Landscape and Visual Impact Assessment for Proposed Boyne Greenway: Drogheda to Mornington

Technical Report

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Meath County Council

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Contract

This report describes work commissioned by Mark Kelly of DBFL, on behalf of Meath County Council. Chen Zheng, Conor O'Neill and Bernadette O'Connell of JBA Consulting carried out this work.

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Purpose

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1 Introduction

1.1 Background

JBA Consulting was commissioned by DBFL Engineering Ltd to prepare a Landscape and Visual Impact Assessment (LVIA) on behalf of Meath County Council for the proposed Boyne Greenway : Drogheda to Mornington project.

The potential impacts arising from the construction of the project, as well as during the operational phase are assessed with regard to key landscape and visual receptors. Where required mitigation measures are proposed to avoid, reduce or remediate potential impacts in order to avoid significant impacts on sensitive landscape and visual receptors.

1.2 Proposed Greenway Route

The proposed route for the Boyne Greenway is approximately 5.9 km in length with approximately 4.1 km of the route directly alongside the Regional Road, and 1.8km off the Regional Road to ensure both a safe continuation of the route and the retention of the views across the Boyne Estuary (Figure 1-1).

Figure 1-1 Route Location

1.2.1 Greenway Type

The proposed greenway comprises a 4m wide combined pedestrian and cycle route along the Drogheda to Mornington road corridor. It will provide a safe, traffic-free environment for tourists and local users to cycle or walk adjacent to the Boyne river, estuary and coast. It extends from east of Drogheda (Ship Street, which is located adjacent to the railway viaduct Belfast - Dublin line) Cp. Louth to Mornington, Co. Meath.

The proposed greenway route generally follows the existing R150/R151 Regional Road, to ensure that open views to the Boyne Estuary are retained where possible and maximising the benefits of the proposed greenway.

1.2.2 Construction methodology

Figure 1-2 Typical Greenway on Boardwalk and as a Bituminous Surface

The proposed greenway will be constructed utilising two different methodologies, selected according to the sensitivities of the landscape encountered within the areas crossed by the route:

- Boardwalk - There is approximately 2.4km of proposed greenway within the SPA/SAC areas with approximately 610 metres of this within the intertidal zone. In these areas it is proposed that the greenway be elevated onto a boardwalk structure and be formed using propriety recycled plastic elements to minimise impact on the SPA and SAC (location of boardwalk as shown in Figure 1-2), as agreed provisionally with the ecological consultant.
- Bituminous Surfaced Greenway - There is approximately 4.1km of proposed greenway to be constructed along the road or close to the road edge. Due to the rural location and low maintenance requirements a bituminous surface is proposed (as shown in Figure 1-2).

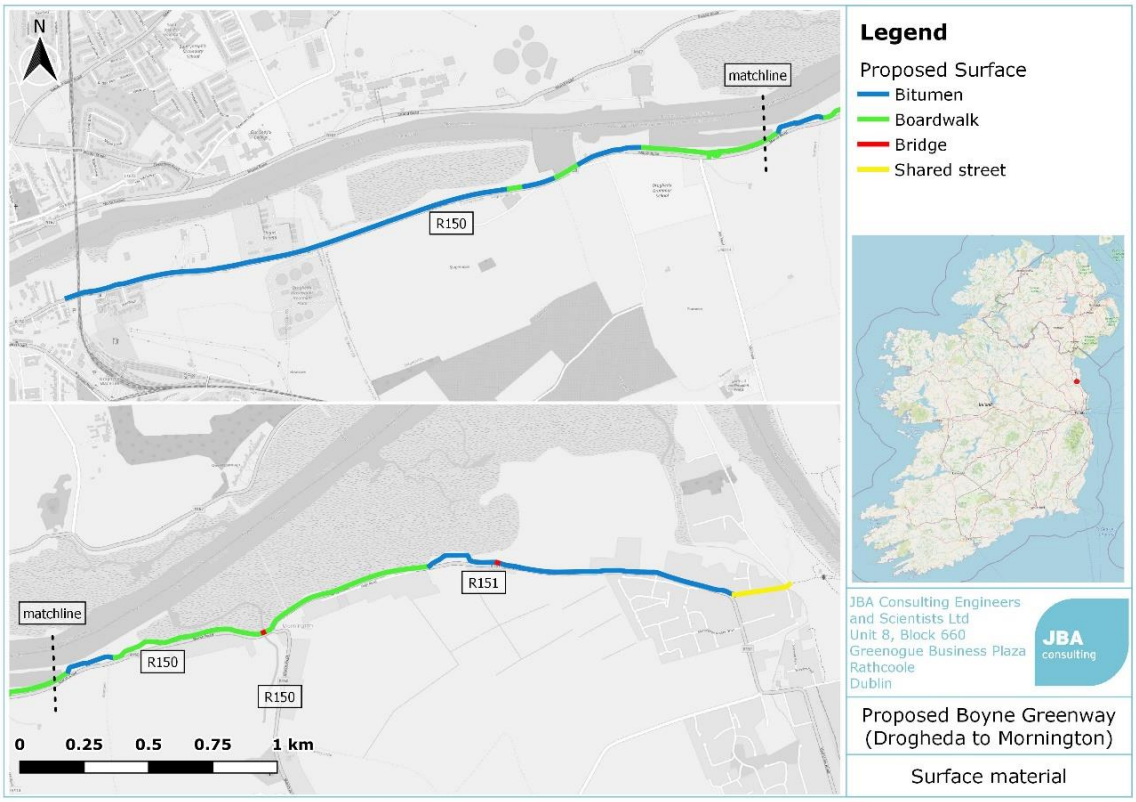


Figure 1-3 Proposed Surface Material along Route of Greenway

1.2.3 Typical Bridge Section

Figure 1-4 Typical Structures along Route of Greenway

Bridge sections will be required at two locations along the route of the greenway to provide 20 metre clear spans. The first is between Chainage 3705 and 3725 in Mornington and spans the outlet from the Stameen/ Colpe Stream. The second is between chainage 4720 and 4740 and spans the outlet from an unnamed watercourse. Typical structures are shown in Figure 1-4 above and in dwg 170029-5201 in Figure 1-5 below.

The proposed bridge at Chainage 3705 to 3725, spanning the outlet of the Stameen/Colpe Stream, will be a prefabricated steel arch bridge placed on precast concrete cross beams on precast concrete piles. This construction approach was agreed through discussions with the architectural heritage department of Meath County Council to limit impact on the existing stone arch bridge structure and not detract from the bridge visually.

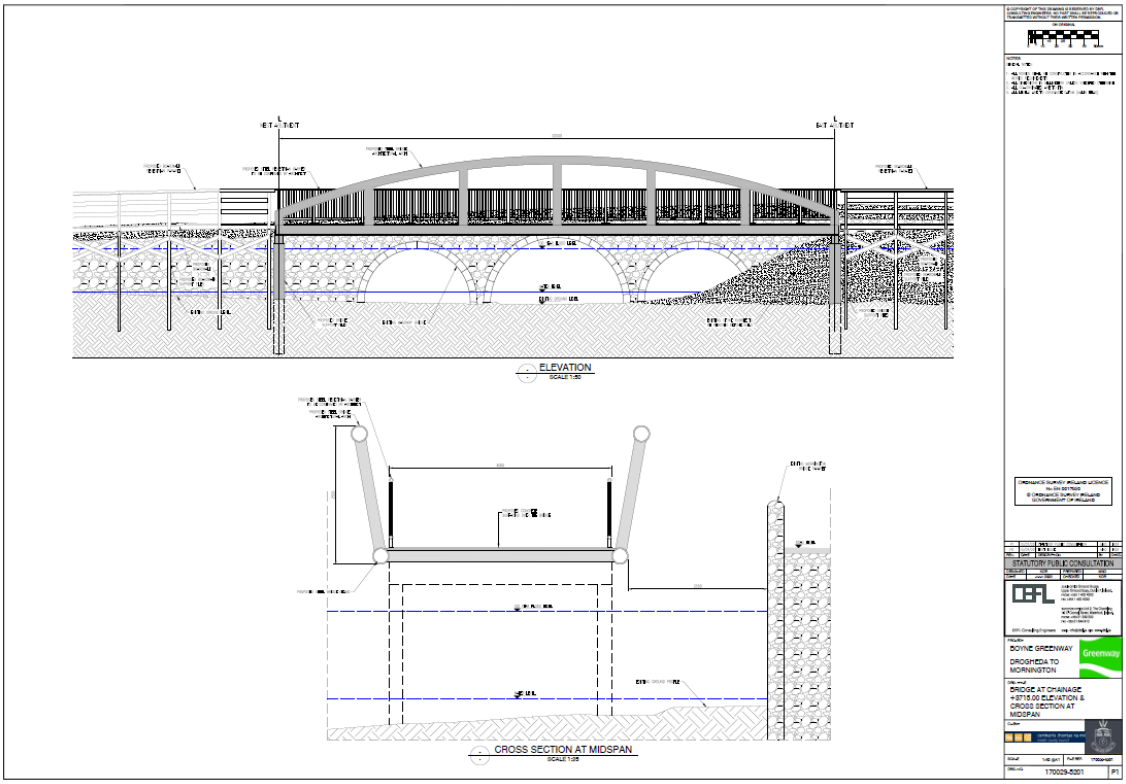


Figure 1-5 Prefabricated steel arch bridge at Chainage 3705 and 3725 in Mornington

1.2.4 Public Lighting

No lighting is proposed for the proposed Boyne Greenway as a whole, as it will be used mostly during daylight hours. Existing lighting associated with the road corridor and existing amenity lands will be maintained. Additional operational lighting is required for security and safety i.e. at the controlled crossings (zebra and toucan crossings) along the scheme on the public road (at Chainages 40, 2215, 2610 and between Chainages 3730-3760 Church Road/R151 junction). These will be LED based (to avoid emission of UV light) and will be 'cowled' away from estuarine habitats with no light spillage, in line with best practice for bats and birds.

2 Methodology

The methodology for the LVIA will be a blended version using methodology from five sources. The work will take into consideration the process outlined in the Natural England publication 'An approach to landscape sensitivity assessment – to inform spatial planning and land management'[1]. It will also take cognisance of the two TII documents for Landscape Character Assessment (LCA)[2] and [3] and it will reflect aspects of the Guidelines on LVIA by the Landscape Institute UK[4]. It will also incorporate the Landscape Character Assessment from the current Meath County Development Plan 2013-2019 and the Louth County Development Plan 2021-2027.

This LVIA was caried out between October and December 2021, and at the request of An Bord Pleanála. The LVIA is a combination of desk studies, field surveys and verified photomontage, the work was carried out by a team of landscape architects in JBA Consulting Ltd and Macroworks Ltd.

The site-work stage involves the verification of nearby views from the initial desk-based study. Field notes were recorded in relation to topography, land use, existing landscape features and overall landscape character.

2.1 Landscape Impact Assessment Criteria

Landscape character assessment (LCA) is the process of identifying and describing variation in character of the landscape[5]. LCA documents identify and explain the unique combination of elements and features that make landscapes distinctive by mapping and describing character types and areas. They also show how the landscape is perceived, experienced and valued by people and identify key landscape features or areas to be protected.

When assessing the potential impacts on the landscape resulting from a proposed project, the following criteria are considered:

- Landscape character sensitivity;
- Magnitude of likely impacts; and
- Significance of landscape effects.

2.1.1 Sensitivity of the Landscape

The sensitivity of the landscape to change is the degree to which a particular area can accommodate changes or new elements without unacceptable detrimental effects to its essential characteristics.

Landscape Sensitivity often referred to as 'value' is classified using the following criteria which have been derived from a combination of industry guidelines from the Landscape Institute for Landscape and Visual Impact Assessment, and professional judgement.

The baseline assessment of landscape sensitivity is to be based largely upon LCA's undertaken as part of the County Development Plans (Louth and Meath) supplemented by site visits to define smaller character zones. It is recognised that there is a difference in detail and form of the analysis presented in the two LCAs. The following sensitivity designations are to be used in the analysis:

Very high - Areas where the landscape character exhibits a very low capacity for change in the form of development. Examples of which are very high value landscapes, protected at an international level e.g. World Heritage Site, where the principal management objectives are likely to be protection of the existing character;

1 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/817928/landscape-sensitivity-assessment-2019.pdf

2 Transport Infrastructure Ireland. *December 2020. Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) of Proposed National Roads – Standard. PE-ENV-01102*. TII publications.

3 Transport Infrastructure Ireland. *December 2020. Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) of Specified Infrastructure Projects – Overarching Technical Document. PE-ENV-01101*. TII publications

4 Landscape Institute and the Institute of Environmental Management & Assessment. 2013. *Guidelines for Landscape and Visual Impact Assessment*. *Third Edition*. Routledge.

5 Tudor. C, Natural England (2014). An Approach to Landscape Character Assessment. Natural England

High - Areas where the landscape character exhibits a low capacity for change in the form of development. Examples of which are high value landscapes, protected at a national level e.g. National Park, where the principal management objectives are likely to be protection of the existing character;

Medium - Areas where the landscape character exhibits a medium capacity for change in the form of development. Examples of which are medium value landscapes, protected at a Local or Regional level e.g. Open space areas mentioned within a County Development Plan, where the principal management objectives are likely to be protection of the existing character;

Low - Areas where the landscape character exhibits a high capacity for change and has very few or no designated landscapes or open space areas; and

Negligible - Areas of landscape character that include derelict, mining, industrial land or are part of the urban fringe where there would be a reasonable capacity to embrace change or the capacity to include the development proposals. Management objectives in such areas could be focused on change, creation of landscape improvements and/or restoration to realise a higher landscape value.

2.1.2 Magnitude of Likely Landscape Impacts

The magnitude of a predicted landscape impact is a product of the scale, extent or degree of change that is likely to be experienced as a result of the proposed project. The magnitude takes into account whether there is a direct physical impact resulting from the loss of landscape components and/or a change that extends beyond the boundary of the proposed project that may have an effect on the landscape character of the area:

Very high - Change that would be large in extent and scale with the loss of critically important landscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an overall change of the landscape in terms of character, value and quality;

High - Change that would be more limited in extent and scale with the loss of important landscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an overall change of the landscape in terms of character, value and quality;

Medium - Changes that are modest in extent and scale involving the loss of landscape characteristics or elements that may also involve the introduction of new uncharacteristic elements or features that would lead to changes in landscape character, and quality;

Low - Changes affecting small areas of landscape character and quality, together with the loss of some less characteristic landscape elements or the addition of new features or elements;

Negligible - Changes affecting small or very restricted areas of landscape character. This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable;

Neutral - Changes that do not involve the loss of any landscape characteristics or elements and will not result in noticeable changes to the prevailing landscape character; and

Positive - Changes that restore a degraded landscape or reinforce characteristic landscape elements.

2.1.3 Significance of Landscape Effects

The significance of the landscape impact will be the combination of the sensitivity of the landscape against the magnitude of the change. It is summarised in Table 2-1 below

MAGNITUDE \ SENSITIVITY	Very high	High	Medium	Low	Negligible
Very high	Profound	Very significant	Significant	Moderate	Slight
High	Very significant	Significant	Moderate	Slight	Slight
Medium	Significant	Moderate	Slight	Slight	Imperceptible
Low	Moderate	Slight	Slight	Imperceptible	Imperceptible
Negligible	Slight	Slight	Imperceptible	Imperceptible	Imperceptible
Neutral	Imperceptible	Imperceptible	Imperceptible	Imperceptible	Imperceptible
Positive	Positive	Positive	Positive	Positive	Imperceptible

Table 2-1 Significance of Impact based on Sensitivity and Magnitude

2.2 Visual Impact Assessment Criteria

2.2.1 Sensitivity of Visual Receptors

Unlike landscape sensitivity, the sensitivity of visual receptors has an anthropocentric (or human-centric) basis. It considers factors such as the perceived quality and values associated with the view, the landscape context of the viewer, the likely activity they are engaged in and whether this heightens their awareness of the surrounding landscape.

The sensitivity of visual receptors is classified using the following criteria which have been derived from a combination of industry guidelines from the Landscape Institute for Landscape and Visual Impact Assessment and professional judgement. Visual receptors most susceptible to changes in views and visual amenity are shown below;

Very high - Residents in properties within protected landscapes and travellers on a Scenic route where awareness of views is likely to be heightened;

High – Residents in properties with predominantly open views from windows, garden or curtilage. People, whether residents or visitors, who are engaged in outdoor recreation including use of public rights of way, whose attention or interest is likely to be focussed on the landscape and on particular views, those on a scenic route where the view is not specifically in the direction of the proposed development and residents close to lit elements of the scheme;

Medium - Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience, and communities where views contribute to the landscape setting enjoyed by residents in the area.

Low - People engaged in outdoor sport or active recreation on a local scale, which does not involve or depend upon appreciation of views of the landscape; and people at their place of work whose attention may be focussed on their work or activity, not their surroundings and where the setting is not important to the quality of working life, and people travelling in vehicles where their view is limited to a few minutes at any view point; and

Negligible - Changes affecting restricted viewpoints.

2.2.2 Magnitude of Visual Impact

The magnitude of a visual effect is determined on the basis of several factors: the relative numbers of viewers, the distance from the viewpoint, the visual dominance of the proposed development within a view including the presence and extent of roadside lighting and its effect on visual amenity, as follows:

Very high - The proposal intrudes into a large proportion or critical part of the available vista and is without question the most noticeable element. The proposals bring night-time lighting into an unlit environment causing very high and significant levels of night time glare. A high degree of visual clutter or disharmony is also generated, strongly reducing the visual amenity of the scene;

High - The proposal intrudes into a significant proportion or important part of the available vista and is one of the most noticeable elements. The proposals bring night-time lighting into an unlit

environment causing high levels of night time glare. A considerable degree of visual clutter or disharmony is also likely to be generated, appreciably reducing the visual amenity of the scene;

Medium - The proposal represents a moderate intrusion into the available vista, is a readily noticeable element and/or it may generate a degree of visual clutter or disharmony, thereby reducing the visual amenity of the scene. The proposals bring night-time lighting into an unlit environment causing noticeable but not significant levels of night time glare. Alternatively, it may represent a balance of higher and lower order estimates in relation to visual presence and visual amenity;

Low - The proposal intrudes to a minor extent into the available vista and may not be noticed by a casual observer and/or the proposal would not have a marked effect on the visual amenity of the scene; and

Negligible - The proposal would be barely discernible within the available vista and/or it would not detract from, and may even enhance, the visual amenity of the scene.

Magnitude can also be described as:

Neutral - Changes that are not discernible within the available vista and have no bearing the visual amenity of the scene; and

Positive - Changes that enhance the available vista by reducing visual clutter or restoring degraded features.

2.2.3 Visual Impact Significance

As stated above, the significance of visual impacts is a function of visual receptor sensitivity and visual impact magnitude. This relationship is expressed in the same significance matrix as used earlier in respect of landscape impacts, see Table 2-1.

2.2.4 Impact Classification Terminology

Table 2-2 presents the Impact Classification Terminology as published in the EPA guidance document[6]. Standard definitions are provided in this glossary, which permit the evaluation and classification of the quality, significance, duration and type of impacts associated with a proposed development on the receiving environment.

Each impact is described in terms of its quality, significance, extent, duration and frequency and type, where possible.

[6] Environmental Protection Agency (August 2017) *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (Draft)

IMPACT CHARECTERISTICS	TERM	DESCRIPTION
Quality of Effects	Positive	A change that improves the quality of the environment.
	Neutral	No effects or effects that are imperceptible, within normal bounds of variation within the margin of forecasting error.
	Negative/ Adverse	A change that reduces the quality of the environment.
Significance of Effects	Imperceptible	An effect capable of measurement, but without significant consequences.
	Not significant	An effect which causes noticeable changes in the character of the environment, but without significant consequences.
	Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
	Significant	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
	Very significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
	Profound	An effect which obliterates sensitive characteristics.
Extent and Context of Effects	Extent	Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.
	Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions.
Probability of Effects	Likely	The effects that can reasonably be expected to occur because of the planned project, if all mitigation measures are properly implemented.
	Unlikely	The effects that can reasonably be expected not to occur because of the planned project, if all mitigation measures are properly implemented.
Duration and Frequency of Effects	Momentary	Effects lasting from seconds to minutes.
	Brief	Effects lasting less than a day.
	Temporary	Effects lasting less than a year.
	Short-term	Effects lasting one to seven years.
	Medium-term	Effects lasting seven to fifteen years.
	Long-term	Effects lasting fifteen to sixty years.
	Permanent	Effects lasting over sixty years.
	Reversible	Effects that can be undone, for example through remediation or restoration
	Frequency	Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)
Types of Effects	Indirect/ Secondary)	Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
	Cumulative	The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.
	'Do-Nothing'	The environment as it would be in the future should the subject project not be carried out.
	`Worst case'	The effects arising from a project in the case where mitigation measures substantially fail.
	Indeterminable	When the full consequences of a change in the environment cannot be described.
	Irreversible	When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
	Residual	The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
	Synergistic	Where the resultant effect is of greater significance than the sum of its constituents.

Table 2-2 Impact Classification Terminology

3 Baseline Environment

3.1 Landscape Character

3.1.1 Desktop Study

The draft Landscape Character Assessment Guidelines of 2000[7] required all Local Authorities to carry out a Landscape Character Assessment (LCA) of their operational area. The route of the proposed Greenway falls across two local authority areas :County Meath and County Louth, their LCA's are described below.

3.1.1.1 Meath County Development Plan 2013-2019

The site is within Landscapes Character Area 7 - Coastal Plain, and is described in the current Meath County Development Plan, 2013-2019. The Coastal Plain area is characterised by scrubby, rolling lowlands near the coast interspersed with stands of pine. The majority of residential development is in the form of ribbon development (see plate 3.1). Long distance views are available down the River Boyne and along the coastline however due to the flat topography of the landscape and overgrown nature of many hedgerows, views inland from the coast are not readily available. Plate 3.2 illustrates the scenic view from the R150.

Plate 3.1

Plate 3.2

3.1.1.2 Louth County Development Plan 2021-2027

A Landscape Character Assessment for County Louth was carried out in 2002, it classified the county into nine areas. The visual envelope of the proposed development (See Figure) site includes two character areas within County Louth:

- The Dunany, Boyne Estuary Coast landscape character area which is on the opposite side of the Boyne Estuary and includes a Scenic route (R167); and
- The Boyne and Mattock Valleys landscape character area which includes the first 1.7km of the proposed Greenway from the railway viaduct on the eastern edge of Drogheda as far as Drogheda Port.

The two character areas are included within the Louth Landscape Character Assessment (December 2002), the key characteristics are below:

Dunany, Boyne Estuary Coast LCA - Louth County Council (LCC) has identified two areas of high scenic quality i.e. Colon and Monasterboice, both north west of the visual envelope and two views and Prospects and two viewing points of note. One Scenic view is on the northern banks of the Boyne Estuary see figure. The area is high in archaeological history with approximately 110 recorded features, the landcover is mostly grassland, tillage with many quarries and rocky outcrops. The LCA notes that the Key Values of this area which relate to the proposed development include its *'Recreational opportunity' which is significant; the Objective is to Conserve and Enhance*. *The Boyne mudflats (SPA) used by wildfowl and wader is also noted of value and the Objective is also to Conserve.*

[7] Department of the Environment, Heritage and Local Government (2000) *Draft Guidelines for Planning Authorities on Landscape and Landscape Assessment*. Irish Government

Boyne and Mattock Valleys LCA - The key characteristics of this area are the valleys either side of the River Boyne which present panoramic views of Drogheda, within the western side of the visual envelope. This LCA includes the industrial urban edge of Drogheda i.e. Chainage 0 to 1700 and the 19th Century railway stone arche viaduct railway viaduct. The most important element of the is LCA is th northern buffer zone for Brú na Bóinne World Heritage Site which is within the administrative areas of Louth and Meath. The LCA notes that the Key Values of this area which relate to the proposed development area include *'Potential for recreational opportunities (particularly water based); the Objective is to Conserve and Enhance*. Additionally *Panoramic views across the town of Drogheda in to plains of Meath, Objective is to Conserve.*

The current development[8] plan, Appendix 7 -Views and Prospects, illustrates 42 scenic viewpoints. There are no viewpoints within the Visual envelope for project. The nearest is VP24 Towards coast and Clogherhead Dardisrath along L6281, 800m north of Barnhill Crossroad (5km north from the nearest point proposed development) and VP29 -view from M1 Retail Park toward the M1 Motorway Bridge 4km west from the nearest point proposed development)

3.1.2 Other Influencing Factors Affecting the Landscape Types in the Study Area

Ecology - A significant portion of the route falls within the boundary of the Boyne Estuary Special Protection Area (SPA) and Boyne Coast and Estuary Special Area of Conservation (SAC).

The project Ecological Impact Assessment[9] (EcIA) states that the Boyne Estuary SPA in general is the second most important estuary for wintering birds on the Louth-Meath coastline. Black-tailed Godwit occurs here in internationally important numbers and a further nine species of wintering water birds have populations of national importance (i.e. Shelduck, Oystercatcher, Golden Plover, Grey Plover, Lapwing, Knot, Sanderling, Redshank and Turnstone). Of particular significance is that three species that regularly occur, Golden Plover, Bar-tailed Godwit and Little Tern are listed on Annex I of the E.U. Birds Directive. Part of the Boyne Estuary SPA is a Wildfowl Sanctuary. The estuary provides both feeding and high-tide roost areas for these birds.

