacts (i.e., lighting, access, and additional planting)
- Other aspects that were considered as mitigation measures:
    - Reducing the impact of hard features within the existing landscape
    - Orientation of receptor's circulation
    - Improving access with ramps and steps
    - Framing views or reinforce through formal planting a gateway
    - Creating a sense of place using planting
    - Considering existing landforms where appropriate, regrading to improve access such as appropriate slopes for ramps
    - Use of specimen plants as focal points and/or as landmarks.
    - Use plants as buffers or as screening and/or integrate the harder features proposed

- Adjusting site levels and the layout to meet the design requirements while still mitigating impact

- Where applicable a landscape drawing with notes indicating planting to be used as visual screening; retention of existing hedges/ trees; reconnection to severed hedges or foraging corridors as identified in Chapter 5; required maintenance access; boundary treatment; and architectural features, and signage compatible with the existing environment and the proposed development. Including avoiding or reducing inappropriate lighting.
- Specification document -includes planting, post planting /maintenance

Additional specific visual design solutions implemented in this design concept as mitigation measures were the selection of appropriate hard finishes (i.e., paving, and stone finishes selected to match the palette of materials already in use throughout the historic town centre of Clonmel) and soft materials such as the proposed wildflower planting at the flood barrier berm and new trees at the Northern Bridge plaza to reduce the existing hardscape area; also creating seasonal and vertical contrast to the ground plane with native tree species tolerant to temporary tolerant flooding (i.e*., Alnus glutinosa-Common Alder; Betula pubescens -Down Birch*; *Salix-Willow spp*.), and these species are also tolerant to the urban environment, and compatible with the Floodplain landscape character of this area; some non-native species will be included for their low maintenance characteristics, tolerance to flooding and pollinating/birdlife value, and seasonal aesthetic appeal.

15.7.2 Construction Phase

Landscape mitigation measure will include mitigating any impact on the existing trees to be retained as per standard practices during construction to prevent damage to existing trees identified for retention.

The trees identified for protection are outlined in Arborist's tree survey report by Austen Associates, and Drawings No. 077291_TS_01 based on the proposed development construction zone. According to the arborist's there is no *Tree Protection Orders* on this site. Tree locations as indicated as per drawing no. MGS42876_TITM_2d_Rev0. The methodology for this site's survey is described in the tree survey report; report limitations - *trees were subject to a basic visual inspection only.*

Tree removals and the tree protection areas are referred to in Drawing No. 072921_TP_02. Principal tree retention practice is according to BS 5837:2012 standards. The building contractor shall prepare a construction method statement in relation to retaining trees.

The tree retention drawing indicates ***Root Protection Area, RPA***, this area of each tree cannot be disturbed or impacted upon during construction.

This protection can be achieved by installing a temporary fence that will remain in place for the duration of construction activities, and any traffic shall pass between the tree protection areas as indicated by arborist's Drawing No. 072921_TP_02. For further clarity refer to original drawings regarding the location of the trees with protective fencing.

Additional mitigation measures that are not specifically addressing the existing vegetation and/or landscape to protect and/or consider are the following:

- Site lighting will be kept low with Lux levels to meet the minimum requirement to protect the flora and fauna as well as to minimise visual impacts of the site's presence from the town centre outside of working hours, but still provide security for at night-time access and circulation.
- It is intended that the construction of the proposed development will be progressed as a single construction contract with the construction phase potentially lasting approximately 18 months. As much as possible of the bridge elements will be constructed off-site with the site area being used for assembly prior to lifting into position. It is proposed that the construction period start in early summer (May), to ensure that foundations are constructed when the Suir River water-level

is at its lowest, which will ensure safe access and minimise flood risk when constructing temporary sheet piling. The visual impacts of these works, including the presence of cranes, will be temporary, and will end with the completion of the works.

- During construction in terms of both the environment and visual impacts, the sensitivity to receptors as identified above and as noted subsection 15.5.4 will potentially affect their experience regarding views and/or as visual amenity. In response to this possibility, the site access and storage areas will be confined to the eastern portion of the existing carpark area on the Island, from where the haul roads will provide access to the northern and southern Island bank locations of the bridge foundations. It is also likely that an area on the northern bank around the proposed plaza location, as well as a strip along the Raheen Road and the southern landing point will be required for site access during the construction period.
- The construction activity, circulation layout and access points are dictated by the inherent constraints of the site's existing features such as its scale, topography, vegetation, and existing structures (i.e., car park, access points, vehicular circulation, walls, both existing and historic buildings, and ruins). The degree of impact on the environment during the construction stage can be *mitigated by selecting the least sensitive areas for access and circulation* as identified in Figure below.

