Cork Line Level Crossings

Volume 3, Chapter 13: Landscape and Visual

Iarnród Éireann

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Cork Line Level Crossings

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Project Manager:	Alex Bradley
Author:	Macro Works

Jacobs U.K. Limited
Artola House
3rd & 4th Floors
91 Victoria Street
Belfast
BT1 4PN
T +44 (0)28 9032 4452
F +44 (0)28 9033 0713
www.jacobs.com

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Table of Acronyms

Acronym	Meaning
CCTV	Closed Circuit Television
CCDP	Cork County Development Plan
CDP	County Development Plan
CIÉ	Córas Iompair Éireann
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
GLVIA	Guidelines for Landscape and Visual Impact Assessment
IÉ	Iarnród Éireann
KM	Kilometre
LC	Level Crossing
LCA	Landscape Character Area
LCT	Landscape Character Type
LIA	Landscape Impact Assessment
LVIA	Landscape and Visual Impact Assessment
M	Metres
VIA	Visual Impact Assessment

13. Landscape & Visual

13.1 Introduction

Macro Works Ltd. has been commissioned to carry out a Landscape and Visual Impact Assessment ("LVIA") on behalf of Córas Iompair Éireann (CIÉ) and Iarnród Éireann (IÉ) for a proposed Project that occurs within the southern periphery of County Limerick and throughout the northern portions of County Cork. The most notable settlements in the wider vicinity of the proposed Project include Kilmallock in County Limerick and Charleville and Buttevant in County Cork (See Volume 4, Figure 1).

The LVIA describes the landscape context of the proposed Project and assesses the likely landscape and visual impacts of the proposed Project on the receiving environment. Although closely linked, landscape and visual impacts are assessed separately.

Landscape Impact Assessment (LIA) relates to assessing effects of a development on the landscape as a resource in its own right and is concerned with how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character.

Visual Impact Assessment (VIA) relates to assessing effects of a development on specific views and on the general visual amenity experienced by people. This deals with how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views as a result of the change or loss of existing elements of the landscape and/or introduction of new elements. Visual impacts may occur from; Visual Obstruction (blocking of a view, be it full, partial or intermittent) or; Visual Intrusion (interruption of a view without blocking).

Cumulative landscape and visual impact assessment is concerned with additional changes to the landscape or visual amenity caused by the proposed Project in conjunction with other developments (associated or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future.

13.1.1 Statement of Authority

This LVIA was prepared by Macro Works Ltd. Relevant experience includes landscape and visual assessments for a range of industrial, commercial and infrastructural developments in Ireland over a period of 20 years, including numerous transport infrastructure projects.

13.1.2 Description of the proposed Project

A brief description of each of the sites and their associated infrastructure is included below (refer to Volume 2, Chapter 3: Project Description for further detail):

- XC187 Fantstown - Straight Closure: Alternative route along existing roads to existing road-over-rail bridge approximately 3km to the north east.
- XC201 Thomastown – New road-over-rail bridge. Tie in to existing local road to south and new junction on Regional Road R515 to north.
- XC209 Ballyhay – Replace the existing manned level crossing with a remote monitored CCTV solution.
- XC211 Newtown – New Access Road: Immediately east of the existing road-over-rail bridge to the north of XC211 Newton; tie in to existing Local road to the east of XC211 Newton.
- XC212 Ballycoskery – New road-over-rail bridge: Tie in to existing Local Road to East and West, new carpark proposed for existing school. Tie into Beechwood Housing Estate and Ballyhea National School to North and existing Local road to south.
- XC215 Shinanagh – New access road to tie into existing road-over-rail bridge approximately 1km to the north.
- XC219 Buttevant –New road-over-rail bridge. Tie into existing regional road to east and west

13.2 Study Area

Within this heavily vegetated low rolling landscape setting, these modest scale proposed crossings are likely to be difficult to discern beyond 1km. Even if discernible from greater distances it is not likely to give rise to significant landscape or visual impacts beyond this threshold. In the interests of a comprehensive appraisal, a 2km radius study area is used in this instance. However, there will be a particular focus on receptors contained within 1km of the proposed Project.