The EcIA[6] also states that sections of the proposed greenway route also overlap or run adjacent to the boundaries of the Boyne Coast and Estuary Special Area of Conservation (SAC), a coastal site which includes most of the tidal sections of the River Boyne, intertidal sand- and mudflats, saltmarshes, marginal grassland, and the stretch of coast from Bettystown to Termonfeckin that includes the Mornington and Baltray sand dune systems. The site is designated due to the presence of the following habitats; Estuaries, Tidal Mudflats and Sandflats, Annual vegetation of drift lines, Salicornia Mud, Atlantic Salt Meadows, Embryonic Shifting Dunes, Marram Dunes (White Dunes), Fixed Dunes (Grey Dunes).

Cultural Heritage - The Archaeological and Built Heritage Assessment[10] (ABHA) noted that there are a number of recorded monuments within the area surrounding the proposed greenway. The closest is the zone of archaeological notification associated with the former medieval settlement at Mornington (RMP ME021-001; Ch. 3680- 4040). The proposed greenway will pass through this area. Three further monuments are located within the immediate vicinity of the proposed greenway, Mornington church, graveyard, and a chest tomb (ME021-001001-3; Ch. 3820-3900).

There is a total of 17 protected structures located within the study area of the proposed greenway, along with 14 structures included on the NIAH Survey and 13 features included in the Meath Industrial Heritage Survey. The closest protected structures consist of Mornington Bridge (RPS MH021-200; Ch. 3690-3730). Here a new bridge will be constructed to the north of the existing bridge with the scheme also passing beneath the Boyne Viaduct (RPS DB-184, Ch. 70-100) at the western end of the scheme.

A number of demesne walls directly associated with protected structures border the proposed greenway directly. These include walls associated with St James (RPS DB-148; Ch. 150-160) and Weirhope House (RPS DB-149; Ch. 390- 430).

[8] Louth County Council (2021) *County Development Plan* 2021-2027

[9] Inis Environmental Consultants Ltd. February 2022. *Proposed Boyne Greenway (Drogheda to Mornington) Project. Ecological Impact Assessment (EcIA) Report.* Meath County Council

[10] Irish Archaeological Consultancy Ltd. April 2020. *Archaeology Archaeological and Built Heritage Assessment of the Proposed Boyne Greenway : Drogheda to Mornington, Counties Meath and Louth*. Meath County Council

Several smaller items of street furniture, including milestones and water pumps, are also located within the immediate vicinity of the proposed greenway.

The presence of both natural (i.e. existing natural environment) and physical (the built environment), constraints has guided the route options for the proposed scheme and informed the selection of the preferred route. These include:

- River Boyne;
- Boyne Estuary SPA and the Boyne Coast and Estuary SAC;
- Existing and committed future development along the route;
- Existing monuments and protected structures along the route such as Mornington Bridge;
- Mature Trees and other natural features along the Marsh Road (R150) and Mornington Road (R151);
- Road alignment along the Marsh Road (R150) and Mornington Road (R151);
- The need to maintain traffic flow for access to local amenities;
- Land ownership; and
- Environmental impacts and engineering constraints such as steep topography, frequent watercourse crossings, and potential flooding.

3.1.3 Site visit

A series of site visits was undertaken in October and November 2021 to understand the baseline landscape character. Local landscape character zones were created to describe the character units along the route. These are illustrated in Figure 3-1 and described below along with key landscape and visual amenity features and the overall quality of the landscape :

3.1.4 Chainage 000 to 340 - Landscape character zone 1

This is the eastern suburban edge of Drogheda from the Carmelite Cottages to 36 Marsh Road with residential properties on southern side of road, and includes a Railway Viaduct (Eighteen-span limestone and iron railway over river bridge, dated 1855) which is a distinct feature. A mature Leylandii treeline from Ch. 95 to 220 provides a tall screen for the industrial lands to the north. From Ch. 220 to 340 on northern side of road is scrub vegetation and intermittent trees and a security fencing and a footpath.

- Key landscape features - Mature Leylandii hedge
- Key visual amenity features - View towards the Railway viaduct
- Landscape Quality - The landscape is suburban, quiet, unremarkable and low in quality.

3.1.5 Chainage 340 to 630- Landscape character zone 2

This is a tree lined narrow road corridor with glimpse views into industrial lands to the north. A stone wall and mature deciduous hedgerow for the southern boundary of the road corridor. Undeveloped industrial lands are on the northern side and intermittent trees and a security fencing for the northern boundary of the road corridor and a footpath. The railway viaduct is a distinct landmark for views in a westerly direction. There is a memorial statue and place (Halpin and Moran memorial) with a low stone wall at Ch. 465. Developed industrial lands (the Marine Terminal) to the north with a low stone wall, security fencing and planted shrub and hedge edge and a footpath

- Key landscape features - A stone wall and mature deciduous hedgerow for the southern boundary of the road corridor. The memorial statue and place on northern side of road.
- Key visual amenity features - View towards the Railway viaduct
- Landscape Quality - The landscape is suburban, quiet, unremarkable and low in quality.

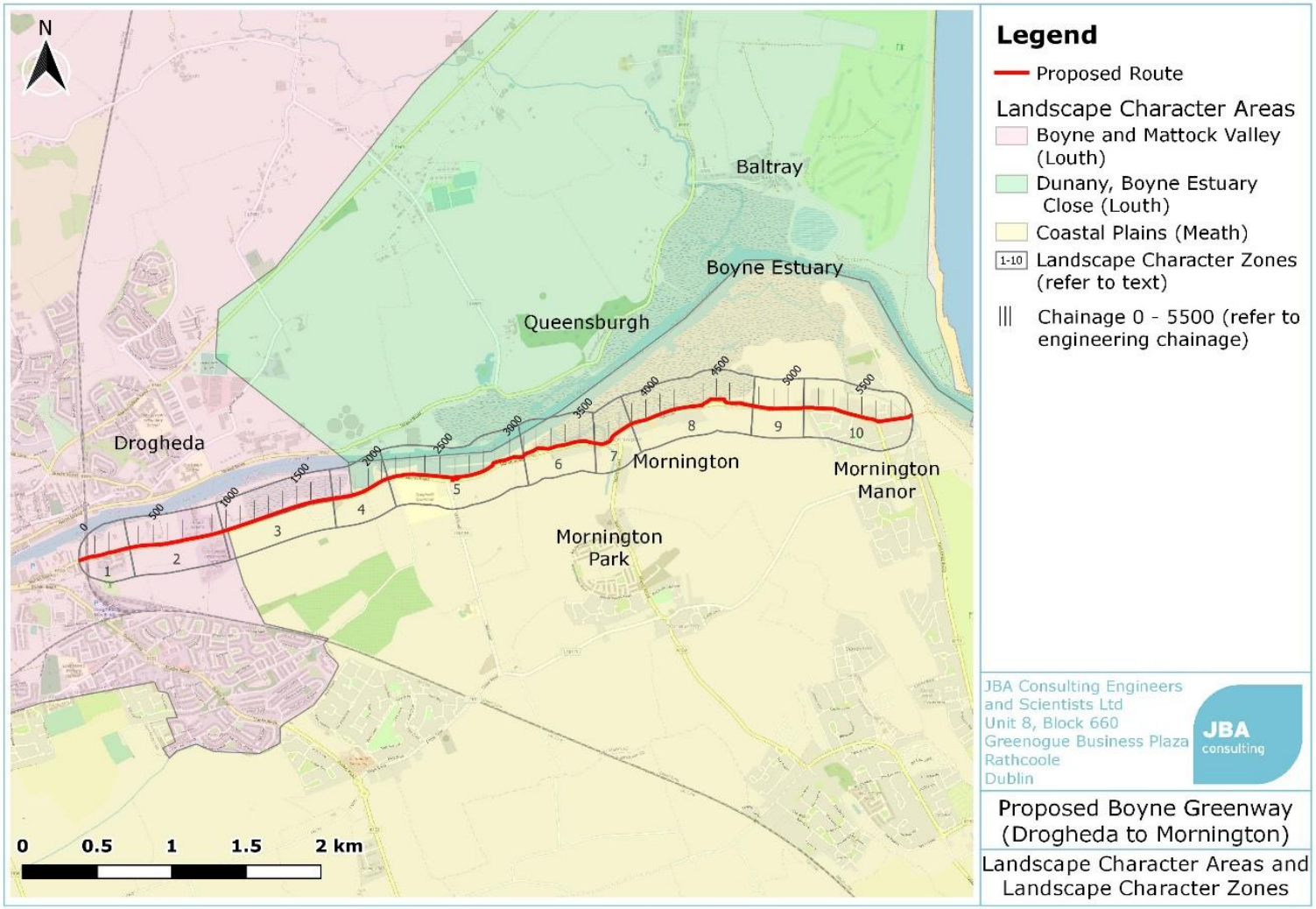


Figure 3-1 Landscape Character Areas and Zones

3.1.6 Chainage 630 to 1750 - Landscape character zone 3

In this zone the mature hedge and footpaths ends, the road verges are intermittent hedges and the road corridor starts to widen out and views in a northern direction in to the industrial lands are available. To the south the view are restrained by land form, sloping agricultural fields create a ridge line to contain visibility of the road corridor. Stagrennan House (Ch. 1330-1600) in a demesne setting, To the north there is flat scrub lands. Glimpse views become possible of the estuary to the north although not of open water.

- Key landscape features - Stagrennan House and demesne.
- Key visual amenity features - View towards the Railway viaduct, view of northern façade of Stagrennan House and glimpse views of the estuary.
- Landscape Quality - The landscape is unremarkable and low in quality.

3.1.7 Chainage 1750 to 2150 - Landscape character zone 4

In this zone there is a mature hedgerow (Short section of Leylandii followed by junction of R150 with L16144 then mature mixed deciduous hedgerow species) and a tall stone hedge return to the route corridor on the southern side to create narrowing of the corridor. There are no footpaths in this character zone. Glimpse views of open water in the estuary to the north become visible (Mud shores, Salt marshes and Reed and large sedge swamps of the SPA and SAC). To the north a narrow channel of water is visible with a stone wall and vegetation separating it from the main estuary. The industrial development in Drogheda Port on the opposite banks of the estuary dominant and form the northern skyline. A short stretch of intimate landscape of high quality is formed at the small inlet of Drogheda port to the north of R150 road on approach to Harbourville house and the presence of the old Lodge for Stameen House on the south. The landscape is interesting and diverse in functions, has greater range of habitats and natural material and increased features of scenic quality yet degraded overall due to the dominance of port side industrial activity and signage.

- Key landscape features - a narrow channel of water north of R150 with a stone wall and vegetation separating it from the main estuary. Small inlet of water next to R150. The old Lodge for Stameen House.
- Key visual amenity features - East facing view towards the small inlet if water and Harbourville house to the rear, old Lodge for Stameen House and glimpse views of the estuary.
- Landscape Quality - The landscape is diverse with a range of natural water edge habitats, mature hedgerow, cultural features and scenic views, it is Medium in quality.

3.1.8 Chainage 2150 to 3100 - Landscape character zone 5

In this zone there is a mature hedgerow, a narrowing of the road corridor and glimpse scenic views of estuary to the north. It includes the grass verges, mature trees and low stone wall of the campus containing the Drogheda Grammar School and Le Chéile Educate Together National School, Drogheda (this is also a Eden View Demesne with intact demesne walls and mature hedgerow). No footpaths except for a short section within the school campus. Thereafter is the junction of R150 with L16114 beyond which is Bay View House in a parkland setting with protected gates, railings and walls. The road corridor is on high ground and continues to be narrowed with mature hedgerow and glimpse scenic views of the channels of water in the estuary to the north and the natural shoreline on the northern side.

- Key landscape features - Stone walls and mature deciduous hedgerow for the southern boundary of the road corridor. Eden View Demesne walls. Bay View House with protected gates, railings and walls.
- Key visual amenity features - Elevated distant glimpse views of the channels of water in the estuary and the natural shoreline on the northern side.
- Landscape Quality - The landscape is diverse with a range of natural water edge habitats, mature hedgerow, cultural features and scenic views, it is Medium in quality.

3.1.9 Chainage 3100 to 3600 - Landscape character zone 6

This zone comprises flat open coastal landscape with very little, tall vegetation either side of the road corridor. Open distant views of estuary to north and northern shore line beyond. There are no

footpaths in this character zone. Established detached residential properties (Mornington) on the southern side of the road with north facing coastal views through their boundary planting.

- Key landscape features - Coastline adjacent to the road corridor.
- Key visual amenity features - Elevated open views of the channels of water in the estuary and the natural shoreline on the northern side.
- Landscape Quality - The landscape is dramatic due to the uninterrupted, scenic, coastal views, it is Medium in quality.

3.1.10 Chainage 3600 to 3900 - Landscape character zone 7

This intimate and semi enclosed character zone is focused on Mornington Bridge (RPS MH021-200) a triple arched stone road bridge surrounded by four historic artefacts (Star of the sea church plus graveyard and house, deserted mediaeval settlement) and the natural shoreline to the north. There are no footpaths in this character zone.

- Key landscape features - Mornington Bridge and historic artefacts. Natural indented coastline adjacent to the road corridor.
- Key visual amenity features - The intimate view towards the bridge, the church and associated vernacular buildings and the mature trees which contain the view and are reflected in the water of the inlet.
- Landscape Quality - The landscape is scenic due to the intimate scale of the collection of buildings, structures and trees in the coastal setting, it is High in quality.

3.1.11 Chainage 3900 to 4750 - Landscape character zone 8

The road corridor is low lying, adjacent to the shore line and close to water level allowing unrestricted views. The coastline on both sides of the estuary is natural and largely undeveloped, vegetation and low ridgelines form the skyline. Established detached residential properties (Mornington) are on the southern side of the road (R151) with north facing coastal views through their boundary planting. There are no footpaths in this character zone.

- Key landscape features - Coastline adjacent to the road corridor.
- Key visual amenity features - Churchyard wall. Elevated open views of the channels of water in the estuary and the natural shoreline on the northern side.
- Landscape Quality - The landscape is dramatic due to the uninterrupted, scenic, coastal views, it is Medium in quality.

3.1.12 Chainage 4750 to 5100 - Landscape character zone 9

The mature hedgerow on the southern side of the route creates a narrowing of the corridor. There are no footpaths in this character zone. Glimpse views of open water in the estuary to the north across open grass fields.

- Key landscape features - Mature hedgerow on southern side of road corridor.
- Key visual amenity features - Glimpse views of the estuary.
- Landscape Quality - The landscape is undeveloped with mature hedgerow and glimpse scenic views, it is Medium in quality.

3.1.13 Chainage 5100 to 5870 - Landscape character zone 10

This is the urban fringe of Mornington Manor to Tower Road where vehicular access ends at a car park for Lady's Finger Tower north of Mornington Bay Beach. There are established residential properties on both sides of the road with a range of domestic boundary treatments including hedges, brick boundary walls and railings marking the property line adjacent to the R151. Footpaths are present along R151 between Ch. 5100 and 5650, no footpaths on Tower Road (L56391).

- Key landscape features - Hedges along residential property boundaries adjacent to R151.
- Key visual amenity features - Channelled view of Lady's Finger Tower at end of Tower Road.
- Landscape Quality - The landscape is unremarkable and Low in quality.

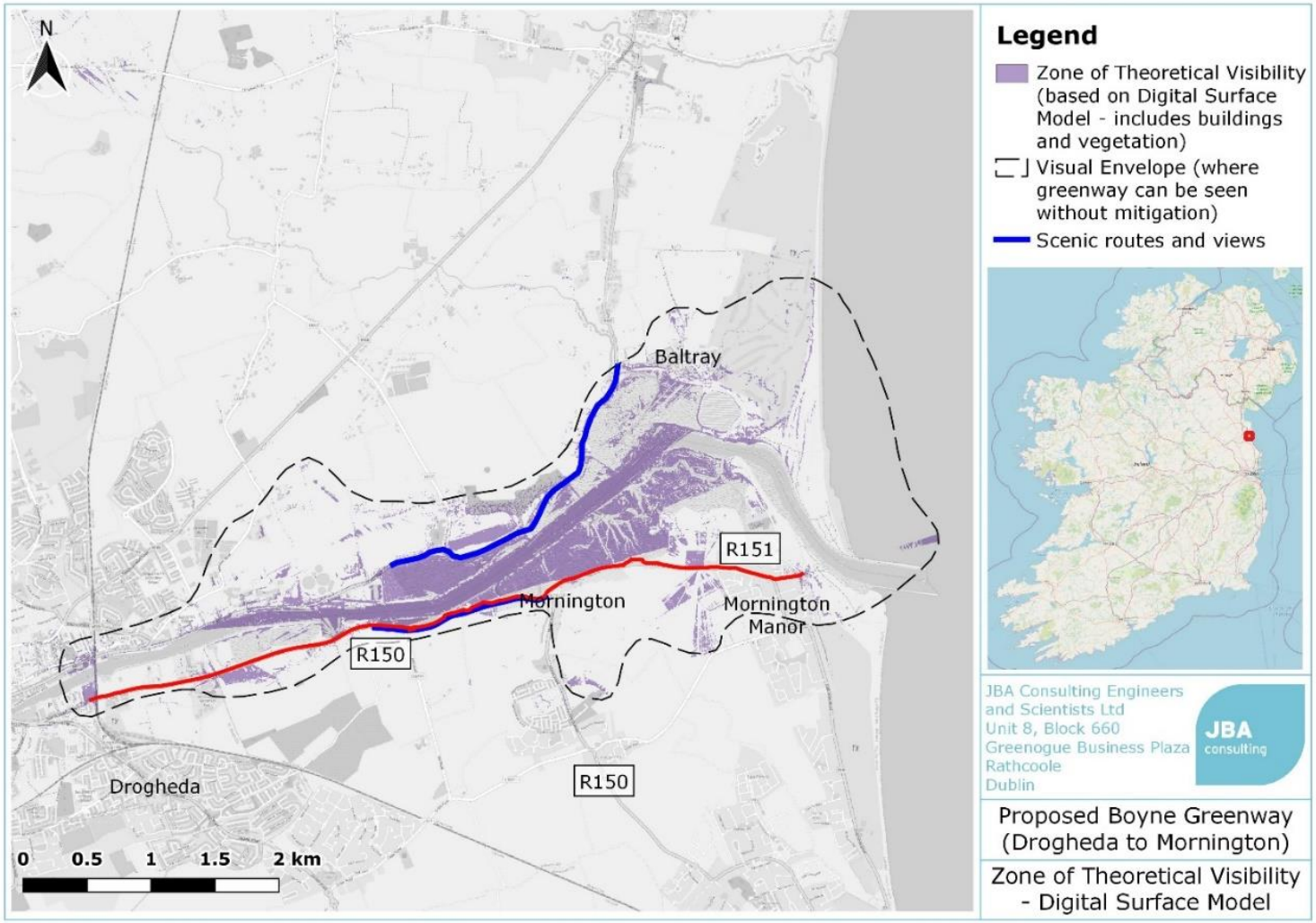


Figure 3-2 Digital Surface Model

3.2 Visual Amenity and Visual Receptors

The Digital Surface Model in Figure 3-2 indicates that visibility of the proposed greenway will be most evident in the central section of the study area i.e. near to Mornington were northerly views for the proposed greenway will be possible over the estuary. In the western and eastern sections of the proposed greenway the presence of built elements or vegetation will restrict visibility to within the R150/R151 road corridor.

In terms of Visual Receptors (VR) along the route, these are listed below, shown overleaf in Figure 3-3 and described in tabular form in Appendix A:

Scenic Routes (R167 and R150) - Vehicle drivers and their passengers on Scenic routes within the area highlighted as visible on the Zone of Theoretic Visibility (Digital Surface Model) in Figure 3-1 including:

- (SR1) Scenic Route R167 Drogheda Road from junction of L63272 to Drogheda Port (Scenic Route SR 19 Baltray -Queensborough- Beaulieu[11]) and residential properties with south facing views also on this route.
- (SR2) Scenic Route R150 Coast Road from the junction of L16114 to Mornington (View Reference 75 Map 8.6 Views and Prospects[12]).

Residential Properties along R150/151 - Residents in properties with predominantly open views from windows, garden or curtilage. These include residents of :

- (R1) Carmelite Cottages to 36 Marsh Road (15No. properties).
- (R2) Residents of Stagrennan House.
- (R3) Balamarino House.
- (R4) Individual Property off Mill Road (2No. properties).
- (R5) Bay View House.
- (R6) Individual Property on southern side of R150.
- (R7) Individual Property on northern side of R150.
- (R8) Mornington, western side, (8No.properties on R151).
- (R9) Mornington, western side, (3No.properties on northern end of Church Road).
- (R10) Mornington, eastern side, (29No.properties on R151).
- (R11) Mornington Manor and Tower Road, (68No.properties on R151).

People using community facilities. These include:

- (C1) Staff and Pupils of Drogheda Grammar School and Le Chéile Educate Together National School, Drogheda.

Visitors to Heritage assets. -These include:

- (C2) People visiting Mornington cemetery overlooking the R151 and visitors of other local heritage assets close by (VR C2).

Industrial Properties - These include:

- (I1) People working in Drogheda Marine Terminal.
- (I2) People working in Harbourville House and the property in the entrance courtyard.

Roads - These include:

- (V1) Vehicle Driver and their passengers on R150.

[11] Louth County Council 2021 *Louth County Development Plan Chapter 8- Natural Heritage, Green Infrastructure and Biodiversity*. Louth County Council

[12] CAAS Ltd 2020 *Draft Meath County Development Plan 2020-2026 Map 8.6 Views & Prospects*. Meath County Council

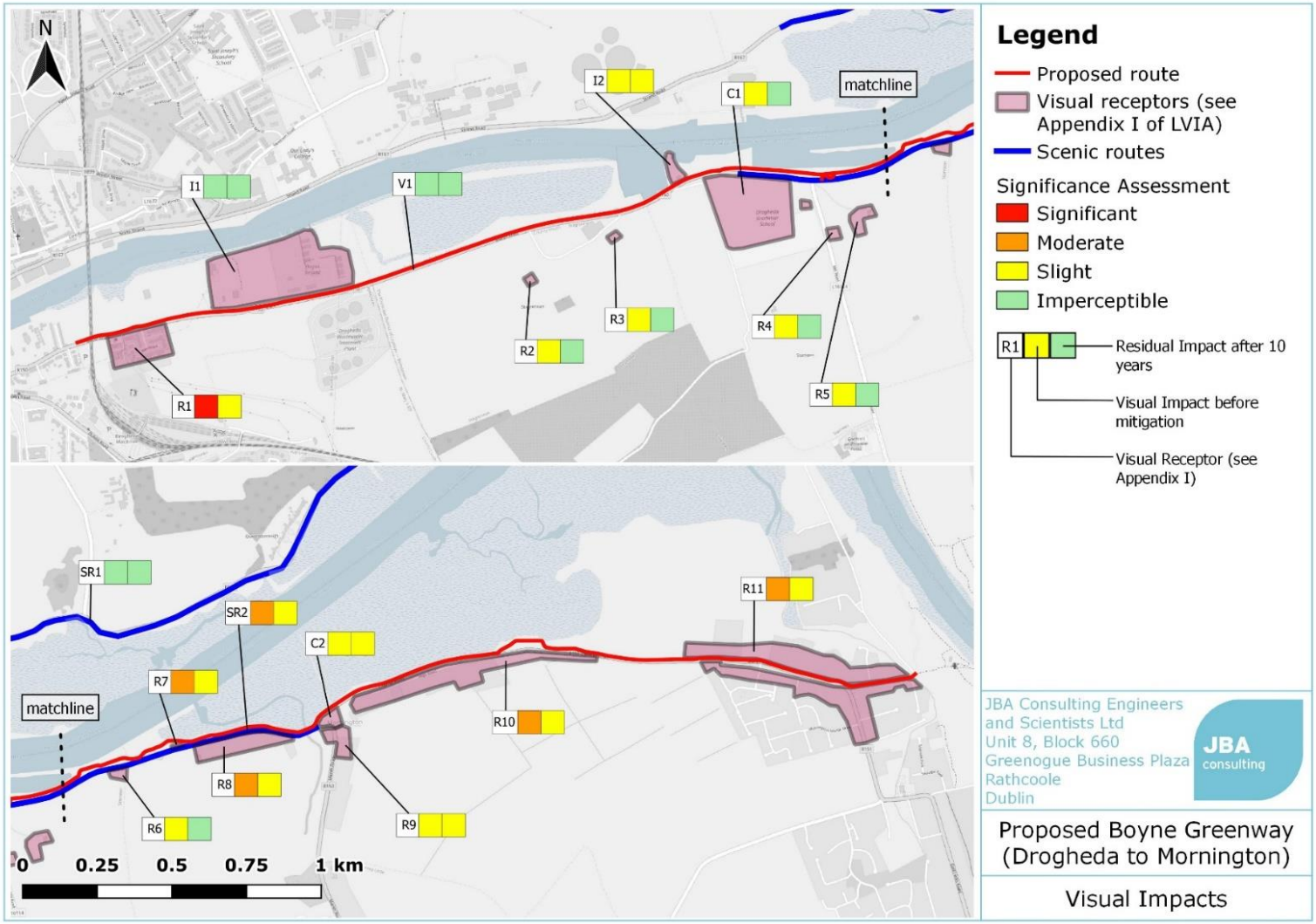


Figure 3-3 Visual Impacts and Location of Receptors

4 Potential Impacts

4.1 Construction Phase Impacts

4.1.1 Landscape Character and Visual Amenity

During the construction phase short term impacts on the landscape character will occur principally due to the removal of verge side tree and hedge planting and boundary treatment. The Arboricultural Impact Assessment (AIA)[13] states that 147 trees and 10 private hedges will be removed to facilitate the construction of the greenway. Eight of the trees are within private residential lands and a further two trees are proposed to be felled as they risk failure and are within a hazardous distance of the R150 road.