During construction phase mitigation measures considered and conveyed through documents and relevant drawings, including these measures being adhered will ensure that the effect on the environment will be ***short-term, neutral,*** and ***moderate.***

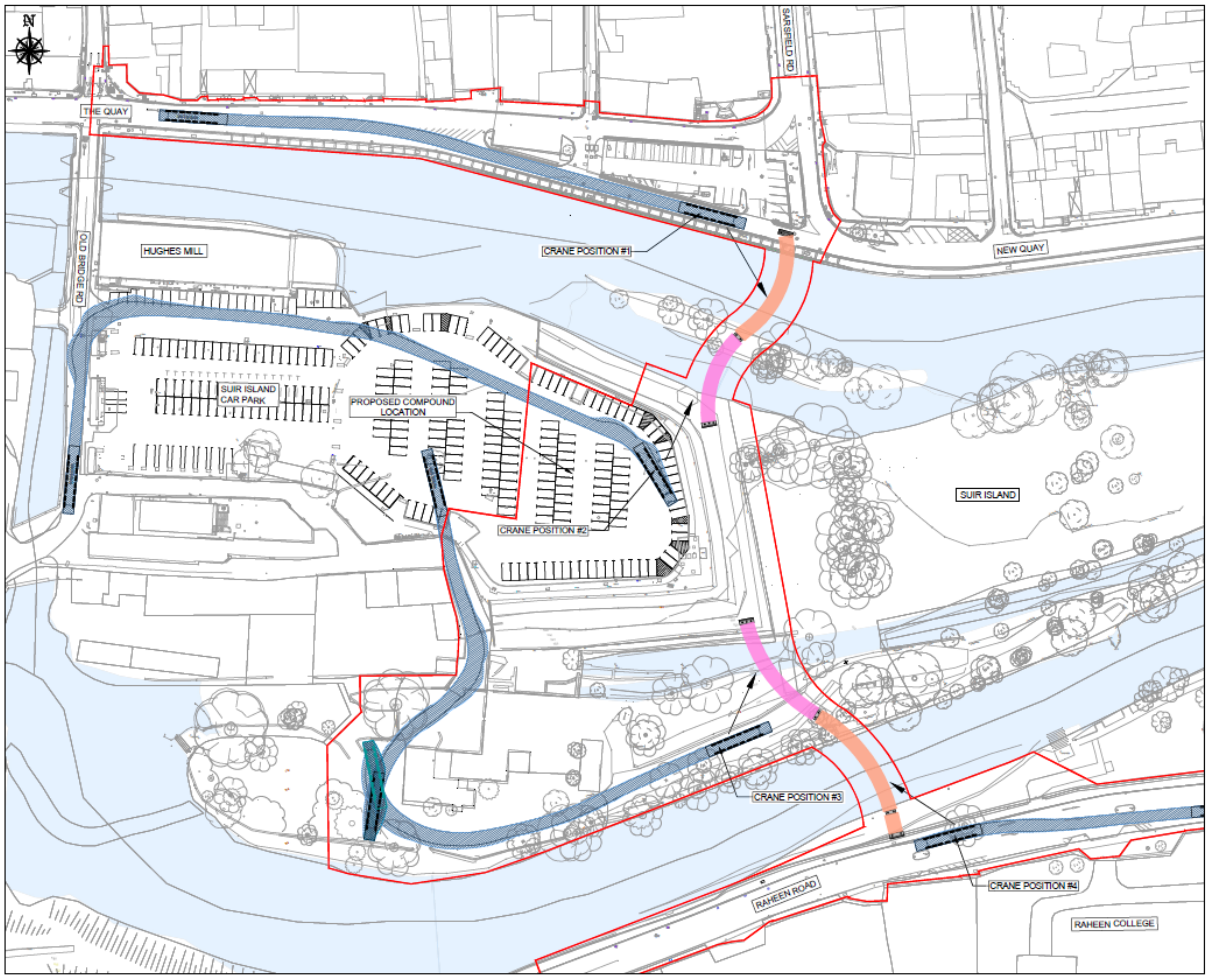


Figure 15-31: CSEA Drawing No. 20_071-CSE-GEN-XX-DR-C-1150 showing possible access points and haul roads during the construction phase.

15.7.3 Operational Phase

The post construction activity for the landscape is referred to in detail in the Arborist's tree survey report by Austen Associates, provided in Appendix 15.1. The main points are the implementation of a Post Construction Review, in order to inspect any damage that requires further mitigation measures such as remedial pruning to damaged branches and identifying any missed disturbance where a tree may have been undermined, comprising its health and the safety of the public.

Any trees identified as retained that are lost during construction shall be replaced with same species in original location to compensate for loss of existing vegetation. Provided the mitigation measures and maintenance are implemented on a consistent and on-going approach the effect of the operational phase on the environment will be *long-term, neutral, and imperceptible.*

15.8 Residual Impacts

The residual impacts are those associated with the proposed development and in this case the bridge and link alignment and presence in the landscape once the mitigation measures have been implemented. These measures have been incorporated into the design from the concept stage onwards and will continue to be improved and refined during the detailed design stage in order to continue the process of assimilating the route into its receiving environments.

15.8.1 Construction Phase

Once the mitigation measures have been implemented during the construction stage the impacts will be temporary, therefore short-term apart from the removal of mature trees along the line of the bridges and the Link Promenade crossing already discussed previous construction subsection 15.5.2. However, these will be replaced as close to their original location as possible so that these impacts too will disappear over time. Mitigation measures during construction phase will have little effect on preserving the landscape character of the site development area during the works phase, except for tree fencing to protect the root system (RPA) of existing trees considered feasible for retention and visual screening of the works area with hoarding as identified arborist's tree survey report and drawing. The *residual impact* regarding the construction phase is considered to be *short term* , neutral and therefore *a moderate impact.*

15.8.2 Operational Phase

The inherent landscape character and visual residual impacts is considered moderate once the mitigation measures have been implemented in the post-construction stage. Although the alignment of its two bridges along with the link promenade and associated ramps and steps will be permanent additions on the receiving landscape the impact will be offset by the mitigation measures listed in previous section 15.7. Many of these mitigation measures will be increased due to the increase in the growth of planting and trees with time, assuming that the landscape will be allowed to develop naturally as an amenity for receptors, which is the stated intention of the Local Authority. Once the mitigation measures are implemented and maintenance is consistent and on-going the residual effect of the operational phase on the environment will be *long-term, neutral, and imperceptible.*

15.9 "Do Nothing Scenario"

Without the proposed link development that includes the two bridges, the Link Promenade section and the associated ramps, steps and a new landscape, the positive or beneficial aspects of this new piece of public infrastructure will not occur.