13.3 Consultation

Table 13.1Consultation Submissions and Responses

Limerick City and County Council (LCC) Consultation Summary		
Department	Issues Raised	Response
Heritage/Environment	Comments received in regard to the EIA Screening and Scoping Report, including: further guidelines and plans to reference within the EIAR, AA Screening and the potential for a Natura Impact Statement (NIS), the importance of public consultation, the need to stress the increased safety of the rail network following the works and citing accident figures, detail measures to prevent run off and preparation of a construction environmental management plan (CEMP), potential fragmentation of badger habitats, archaeology and landscape should be addressed within the EIAR and comments on the eventual electrification of the railway line and how that will help in regard to climate issues. In addition, further comments were received requiring the removal of any trees/hedges to be addressed in the EIAR, the need for replanting, wildlife surveys, consideration of archaeology and potential run off to the local watercourse.	This chapter considers landscape visual impacts, including removal of trees/hedges. Any vegetation that is removed to facilitate the construction of the proposed Project will be offset by new areas of planting outlined in Section 13.6 Mitigation Measures and on the Landscape Mitigation Plans contained in Volume 5, Appendix 13A.
Limerick County Council Meeting, 8th January 2020		
Thomas O'Neill (Heritage Officer) dated 10th January 2020.	Under cultural heritage the fact that line itself dating from the 19th Century may have architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest echoes the protected structure legislation- this should mean that these aspects should be adequately covered in the EIAR. Similarly, Volume 3, Chapter 13: Landscape and Visual is also detailed.	This chapter considers the existing railway line in so far as it is part of the baseline landscape; impacts upon the landscape are considered in Section 13.6 and any mitigation measures set out in Section 13.7. Where required, landscape management plans have also been prepared and are presented in Volume 5, Appendix 13A.
Meeting with Trevor McKeckie, Diarmuid Sheehy (Roads) and Donogh O'Donoghue (Planning Dept) at Limerick County Council Office.	Under cultural heritage the fact that line itself dating from the 19th Century may have architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest echoes the protected structure legislation- this should mean that these aspects should be adequately covered in the EIAR. Similarly, Volume 3, Chapter 13: Landscape and Visual is also detailed.	This chapter considers the existing railway line in so far as it is part of the baseline landscape; impacts upon the landscape are considered in Section 13.6 and any mitigation measures set out in Section 13.7. Where required, landscape management plans have also been prepared and are presented in Volume 5, Appendix 13A.

Limerick City & County Council – Comments following Further Consultation on XC211 (Newtown) 10th February to Friday 6th March 2020		
Thomas O'Neill (Heritage Officer)	Concern in regard to the removal of trees and hedgerows for works related to a separate project on the Limerick to Waterford line. If trees/hedgerows are to be removed as part of the proposed Project, it should be acknowledged within the EIA and the reasons behind it e.g. safety/functioning of the railway; It would help if replanting or replacement would be implemented.	It is noted that the comments made regarding removal of trees and hedgerows were in reference to a separate project. Any trees/hedgerows removed as part of the proposed Project will only be done so to ensure the proposed infrastructure can be accommodated and only where necessary. This chapter includes proposed mitigation measures in section 13.6. Landscaping measures are also included on Landscape Plans and depicted on photomontages at Volume 5, Appendix 13A and 13B.
Ballyhea Village Community Group Meeting 3rd December 2019		
Members of Public	XC212 Ballycoskery – Concerns raised in regard to the proximity of the proposed bridge to the houses at the front of the Beechwood Estate. Issues such noise, visual impact, light and overshadowing were raised	Visual impacts have been considered at in this chapter. Three representative viewpoints have been selected for the purposes of the visual impact appraisal for XC212Ballycoskery. VP1 is situated to the front of Beechwood Drive residential estate on the western side of the Dublin-Cork Railway The assessment found that even in a pre-mitigated scenario the proposed road-over-rail bridge and new road alignment would be afforded a notable degree of screening by the existing mature vegetation along the L1533 local road. As part of the mitigation strategy outlined in section 13.6 of this chapter, the existing vegetation will be bolstered with additional planting which will reduce the magnitude of visual impact to medium.
Summary of Consultation Response Issues Relevant to Landscape		
General Comments	1) Negative impacts upon nearby dwellings/settlements; 2) Concerns regarding impact upon amenity; 3) Loss of views; 4) Negative impacts upon the environment; and 5) Negative aesthetic appearance of proposed Project.	This chapter includes an assessment of key viewpoints for each of the proposed crossings. In instances where proposed infrastructure is in close proximity to dwellings or sensitive receptors, planting will be used to help mitigate the visual impacts of the proposed crossings; The appearance of the infrastructure will be screened/softened by the introduction of planting. Also refer to Volume 5, Appendix 13A and 13B.