The presence of construction traffic, plant and materials will also create visual clutter and increased activity also causing short term impacts on visual amenity.

4.2 Operational Phase Impacts

4.2.1 Chainage 000 to 340 - Landscape character zone 1

4.2.1.1 Impacts on Landscape Character

In zone 1 the mature Leylandii treeline (130 lin. m), the wall and the security fence on the northern side of the road will be removed, the existing cycleway on the west bound traffic lane will also be removed. It is proposed to create a 4m wide bituminous pavement with kerb at the road edge and replace the boundary treatment with 1.2m high stone wall. The existing footpath on the southern side of the road will remain.

The sensitivity of the landscape in zone 1 is Low i.e. it has very few or no designated landscapes or open space areas. The magnitude of change on the physical character of this zone resulting from the removal of the treeline, the wall and the introduction of the proposed greenway pavement is Medium resulting in *Slight adverse permanent landscape impact*.

4.2.1.2 Impacts on Visual Amenity and Visual Receptors

In terms of visual impact the removal of the treeline which is a tall green screen will reveal the vacant brown field site and visibility across the river to Drogheda Port for the residents of Marsh Road (Visual Receptors R1 in Appendix A). Residential properties are classified as highly sensitive in terms of change of visual amenity, they will experience High levels of change in this zone resulting in a *Significant adverse permanent visual impact*.

4.2.2 Chainage 340 to 980 - Landscape character zone 2

4.2.2.1 Impacts on Landscape Character

In zone 2 the intermittent trees (4No.) and a security fencing for the northern boundary of the road corridor will be removed. The Halpin and Moran Memorial and its stone wall will remain in place. The stone wall and mature trees on the southern side of the road will not be altered. It is proposed to create a 4m wide bituminous pavement with kerb at the road edge and replace the boundary treatment with 1.2m high stone wall. In front of the industrial units it is proposed to retain existing parking.

The sensitivity of the landscape in zone 2 is Low i.e. has very few or no designated landscapes or open space areas. The magnitude of change resulting from the removal of the intermittent trees and a security fencing and the introduction of the proposed greenway pavement is Low resulting in an *Imperceptible permanent landscape impact*.

4.2.2.2 Impacts on Visual Amenity and Visual Receptors

Visual receptors in this zone are workers in the industrial units on the northern side of the road, they are Low in sensitivity (Visual Receptors I1 in Appendix A). They will experience Low levels of change

[13] CMK Hort + Arb Ltd. Feb 2022 *Arboricultural Assessment, Arboricultural Impact and Tree Protection Strategy Report. Boyne Greenway - Drogheda to Mornington, Co. Meath/Co. Louth*. Meath County Council.

from the sight of the proposed greenway and the visibility of moving cyclists resulting in an *Imperceptible permanent visual impact*.

4.2.3 Chainage 980 to 1750 - Landscape character zone 3

4.2.3.1 Impacts on Landscape Character

In zone 3 the intermittent hedges along the northern boundary of the road corridor will be removed. The wall and mature trees on the southern side of the road will not be altered. It is proposed to create a 4m wide bituminous pavement with kerb at the road edge, and provide a grass verge on either side of the road.

The sensitivity of the landscape in zone 3 is Medium i.e. it includes Stagrennan House (Ch. 1330-1600) in a demesne setting is to the south, otherwise there are no designated landscapes or open space areas. The magnitude of change resulting from the removal of the intermittent trees and hedges and the introduction of the proposed greenway pavement is Low resulting in a *Slight adverse permanent landscape impact*.

4.2.3.2 Impacts on Visual Amenity and Visual Receptors

Visual receptors in this zone are residents of Stagrennan House to the south, they are High in sensitivity (Visual Receptors R2 in Appendix A). Visual receptors will experience Low levels of change from the sight of the proposed greenway and the visibility of moving cyclists resulting in a *Slight adverse permanent visual impact*.

4.2.4 Chainage 1750 to 2150 - Landscape character zone 4

4.2.4.1 Impacts on Landscape Character

In zone 4 intermittent trees (4No.) and hedges along the northern boundary of the road corridor will be removed. The wall and mature hedge, trees on the southern side of the road will not be altered. It is proposed to create a 4m wide bituminous pavement with kerb at the road edge, and provide a grass verge on either side of the road. At the inlet of water west of Harbourville House (Ch. 2000 to 2104) the proposed greenway will be a boardwalk with a full height screen (created by fixing board walk running boards to the fence posts) on the northern side of the boardwalk handrail. It will be separated by the R150 by a proposed stone wall which will extend into the existing wall.

The sensitivity of the landscape in zone 4 is Medium i.e. the range of mature habitats, the stone walls and the presence of the old Lodge for Stameen House and the proximity to the Mud shores, Salt marshes, Reed and large sedge swamps of the SPA and nearby SAC. The magnitude of change resulting from the removal of the intermittent trees and hedges and the introduction of the proposed greenway pavement and board walkover the Mud shores in the SPA is Medium resulting in a *Slight adverse permanent landscape impact*.

4.2.4.2 Impacts on Visual Amenity and Visual Receptors

Visual receptors in this zone are workers in Drogheda Port, Harbourville House and the property in the entrance courtyard (Visual Receptors I2 in Appendix A), they are all Low in sensitivity. Visual receptors will experience Low levels of change from the sight of the proposed greenway, the board walk and the visibility of moving cyclists resulting in a *Slight adverse permanent visual impact*.

4.2.5 Chainage 2150 to 3100 - Landscape character zone 5

4.2.5.1 Impacts on Landscape Character

In zone 5 mature trees (19No.) within woodland fringe areas at the northern side of the road corridor will be removed. The wall and mature hedge, trees on the southern side of the road will not be altered and there will be no impact on Eden View Demesne walls or protected gates, railings and walls of Bay View House.

It is proposed to create a 4m wide bituminous pavement with kerb at the road edge, and provide a grass verge on either side of the road between Ch 2170 to 2270. There will be a proposed 2m wide footpath on the southern side of the road for improved access to the grounds of Drogheda Grammar School and Le Chéile Educate Together National School, Drogheda. From Ch 2270 the proposed greenway will depart the road corridor and pass onto an area of amenity grassland at a lower ground level closer to the estuary. From Ch 2360 the greenway will pass onto boardwalk as it continues across the mud shore of the estuary and adjacent to an area of woodland fringe. There will also be

a controlled crossing at Ch 2210 close to the entrance to the school and traffic calming measures (raised table) on the road surface at Ch 2900. From Ch 2270 to 3100 (and on into landscape character zone 8) the proposed greenway will have a full height screen on the northern side of the boardwalk handrail (created by fixing board walk running boards to the fence posts).

The sensitivity of the landscape in zone 5 is Medium i.e. the range of mature habitats, the stone walls and the presence of the Eden View Demesne walls. Other valued features include Bay View House with protected gates, railings and walls and the proximity to the Mud shores, Salt marshes, of the nearby SPA and SAC. The magnitude of change resulting from the removal of the mature trees and the introduction of the proposed greenway pavement and board walkover the Mud shores is High resulting in a *Moderate adverse permanent landscape impact*.

4.2.5.2 Impacts on Visual Amenity and Visual Receptors

Visual receptors in this zone are residents of Bay View House (Visual Receptors R5 in Appendix A)to the south (glimpse views only), they are High in sensitivity. Other receptors include pupils and staff in the buildings on the northern edge of the Drogheda Grammar School (Visual Receptors C1 in Appendix A), they are Low in sensitivity. Visual receptors will experience Low levels of change in visual amenity from the removal of the vegetation sight of the proposed greenway at the side of the road, the board walk on lower ground level and the visibility of moving cyclists resulting in a *Slight adverse permanent visual impact*.

4.2.6 Chainage 3100 to 3600 Landscape character zone 6

4.2.6.1 Impacts on Landscape Character

In zone 6 intermittent trees (6No.) within road side scrub at the northern side of the road corridor will be removed. It is proposed to construct a 4m wide boardwalk in this zone on lower ground north of the road corridor. The board walk will pass across lower salt marsh habitat of the estuary and adjacent to an area of scrub. In this zone the proposed greenway will have a full height screen on the northern side of the boardwalk handrail (created by fixing board walk running boards to the fence posts).

The sensitivity of the landscape in zone 6 is Medium i.e. a wide range of mature habitats, and undisturbed coastal landscape and the proximity to the Mud shores, Salt marshes, of the SPA and SAC. The magnitude of change resulting from the removal of the intermittent trees and the introduction of the proposed greenway boardwalk is Medium resulting in a *Slight adverse permanent landscape impact.*

4.2.6.2 Impacts on Visual Amenity and Visual Receptors

Visual receptors in this zone are residents of two detached road side residential properties (Visual Receptors R6 and R7 in Appendix A) on either side of the road and eight residents (Visual Receptors R8 in Appendix A) in the established detached residential properties of the western side of Mornington on the southern side of the road with north facing coastal views through their boundary planting. Residents of these properties are High in sensitivity. Visual receptors in residential properties will experience Low levels of change in visual amenity from the removal of the vegetation and the visibility of moving cyclists resulting in *Moderate and Slight adverse permanent visual impacts*. The vehicle drivers on the R150 road will experience an *Imperceptible momentary visual impact.*

4.2.7 Chainage 3600 to 3900 Mornington Bridge - Landscape character zone 7

4.2.7.1 Impacts on Landscape Character

In zone 7 no vegetation corridor will be removed. It is proposed to construct a 4m wide boardwalk and a Steel Arch Bridge in this zone on lower ground north of the road corridor. The board walk will pass across lower salt marsh habitat of the estuary and adjacent to an area of scrub. For noise mitigation purposes a Perspex panel 1400mm in height will be provided on the northern side of the boardwalk section between at Ch 3705-3725. Elsewhere in this zone the proposed greenway will have a full height screen on the northern side of the boardwalk handrail (created by fixing board walk running boards to the fence posts).

The sensitivity of the landscape in zone 7 is High i.e. a wide range of mature habitats, and undisturbed coastal landscape and the proximity to the Mud shores, Salt marshes, of the SPA and SAC and Mornington Bridge which is a protected structure and historic architectural features (milestone and water pump) in Church Street nearby. No vegetation of cultural heritage features will

be removed or altered in this zone and the magnitude of change resulting from the introduction of the proposed greenway boardwalk is Medium i.e. changes that are modest in scale, resulting in a *Slight adverse permanent landscape impact*. There will also be one zebra crossings at the junction of R150 with R151, one uncontrolled crossing at the Mornington Road/ Church Road junction and traffic calming measures (a raised table) on the road surface.

4.2.7.2 Impacts on Visual Amenity and Visual Receptors

Visual receptors in this zone are residents of northern end of Church Road in Mornington (Visual Receptors R9 in Appendix A) with north facing coastal views through their boundary planting. Residents of these properties are High in sensitivity. Other receptors include visitors to the Star of the Sea church (Visual Receptors C2 in Appendix A) and graveyard (and deserted mediaeval settlement) and visitors walking on the adjacent coastal stretch, they are also Medium in Sensitivity.

The design of a modern pre-fabricated steel bridge structure on piles creates a dynamic new element in the landscape and does not seek to compete with the existing heritage features present. The bridge design, which is in scale with the setting, does not create an interruption to the skyline or shoreline. The bridge design is transparent and light, it maintains visibility of the triple-arch road bridge built c.1840 which is directly adjacent, and it creates an interesting modern view point which aims to mitigate negative impacts from the intrusion towards the view of the existing historic stone bridge. Visual receptors in the residential properties will experience Low levels of change in visual amenity from the introduction of the new bridge and the visibility of moving cyclists which will be a noticeable element and an intrusion into the intimate heritage coastal setting resulting in a Slight adverse permanent visual impact. The heritage visitors will also experience *Slight adverse permanent visual impact*.

4.2.8 Chainage 3900 to 4750 - Landscape character zone 8

4.2.8.1 Impacts on Landscape Character

In zone 8 intermittent trees (9No.) within road side grass verge at the northern side of the road corridor will be removed. It is proposed to construct a 4m wide boardwalk in this zone on lower ground north of the road corridor up to Ch 4430. The board walk will pass across lower salt marsh habitat of the estuary and adjacent to an area of scrub. From Ch 4430 the proposed greenway will revert to bituminous construction at ground level. Up to Ch 4735 the proposed greenway will have a full height screen on the northern side of the boardwalk handrail (created by fixing board walk running boards to the fence posts).

The sensitivity of the landscape in zone 8 is Medium i.e. a wide range of mature habitats, and undisturbed coastal landscape and the proximity to the Mud shores, Salt marshes, of the SPA and SAC. The magnitude of change resulting from the removal of the intermittent trees and the introduction of the proposed greenway boardwalk is Medium resulting in a *Slight adverse permanent landscape impact.*

4.2.8.2 Impacts on Visual Amenity and Visual Receptors

Visual receptors in this zone are residents of twenty nine residents in the established detached residential properties of the eastern side of Mornington (Visual Receptors R10 in Appendix A) on the southern side of the road with north facing coastal views through their boundary planting. Residents of these properties are High in sensitivity. Other receptors include vehicle drivers on the R151 road, they are Low in sensitivity. Visual receptors in residential properties will experience Medium levels of change in visual amenity from the removal of the vegetation and the visibility of moving cyclists resulting in a *Moderate adverse permanent visual impact*. The vehicle drivers on the R151 road will experience an *Imperceptible negative momentary visual impact*.

4.2.9 Chainage 4750 to 5100 - Landscape character zone 9

4.2.9.1 Impacts on Landscape Character

In zone 9, individual trees (4No.) within the southern part of the mature hedgerow along the northern boundary of the road corridor will be removed. The mature trees on the southern side of the road will not be altered. It is proposed to create a 4m wide bituminous pavement with kerb at the road edge, and provide a grass verge on either side of the road.

The sensitivity of the landscape in zone 9 is Medium i.e. landscape is undeveloped with mature hedgerow and glimpse scenic views. The magnitude of change resulting from the removal of the

individual trees and hedges and the introduction of the proposed greenway pavement is Low resulting in a *Slight adverse permanent landscape impact*.

4.2.9.2 Impacts on Visual Amenity and Visual Receptors

Visual receptors in this zone include vehicle drivers on the R151 road, they are Low in sensitivity. There are no residential properties (one derelict cottage) in this zone.

Visual receptors in vehicles will experience Low levels of change from the sight of the proposed greenway and the visibility of moving cyclists resulting in an *Imperceptible permanent visual impact*.

4.2.10 Chainage 5100 to 5840 - Landscape character zone 10

4.2.10.1 Impacts on Landscape Character

This zone is the urban fringe of Mornington Manor to Tower Road. Established residential properties on both sides of the road with a range of domestic boundary treatments including hedges, brick boundary walls and railings marking the property line adjacent to the R151. Footpaths are present along R151 between Ch. 5100 and 5650, there are no footpaths on Tower Road (L56391).

The greenway will terminate at Mornington Road (R151) / Tower Road (Ch. 5650) junction. A footpath (1.8m) will be provided on Tower Road from Mornington Road (R151) / Tower Road (Ch. 5650) junction to Tower Road / Crook Road (Ch.5840) junction. This is to enable safe connectivity onto the greenway from Tower Road. It is intended that the strategic greenway will follow the R151 as it proceeds south to Bettystown. Uncontrolled crossings will be provided to access the bus stop at Ch. 5465 and Ch.5635.

The sensitivity of the landscape in zone 10 is Low i.e. it has very few or no designated landscapes or open space areas. The magnitude of change on the physical character of this zone resulting from the removal of the trees and hedge and the introduction of the proposed greenway pavement is Medium resulting in *Slight adverse permanent landscape impact*.

4.2.10.2 Impacts on Visual Amenity and Visual Receptors

Visual receptors in this zone are residents of the established detached residential properties of Mornington Manor (Visual Receptors R11 in Appendix A) with visibility of R151 and Tower Road views through their boundary planting. Residents of these properties are High in sensitivity. Other receptors include vehicle drivers on the R151 road, they are Low in sensitivity. Visual receptors in residential properties on R151 will experience Medium levels of change in visual amenity from the removal of the vegetation and the visibility of moving cyclists resulting in a *Moderate adverse permanent visual impact*. The vehicle drivers on the R151 road and properties on Tower Road will experience an *Imperceptible momentary visual impact.*

5 Mitigation

5.1 Construction Phase Mitigation

In order to mitigate construction related impacts on landscape character and visual amenity it is proposed that the time period between removal of roadside vegetation and replanting be kept as short as possible.

Vegetation removal of roadside hedgerow and individual trees must be carried out between September and February which is outside the bird nesting and breeding season i.e. 1st March to 31st August in any given year.

Planting of bare-rooted trees and hedge species normally takes place between November and March when plants are dormant and can be safely planted without damaging their root system.

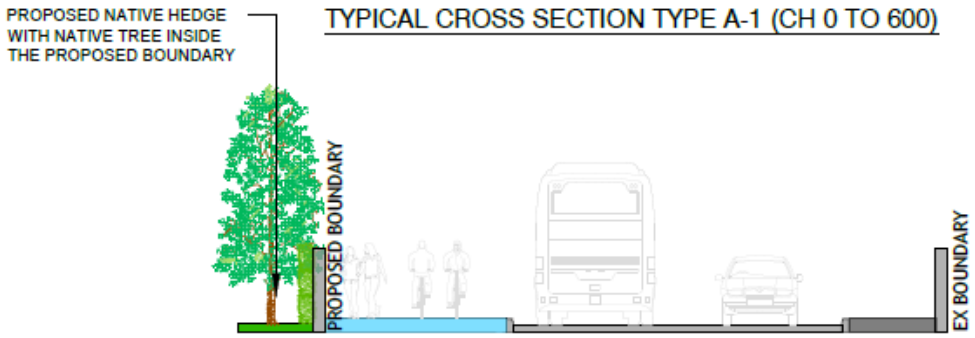
It is suggested that in order to achieve this all areas requiring removal of planting within visibility of residential properties should be removed in September and October.

This will ensure that areas planting which contribute to the landscaper character and visual amenity of the site comes back into leaf in the next season to maintain levels of vegetation pre development.

5.2 Operational Phase Mitigation

Soft landscape proposals are as shown on the drawings in Appendix C. Tree planting comprises generally native species including birch, small-leaved lime, field maple, rowan/mountain ash and common oak. Hedge species are also native and include: hawthorn, blackthorn, elder and dog rose.

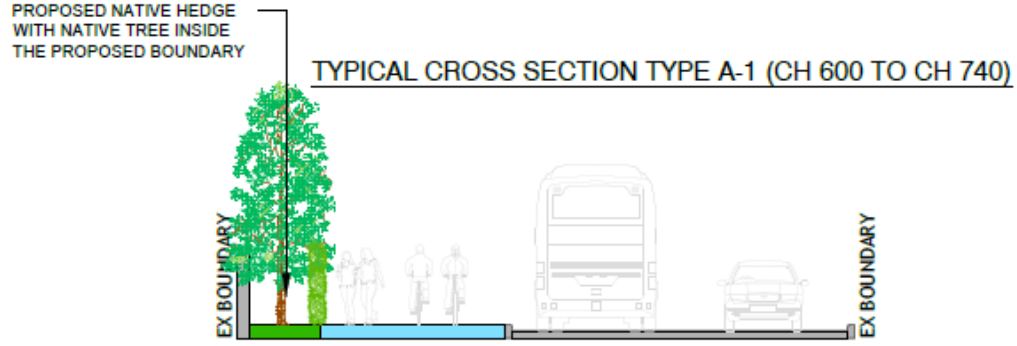
5.2.1 Chainage 000 to 340 - Landscape character zone 1



To mitigate impacts on landscape character it is proposed to implement a row of native tree and hedge planting (densely planted) behind the proposed wall. This will restore the treelined character to the urban streetscape and increase the biodiversity value of the proposed greenway corridor at this section.

For Visual Receptors (R1 Carmelite Cottages to 36 Marsh Road (15No. properties)) the tree planting will screen visibility into the industrial lands to the north.

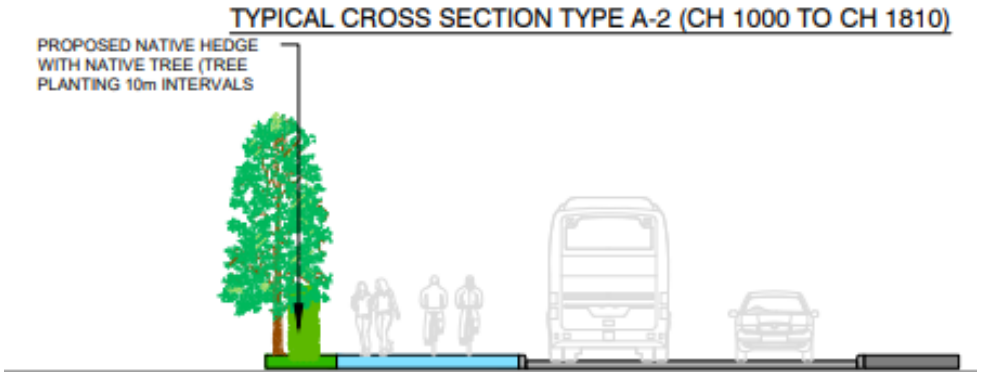
5.2.2 Chainage 340 to 980 - Landscape character zone 2



To mitigate impacts on landscape character it is proposed to implement a row of native tree and hedge planting in front of the proposed wall. This will restore the treelined character to the streetscape and increase the biodiversity value of the proposed greenway corridor at this section.

For Visual Receptors (I1 staff in the Drogheda Marine Terminal) the tree planting and hedge will screen the visibility of the proposed greenway and of the moving cyclists.

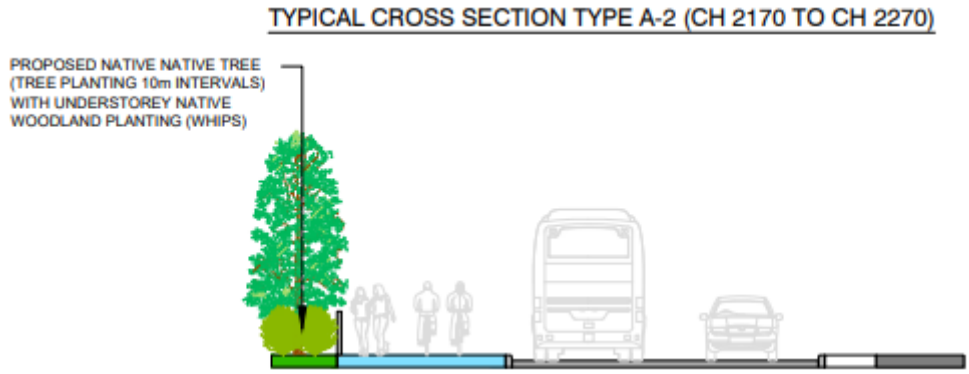
5.2.3 Chainage 980 to 1750 - Landscape character zone 3



To mitigate impacts on landscape character it is proposed to implement a row of native trees (loosely planted) and hedge planting along the northern boundary. This will enhance the landscape character of the road corridor and increase the biodiversity value of the proposed greenway at this section.

For Visual Receptors (R2 Stagrennan House) the hedge planting will screen the visibility of the proposed greenway and of the moving cyclists

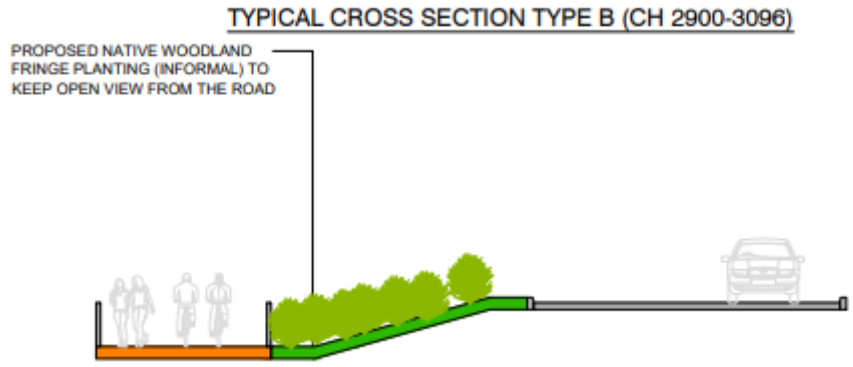
5.2.4 Chainage 1750 to 2150 - Landscape character zone 4



In zone 4 to mitigate impacts on landscape character it is proposed to implement a row of native trees (densely planted) and woodland whip planting on the northern side of the proposed greenway. This will enhance the landscape character of the road corridor and increase the biodiversity value of the greenway at this section. In this zone from Ch 2000 to 2104 the proposed greenway will have a full height screen on the northern side of the boardwalk handrail (created by fixing board walk running boards to the fence posts), this will visually screen the movement of cyclists, walkers and dogs for birds in the Special Protection Area to the north.