These positive aspects as noted in the previous subsections are primarily the North Plaza on the north riverbank, the new circulation system for pedestrians and cyclists, and a connection between the two riverbanks of the River Suir. Without this development there will be no opportunity for the public to appreciate the existing landscapes and views from the elevated platform it proposes. They will not have the opportunity to discover new views of their town and its hinterland and to have a better appreciation of their local environment that this new route will provide.

In addition, without this proposed development there will be no construction, operational, or residual impacts in this do-nothing scenario. The landscape character, the environment as a resource, the viewpoints, or views, will result with no changes or alterations, therefore no visual impact and the visual amenity to receptors will remain unchanged.

Appendix 15.1 Tree Survey Report by Austin Associates (2021)

AUSTEN ASSOCIATES

TREE & VEGETATION SURVEY, ASSESSMENT, MANAGEMENT & PROTECTION MEASURES

FOR

Suir Island

CLIENT: CSEA

March 2023

D 002

Austen Associates
Renishaw House
Ballyguile Beg
Wicklow Town
A67 XH92
Tel: 0404 66827
designdesk@austenassociates.ie
www.austenassociates.ie

Contents

1.0 Introduction

This tree survey was commissioned as part of the proposals for public realm enhancements at Suir Island, Clonmel, Co. Tipperary.

This survey covers the trees on site and any trees overhanging the site. The trees and vegetation were surveyed on the 24/11/2021 by this practice and the findings have been summarised and recorded in the following report. All significant trees have been individually identified and numbers referenced in the survey table, Appendix 1.

This report should be read in conjunction with Drawing No. 072921_TS_01 (Tree Survey Plan) and Drawing No. 072921_TP_02 (Tree Retention and Protection Plan). There are no Tree Protection Orders on the trees subject to this report.
Trees have been located as per the drawing *MGS42876_T_ITM_2d_Rev0*.

2.0 Report Limitations

The trees are subject to a basic visual inspection only. A visual inspection is from ground level only and it shall be borne in mind it is subject only to obvious external defects visible at the time of inspection. It does not include a climbing inspection, below ground, tomographical readings or internal investigations.

3.0 Existing Environment

The site is situated on Suir Island to the southern edge of Clonmel town centre. The streetscape is tight and urban in character. The River Suir envelopes the island and there is a quayside character to the northern bank of the river. The main body of the town centre is concentrated to the north of the river. The Island acts as an approach

to the urban fabric of the town. The town centre has street tree planting. These trees are generally semi-mature or have been pollarded/pruned back hard. The island offers a contrast to this, with mature/semi-mature trees dotted throughout.

There has been some development on the island. There are older dwellings and buildings to the eastern side of the island. To the west there is a large car park and newly developed apartment buildings. A series of warehouse type buildings are located to the south of the car park, along with a group of ruined buildings and associated mill structures.

The eastern part of the island is an undeveloped green space with a mosaic of tree planting. Some of these trees are mature specimens, there are also some dense copses of woodland planting. To the south of the island, there appear to be many self-seeded trees. There are some mature specimen trees in the vicinity of the buildings. To the north of the island, the trees have a more woodland like character, with mature trees offering a pleasant vista when viewed from The Quay to the north.

4.0 Arboricultural Impact Assessment

Amount of trees and percentage categories				
Individual trees	Category A	Category B	Category C	Category U
53no.	2no. 4%	0no. 0%	52no. 96%	0no. 0%
Tree groups/lines	Category A	Category B	Category C	Category U
6	0no. 0%	0no. 0%	6no. 100%	0no. 0%

This section of the report describes the impacts that the proposed development will have on the trees. To be read in conjunction with the tree survey and tree protection drawings 072921_TS_01 and 072921_TS_02. Refer to section 5 Arboricultural Method Statement below for details on the protective actions required.

Construction access routes, storage, parking and compound to be agreed with arborist pre commencement. They will be set up away from the RPA's indicated on the drawings. Tree protective fence locations will be reviewed and altered to account for construction access routes, site storage, contractors parking and compound locations.

Individual Trees

Tree numbers 0069 – 0072 are Sycamore *Acer pseudoplatanus* growing on or close to the river bank. These are category C 2 trees, i.e., *'Typically including generally poor-quality trees that may be of only limited value.' 'A tree which provides low screening or softening effect to the locality in relation to views in or out of the site, and/or is of a low aesthetic value.'*

Impact of the development: A bridge will be constructed in the vicinity of these trees.

Action: Remove trees. Review construction methodology to determine if more trees will be affected.

Tree groups

Tree Group 02 is a self-seeded copse of scrub Willow *Salix* spp. growing alongside the millrace. This group has been categorised as C.

Impact of the development: A path will be constructed in the vicinity of this group.

Action: partial removal of the trees under arborists supervision will be required. Review construction methodology to determine the full extent of removal.