13.4 Baseline Environment

13.4.1 XC187 Fantstown

The existing level crossing at XC187 Fantstown will result in a complete closure with any traffic using an alternative route along the existing road network. As no additional infrastructure is proposed here a landscape and visual impact assessment for XC187 Fantstown was screened out during scoping.

13.4.2 XC201 Thomastown

Desk Top Study

Landscape and Visual Policy Context and Designations: Limerick County Development Plan (LCDP) 2010 – 2016

A landscape character assessment is included in the Limerick County Development Plan (LCDP) 2010-2016. Whilst a pre-draft consultation has commenced in relation to the Limerick County Development Plan 2022-2028, the current 2010-2016 Limerick County Development Plan is still the overriding plan for Limerick until such time that the new Limerick CDP is adopted. The LCDP divides the region into 10 specific Landscape Character Areas (LCA). The proposed Project is contained within the northern periphery of the 'Ballyhoura/Slieve Reagh' LCA and is situated immediately adjacent to the 'Agricultural Lowlands' LCA Inset Figure 13.1 refers). In the LCDP the LCA 'Ballyhoura/Slieve Reagh is described as:

"a locally dominant range of hills running along the Cork boundary. The lowland component of this landscape character area is generally a farmed landscape, but the range of hills provide an upland backdrop. The lower reaches of Ballyhoura are pastoral in character but this changes as altitude increases and the vegetation cover changes to commercial forestry interspersed with upland grassland and the remnants of peat bogs."

The LCDP includes objectives regarding the 'Ballyhoura/Slieve Reagh' LCA. Only part (b and c) are relevant to the proposed Project and these are:

EH08 *"(b) Strongly encourage retention of earth bank field boundaries particularly in the more upland parts of this area, as the screening abilities of landscape features in this area are limited.*

(c) Encourage use of species native to this particular area in landscape developments. Species native to the upland parts of this area could be used, such as mountain ash and birch. "

Section 7.3.2 of the LCDP also has a number of general landscape related objectives. Those that are considered to be relevant to the proposed Project are included below;

EH O6 *"(a) Ensure the adequate integration of development into the landscape by the retention of existing trees and landscape features and/or suitable planting.*

(b) Encourage, where appropriate, the use of native species. The layout of landscaping planting and features to act as wildlife corridors within developments, particularly residential developments, and linking with other habitats in the area will be encouraged.

(c) Resist the removal of substantial lengths of roadside boundaries. Where an alternative, suitable site is available for the development, applicants should consider such an alternative on the basis that avoids the necessity for widespread boundary removal. Only in exceptional circumstances should roadside boundaries be removed."