For Visual Receptors (R3 Balamarino House and I2 Harbourville House and the property in the entrance courtyard) the hedge planting will screen the visibility of the proposed greenway and of the moving cyclists.

5.2.5 Chainage 2150 to 3100 - Landscape character zone 5



To mitigate impacts on landscape character it is proposed to implement a row of native tree and hedge planting along the northern boundary. Additional planting is also proposed to the woodland fringe areas disturbed by the proposed greenway and boardwalk ramp as it passes onto flatter ground. The tree and hedge planting will enhance the landscape character of the road corridor and increase the biodiversity value of the proposed greenway at this section. The woodland fringe and low lying scrub planting will help to reinstate the edges of the woodland that have been removed during construction and to link severed habitats. In this zone from Ch 2270 the proposed greenway will have a full height screen on the northern side of the boardwalk handrail (created by fixing board walk running boards to the fence posts), this will visually screen the movement of cyclists, walkers and dogs for birds in the Special Protection Area to the north.

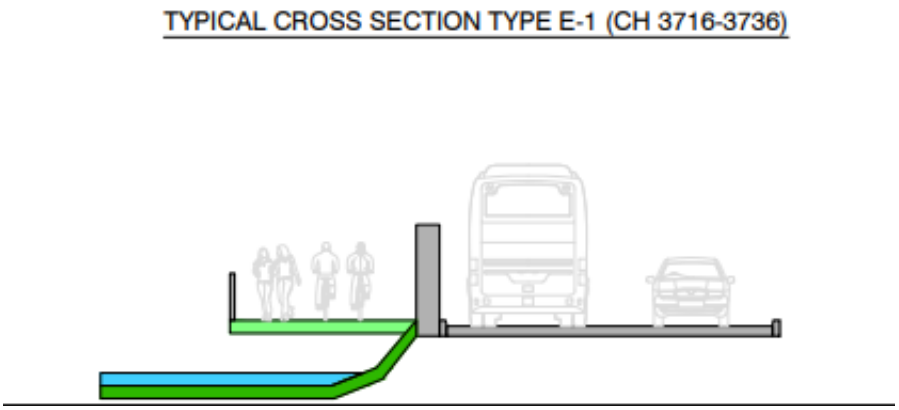
For Visual Receptors (C1 Drogheda Grammar School and Le Chéile Educate Together National School, Drogheda, R4 Individual Property off Mill Road (2No. properties) and R5 Bay View House) the hedge and woodland fringe planting will screen the visibility of the proposed greenway and of the moving cyclists.

5.2.6 Chainage 3100 to 3600 - Landscape character zone 6

To mitigate impacts on landscape character it is proposed to implement planting to the woodland fringe areas disturbed by the proposed greenway boardwalk ramp as it passes onto flatter ground, see Typical Cross section for Ch 2900-3096 above. Road side tree and hedge planting is not proposed along this zone to maintain the openness of the unique scenic coastal views from R150 and R151. The woodland fringe and low lying scrub planting will help to reinstate the edges of the woodland that have been removed during construction and to link severed habitats. In this zone the proposed greenway will have a full height screen on the northern side of the boardwalk handrail (created by fixing board walk running boards to the fence posts), this will visually screen the movement of cyclists, walkers and dogs for birds in the Special Protection Area to the north.

For Visual Receptors (R6 Individual Property on southern side of R150, R7 Individual Property on northern side of R150, R8 Mornington, western side, (8No.properties on R151) and SR2 Vehicle drivers and passengers on R150/R151 Scenic Route) the hedge planting and woodland fringe will screen the visibility of the proposed greenway and of the moving cyclists whilst allowing vehicle drivers and their passengers to experience the unique scenic coastal views.

5.2.7 Chainage 3600 to 3900 - Landscape character zone 7

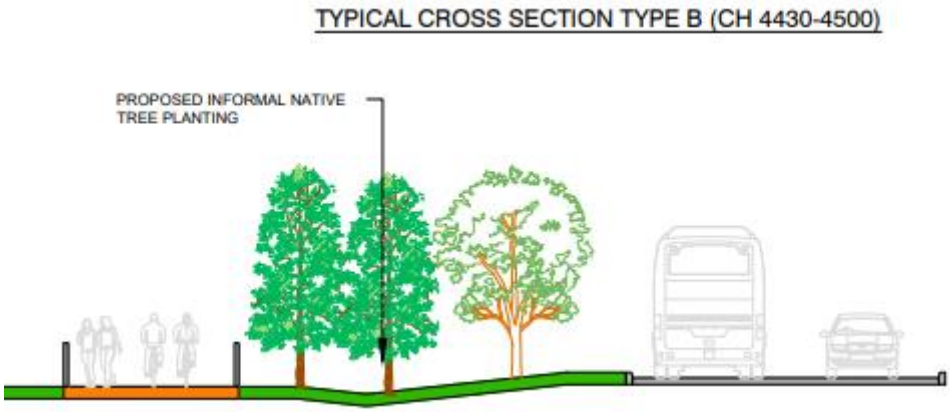


In zone 7 no vegetation in the road corridor or the adjacent SAC/SPA will be removed. The design of a modern pre-fabricated steel bridge structure (Ch. 3705-3725) on piles creates a dynamic new element in the landscape and does not seek to compete with the existing heritage features present. The bridge design, which is in scale with the setting, does not create an interruption to the skyline or shoreline and mitigates impacts on the landscape character. The bridge will have full height Perspex noise screen at Ch. 3705-3725 to enable views of Mornington Bridge from the estuary, full height screening will be provided on the northern side of the boardwalk either side of the bridge.

For Visual Receptors (R9 Mornington, western side, (3No.properties on northern end of Church Road) and C2 Star of the Sea Church and graveyard and deserted mediaeval settlement) the hedge planting will part screen the visibility of the proposed bridge and of the moving cyclists.

The bridge design is transparent and light, it maintains visibility of the triple-arch road bridge built c.1840 which is directly adjacent, and it creates an interesting modern view point which aims to mitigate negative visual impacts from the intrusion towards the view of the existing historic stone bridge. To further assimilate the bridge design into the setting at Mornington further consideration should be given to the bridge balustrade as it protrudes from the parapet and merges with the greenway. Road side tree and hedge planting and screening to the boardwalk balustrade is not proposed along this zone to maintain the openness of the unique scenic coastal views.

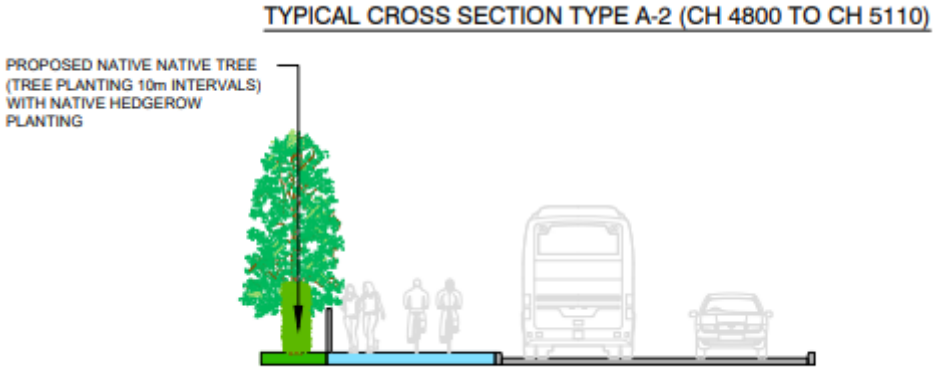
5.2.8 Chainage 3900 to 4750 - Landscape character zone 8



To mitigate impacts on landscape character in zone 8 and to maintain the openness of the unique scenic coastal views it is proposed to restrict planting to blocks of native tree planting within the Dry Meadows habitat (between Ch 4430 and 4500 as shown above). This will create shelter for the cyclist and improve biodiversity particularly for the bird population in the area. In this zone up to Ch 4735 the proposed greenway will have a full height screen on the northern side of the boardwalk handrail (created by fixing board walk running boards to the fence posts), this will visually screen the movement of cyclists, walkers and dogs for birds in the Special Protection Area to the north.

For Visual Receptors (R10 Mornington, eastern side, (29No.properties on R151)) the hedge planting and limited blocks of trees will part screen the visibility of the proposed greenway and of the moving cyclists whilst allowing vehicle drivers and their passengers to experience the unique scenic coastal views.

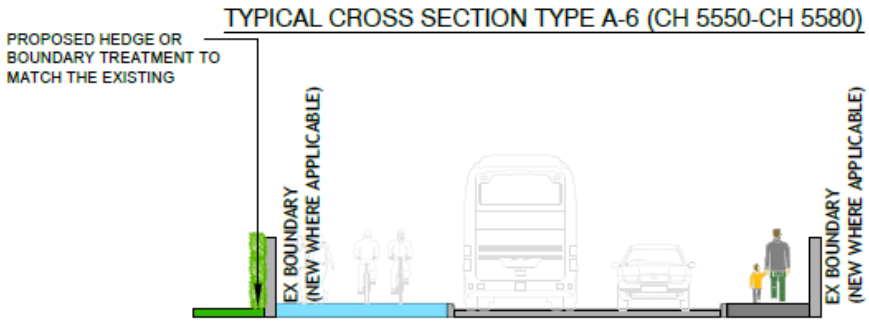
5.2.9 Chainage 4750 to 5100 - Landscape character zone 9



To mitigate impacts on landscape character in zone 9, it is proposed to implement a row of native trees (loosely planted) and hedge planting along the northern side of the road corridor. This will enhance the landscape character of the road corridor and increase the biodiversity value of the proposed greenway at this section.

There are no Visual Receptors in this character zone other than vehicle drivers and their passengers. The trees on the northern side of the proposed greenway planted at 10m centres will allow visibility into the rural agricultural lands to the north.

5.2.10 Chainage 5100 to 5840 - Landscape character zone 10



To mitigate impacts on landscape character in zone 10 it is proposed to reinstate boundary treatment with native planting to affected properties along Mornington Road. This will restore the urban streetscape character and improve biodiversity. The greenway will terminate at Mornington Road / Tower Road junction. A footpath will be provided on Tower Road from Mornington Road / Tower Road junction to Tower Road / Crook Road junction. This is to enable safe connectivity onto the greenway from Tower Road.

For Visual Receptors (R11 Mornington Manor), (68No.properties on R151) the reinstated boundary treatment will part screen the visibility of the proposed greenway and of the moving cyclists.

5.3 Cumulative effects

The area in which the proposals site is located does not contain other developments of similar size, therefore any cumulative effects from other developments is not expected to have an impact on landscape and visual amenity.

6 Residual Impacts

6.1.1 Chainage 000 to 340 - Landscape character zone 1

On implementing the mitigation measures comprising proposed trees and hedge, the residual impact in zone 1 on landscape character will remain as a *Slight adverse permanent landscape impact.* The slight adverse permanent impact results from the proposed greenway pavement and the increased pedestrian activity will cause a noticeable change in the character of the streetscape for the local residents.

For Visual Receptors i.e. residents of Carmelite Cottages to Marsh Road (R1 in Appendix A) the residual visual impacts will change from Significant adverse permanent to *Slight adverse permanent* as the planting matures and provides an effective screen to lands in the north. The close and clear visibility of moving cyclists on the proposed greenway will remain.

6.1.2 Chainage 340 to 980 - Landscape character zone 2

On implementing the mitigation measures comprising proposed trees and hedge, the residual impact in zone 2 on landscape character will remain as an *Imperceptible permanent landscape impact*. The proposed street trees and hedge will maintain the suburban character of the road corridor in this location and assimilate the proposed greenway into the landscape.

For Visual Receptors (I1 staff in the Drogheda Marine Terminal) the residual visual impacts will remain as an *Imperceptible permanent visual impact*, the tree planting and hedge will screen the visibility of the proposed greenway and of the moving cyclists.

6.1.3 Chainage 980 to 1750 - Landscape character zone 3

On implementing the mitigation measures comprising proposed trees and hedge, the residual impact in zone 3 on landscape character will change from Slight adverse permanent to *Imperceptible permanent*. The proposed street trees and hedge will supplement existing roadside planting, it will enhance the rural character of the road corridor in this location. The proposed street trees and hedge will maintain the suburban character of the road corridor in this location and assimilate the proposed greenway into the landscape.

For Visual Receptors (R2 Stagrennan House) the residual visual impacts will change from Slight adverse permanent to *Imperceptible permanent* as the planting matures, it will screen the visibility of the proposed greenway and of the moving cyclists.

6.1.4 Chainage 1750 to 2150 - Landscape character zone 4

On implementing the mitigation measures comprising native trees (densely planted) and woodland whip planting on the northern side of the proposed greenway and native trees (loosely planted) and hedge planting along the southern boundary the residual impacts on landscape character will remain as *Slight adverse permanent landscape impact*. The slight adverse permanent impact results from the proposed boardwalk at the inlet of water west of Harbourville House which will cause a noticeable change in the character of this sensitive area.

For Visual Receptors (I2 Harbourville House and the property in the entrance courtyard) the residual visual impacts will remain as *Slight adverse permanent* as the close and clear visibility of moving cyclists on the proposed boardwalk will continue.

6.1.5 Chainage 2150 to 3100 - Landscape character zone 5

On implementing the mitigation measures comprising a row of native tree and hedge planting along the northern boundary and woodland fringe planting in areas disturbed by the proposed greenway and boardwalk ramp the residual impacts on landscape character will change from Moderate adverse permanent to a *Slight adverse permanent impact*. The proposed planting will help to assimilate the proposed greenway into the landscape. However the slight adverse permanent impact results from the proposed greenway pavement, the traffic calming measures and the increased pedestrian activity will cause a noticeable change in the character of the road corridor in this area.

For Visual Receptors (C1 Drogheda Grammar School and Le Chéile Educate Together National School, Drogheda, R4 Individual Property off Mill Road (2No. properties) and R5 Bay View House) the residual visual impacts will change from Slight adverse permanent to *Imperceptible permanent* as the planting matures, it will screen the visibility of the proposed greenway and of the moving cyclists from north facing rooms in these properties.

6.1.6 Chainage 3100 to 3600 - Landscape character zone 6

On implementing the mitigation measures comprising woodland fringe planting in areas disturbed by the proposed greenway boardwalk ramp in zone 6 the residual impacts on landscape character will change from Slight adverse permanent to *Imperceptible permanent*. The woodland fringe and low lying scrub planting will help to reinstate the edges of the woodland that have been removed during construction and to link severed habitats and assimilate the proposed greenway into the landscape.

For Visual Receptors, residential properties R6 the residual visual impacts will change from Slight adverse permanent to *Imperceptible permanent* as the planting matures. For properties R7 and R8 with direct north facing views towards the greenway the residual visual impacts will change from Moderate adverse to *Slight adverse permanent* as the close and clear visibility of moving cyclists on the proposed boardwalk will continue.

6.1.7 Chainage 3600 to 3900 - Landscape character zone 7

In zone 7 the residual impacts on landscape character will remain as *Slight adverse permanent landscape impact*. The slight adverse permanent impact results from the proposed boardwalk Steel Arch Bridge, and traffic calming measures which cannot be mitigated. It is recommended that the unsympathetic bridge balustrade be further considered to assimilate the bridge design into the landscape. Road side tree and hedge planting is not proposed along this zone to maintain the openness of the unique scenic coastal views.

For Visual Receptors, residents R9 of northern end of Church Road in Mornington, the residual visual impacts will remain as *Slight adverse permanent* as the close and clear visibility of moving cyclists on the proposed bridge and boardwalk will continue.

6.1.8 Chainage 3900 to 4750 - Landscape character zone 8

On implementing the mitigation measures comprising blocks of native trees within the Dry Meadows habitat and hedge on the southern side of the road in zone 8 the residual impacts on landscape character will change from Slight adverse permanent to *Imperceptible permanent*. The planting will help to assimilate the proposed greenway boardwalk into the landscape.

For Visual Receptors, (R10 Mornington, eastern side, (29No.properties on R151)) the residual visual impacts will change from Moderate adverse to *Slight adverse permanent* as the hedge planting and limited blocks of trees will part screen the visibility of the proposed greenway and of the moving cyclists whilst allowing vehicle drivers and their passengers to experience the unique scenic coastal views.

6.1.9 Chainage 4750 to 5100 - Landscape character zone 9

On implementing the mitigation measures in zone 9 comprising a row of native trees (loosely planted) and hedge planting on the northern side of the road corridor the residual impacts on landscape character will change from Slight adverse permanent to *Imperceptible permanent*. The planting will help to reinstate the edges of the woodland that have been removed during construction and to link severed habitats and assimilate the proposed greenway into the landscape.

There are no Visual Receptors in this character zone other than vehicle drivers and their passengers. For vehicular drivers and their passengers the residual impacts will remain *Imperceptible permanent visual impact*.

6.1.10 Chainage 5100 to 5870 - Landscape character zone 10

On implementing the mitigation measures in zone 10 comprising reinstatement of residential boundary treatment the residual impacts on landscape character would remain as *Slight adverse permanent*. The slight adverse permanent impact results from the proposed greenway pavement and the increased pedestrian activity will cause a noticeable change in the character of the streetscape for the local residents.

For Visual Receptors (68No.properties on R151 and in the established detached residential properties of Mornington Manor) the residual visual impacts will remain as *Slight adverse permanent* as the close and clear visibility of moving cyclists on the proposed greenway will remain.

6.2 Assessment of Views Illustrated by Photomontage

Photomontage are included within Appendix B.

6.2.1 View 1 (A and B) Area in front of Flogas - Ch. 740-880

View 1 is within landscape character zone 2 which is an industrial zone. It is proposed to create a 4m wide bituminous pavement with kerb for the proposed greenway at the road edge and replace the boundary treatment with 1.2m high stone wall. In front of the industrial units it is proposed to retain existing parking.

The sensitivity of the landscape in zone 2 is Low. Visual Receptors at this location are people working in the adjacent industrial units, they are Low in Sensitivity. The magnitude of change at the location of View 1 resulting from the introduction of the proposed greenway and the movement of cyclists is Low.

Mitigation measures comprising proposed trees and hedge along the road corridor and adjacent to the proposed wall. The proposed street trees and hedge will maintain the suburban character of the road corridor in this location and assimilate the proposed greenway into the landscape.

The residual visual impact for Visual Receptors (I1 staff in the Drogheda Marine Terminal) at this location will be *Imperceptible permanent*.

6.2.2 View 2 Area in front of the Schools - Ch. 2170-2280

View 2 is within landscape character zone 5 in front of the Drogheda Grammar School and Le Chéile Educate Together National School, Drogheda. Mature trees (19No.) within woodland fringe areas at the northern side of the road corridor will be removed. The wall and mature hedge, trees on the southern side of the road will not be altered. There will be a proposed 2m wide footpath on the southern side of the road for improved access to the grounds of Drogheda Grammar School and Le Chéile Educate Together National School, Drogheda. There will also be a controlled crossing at Ch 2210 close to the entrance to the school and traffic calming measures (raised table) on the road surface at Ch 2900. The proposed greenway will be a 4m wide bituminous pavement with kerb.

The sensitivity of the landscape in zone 5 is Medium. Visual receptors include pupils and staff in the buildings on the northern edge of the Drogheda Grammar School, they are Low in Sensitivity. The magnitude of change at the location of View 2 resulting from the introduction of the proposed greenway pavement and the movement of cyclists is Low.

To mitigate impacts on landscape character it is proposed to implement a row of native tree and hedge planting along the northern boundary. Additional planting is also proposed to the woodland fringe areas disturbed by the proposed greenway and boardwalk ramp as it passes onto flatter ground. The tree and hedge planting will enhance the landscape character of the road corridor and increase the biodiversity value of the proposed greenway at this section. The woodland fringe and low lying scrub planting will help to reinstate the edges of the woodland that have been removed during construction and to link severed habitats.

The residual visual impact for Visual Receptors (C1 Drogheda Grammar School and Le Chéile Educate Together National School, Drogheda) at this location will be *Imperceptible permanent.*

6.2.3 View 3 Mornington Bridge – Ch. 3680 - 3730

View 3 is within landscape zone 7 at Mornington Bridge. It is proposed to construct a 4m wide boardwalk and a Steel Arch Bridge in this zone on lower ground north of the road corridor. The proposed boardwalk will pass across lower salt marsh habitat of the estuary and adjacent to an area of scrub.

The sensitivity of the landscape in zone 5 is High i.e. a wide range of mature habitats, and undisturbed coastal landscape and the proximity to the Mud shores, Salt marshes, of the SPA and SAC and Mornington Bridge which is a protected structure and historic architectural features (milestone and water pump) in Church Street nearby.

Visual receptors in this zone are primarily vehicle users and their passengers on the Scenic Route (R150) who have open and long distance view over the Boyne Estuary towards the north side of the river corridor and short distance views of the coastal edge. Road users at this point are Very High in Sensitivity. The magnitude of change resulting from the new bridge, its balustrade and the visibility of moving cyclists is Low.

Road side tree and hedge planting is not proposed at this location to maintain the openness of the unique scenic coastal views.

The residual visual impact for vehicle users and their passengers on the Scenic Route at this location will be *Slight adverse permanent*.

6.2.4 View 4 Church Road Junction – Ch. 3730 - 3770

View 4 is within landscape zone 7 at Mornington Bridge. It is proposed to construct a 4m wide boardwalk and a Steel Arch Bridge in this zone on lower ground north of the road corridor. The boardwalk will pass across lower salt marsh habitat of the estuary and adjacent to an area of scrub.

The sensitivity of the landscape in zone 5 is High i.e. a wide range of mature habitats, and undisturbed coastal landscape and the proximity to the Mud shores, Salt marshes, of the SPA and SAC and Mornington Bridge which is a protected structure and historic architectural features (milestone and water pump) in Church Street nearby.

Visual receptors in this zone are residents of northern end of Church Road in Mornington with north facing coastal views through their boundary planting. Residents of these properties are High in Sensitivity. Other receptors include visitors to the Star of the Sea church and graveyard (and deserted mediaeval settlement) and visitors walking on the adjacent coastal stretch, they are Medium in Sensitivity. The magnitude of change resulting from the new bridge and the visibility of moving cyclists is Low.

The residual visual impact for Visual Receptors, (residents R9 of northern end of Church Road in Mornington), at this location will be *Slight adverse permanent*.

6.2.5 View 5 Former golf driving range – Ch. 4790 - 4820

View 5 is within landscape zone 9. It is proposed to create a 4m wide bituminous pavement with kerb at the road edge.

The sensitivity of the landscape in zone 9 is Medium i.e. landscape is undeveloped with mature hedgerow and glimpse scenic views. The magnitude of change resulting from the removal of the individual trees and hedges and the introduction of the proposed greenway pavement is Low.

Visual receptors in this zone include vehicle drivers on the R151 road, they are Low in sensitivity. There are no residential properties (one derelict cottage) in this zone.

To mitigate impacts on landscape character in zone 9, it is proposed to implement a row of native trees (loosely planted) and hedge planting along the northern side of the road corridor. This will enhance the landscape character of the road corridor and increase the biodiversity value of the proposed greenway at this section.

The residual visual impact for vehicle users and their passengers at this location will be *Imperceptible permanent visual impact*.

6.2.6 View 6 Tower Road junction with the R151 – Ch. 5620 - 5660

View 6 is within landscape zone 10 in the urban fringe of Mornington Manor. The proposed greenway will be a 4m wide bituminous pavement with kerb. The sensitivity of the landscape in zone 10 is Low i.e. it has very few or no designated landscapes or open space areas.

Visual receptors in this zone are residents of the established detached residential properties of Mornington Manor with visibility of R151 and Tower Road views through their boundary planting. Residents of these properties are High in sensitivity. Visual receptors in residential properties will experience Medium levels of change in visual amenity from the removal of the vegetation and the visibility of moving cyclists resulting in a Moderate adverse permanent visual impact.

The magnitude of change resulting from the proposed greenway and the visibility of moving cyclists is Medium.

To mitigate impacts on landscape character in zone 10 it is proposed to reinstate boundary treatment with native planting to affected properties. This will restore the urban streetscape character and improve biodiversity.

The residual visual impact for Visual Receptors, (residents R11 Mornington Manor), at this location will be *Slight adverse permanent*.

6.2.7 View 7 – End of scheme Ch.5840

View 7 is within landscape zone 10 in the urban fringe of Mornington Manor, the view is from the eastern end of the proposed greenway and looking towards a car park for Lady's Finger Tower north of Mornington Bay Beach.

The sensitivity of the landscape in zone 10 is Low i.e. it has very few or no designated landscapes or open space areas although the view towards Lady's Finger Tower is a focal point for the road.