Tree Group 05 consists of mature Sycamore *Acer pseudoplatanus,* Horse Chestnut *Aesculus hippocastanum* and Cherry Laurel *Prunus laurocerasus,* growing alongside the river bank. This group has been categorised as C.

Impact of the development: A path will be constructed in the vicinity of this group. Action: partial removal of the trees under arborists supervision will be required. Review construction methodology to determine the full extent of removal.

Tree Group 06 consists of mature Horse Chestnut *Aesculus hippocastanum,* Sycamore *Acer pseudoplatanus*, Ash *Fraxinus excelsior* and Beech *Fagus sylvatica,* growing on a spit of land surrounded by water. The trees are inaccessible and have been surveyed from the island and from the Quay to the north. This group has been categorised as C 2.

Impact of the development: A bridge will be constructed in the vicinity of this group.

Action: partial removal of the trees under arborists supervision will be required. Review construction methodology to determine the full extent of removal.

Tree F is a large mature Sycamore *Acer pseudoplatanus* growing in limited space in a small tree pit in the public footpath. A large limb has been sheared off on the eastern side, in the past, leaving torn timber and bark.

Impact of the development: There will be works in this area and the tree cannot be retained.

Action: Remove this tree

5.0 Arboricultural Method Statement

Introduction:

This method statement contains information that will allow the building contractor set up the site for protection of trees. It will also help the contractor prepare a method statement detailing how they intend to protect retained trees.

The existing site contains a number of mature trees, they are generally of reasonable quality. Some of these trees are called up for removal and some for retention. Please refer to the drawing 072921_TP_02 and the Arboricultural Impact Assessment above for details. The principal standard for tree retention practices is BS 5837:2012.

Tree rooting:

The majority of the tree's roots are in the top 1000mm of the soil, with the majority of feeding and anchoring roots in the top strata. Typically, they spread laterally from the trunk out beyond the crown. The area of the tree roots is referred to as the **Root Protection Area**, **RPA**, and is indicated on the accompanying plans, 072921_TS_01 and 072921 TS_02. The RPA of the trees to be retained is not to be disturbed or impacted upon by construction. **CRITICAL: UNDER NO CIRCUMSTANCES ARE LEVELS TO BE RAISED OR LOWERED IN THE ROOT PROTECTION AREA!**

Removal of trees:

There are 4 category C trees called for removal along with a number of trees in tree group 02, tree group 05 and tree group 06.

Trees are to be removed to the standard set out in BS 3998:2010. They are to be safely felled with stumps and roots to be removed. The trees proposed for removal are adjacent to trees proposed for retention. Care is to be taken so as to not damage the above ground parts, (bark, trunk, branches, shoots and leaves etc. of the retained trees). The roots of the retained trees are to be protected also. Note the rootzone that requires protection is indicated on the drawing 072921_TS_02.

Retention of trees:

- The root protection area of the trees has been worked out in line with the guidance given in BS 5837:2012. It is indicated on drawings 072921_TS_01 and 072921_ TS_02. This area is an estimate of the below ground root spread of the trees and protection of this area is of utmost importance.
    - No alterations of ground levels are to occur within the RPA, this includes excavations or raising of ground levels.
    - Any practices that would lead to compaction within the RPA such as storage of materials or location of site buildings are strictly prohibited.
    - Any spillages, washings or any other possible contamination of the soil in the rootzone from construction operations is prohibited.
- The above ground parts of the trees will be protected from damage from site traffic and machinery and from felling operations of adjacent trees.

Construction method statement

The building contractor must prepare a construction method statement in relation to retaining trees on site.

- This method statement will detail how construction work and activities including but not limited to; waste management, site traffic management, location of services (both underground and overhead), will be planned so that there is

little or no impact on the root protection areas and over-ground plant parts of the trees or protected vegetation.

- This will include outline drawings showing location site traffic routes, storage areas, welfare facilities, waste management areas etc. in relation to the locations of retained trees.
- It will outline the locations of and materials to be used in tree protective fencing. See below for tree protective fencing requirements.
- It will outline the induction process for all staff and sub-contractors in relation to tree protection.
- It will use this document as a minimum standard for tree protection. All tree protection measures mentioned herein shall be the construction method statement.
- It will show temporary ground protection measures for any machinery/vehicles that must enter the RPA of trees to carry out vital work. The temporary ground protection measures for machinery under 2 Tonnes will comprise of a 150mm layer of coarse wood chippings placed over a geo-textile to spread the load. A weight bearing surface such as chip board will be placed on the wood chippings. For machinery above 2 Tonnes a proprietary ground protection system will be used. This will be agreed with the project engineer and will accommodate the necessary loading.

Tree work

- Any tree work undertaken on site will be in line with BS 3998. An assessment shall be taken for the presence of any protected wildlife prior to removal and any ecological survey recommendations will be observed.

Tree protection areas

The alignment of the tree protective fencing will be as shown on Drawing No. 072921_TP_02 and is specifically designed to protect the tree roots. Construction traffic will be diverted between tree protection areas for the duration of construction and no heavy-duty traffic shall pass over the RPA of retained trees prior to erection of tree protective fencing. The fencing shall remain in place for the duration of the construction works and shall only be removed when all works are complete. The tree protective fencing alignments will not be altered, even on a temporary basis, without the written consent of the project arborist.