Visual receptors in this zone are residents of the established detached residential properties of Tower Road views through their boundary planting. Residents of these properties are High in sensitivity.

The magnitude of change resulting from the visibility of moving pedestrians at this point is Negligible.

The residual visual impact for Visual Receptors, (residents R11 Tower Road), at this location will be *Slight adverse permanent*.

Appendices

A Visual Impacts

Visual Receptor (VR)	Type of aspect	Distance From site	Elements of proposed development potentially visible	Visual impact	Mitigation measures proposed	Residual impact after 10 years
Scenic Routes (SR)						
SR1 Vehicle drivers and passengers on R167 Scenic Route Louth CC	Coastal View in southerly direction across estuary	0.5-1.5km	New steel bridge at Mornington	Receptor sensitivity-Very high. Magnitude-Low ***Visual Impact- Imperceptible***	None	***Imperceptible***
SR2 Vehicle drivers and passengers on R150/R151 Scenic Route Meath CC	Coastal View in easterly direction across estuary	0-10m	Greenway surface or board walk (on lower ground) and movement of cyclists	Receptor sensitivity-Very high. Magnitude-Low ***Visual Impact- Moderate, adverse***	Tree and hedge planting	***Slight, adverse***
Residential Properties (R)						
R1 Carmelite Cottages to 36 Marsh Road (15No. properties)	Clear north facing views	15m	Greenway surface and movement of cyclists, traffic calming measures	Receptor sensitivity-High. Magnitude-High Visual Impact- Significant, adverse	Tree and hedge planting plus replacement stone wall	***Slight, adverse***
R2 Stagrennan House	Clear north facing views	160m	Greenway surface and movement of cyclists	Receptor sensitivity-High. Magnitude-Low Visual Impact- Slight, adverse	Tree and hedge planting	***Imperceptible***
R3 Balamarino House	Glimpse north facing views through mature trees	80m	Movement of cyclists	Receptor sensitivity-High. Magnitude-Negligible Visual Impact- Slight, adverse	Tree and hedge planting	***Imperceptible***
R4 Individual Property off Mill Road (2No. properties)	Glimpse north facing views	190m	Movement of cyclists	Receptor sensitivity-High. Magnitude-Negligible Visual Impact- Slight, adverse	Tree and hedge planting	***Imperceptible***
R5 Bay View House	Glimpse north facing views	120m	Movement of cyclists	Receptor sensitivity-High. Magnitude-Negligible Visual Impact- Slight, adverse	Tree and hedge planting	***Imperceptible***
R6 Individual Property on southern side of R150	Property has south facing views but glimpse north facing	30m	Movement of cyclists	Receptor sensitivity-High. Magnitude-Negligible Visual Impact- Slight, adverse	Tree and hedge planting	***Imperceptible***

Visual Receptor (VR)	Type of aspect	Distance From site	Elements of proposed development potentially visible	Visual impact	Mitigation measures proposed and/or included within design	Residual impact after 10 years
Residential Properties (R)						
R7 Individual Property on northern side of R150	Property have south facing views, part screened by vegetation	30m	Movement of cyclists	Receptor sensitivity-High. Magnitude-Medium Visual Impact- Moderate, adverse	Tree and hedge planting	***Slight, adverse***
R8 Mornington, western side, (8No.properties on R151)	Properties have north facing views, part screened by vegetation	30m	Greenway surface or board walk balustrade and movement of cyclists, traffic calming measures	Receptor sensitivity-High. Magnitude-Medium Visual Impact- Moderate, adverse	Tree and hedge planting	***Slight, adverse***
R9 Mornington, western side, (3No.properties on northern end of Church Road)	Properties have north west facing views, part screened by vegetation	50-100m	Greenway board walk, new steel bridge and movement of cyclists, traffic calming measures	Receptor sensitivity-High. Magnitude-Low Visual Impact- Slight, adverse	None	***Slight, adverse***
R10 Mornington, eastern side, (29No.properties on R151)	Properties have north facing views, part screened by vegetation	30m	Greenway surface or board walk balustrade and movement of cyclists, traffic calming measures	Receptor sensitivity-High. Magnitude-Medium Visual Impact- Moderate, adverse	Tree and hedge planting	***Slight, adverse***
R11 Mornington Manor and Tower Road, (68No.properties on R151)	Properties have north and south facing views, part screened by vegetation	30m	Greenway surface and movement of cyclists, traffic calming measures. No cyclists on Tower Road.	Receptor sensitivity-High. Magnitude-Medium Visual Impact- Moderate, adverse	Replacement of boundary treatment and supplementary tree planting	***Slight, adverse***
Community and Heritage Building (C)						
C1 Drogheda Grammar School and Le Chéile Educate Together National School, Drogheda	Buildings on northern edge have north facing views, part screened by vegetation	60m	Greenway surface, movement of cyclists, traffic calming measures	Receptor sensitivity-Medium. Magnitude-Low Visual Impact- ***Slight***	Tree and hedge planting	***Imperceptible***
C2 Star of the Sea Church and graveyard (and deserted mediaeval settlement)	Graveyard and church have north and west facing views	60m	Greenway board walk, new steel bridge and movement of cyclists, traffic calming measures	Receptor sensitivity-Medium. Magnitude-Low Visual Impact- Slight, adverse	None	Slight, adverse

Visual Receptor (VR)	Type of aspect	Distance From site	Elements of proposed development potentially visible	Visual impact	Mitigation measures proposed and/or included within design	Residual impact after 10 years
Industrial Properties (I)						
I1 Drogheda Marine Terminal	Buildings on northern side of R150 with south facing views, part screened by vegetation	50m	Greenway surface, movement of cyclists	Receptor sensitivity-Low. Magnitude-Low Visual Impact- ***Imperceptible***	Tree and hedge planting	***Imperceptible***
I2 Harbourville House and the property in the entrance courtyard	Buildings on northern side of R150 with south facing views	50-100m	Greenway boardwalk surface, balustrade and movement of cyclists	Receptor sensitivity-Low. Magnitude-Medium Visual Impact- Slight, adverse	None	***Slight, adverse***
Roads (V)						
V1 Vehicle Driver and their passengers on R150	Coastal View in easterly direction across estuary	0-10m	Greenway surface or board walk balustrade and movement of cyclists	Receptor sensitivity-Low. Magnitude-Low ***Visual Impact- Imperceptible***	Tree and hedge planting	***Imperceptible***

B Photomontage

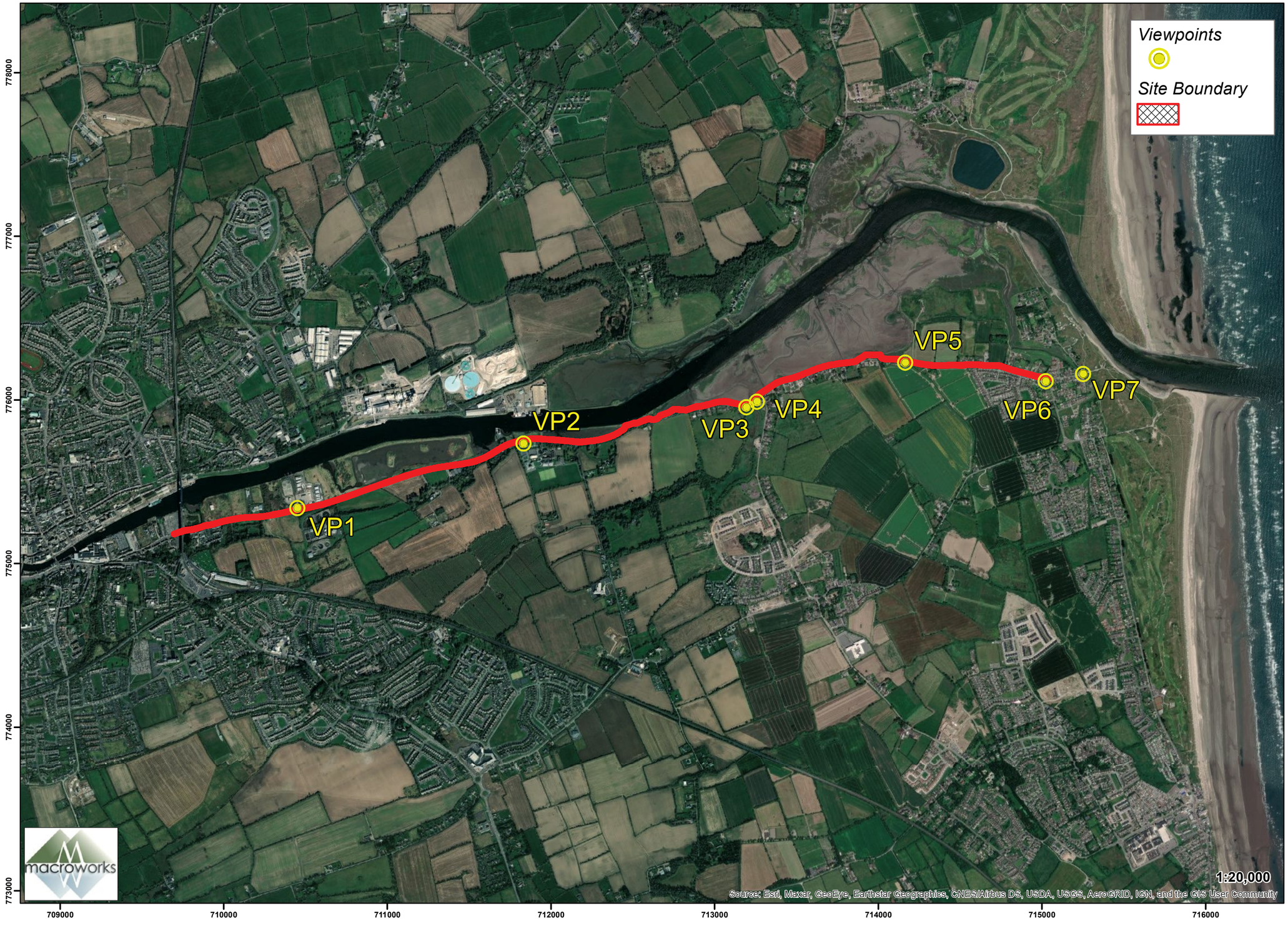
Boyne Greenway- Drogheda to Mornington

Photomontages

February 2022

INDEX

LVIA viewpoint locations selected for the Boyne Greenway project



Boyne Greenway- Drogheda to Mornington

Imagery depicting the view towards the site (Existing and Montage)

Flogas car park VP01A

These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (ITM):	710450	Lens:	50mm / Full Frame Sensor	Date:	03/11/2021
Northing (ITM):	775341	Camera:	Canon 1-D Mark II digital SLR	Time:	15:06
Direction of View 120°	E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

macroworks

Boyne Greenway- Drogheda to Mornington

Imagery depicting the view towards the site (Existing and Montage)

Flogas car park VP01B

These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (ITM):	710450	Lens:	50mm / Full Frame Sensor	Date:	03/11/2021
Northing (ITM):	775341	Camera:	Canon 1-D Mark II digital SLR	Time:	15:06
Direction of View	145° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

macroworks

Boyne Greenway- Drogheda to Mornington

Imagery depicting the view towards the site (Existing and Montage)

The schools VP02

These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (ITM):	711832	Lens:	50mm / Full Frame Sensor	Date:	03/11/2021
Northing (ITM):	775735	Camera:	Canon 1-D Mark II digital SLR	Time:	15:20
Direction of View	60° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

macroworks

Boyne Greenway- Drogheda to Mornington

Imagery depicting the view towards the site (Existing and Montage)

Mornington Bridge VP03

Existing View

Montage View

These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (ITM):	713193	Lens:	50mm / Full Frame Sensor	Date:	03/11/2021
Northing (ITM):	775957	Camera:	Canon 1-D Mark II digital SLR	Time:	14:56
Direction of View	22° E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

macroworks

Boyne Greenway- Drogheda to Mornington

Imagery depicting the view towards the site (Existing and Montage)

Church Road Junction VP04

Existing View

Montage View

These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (ITM):	713258	Lens:	50mm / Full Frame Sensor	Date:	03/11/2021
Northing (ITM):	775991	Camera:	Canon 1-D Mark II digital SLR	Time:	14:51
Direction of View	120° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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Boyne Greenway- Drogheda to Mornington

Imagery depicting the view towards the site (Existing and Montage)

Former golf driving range VP05A

Existing View

Montage View

These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (ITM):	714164	Lens:	50mm / Full Frame Sensor	Date:	03/11/2021
Northing (ITM):	776228	Camera:	Canon 1-D Mark II digital SLR	Time:	14:39
Direction of View	30° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

macroworks

Boyne Greenway- Drogheda to Mornington

Imagery depicting the view towards the site (Existing and Montage)

Former golf driving range VP05B

These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (ITM):	714164	Lens:	50mm / Full Frame Sensor	Date:	03/11/2021
Northing (ITM):	776228	Camera:	Canon 1-D Mark II digital SLR	Time:	14:39
Direction of View	62° E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

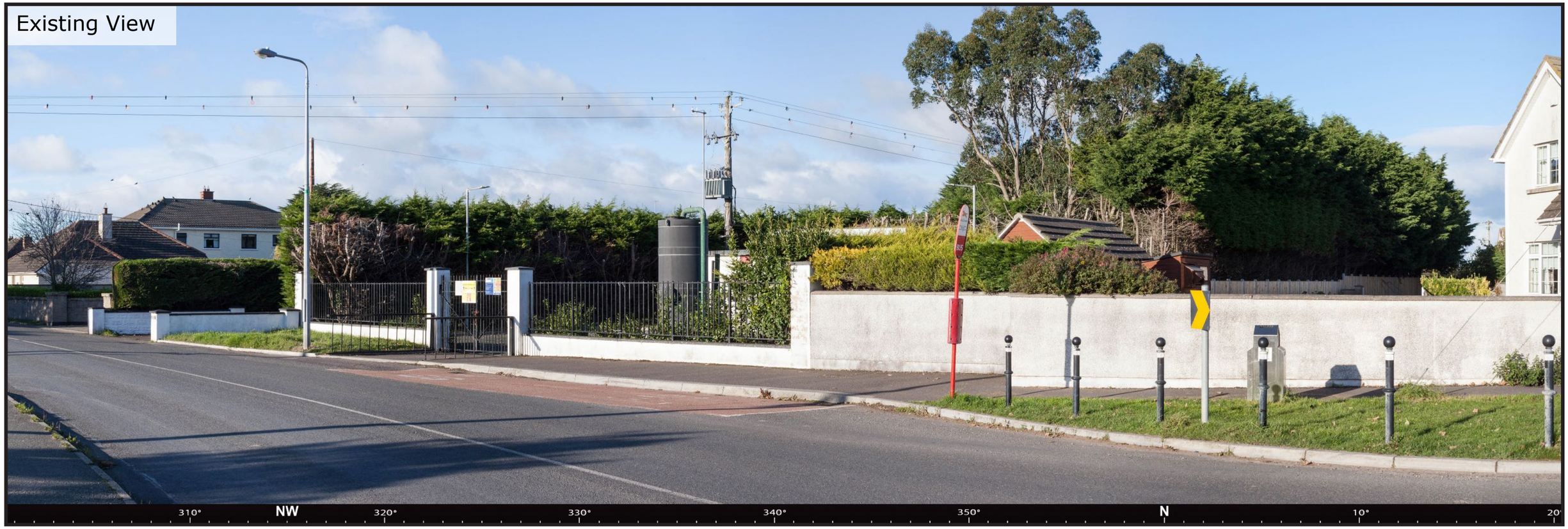
macroworks

Boyne Greenway- Drogheda to Mornington

Imagery depicting the view towards the site (Existing and Montage)

Tower Road junction with the R151 VP06A

Existing View



Montage View

These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (ITM):	715023	Lens:	50mm / Full Frame Sensor	Date:	03/11/2021
Northing (ITM):	776114	Camera:	Canon 1-D Mark II digital SLR	Time:	14:27
Direction of View	40° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

macroworks

Boyne Greenway- Drogheda to Mornington

Imagery depicting the view towards the site (Existing and Montage)

Tower Road junction with the R151 VP06B

Existing View

Montage View

These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (ITM):	715023	Lens:	50mm / Full Frame Sensor	Date:	03/11/2021
Northing (ITM):	776114	Camera:	Canon 1-D Mark II digital SLR	Time:	14:27
Direction of View	95° E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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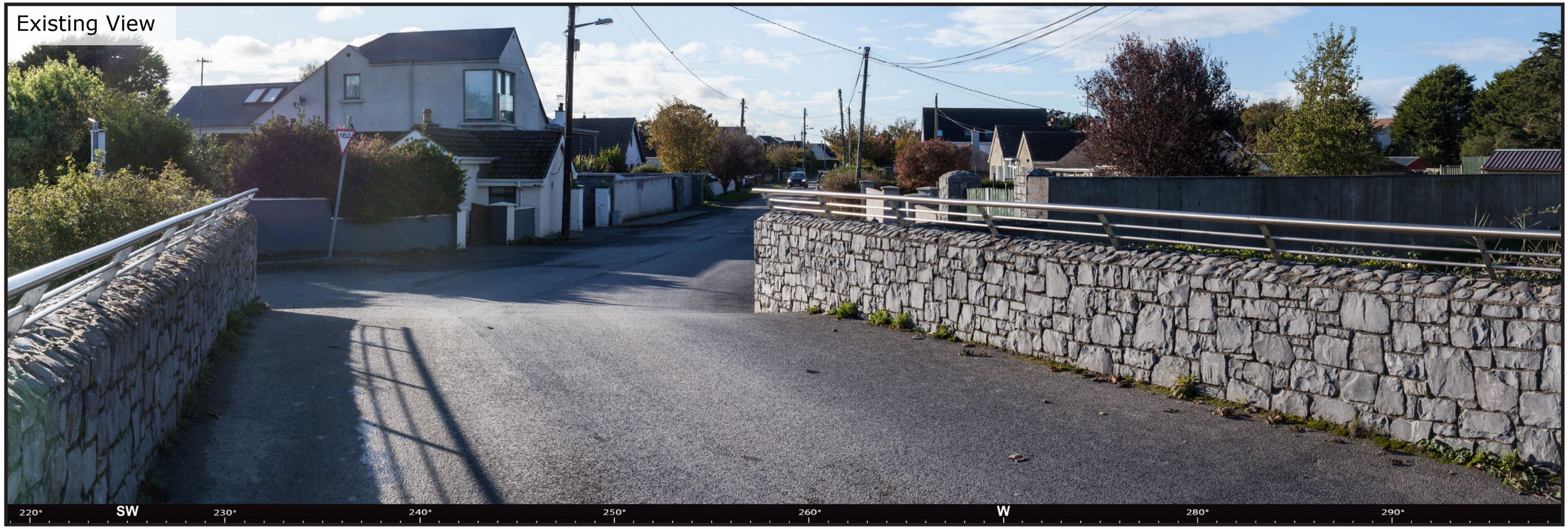
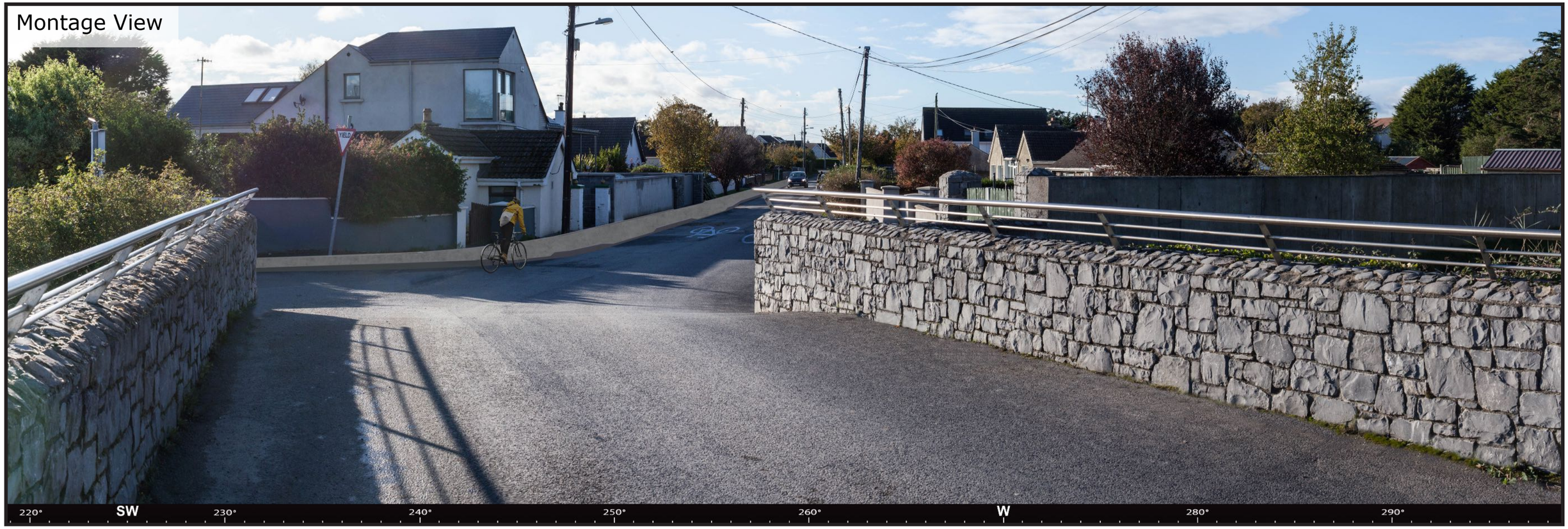
Boyne Greenway- Drogheda to Mornington

Imagery depicting the view towards the site (Existing and Montage)

"Lady's Finger" VP07A





These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

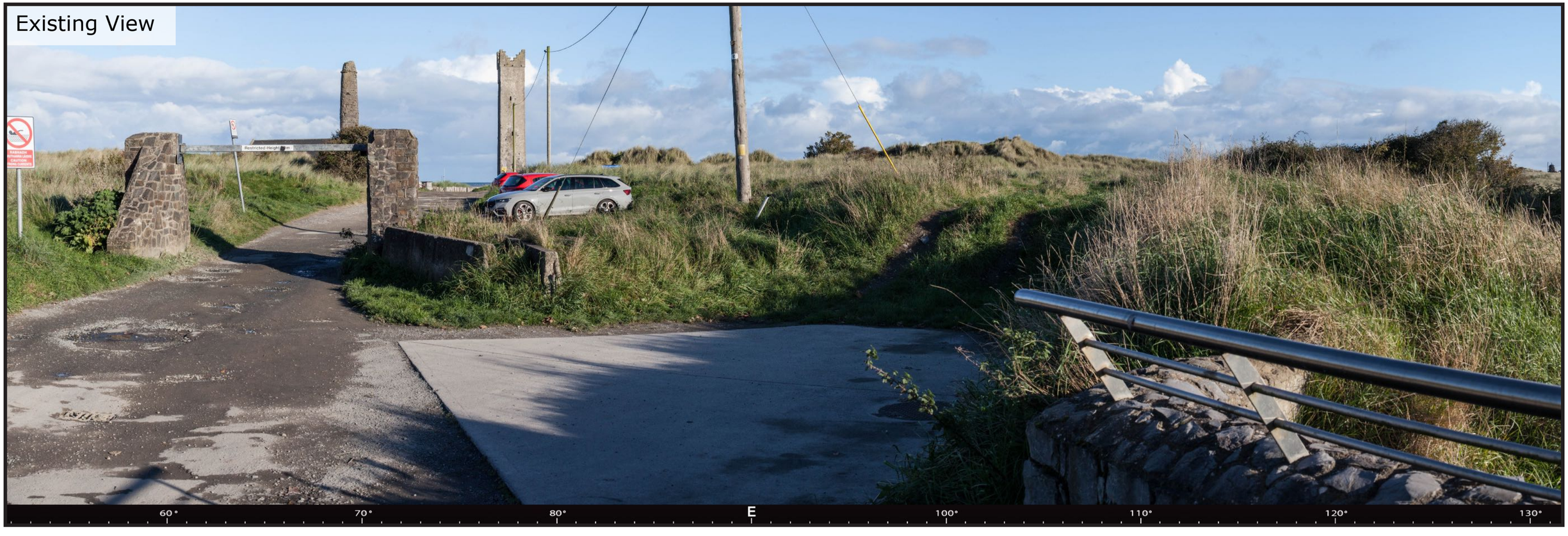
Easting (ITM):	715252	Lens:	50mm / Full Frame Sensor	Date:	03/11/2021
Northing (ITM):	776159	Camera:	Canon 1-D Mark II digital SLR	Time:	14:19
Direction of View	102° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

macroworks

Boyne Greenway- Drogheda to Mornington

Imagery depicting the view towards the site (Existing)