Tree Protection

- No materials, site storage areas, cement washing points, construction waste disposal areas shall be located in or around the Root Protection Areas.
- No noxious liquids shall be disposed of or deposited within the RPA.
- Rubbish shall not be burned in the RPA
- The soil level shall not be altered in any way, (raised or lowered) within the RPA.
- No action that might cause compaction within the RPA are to be carried out, this includes but is not limited to: placement of site facilities, storage of machinery, storage of materials, topsoil storage, staff parking.
- No signage, staples, boards or any other item/material shall be attached to any retained tree.
- Site machinery with extending arms, buckets etc. shall not damage the above ground parts of the trees.

Tree Protective fencing

protective fencing shall be as outlined on Drawing No. 072921_TP_02 and shall remain in place during the construction works. Any works within the tree protective fencing shall be supervised on site by the project Arboriculturist. Signage shall be attached to the fencing reading 'Tree Protective fencing KEEP OUT'

Reports on the successful completion of the works shall be issued by the project Arboriculturist on completion. Once the tree protective fencing is in place and has been approved by the project Arboriculturist, the contractor may commence site set up.

No materials, site storage areas, cement washing points, construction waste disposal areas shall be located in or around the Tree Protection Areas. No noxious liquids shall be disposed of or deposited within the TPA.

This fencing must be checked daily by the site foreman to ensure it is on the alignment shown in the drawings and is rigid with no breaches.
It must be in place for the entirety of the works programme, it is the last item to be removed off site on completion of works.

Site Supervision and Review

It is recommended that an arborist be engaged to supervise works around trees.
Meetings will be required at;

- Project start up
- Removal of trees in tree group 02, tree group 05 & tree group 06
- Post construction review

6.0 Conclusions

There are a number of mature and semi-mature trees on site. These are mostly category C trees, i.e., trees of low quality. The development impacts a small number of these trees, which will be removed. Indirect impacts on the remaining trees will not be permitted.

To allow for the retention of the trees, The remaining trees will be fenced off. Tree protection fencing will be erected to prohibit access to the rooting area of the trees. This tree protective fencing to BS 5837:2012 will be in place all through construction, along with adherence by all on site with the instructions regarding the protection of the RPA. These steps are critical to the successful retention of trees.

At construction stage, the contractor must carefully read this report and use it as a basis for drawing up his/her own construction method statement in relation to tree protection.

Signed: _____ Date 23/03/2023

Eunan O'Donnell BSc Ag, Dip Hort, MILI, Arb Cert, TechArborA

Senior Project Landscape Architect and Arborist

Appendix 1 Schedule of Tree Data

List of Abbreviations Used in Schedule of Tree Data Below:

m = Metre

cm = Centimetre

CBH= Circumference at Breast Height

NA = Not Applicable

TS = Twin Stems

MS = Multi Stems

ERC = Estimated remaining contribution in years (<10, 10+, 20+, 40+)

Age Class:

A = Young: A tree which has been planted in the last 10 years or is less than 1/3 expected height of the species in question

B = Middle aged: A tree which is between 1/3 and 2/3's the expected height of the species in question

C. = Mature: A tree that has reached the expected height of the species in question, but is still increasing in size

D =Over Mature: A tree at the end of its life cycle and the crown is starting to break up and decrease in size

V= Veteran: A tree showing signs of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Health Status:

L = low vigour

Md = Moderate vigour

N = Normal vigour

Appendix 1 Schedule of Tree Data.

Condition Class :

U=Those trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years

A = Trees of high quality with an estimated remaining life expectancy of at least 40 years

B = Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

C= Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

The above categories (A, B and C) will be further subdivided with regard to the nature of their values or qualities. A tree may be awarded one or more value categories as below, but such attributes do note infer any additional value and it may be possible for a tree may qualify for one or more of the categories as below.

Sub-categories:

1-mainly Arboricultural Values:

A = Good: Typically, a good quality specimen, which is considered to make a substantial Arboricultural contribution

B = Fair: Typically including trees regarded as being of moderate quality.

C= Poor: Typically including generally poor-quality trees that may be of only limited value.

2- mainly Landscape Values:

A = Good: A tree which provides definitive screening or softening effect to the locality in relation to views in or out of the site, and/or is of a high aesthetic value.

B = Fair: A tree which provides moderate screening or softening effect to the locality in relation to views in or out of the site, and/or is of a medium aesthetic value.

C = Poor: A tree which provides low screening or softening effect to the locality in relation to views in or out of the site, and/or is of a low aesthetic value.

Appendix 1 Schedule of Tree Data.

3-Cultural Values:

A = Good: A tree which provides high conservation, historical or commemorative values.

B = Fair: A tree which provides medium conservation, historical or commemorative values.

C = Poor: A tree which provides low conservation, historical or commemorative values.

Appendix 1 Schedule of Tree Data.

No.	Species	Ht	N	S	E	W	Dia (DBH)	Vigour	Age Class	Cond Class	ERC	Comments	Priority Action
0049	Lime *Tilia cordata*	14-16	8m	8m	10m	7m	1300mm	Md	D	A 1,3	40+	A lot of pruning in crown- crown reduction, lifting and thinning has been carried out, some decay in crown, cavity at 8-10m	Retain
0050	Willow *Salix* spp.	8-10	3m	2.5m	2m	3.5 m	240mm	N	B	C	40+	Broken branch on south side, sapling Willow 5m to east, major broken dead branch at base with decay	Retain
Tree Group 01 Sycamore *Acer pseudoplatanus* Leyland Cypress *X Cuprocyparis leylandii,* shrub understorey of Spotted Laurel *Aucuba japonica,* Old Man's beard *Clematis vitalba* - Non-native invasive species Old Man's Beard *Clematis vitalba* growing present													
0051	Leyland Cypress *X Cuprocyparis leylandii*	12-14	5.5 m	6m	5m	7m	M/S 580, 560, 530 & 510mm	N	C	C	20+	4 large stems arising from base, spreading with foliage from GL, dominates TG 01	Retain
0052	Beech *Fagus sylvatica*	10-12	6.5 m	6.5 m	6.5 m	6.5 m	970mm	Md	C	C	20+	Severely topped with significant branch removal, decay in crown	Retain, survey every 2 years
0053	Sycamore *Acer pseudoplatanus*	10-12	5m	2m	5m	5m	430mm	N	B	C 2	40+	Slight kink in stem at 1.5m, twin stem from 3m, girdling roots, Acer Tar spot *Rhytisma acerinum* present	Retain
A	Sycamore *Acer pseudoplatanus*	10-12	5m	2m	5m	5m	M/S 300, 300, 190, 150,130, 130, 100, 90, 80 & 80mm	N	B	C 2	40+	Causing damage to adjacent stone wall, Acer Tar spot *Rhytisma acerinum* present	Retain

Appendix 1 Schedule of Tree Data.

No.	Species	Ht	N	S	E	W	Dia (DBH)	Vigour	Age Class	Cond Class	ERC	Comments	Priority Action
0054	Horse Chestnut *Aesculus hippo-castanum*	10-12	2m	6m	3m	7m	520 & 420mm	N	B	C 2	20+	Twin stem at base, leaning over river, 2 juvenile Horse Chestnut trees adjacent	Retain
0055	Monterey Cy-press *Cupressus macrocarpa*	12-14	4m	2m	2m	5m	460mm	N	B	C 2	20+	Significant bark damage to North, poor tree	Retain
0056	Sycamore *Acer pseudoplatanus*	12-14	2m	3m	4.5 m	3.5 m	430mm	N	B	C 2	40+	Heavy ivy on main stem, broken twin stem-decay at break	Retain
0057	Sycamore *Acer pseudoplatanus*	8-10	2.5 m	2.5 m	2.5 m	2.5 m	270mm	N	A	C 2	40+		Retain
0058	Ash *Fraxinus ex-celsior*	8-10	2m	2m	2m	2m	240mm	N	A	C 2	10+		Retain
0059	Sycamore *Acer pseudoplatanus*	10-12	5m	5m	5m	5m	190, 190, 180, 180, 170, 150, 150, 100, 100, 80, & 60mm	N	B	C 2	40+	Right on river edge, ivy on stem	Retain
0060	Sycamore *Acer pseudoplatanus*	8-10	1.5 m	3m	3.5 m	2.5 m	190mm	N	A	C 2	40+	Right on river edge	Retain

Appendix 1 Schedule of Tree Data.

No.	Species	Ht	N	S	E	W	Dia (DBH)	Vigour	Age Class	Cond Class	ERC	Comments	Priority Action
0061	Bay Laurel *Laurus nobilis*	8-10	3m	4m	3.5 m	3.5 m	230, 200, 180 & 180mm	N	C	C 2	20+	Lower branches have been pruned, on river edge	Retain
0062	Sycamore *Acer pseudoplatanus*	10-12	3m	3m	3m	3m	340mm	N	B	C 2	40+	Heavy ivy on stem, Acer Tar spot *Rhytisma acerinum* present	Retain
0063	Sycamore *Acer pseudoplatanus*	10-12	3.5 m	3.5 m	3.5 m	3.5 m	300 & 230mm	Md	B	C 2	40+	Twin stem at 1.4m, no leaves-leaves on other Sycamore nearby, pruning in crown	Retain
B	Ash *Fraxinus excelsior*	8-10	3m	4m	4m	3m	300mm	N	B	C 2	10+	Leaning over river, heavy ivy	Retain
0064	Sycamore *Acer pseudoplatanus*	12-14	5m	6m	5m	5m	320, 300 & 230mm	N	C	C 2	40+	On river bank, Old Man's beard present	Retain
0065	Sycamore *Acer pseudoplatanus*	14-16	3m	3m	4m	3m	540mm	N	C	C 2	40+	Scaffold branches arise at 1.6m, Ivy on stem, Old Man's beard present	Retain
0066	Sycamore *Acer pseudoplatanus*	12-14	3m	3m	3m	3m	290 & 260mm	N	C	C 2	40+		Retain
Tree group 02: Willow *Salix* spp. multiple stems forming a thicket on millrace bank, self-seeded and of minor importance, category C, partial removal under arborists supervision													
0067	Sycamore *Acer pseudoplatanus*	14-16	4m	4m	4m	3m	270 & 240mm	N	C	C 2	40+	Twin stem at 1.3m, detritus in V shaped union, some decay in union – structurally weak	Retain

Appendix 1 Schedule of Tree Data.