"Lady's Finger" VP07B



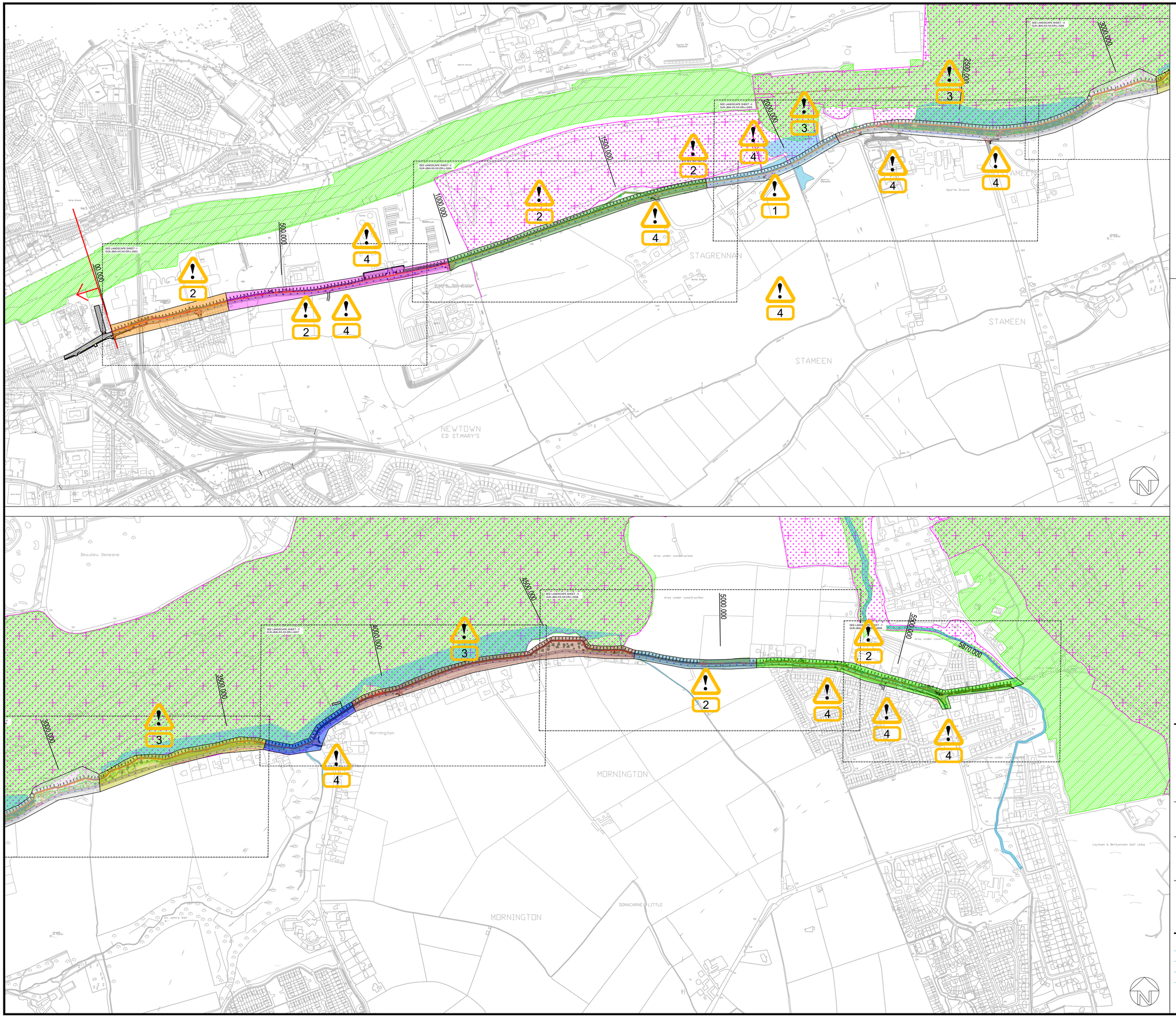
These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (ITM):	715252	Lens:	50mm / Full Frame Sensor	Date:	03/11/2021
Northing (ITM):	776159	Camera:	Canon 1-D Mark II digital SLR	Time:	14:19
Direction of View	90° E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

macroworks

C Landscape Design



Legend

- ZONE 1 CHAINAGE 0 - 340
- ZONE 2 CHAINAGE 340 - 980
- ZONE 3 CHAINAGE 980 - 1750
- ZONE 4 CHAINAGE 1750 - 2150
- ZONE 5 CHAINAGE 2150 - 3100
- ZONE 6 CHAINAGE 3100 - 3600
- ZONE 7 CHAINAGE 3600 - 3900
- ZONE 8 CHAINAGE 3900 - 4750
- ZONE 9 CHAINAGE 4750 - 5100
- ZONE 10 CHAINAGE 5100 - 5870
- FOR LANDSCAPE ZONES REFER TO LVIA DESCRIPTION LANDSCAPE TREATMENT
- EXISTING RIVER / WATER COURSE
- SPECIAL PROTECTION AREA (SPA)
- SPECIAL AREA OF CONSERVATION (SAC)

DESIGN HAZARDS

1. U/G UTILITIES
2. O/H CABLES
3. OPEN WATER BODY
4. LIVE TRAFFIC

Note:
DESIGN HAZARDS HAVE NOT BEEN CONSIDERED AT THIS STAGE OF THE DESIGN

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Project

Boyne Greenway LVIA

Title

Landscape Detailed Layout - Sheet Layout

for

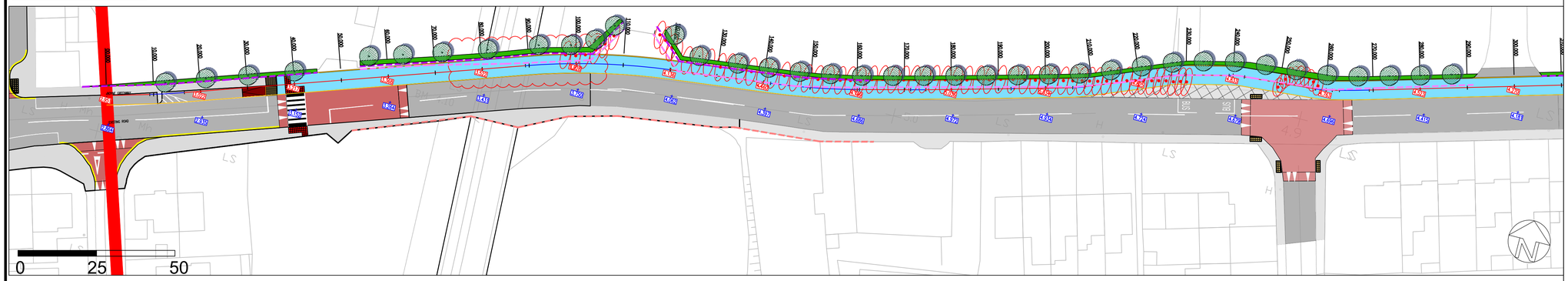
Client

Meath County Council

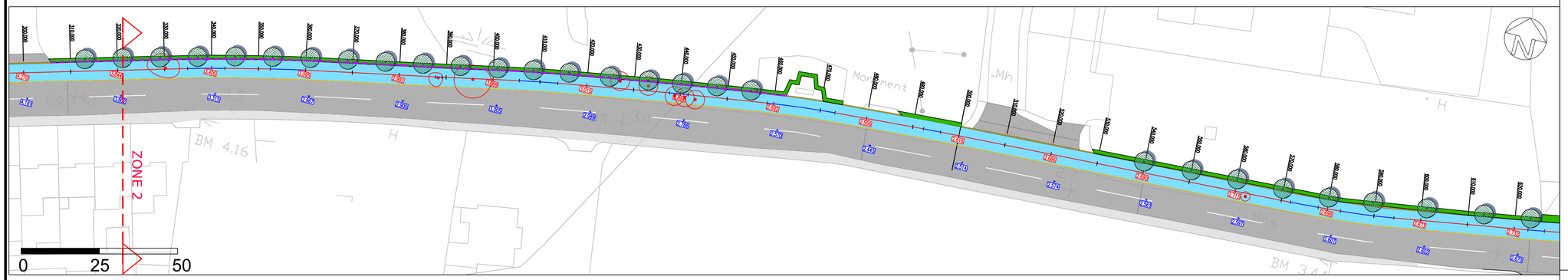
Drawn:	CZ	01/03/2022	Designed:	CZ	16/02/2022
Checked:	CP	01/03/2022	Approved:	BOC	01/03/2022
Project Reference:	2021s1306		Scale:	1:5000 @ A1	

Drawing Number:	Status:	Revision:	Sheet Size:
GUK-JBAI-XX-XX-DR-L-0002	A3	C01	A1

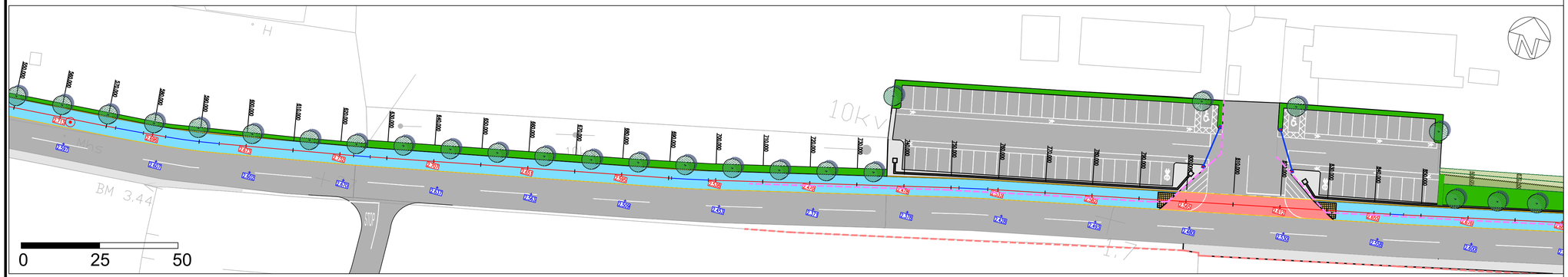
CHAINAGE: 0 - 300



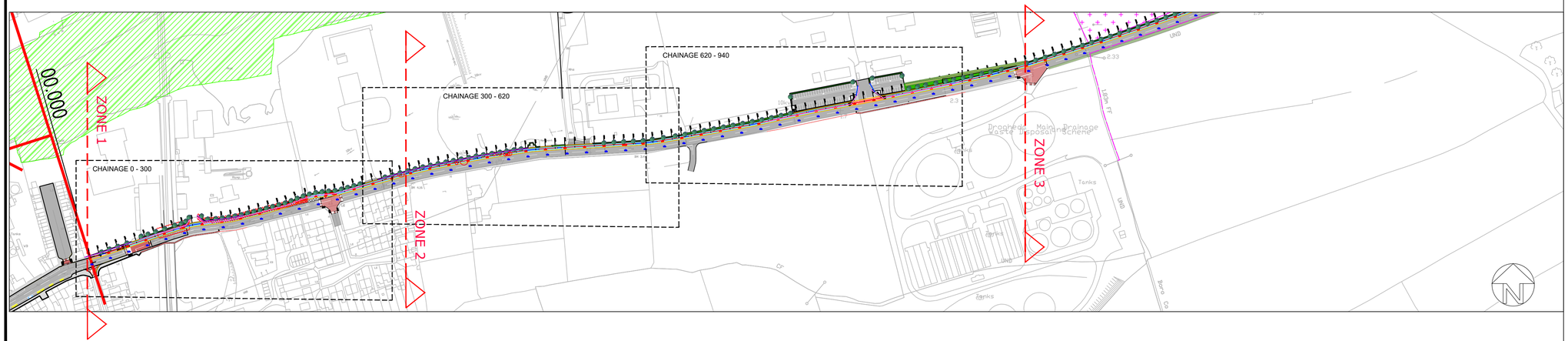
CHAINAGE: 300 - 620



CHAINAGE: 620 -940



KEY PLAN CHAINAGE: 0 - 940



Legend

- SITE BOUNDARY
- EXISTING TREE TO BE RETAINED, REFER TO ARBORICULTURA SURVEY
- EXISTING TREE TO BE REMOVE, REFER TO ARBORICULTURA SURVEY
- TREE PROTECTION FENCING REFER TO ARBORICULTURA SURVEY
- EXISTING HEDGEROW TO BE RETAINED, REFER TO ARBORICULTURA SURVEY
- EXISTING HEDGEROW TO BE REMOVE, REFER TO ARBORICULTURA SURVEY
- PROPOSED NATIVE TREE PLANTING, REFER TO PLANTING SCHEDULE
- PROPOSED NATIVE WOODLAND PLANTING, REFER TO PLANTING SCHEDULE
- PROPOSED NATIVE LOW/MEDIUM SHRUB AND ORNAMENTAL GRASS PLANTING
- PROPOSED NATIVE HEDGEROW, REFER TO PLANTING SCHEDULE
- PROPOSED HEDGE PLANTING TO EXSITING FRONT GARDEN REFER TO PLANTING SCHEDULE
- EXISTING BOUNDARY TREATMENT TO BE REMOVED
- PROPOSED NEW BOUNDARY WALL TO EXISTING FRONT GARDEN
- EXISTING MASONRY WALL

REFER TO ENGINEER'S DETAIL

- TYPE A CONSTRUCTION SECTION BITUMINOUS CONSTRUCTION (ALONGSIDE ROAD)
- TYPE B CONSTRUCTION SECTION BITUMINOUS CONSTRUCTION (AWAY FROM ROAD)
- TYPE C CONSTRUCTION SECTION BOARDWALK CONSTRUCTION
- TYPE D CONSTRUCTION SECTION LOCAL BRIDGE
- PROPOSED FOOTPATH
- EXISTING RIVER / WATER COURSE
- EXISTING ROAD
- EXISTING FOOTPATH
- RAISED TABLE
- SPECIAL PROTECTION AREA (SPA)
- SPECIAL AREA OF CONSERVATION (SAC)
- FOR LANDSCAPE ZONES REFER TO LVIA DESCRIPTION LANDSCAPE TREATMENT

Note:
FOR CHAINAGE REFER TO ENGINEERING DRAWINGS

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Project

Boyne Greenway LVIA

Title

Landscape Detailed Layout - Sheet -1
for

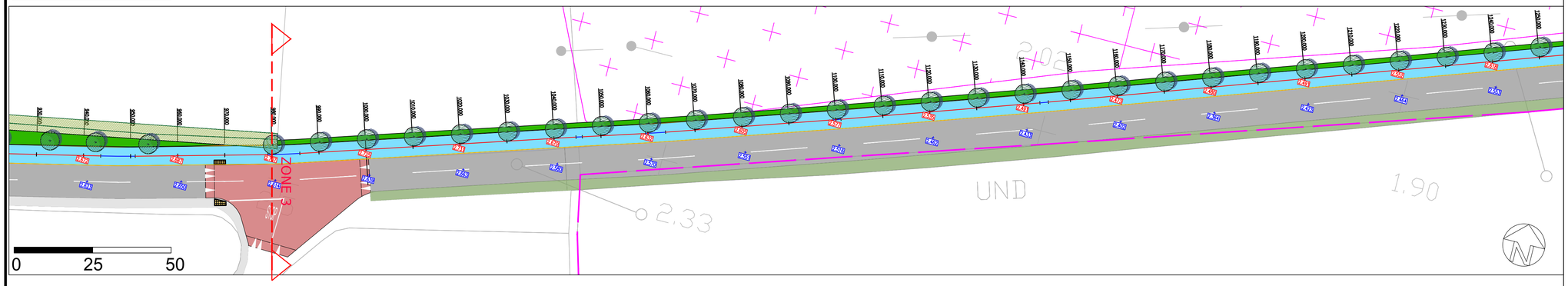
Client

Meath County Council

Drawn:	CZ	01/03/2022	Designed:	CZ	07/01/2022
Checked:	CP	01/03/2022	Approved:	BOC	01/03/2022
Project Reference:	2021s1306		Scale:	1:500 @ A1	

Drawing Number:	Status:	Revision:	Sheet Size:
GUK-JBAI-XX-XX-DR-L-0003	A3	C01	A1

CHAINAGE: 940 - 1250



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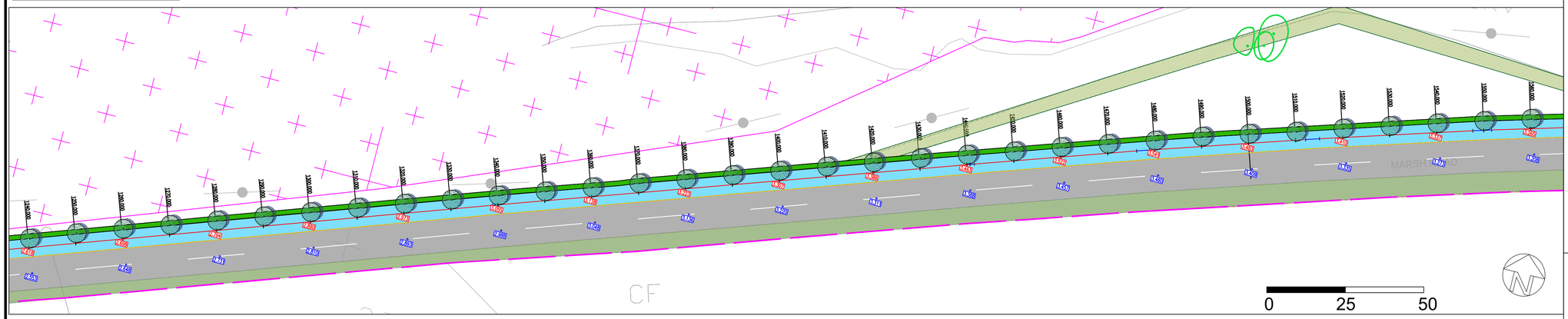

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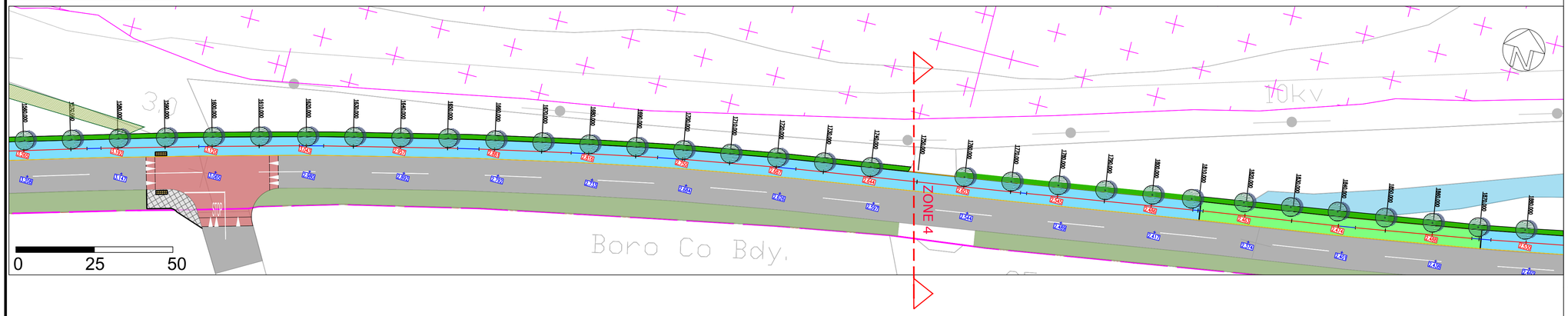
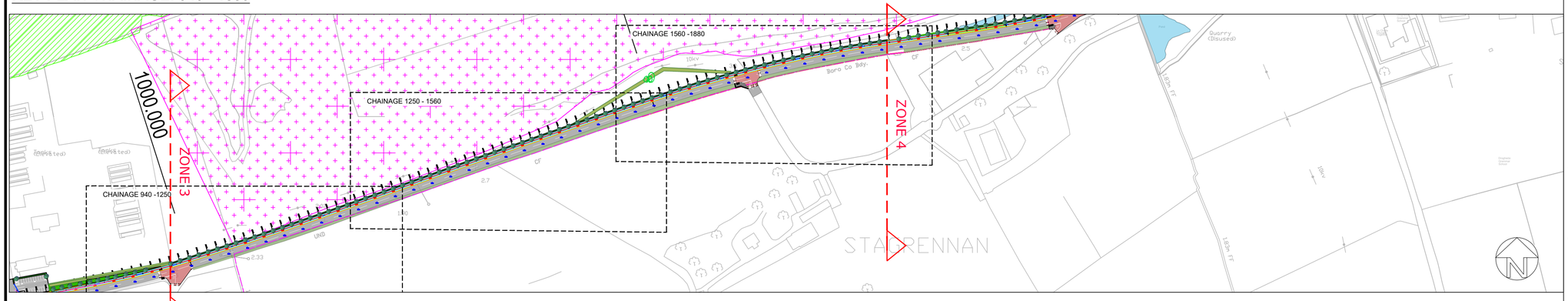


KEY PLAN CHAINAGE: 940 - 1880



Legend

- SITE BOUNDARY
- EXISTING TREE TO BE RETAINED, REFER TO ARBORICULTURA SURVEY
- EXISTING TREE TO BE REMOVE, REFER TO ARBORICULTURA SURVEY
- TREE PROTECTION FENCING REFER TO ARBORICULTURA SURVEY
- EXISTING HEDGEROW TO BE RETAINED, REFER TO ARBORICULTURA SURVEY
- EXISTING HEDGEROW TO BE REMOVE, REFER TO ARBORICULTURA SURVEY
- PROPOSED NATIVE TREE PLANTING, REFER TO PLANTING SCHEDULE
- PROPOSED NATIVE WOODLAND PLANTING, REFER TO PLANTING SCHEDULE
- PROPOSED NATIVE LOW/MEDIUM SHRUB AND ORNAMENTAL GRASS PLANTING
- PROPOSED NATIVE HEDGEROW, REFER TO PLANTING SCHEDULE
- EXISTING MASONRY WALL

REFER TO ENGINEER'S DETAIL

- TYPE A CONSTRUCTION SECTION BITUMINOUS CONSTRUCTION (ALONGSIDE ROAD)
- TYPE B CONSTRUCTION SECTION BITUMINOUS CONSTRUCTION (AWAY FROM ROAD)
- TYPE C CONSTRUCTION SECTION BOARDWALK CONSTRUCTION
- TYPE D CONSTRUCTION SECTION LOCAL BRIDGE
- PROPOSED FOOTPATH
- EXISTING RIVER / WATER COURSE
- EXISTING ROAD
- EXISTING FOOTPATH
- RAISED TABLE
- SPECIAL PROTECTION AREA (SPA)
- SPECIAL AREA OF CONSERVATION (SAC)
- FOR LANDSCAPE ZONES REFER TO LVIA DESCRIPTION LANDSCAPE TREATMENT

Note:
FOR CHAINAGE REFER TO ENGINEERING DRAWINGS

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Project

Boyne Greenway LVIA

Title

Landscape Detailed Layout - Sheet -2

for

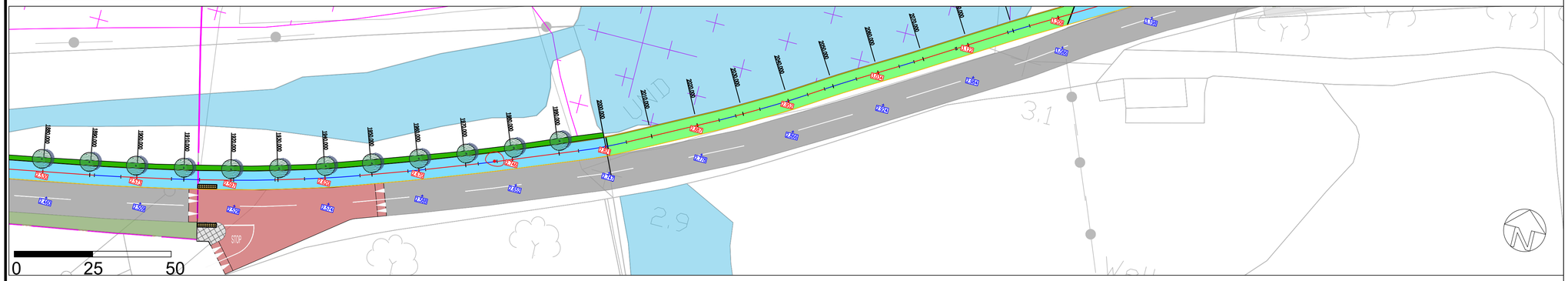
Client

Meath County Council

Drawn:	CZ	01/03/2022	Designed:	CZ	07/01/2022
Checked:	CP	01/03/2022	Approved:	BOC	01/03/2022
Project Reference:	2021s1306		Scale:	1:500 @ A1	

Drawing Number:	Status:	Revision:	Sheet Size:
GUK-JBAI-XX-XX-DR-L-0004	A3	C01	A1

CHAINAGE: 1880 - 2070



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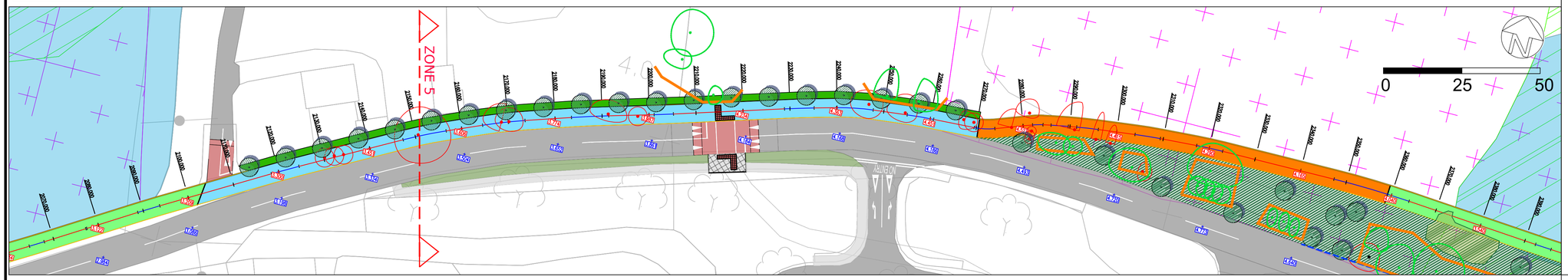

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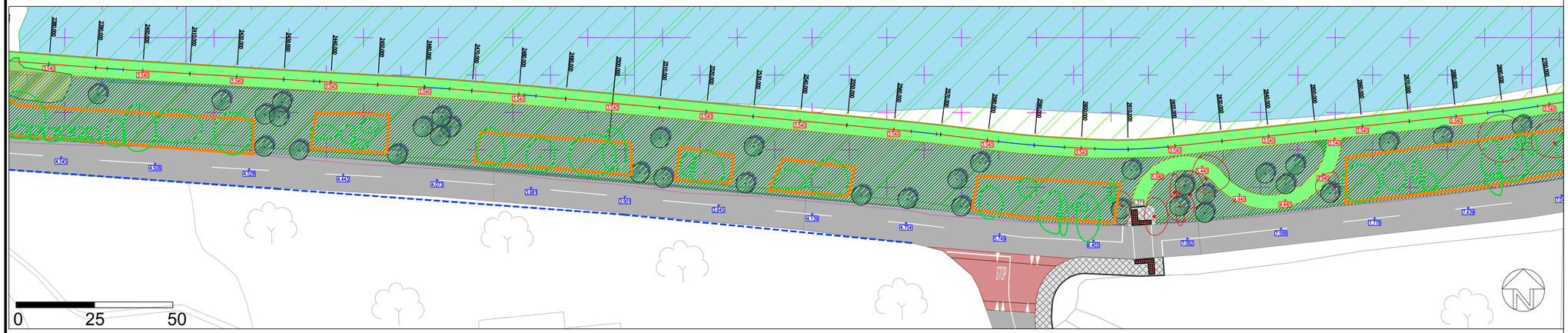
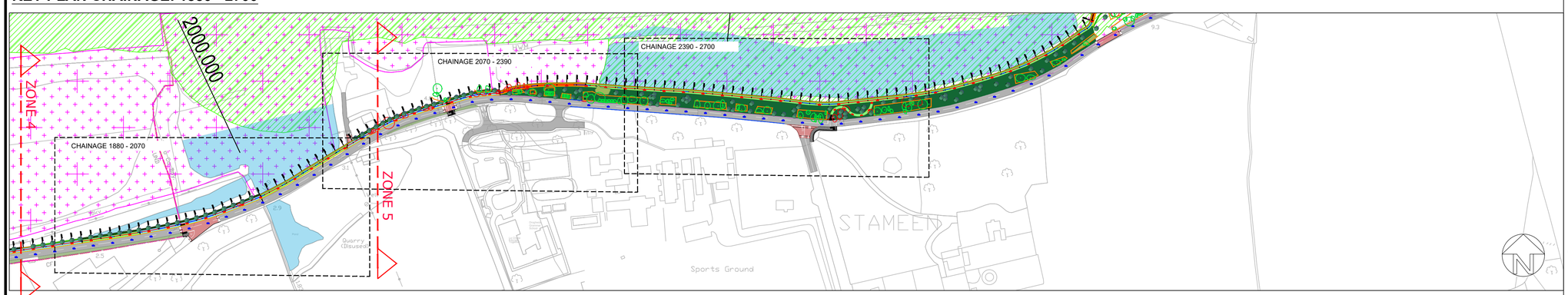


KEY PLAN CHAINAGE: 1880 - 2700



Legend

- SITE BOUNDARY
- EXISTING TREE TO BE RETAINED, REFER TO ARBORICULTURA SURVEY
- EXISTING TREE TO BE REMOVE, REFER TO ARBORICULTURA SURVEY
- TREE PROTECTION FENCING REFER TO ARBORICULTURA SURVEY
- EXISTING HEDGEROW TO BE RETAINED, REFER TO ARBORICULTURA SURVEY
- EXISTING HEDGEROW TO BE REMOVE, REFER TO ARBORICULTURA SURVEY
- PROPOSED NATIVE TREE PLANTING, REFER TO PLANTING SCHEDULE
- PROPOSED NATIVE WOODLAND PLANTING, REFER TO PLANTING SCHEDULE
- PROPOSED NATIVE LOW/MEDIUM SHRUB AND ORNAMENTAL GRASS PLANTING
- PROPOSED NATIVE HEDGEROW, REFER TO PLANTING SCHEDULE
- EXISTING MASONRY WALL

REFER TO ENGINEER'S DETAIL

- TYPE A CONSTRUCTION SECTION BITUMINOUS CONSTRUCTION (ALONGSIDE ROAD)
- TYPE B CONSTRUCTION SECTION BITUMINOUS CONSTRUCTION (AWAY FROM ROAD)
- TYPE C CONSTRUCTION SECTION BOARDWALK CONSTRUCTION
- TYPE D CONSTRUCTION SECTION LOCAL BRIDGE
- PROPOSED FOOTPATH
- EXISTING RIVER / WATER COURSE
- EXISTING ROAD
- EXISTING FOOTPATH
- RAISED TABLE
- SPECIAL PROTECTION AREA (SPA)
- SPECIAL AREA OF CONSERVATION (SAC)
- FOR LANDSCAPE ZONES REFER TO LVIA DESCRIPTION LANDSCAPE TREATMENT

Note:
FOR CHAINAGE REFER TO ENGINEERING DRAWINGS

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Project

Boyne Greenway LVIA

Title

Landscape Detailed Layout - Sheet -3

for

Client

Meath County Council

Drawn:	CZ	01/03/2022	Designed:	CZ	07/01/2022
Checked:	CP	01/03/2022	Approved:	BOC	01/03/2022
Project Reference:	2021s1306		Scale:	1:500 @ A1	

Drawing Number:	Status:	Revision:	Sheet Size:
GUK-JBAI-XX-XX-DR-L-0005	A3	C01	A1

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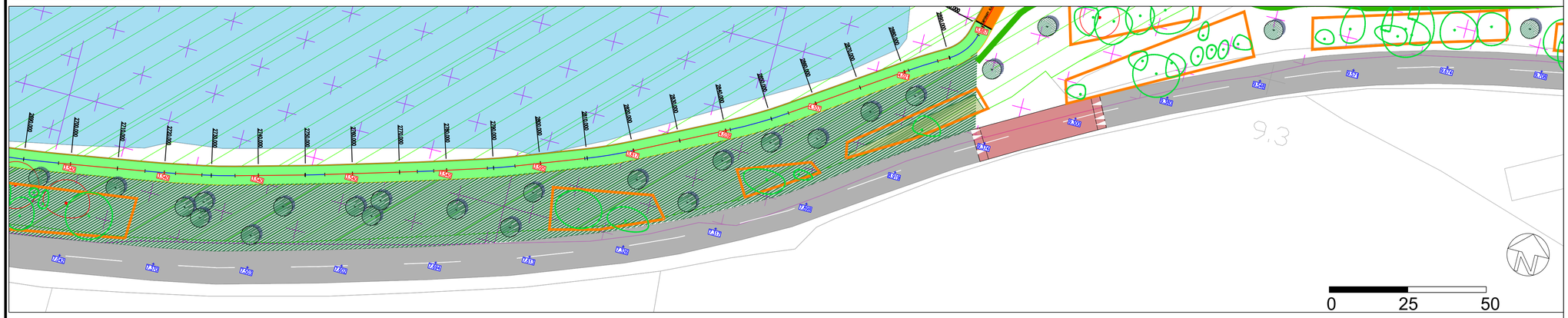

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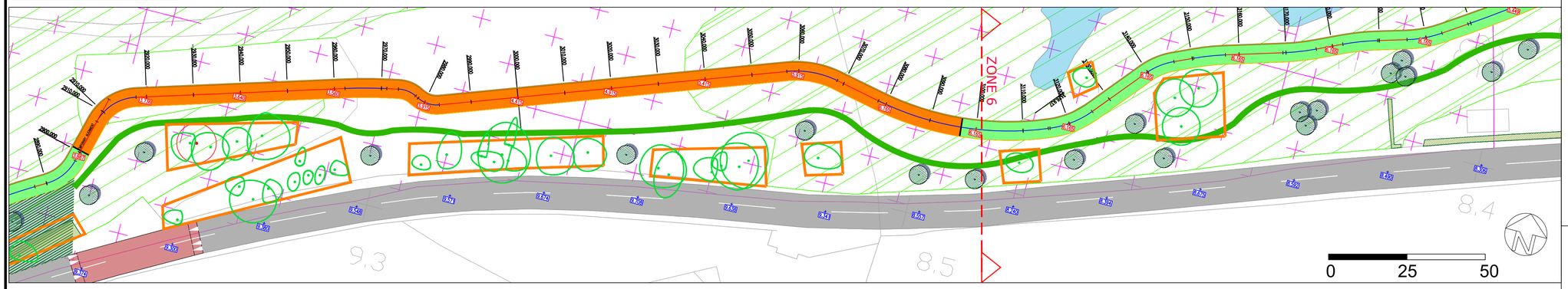
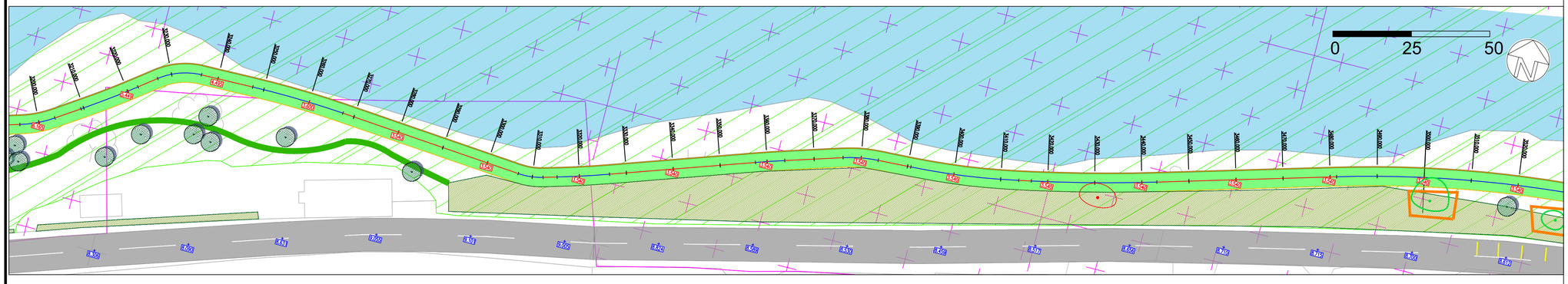
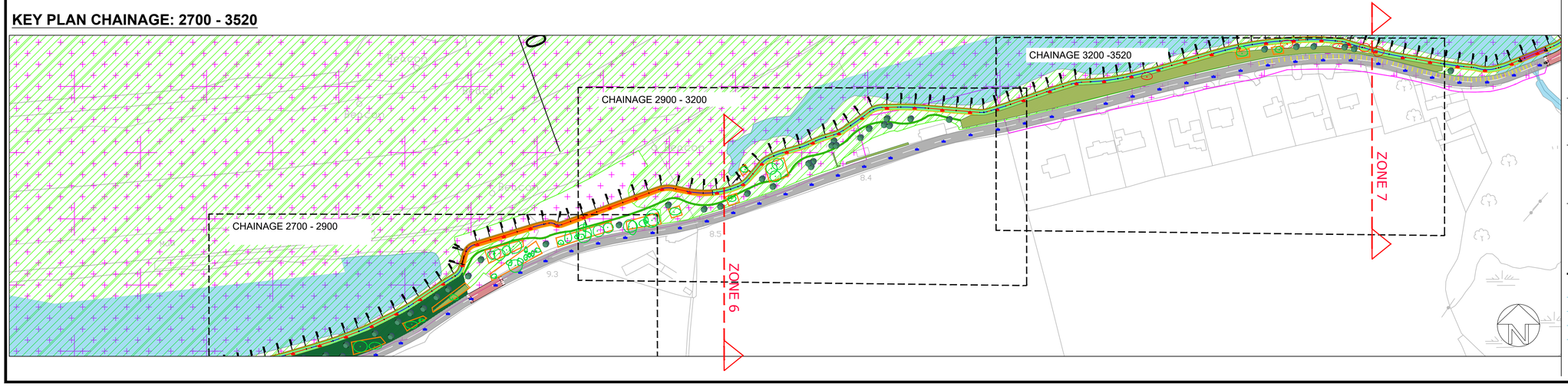


CHAINAGE: 3200 - 3520



KEY PLAN CHAINAGE: 2700 - 3520



Legend

- SITE BOUNDARY
- EXISTING TREE TO BE RETAINED, REFER TO ARBORICULTURA SURVEY
- EXISTING TREE TO BE REMOVE, REFER TO ARBORICULTURA SURVEY
- TREE PROTECTION FENCING REFER TO ARBORICULTURA SURVEY
- EXISTING HEDGEROW TO BE RETAINED, REFER TO ARBORICULTURA SURVEY
- EXISTING HEDGEROW TO BE REMOVE, REFER TO ARBORICULTURA SURVEY
- PROPOSED NATIVE TREE PLANTING, REFER TO PLANTING SCHEDULE
- PROPOSED NATIVE WOODLAND PLANTING, REFER TO PLANTING SCHEDULE
- PROPOSED NATIVE LOW/MEDIUM SHRUB AND ORNAMENTAL GRASS PLANTING
- PROPOSED NATIVE HEDGEROW, REFER TO PLANTING SCHEDULE
- EXISTING MASONRY WALL

REFER TO ENGINEER'S DETAIL

- TYPE A CONSTRUCTION SECTION BITUMINOUS CONSTRUCTION (ALONGSIDE ROAD)
- TYPE B CONSTRUCTION SECTION BITUMINOUS CONSTRUCTION (AWAY FROM ROAD)
- TYPE C CONSTRUCTION SECTION BOARDWALK CONSTRUCTION
- TYPE D CONSTRUCTION SECTION LOCAL BRIDGE
- PROPOSED FOOTPATH
- EXISTING RIVER / WATER COURSE
- EXISTING ROAD
- EXISTING FOOTPATH
- RAISED TABLE
- SPECIAL PROTECTION AREA (SPA)
- SPECIAL AREA OF CONSERVATION (SAC)
- FOR LANDSCAPE ZONES REFER TO LVIA DESCRIPTION LANDSCAPE TREATMENT

Note:
FOR CHAINAGE REFER TO ENGINEERING DRAWINGS

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Project

Boyne Greenway LVIA

Title

Landscape Detailed Layout - Sheet -4

for

Client

Meath County Council

Drawn:	CZ	01/03/2022	Designed:	CZ	07/01/2022
Checked:	CP	01/03/2022	Approved:	BOC	01/03/2022
Project Reference:	2021s1306		Scale:	1:500 @ A1	

Drawing Number:	Status:	Revision:	Sheet Size:
GUK-JBAI-XX-XX-DR-L-0006	A3	C01	A1

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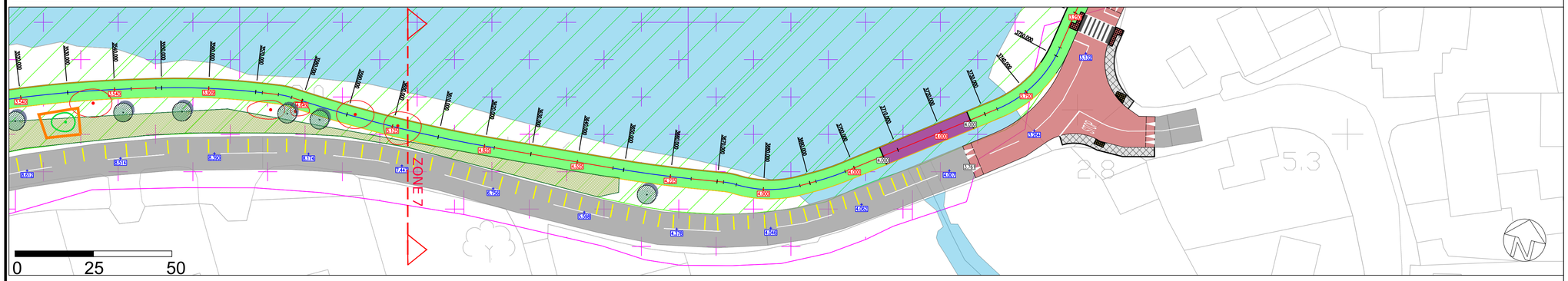

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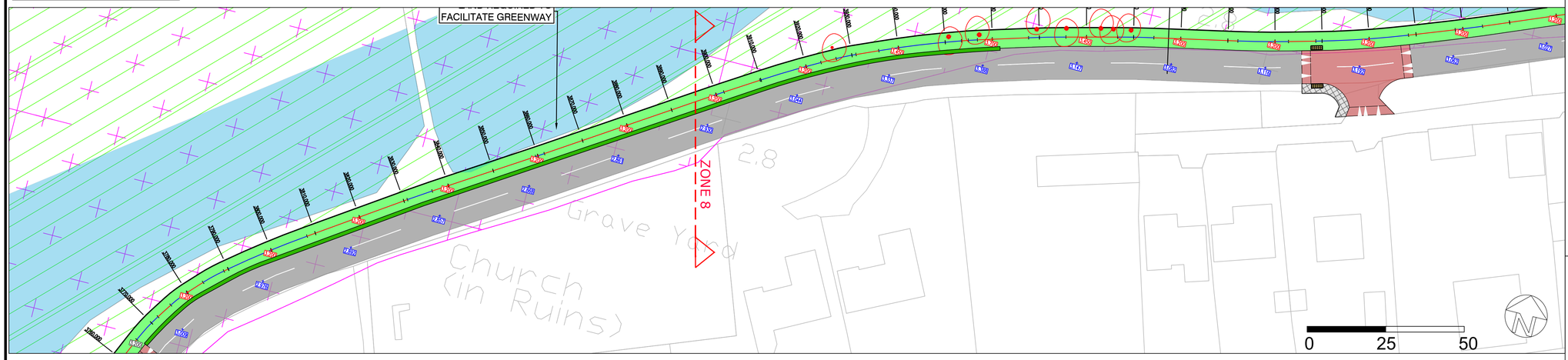

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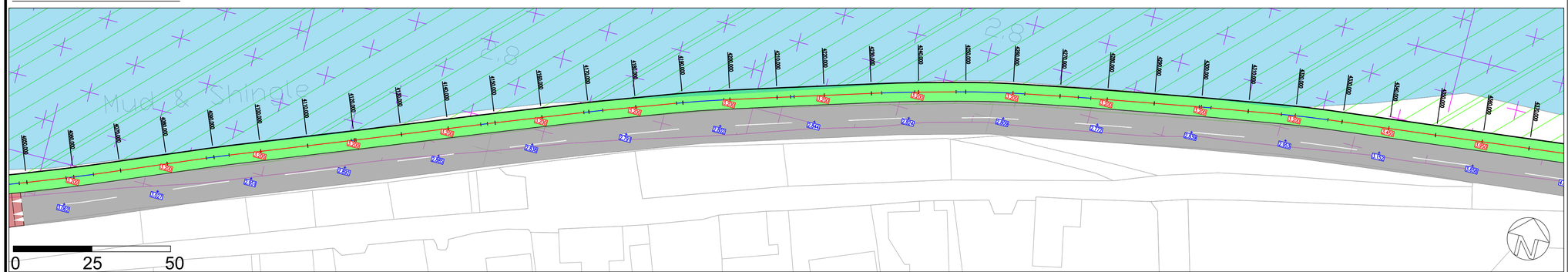

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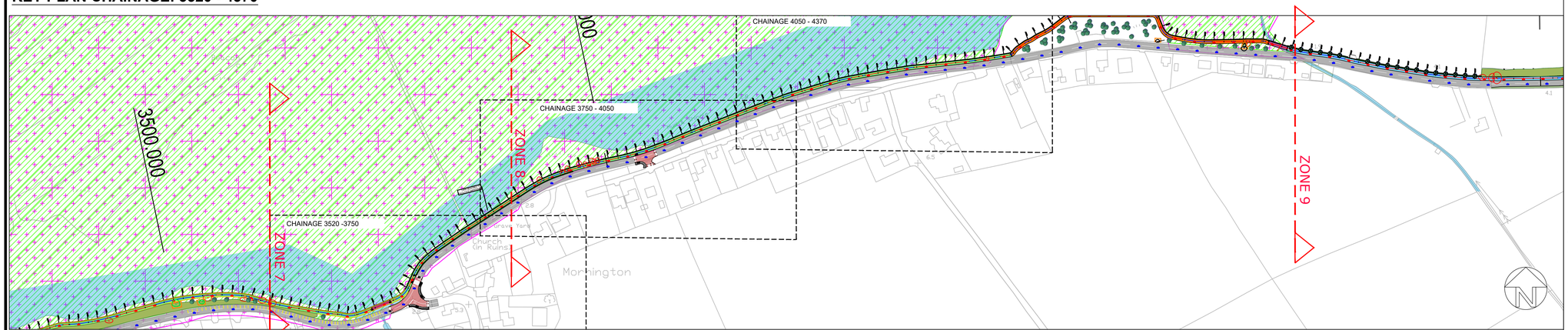

Legend

- SITE BOUNDARY
- EXISTING TREE TO BE RETAINED, REFER TO ARBORICULTURA SURVEY
- EXISTING TREE TO BE REMOVE, REFER TO ARBORICULTURA SURVEY
- TREE PROTECTION FENCING REFER TO ARBORICULTURA SURVEY
- EXISTING HEDGEROW TO BE RETAINED, REFER TO ARBORICULTURA SURVEY
- EXISTING HEDGEROW TO BE REMOVE, REFER TO ARBORICULTURA SURVEY
- PROPOSED NATIVE TREE PLANTING, REFER TO PLANTING SCHEDULE
- PROPOSED NATIVE WOODLAND PLANTING, REFER TO PLANTING SCHEDULE
- PROPOSED NATIVE LOW/MEDIUM SHRUB AND ORNAMENTAL GRASS PLANTING
- PROPOSED NATIVE HEDGEROW, REFER TO PLANTING SCHEDULE
- EXISTING MASONRY WALL

REFER TO ENGINEER'S DETAIL

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Project

Boyne Greenway LVIA

Title

Landscape Detailed Layout - Sheet -5

for

Client

Meath County Council

Drawn:	CZ	01/03/2022	Designed:	CZ	07/01/2022
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Drawing Number:	Status:	Revision:	Sheet Size:
GUK-JBAI-XX-XX-DR-L-0007	A3	C01	A1

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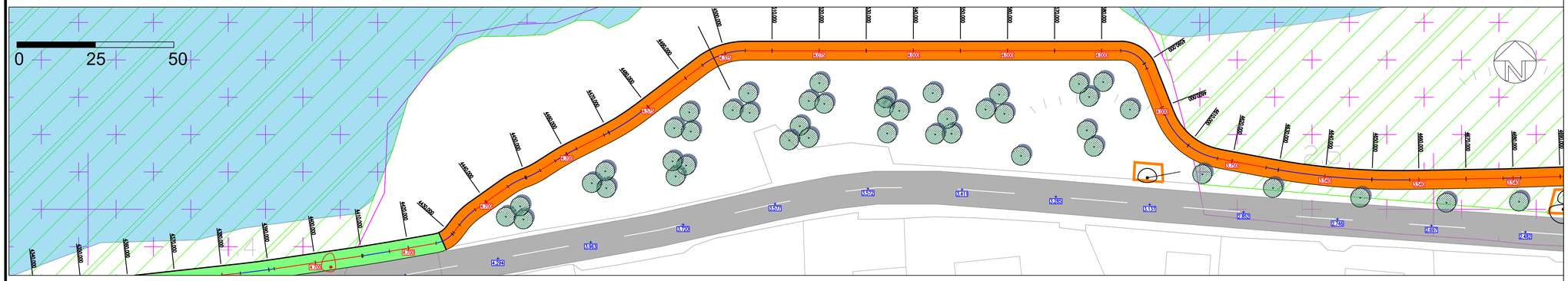

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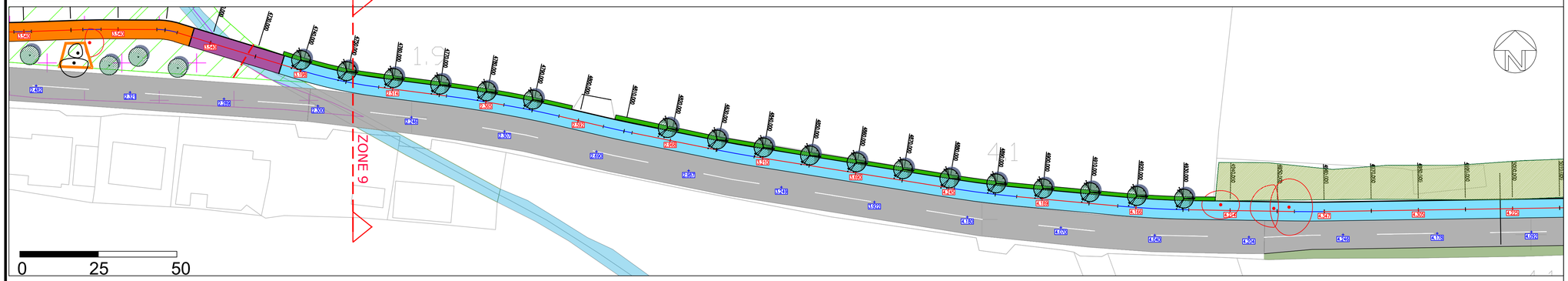