No.	Species	Ht	N	S	E	W	Dia (DBH)	Vigour	Age Class	Cond Class	ERC	Comments	Priority Action
0068	Sycamore *Acer pseudoplatanus*	12-14	3m	2.5m	3m	3m	360mm	N	C	C 2	40+	Ivy on stem, twist in stem at 1.5m, some decay in crown, major branch removed at GL	Retain
0069	Sycamore *Acer pseudoplatanus*	12-14	4m	2m	4m	4m	300mm	N	C	C 2	20+	Slight kink to the west, decay in lower crown	Remove
0070	Sycamore *Acer pseudoplatanus*	12-14	2.5m	2.5m	2.5m	2.5m	230, 170, & 150mm	N	B	C 2	40+	Multi stem at 0.5m	Remove
0071	Sycamore *Acer pseudoplatanus*	12-14	1.5m	3m	2.5m	2.5m	280mm	N	C	C 2	20+	Bow in trunk at 1.2m, decay in lower crown, ivy on main stem	Remove
0072	Sycamore *Acer pseudoplatanus*	12-14	2m	3.5m	2m	3m	280mm	N	C	C 2	20+	Slight bow in trunk at 2-3m, decay in lower crown	Remove
0073	Yew *Taxus baccata*	10-12	3m	6m	3m	10m	630mm	N	C	C	20+	Main branch propped with steel support, severe lean to west	Retain
0074	Sycamore *Acer pseudoplatanus*	12-14	4m	4m	3m	2.5m	330, 280, 200 & 190mm	N	C	C	20+	4 stems from GL, crossing stems in crown, decay in lower crown	Retain
0075	Sycamore *Acer pseudoplatanus*	12-14	3m	5m	3m	5m	380, 320 & 280, mm	N	C	C	20+	Decay at base where branch has been re-moved, epicormic growth	Retain

Appendix 1 Schedule of Tree Data.

No.	Species	Ht	N	S	E	W	Dia (DBH)	Vigour	Age Class	Cond Class	ERC	Comments	Priority Action
0076	Sycamore *Acer pseudoplatanus*	12-14	2m	4m	2m	2m	230 & 160mm	N	C	C 2	20+	Honey fungus *Armillaria mellea* at base – (causes decay), 2 stems, ivy on smaller stem	Retain
0077	Yew *Taxus baccata*	10-12	4m	4m	4m	4m	360mm	N	C	C 2	20+	Main branch propped with steel support, severe lean to west	Retain
C	Sycamore *Acer pseudoplatanus*	12-14	6m	3m	5m	5m	350, 300 & 250mm	N	C	C 2	20+	3 stems over river, some decay at base	Retain
0078	Beech *Fagus sylvatica*	16-18	7m	8m	7m	9m	940mm	N	V	A 3	20+	Some decay in broken branches in the main crown	Retain, survey every 2 years
Tree group 03: Willow *Salix* spp. multiple stems forming a copse on millrace bank, self-seeded and of minor importance													
0079	Yew *Taxus baccata*	6-8	4m	3m	4m	4m	310mm	N	B	C	40+		Retain
0080	Ash *Fraxinus excelsior*	8-10	3m	0m	3m	0m	300mm	N	B	C 2	10+	Lean to north east towards light	Retain
0081	Sycamore *Acer pseudoplatanus*	10-12	4m	2m	4m	3m	150 & 120mm	N	A	C 2	20+	On edge of bank	Retain
0082	Sycamore *Acer pseudoplatanus*	10-12	3m	3m	3m	3.5 m	200, 180, 150, 150 & 100mm	N	B	C 2	20+	On edge of bank	Retain

Appendix 1 Schedule of Tree Data.

No.	Species	Ht	N	S	E	W	Dia (DBH)	Vigour	Age Class	Cond Class	ERC	Comments	Priority Action
D	Sycamore *Acer pseudoplatanus*	12-14	4m	3m	3m	2.5m	300mm	N	B	C 2	20+	Heavy ivy on stem	Retain
0083	Sycamore *Acer pseudoplatanus*	12-14	6m	3m	5m	5m	340, 240, 200 & 120mm	N	C	C 2	20+	Heavy ivy on stem	Retain
E	Sycamore *Acer pseudoplatanus*	8-10	4m	2m	3m	3m	300mm	N	B	C 2	20+	On very edge of river bank	Retain
Tree Group 04: Sycamore *Acer pseudoplatanus,* Ash *Fraxinus excelsior,* Portuguese Laurel *Prunus lusitanica,* multi-stemmed semi-mature/mature trees growing on stone wall													
0084	Sycamore *Acer pseudoplatanus*	12-14	5m	3m	5m	4m	320, 300, 250 & 240mm	N	C	C 2	20+		Retain
0085	Willow *Salix* spp.	12-14	4m	4m	4m	4m	260mm	N	C	C 2	40+	Crossing branches	Retain
0086	Willow *Salix* spp.	12-14	1m	4m	4m	5m	300, 100 & 100mm	Md	C	C 2	40+	Ivy on trunk	Retain
0087	Sycamore *Acer pseudoplatanus*	12-14	6m	6m	5m	6m	350mm	N	C	C 2	20+	Heavy ivy on stem, crossing branches	Retain
0088	Sycamore *Acer pseudoplatanus*	12-14	4m	2m	4m	2m	260 & 200mm	N	C	C	20+	Heavy ivy on stem, decay on lower branches	Retain

Appendix 1 Schedule of Tree Data.