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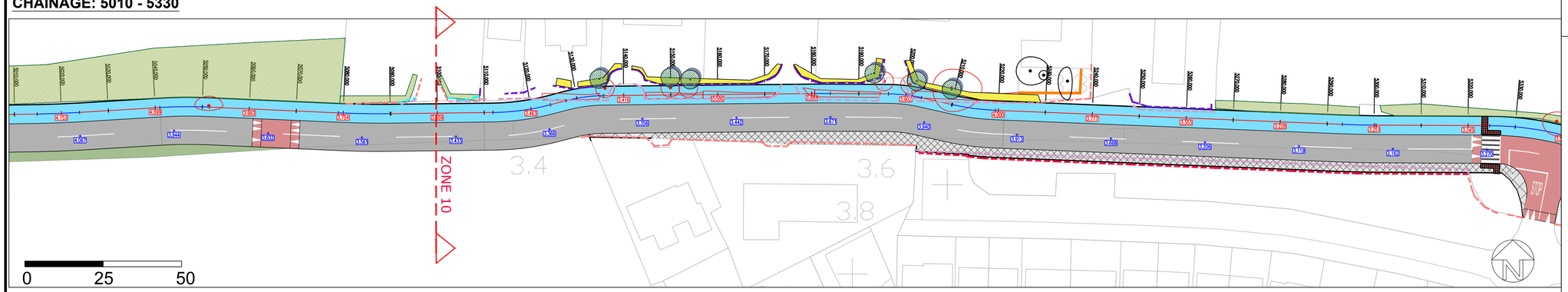

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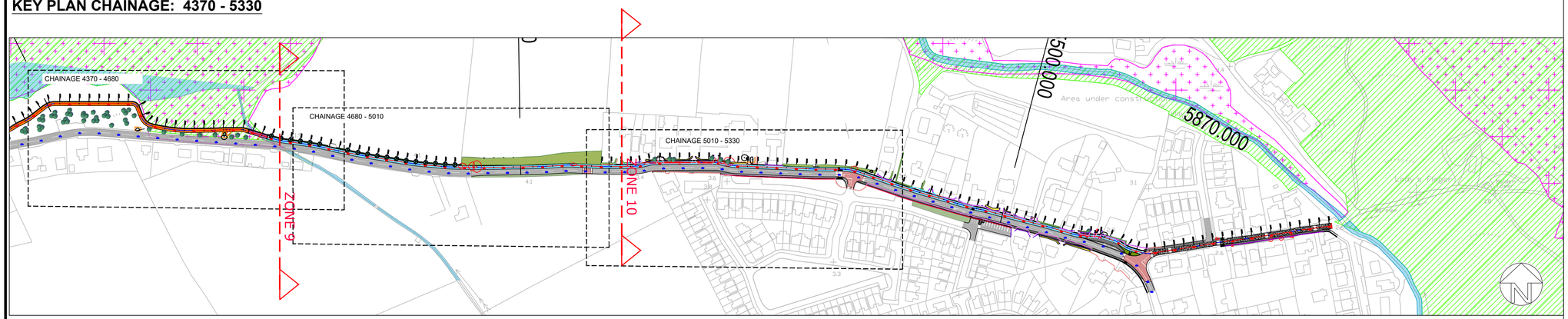

Legend

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- EXISTING TREE TO BE RETAINED, REFER TO ARBORICULTURA SURVEY
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Boyne Greenway LVIA

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Landscape Detailed Layout - Sheet -6

for

Client

Meath County Council

Drawn:	CZ	01/03/2022	Designed:	CZ	16/02/2022
Checked:	CP	01/03/2022	Approved:	BOC	01/03/2022
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Drawing Number:	Status:	Revision:	Sheet Size:
GUK-JBAI-XX-XX-DR-L-0008	A3	C01	A1

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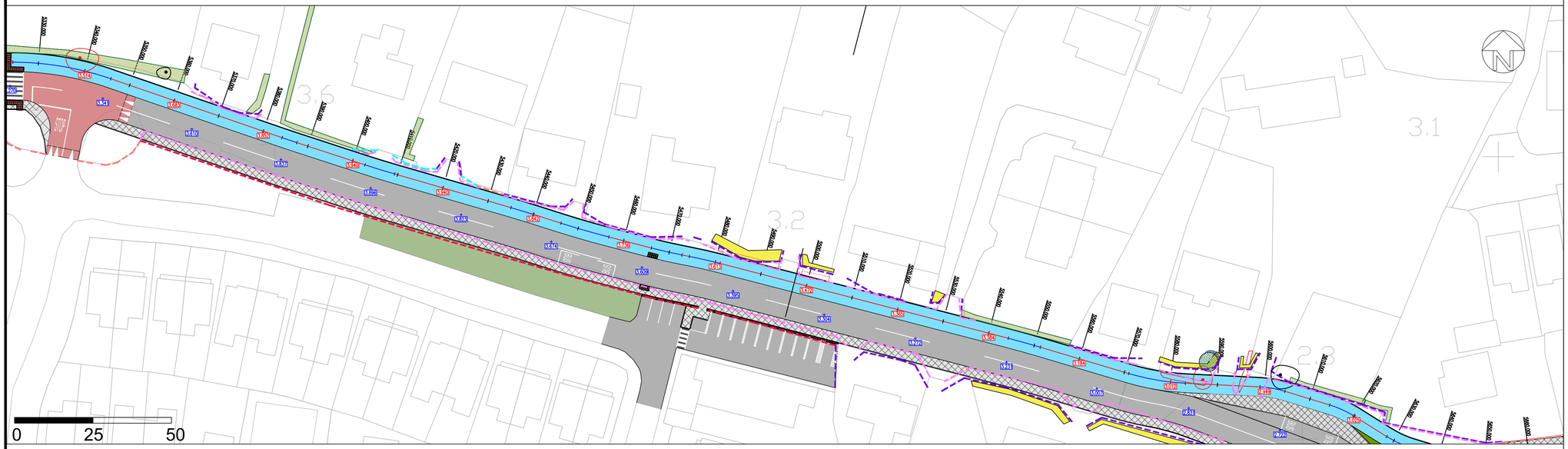

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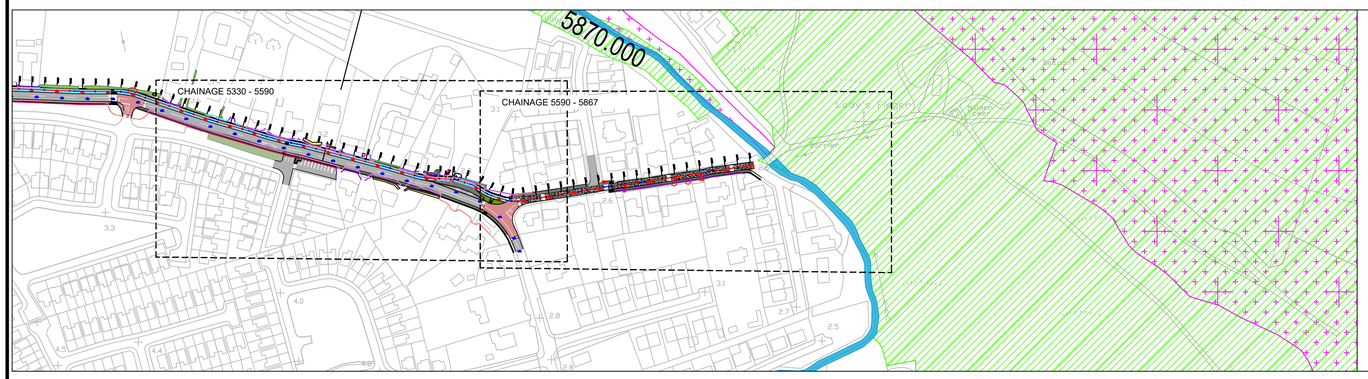
KEY PLAN CHAINAGE: 5330 - 5867



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Project

Boyne Greenway LVIA

Title

Landscape Detailed Layout - Sheet -7

for

Client

Meath County Council

Drawn: CZ	01/03/2022	Designed: CZ	07/01/2022
Checked: CP	01/03/2022	Approved: BOC	01/03/2022
Project Reference: 2021s1306		Scale: 1:500 @ A1	

Drawing Number:	Status:	Revision:	Sheet Size:
GUK-JBAI-XX-XX-DR-L-0009	A3	C01	A1

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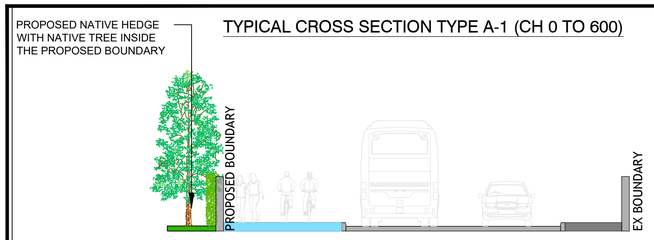

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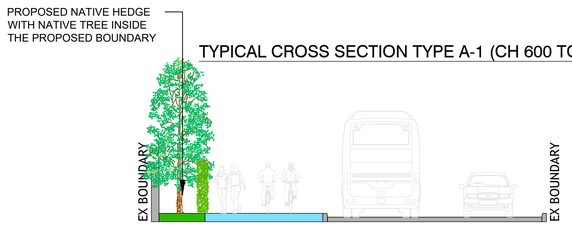

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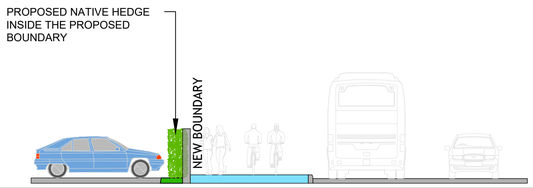

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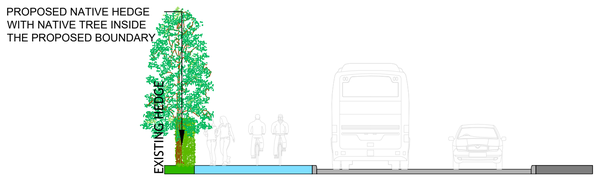

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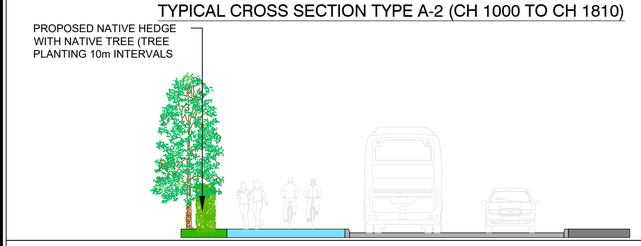

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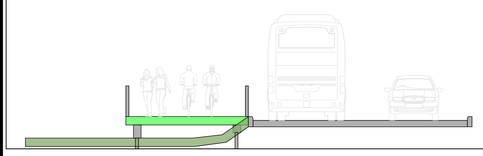

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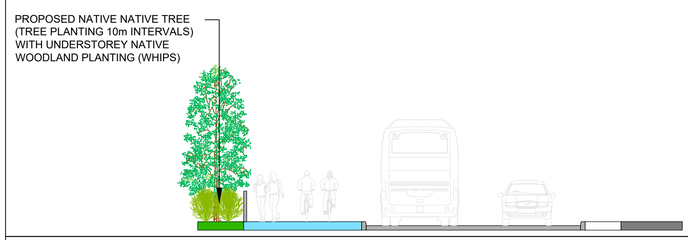

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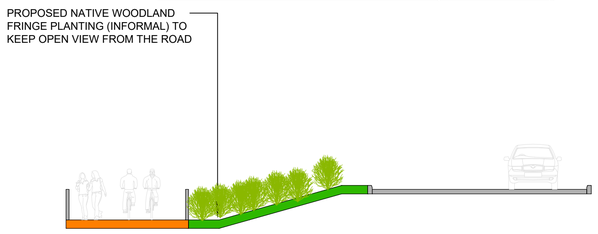

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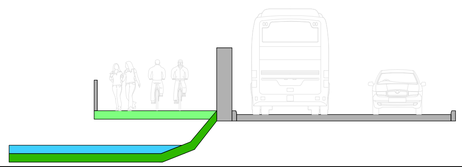

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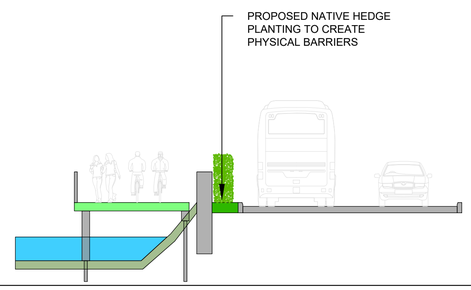

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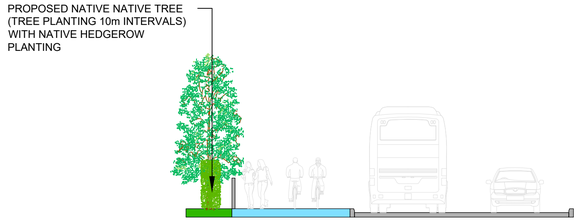

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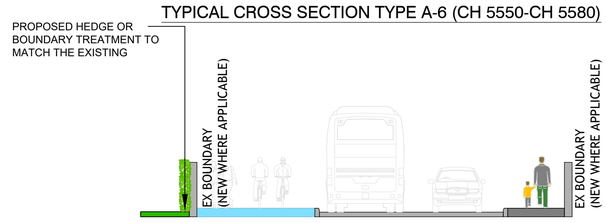

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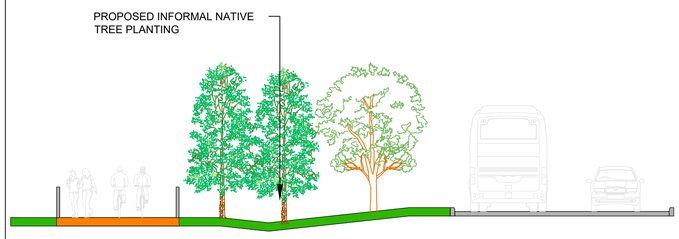

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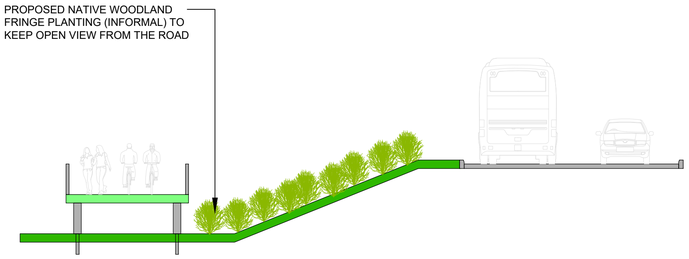

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Project

Boyne Greenway LVIA

Title

Landscape Section for

Client

Meath County Council

Drawn:	CZ	01/03/2022	Designed:	CZ	07/01/2022
Checked:	CP	01/03/2022	Approved:	BOC	01/03/2022
Project Reference:	2021s1306		Scale:	1:100 @ A1	

Drawing Number:	Status:	Revision:	Sheet Size:
GUK-JBAI-XX-XX-DR-L-0010	A3	C01	A1

PLANTING SCHEDULE

PROPOSED NATIVE TREE PLANTING

Species	Girth / Form / Height	% in mix	Planting Density (no./m2)	Total no.	No.	Comments	Establishment Maintenance 18 months	Management year 1.5 -5
		100		**TBC**			Defective (dead or dying) plants to be repaced after year 1. Monthly tasks: -Trees stakes/ties to be checked -Water weekly during dry weather -Weed removal at base of tree -Fertilise at base of tree	Tree ties and staking to be removed at start of management period
Betula pendula	16-18cm girth (Extra Heavy Standard), min 4m in height	20	5		TBC			
Tilia cordata	16-18cm girth (Extra Heavy Standard), min 4m in height	20	5		TBC			
Acer campestre	16-18cm girth (Extra Heavy Standard), min 4m in height	10	5		TBC			
Pinus sylvestris	3.5-4m high Feathered	20	5		TBC			
Sorbus aucuparia	16-18cm girth (Extra Heavy Standard), min 4m in height	10	5		TBC			
Quercus robur	16-18cm girth (Extra Heavy Standard), min 4m in height	20	5		TBC			

PROPOSED NATIVE WOODLAND PLANTING

Species (native species)	Height / Pot size	% in mix	Planting Density (no./m2)	Total Area (m)	No.	Comments	Establishment Maintenance Period 18 months	Management year 5-10
Shrubs		**100**		**TBC**		Hedge species to be planted at 0.5m centres, in 2 staggered row, rows to be 0.4m apart. To be planted in positions shown on drawing	Note - Establishment Maintenance to be 18 months after end of Defects Liability Period. Defective (dead or dying) plants to be replaced at end of Establishment Maintenance Period. Monthly tasks during Establishment Maintenance Period: -Water weekly during dry weather -Weed removal at base of shrub or tree - Bark mulch to be applied to beds	Top up bark mulch annually. Shrubs to be trimmed in spring to 1m max height
Crataegus monogyna	60-90cm/BR	10	5		TBC			
Hedera helix	60-90cm/2L pot	10	5		TBC			
Prunus spinosa	60-90cm/BR	10	5		TBC			
Quercus robur	60-90cm/BR	10	5		TBC			
Rosa canina	60-90cm/BR	10	5		TBC			
Salix caprea	60-90cm/BR	10	5		TBC			
Sambucus nigra	60-90cm/BR	10	5		TBC			
Viburnum davidii	40-60cm shoot length/2L pot	10	5		TBC			
Acer campestre	60-90cm/BR	10	5		TBC			
Descampsia cespitosa	3L pot	10	5		TBC			
				Total No.	**TBC**			

PROPOSED NATIVE LOW/MEDIUM SHRUB AND ORNAMENTALGRASS PLANTING

Species (inc. pollinator species)	Height	% in mix	Density (no. /m2)	Total Area (m2)	Total No.	Comments	Establishment Maintenance Period 18 months	Management year 1.5 -5
Shrubs, grasses and herbaceous		**100**		**TBC**				
Cornus alba 'Sibirica'	40-60cm shoot length/2L pot	15	5		TBC	To be planted in groups of 3-5 of same species	Note - Establishment Maintenance to be 18 months after end of Defects Liability Period. Defective (dead or dying) plants to be replaced at end of Establishment Maintenance Period. Monthly tasks during Establishment Maintenance Period: -Water weekly during dry weather -Weed removal at base of shrub or tree - Bark mulch to be applied to beds	Every year: Cornus to be pruned to ground in alternate years. If over crowding of shrub bed has occurred then alternate shrubs to be removed. Top up bark mulch after 3 years
Choisya x dewitteana 'Aztec Gold'	40-60cm shoot length/2L pot	10	5		TBC			
Euonymus fortunei 'Emerald 'n' Gold'	40-60cm shoot length/2L pot	15	5		TBC			
Hebe 'Midnight Sky Lowten'	40-60cm shoot length/2L pot	25	5		TBC			
Stipa gigantea	5L pot	5	3		TBC			
Kniphofia caulescens	5L Pot	10	3		TBC			
Kniphofia 'Elvira'	5L Pot	10	3		TBC			
Viburnum davidii	40-60cm shoot length/2L pot	10	5		TBC			
Bulbs		**100**			TBC	Bulbs to be scattered by hand and planted where they fall. Planted at 15cm depth.		
Narcissus poeticus	10/12cm girth bulbs	30	10		TBC			
Narcissus 'Empress of Ireland'	10/12cm girth bulbs	30	10		TBC			
Allium 'Purple Sensation'	10/12cm girth bulbs	40	5		TBC			
					0			
Wild flower mix EC09: Species Rich Amenity Grassland (100% flora) from Design by Nature	Sowing rate:1.5grams per m, 15 kilos per Ha					To be planted in groups of 3-5 of same species		

PROPOSED NATIVE HEDGEROW

Species	Height	% in mix	Density (no. /m2)	Total Length (m)	Total No.	Comments	Management year 1-5	Management year 5-10
		100		**TBC**				
Rosa canina	60-90cm/BR		5			Hedge to be planted in groups of 2-3 of same species as shown on planting plan.	Defective (dead or dying) plants to be replaced after year 1. Monthly tasks: -Water weekly during dry weather -Weed removal at base of whip/shrub -Fertilise at base of whip/shrub	Every 3 years: -Plant to be thinned, pruned 1.2m in height.
Crataegus monogyna	60-90cm/BR		5					
Hedera helix	60-90cm/BR / 2L pot		5					
Sambucus nigra	60-90cm/BR		5					
Prunus spinosa	60-90cm/BR		5					
Fagus sylvatica	60-90cm/BR		5					
Corylus avellana	60-90cm/BR		5					

PROPOSED FORMAL HEDGE TO EXISTING FRONT GARDEN

Species	Height	% in mix	Density (no. /m2)	Total Area (m2)	Total No.	Comments	Establishment Maintenance Period 18 months	Management year 1.5 -5
		100		**TBC**				
Crinodendron hookerianum	2m	10	5		TBC	Hedge species to be planted at 0.5m centres, in 2 staggered row, rows to be 0.4m apart. To be planted in positions shown on drawing	Defective (dead or dying) plants to be replaced after year 1. Monthly tasks: -Water weekly during dry weather -Weed removal at base of whip/shrub -Fertilise at base of whip/shrub	To be kept trimmed to final height and width.
Cupressus leylandii	1.5m	10	5		TBC			
Prunus laurocerasus	1.5m	10	5		TBC			
Griselinia littoralis	2m	5	5		TBC			
Sorbus aria	1.5m	5	5		TBC			
Cupressus macrocarpa 'Goldcrest'	1.75m	10	5		TBC			
Euonymus cultivars	2.5m	10	5		TBC			
Acer pseudoplatanus	3m	5	5		TBC			
Euonymus japonicus cv.	1.2m	10	5		TBC			
Betula pendula	3m	5	5		TBC			
Hibiscus syriacus	1m	5	5		TBC			
Phormium tenax	1m	5	5		TBC			
Fagus sylvatica	2m	5	5		TBC			
Ligustrum vulgare	1.75m	5	5		TBC			
					0			

Legend

- SITE BOUNDARY
- EXISTING TREE TO BE RETAINED, REFER TO ARBORICULTURA SURVEY
- EXISTING TREE TO BE REMOVE, REFER TO ARBORICULTURA SURVEY
- TREE PROTECTION FENCING REFER TO ARBORICULTURA SURVEY
- EXISTING HEDGEROW TO BE RETAINED, REFER TO ARBORICULTURA SURVEY
- EXISTING HEDGEROW TO BE REMOVE, REFER TO ARBORICULTURA SURVEY
- PROPOSED NATIVE TREE PLANTING, REFER TO PLANTING SCHEDULE
- PROPOSED NATIVE WOODLAND PLANTING, REFER TO PLANTING SCHEDULE
- PROPOSED NATIVE LOW/MEDIUM SHRUB AND ORNAMENTAL GRASS PLANTING
- PROPOSED NATIVE HEDGEROW, REFER TO PLANTING SCHEDULE
- PROPOSED FORMAL HEDGE PLANTING TO EXISTING FRONT GARDEN REFER TO PLANTING SCHEDULE
- EXISTING BOUNDARY TREATMENT TO BE RETAINED
- EXISTING BOUNDARY TREATMENT TO BE REMOVED
- PROPOSED WALL RAILING ALONG THE MORNINGTON COURT
- PROPOSED NEW POST AND RAIL BOUNDARY TO EXISTING FRONT GARDEN
- PROPOSED NEW BOUNDARY WALL TO EXISTING FRONT GARDEN
- EXISTING MASONRY WALL

REFER TO ENGINEER'S DETAIL

- TYPE A CONSTRUCTION SECTION BITUMINOUS CONSTRUCTION (ALONGSIDE ROAD)
- TYPE B CONSTRUCTION SECTION BITUMINOUS CONSTRUCTION (AWAY FROM ROAD)
- TYPE C CONSTRUCTION SECTION BOARDWALK CONSTRUCTION
- TYPE D CONSTRUCTION SECTION LOCAL BRIDGE
- PROPOSED FOOTPATH
- EXISTING RIVER / WATER COURSE
- EXISTING ROAD
- EXISTING FOOTPATH
- RAISED TABLE
- SPECIAL PROTECTION AREA (SPA)
- SPECIAL AREA OF CONSERVATION (SAC)

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Project

Boyne Greenway LVIA

Title

Planting Schedule
for
Client

Meath County Council

Drawn:	CZ	01/03/2022	Designed:	CZ	07/01/2022
Checked:	CP	01/03/2022	Approved:	CP	01/03/2022
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