No.	Species	Ht	N	S	E	W	Dia (DBH)	Vigour	Age Class	Cond Class	ERC	Comments	Priority Action
0089	Sycamore *Acer pseudoplatanus*	14-16	4m	4m	4m	4m	370, 350 & 330mm	N	C	C	20+	Heavy ivy on stem, decay on lower branches	Retain
0090	Sycamore *Acer pseudoplatanus*	14-16	3m	3.5 m	3.5 m	4m	280, 220, 220 & 170mm	N	C	C	20+	Heavy ivy on stem, decay on lower branches	Retain
0091	Sycamore *Acer pseudoplatanus*	12-14	5m	5m	2.5 m	5m	380, 320 & 230mm	N	C	C	20+	Heavy ivy on stem	Retain
0092	Sycamore *Acer pseudoplatanus*	12-14	5m	3m	4m	2.5 m	330 & 120mm	N	C	C	20+	Heavy ivy on stem, crossing branches	Retain
0093	Sycamore *Acer pseudoplatanus*	12-14	1m	2m	3m	3m	310mm	N	C	C	20+	Heavy ivy on stem, suppressed by neigh-bouring trees	Retain
0094	Sycamore *Acer pseudoplatanus*	12-14	2m	3m	3.5 m	4m	370mm	N	C	C	20+	Heavy ivy on stem, suppressed by neigh-bouring trees	Retain
Tree Group 05: Sycamore *Acer pseudoplatanus,* Horse Chestnut *Aesculus hippocastanum* and Cherry Laurel *Prunus laurocerasus,* mature trees on the river bank/waters edge, forms a dense thicket, 350mm typical DBH, large branch has sheared off large Horse chestnut, partial removal under arborists supervision													
0095	Lime *Tilia* spp.	18-20	7m	6m	7m	7m	810mm	N	C	C 2	20+	Heavy ivy on stem, suppressed by neigh-bouring trees	Retain
0096	Lime *Tilia* spp.	18-20	6m	4m	3m	5m	330, 250, 200, 120 & 100mm	N	C	C 2	20+	Suppressed by 0095, large fallen tree at base	Retain

Appendix 1 Schedule of Tree Data.

No.	Species	Ht	N	S	E	W	Dia (DBH)	Vigour	Age Class	Cond Class	ERC	Comments	Priority Action
Tree Group 06: No access to this group, located on the north bank of the island, Mature Horse Chestnut *Aesculus hippocastanum,* Sycamore *Acer pseudo-platanus*, Ash *Fraxinus excelsior* and Beech *Fagus sylvatica,* mature dense woodland thicket, partial removal under arborists supervision													
F	Sycamore *Acer pseudoplatanus*		5.2	5.2	5.1	5.2	#350	N	C	C 2	20+	Large limb sheared from eastern side	Remove

Tree Protection Plan 1:500

Westcourt
1-24

MADENS LANE

LANE

STREET

QUAY STREET

NEW QUAY

NEW QUAY

1

2

Old Bridge

RIVER SUIR

Tree retention to be reviewed re construction access and methodology required to construct bridge

Tree Group 06

0095

0096

Red line taken from drawing 20_071-CSE-GEN-XX-DR-C-1160

Tree Group 05

0094

0093

0092

0090

0091

0089

0088

0086

0084

0087

0085

Tree Group 04

0080

0083

D

E

0078

0079

0082

0081

0074

0076

0075

0077

C

0072

0073

0071

0070

0069

0067

0068

Tree Group 03

Tree retention to be reviewed re construction access and methodology required to construct bridge

Tree Group 02

0066

0065

0063

0064

B

0062

0061

0060

0058

0057

0056

0055

0059

0054

0053

A

0049

0050

Tree Group 01

0051

0052

River

Suir

RAHEEN ROAD

F

Suirmount

0 5 10 15m

Legend

Tree Protection

- Existing Tree to be retained
- 0960 — Crown spread; Tree tag reference number
- Colour coded tree stem
- RPA, Root protection area

Colour coding
- Category A: Trees of high quality
- Category B: Trees of moderate quality
- Category C: Trees of low quality
- Category U: Trees unsuitable/unsafe for retention

- Existing tree line or tree group retained
- Existing Tree to be removed
- Existing vegetation retained
- Existing tree line or tree group to be removed
- Tree protection fence (Temporary during construction) Exact alignments to be agreed on site with Arborists

Construction access routes, storage, parking and compound to be agreed with arborist pre commencement

This arboricultural survey and plan has been completed by Eunan O'Donnell BSc Ag, Dip Hort, Arb cert, MILI, TechArborA

Rev	Date	By	Details
D	23/03/23	EOD	Updated tree
C	30/08/22	EOD	Updated to new red line
B	30/03/22	EOD	Updated to new layout
A	16/12/21	EOD	Tree Survey

AUSTEN ASSOCIATES
Renishaw House, Ballyguile Beg, Wicklow Town, Co. Wicklow, A67 XH92
T: 0404 66827
Email: designdesk@austenassociates.ie | Web: www.austenassociates.ie
landscape architecture arboriculture design project management

Client: CSEA

Project title: Suir Island

Drawing title: Tree Protection Plan

Drawn by: EOD
Approved by: TA
Status: Planning
Scale: 1:500 on A1
Date: November 2021

Drawing no: 072921_TP_01
Revision: D

Clifton Scannell Emerson Associates Limited, Civil & Structural Consulting Engineers
3rd Floor The Highline, Bakers Point, Pottery Road, Dun Laoghaire, Co Dublin, Ireland A96 KW29

T. +353 1 288 5006 E. info@csea.ie W. www.csea.ie