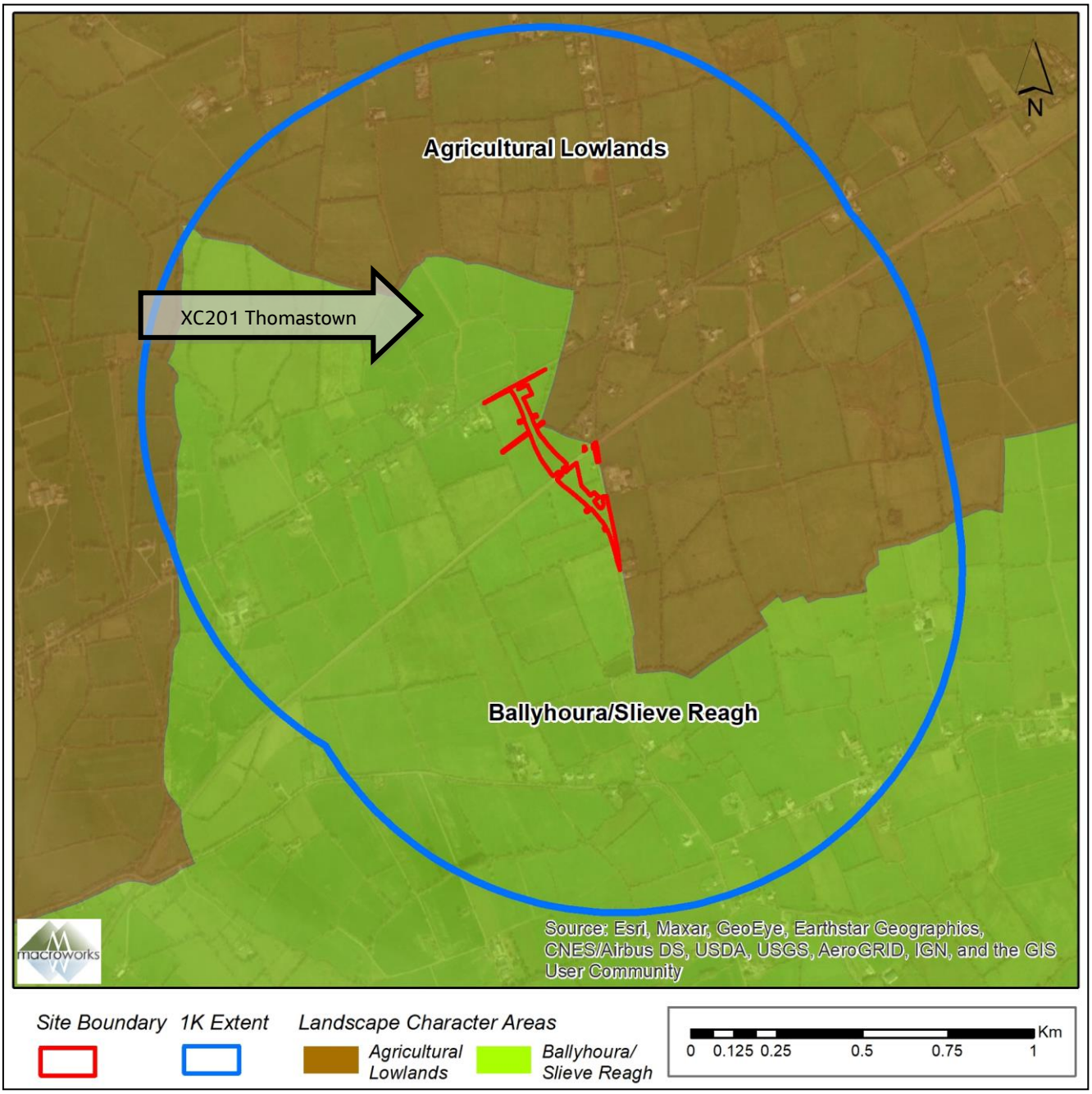
EH O5 *"It is the objective of the Council to preserve and enhance the general level of tree cover within the County, both in the countryside at large and also in the County's towns. The Council strongly encourages the establishment of native species, in particular broadleaf species."*

EH O17 *"(a) It is the objective of the Council to safeguard the scenic views and prospects by integrating them into landscape character areas, which will ensure a more balanced approach towards landscape issues within the County.*

(b) "In areas where scenic views and prospects are listed in Map 7.6 there will be a presumption against development except that which is required in relation to farming and appropriate tourism and related activities, or a dwelling required by a long term land owner or his/her family that can be appropriately designed so that it can be integrated into the landscape.

(c) The Planning Authority will exercise a high level of control (layout design, siting, materials used, landscaping) on developments in these areas. In such areas site specific designs are required. It should be noted that in areas outside these delineated areas, high standards will also be required."

Inset Figure 13.1: Excerpt from Map no. 7.4 of the Limerick County Development Plan 2010 – 2016, showing approximate location of the proposed Project relative to Landscape Character Areas.



Views of Recognised Scenic Value

Views of recognised scenic value are primarily indicated within the LCDP in the context of scenic views/routes designations, but they might also be indicated on touring maps, guide books, road side rest stops or on post cards that represent the area.

The LCDP shows areas where views are to be preserved on map no. 7.6. There are no scenic views or routes located within the immediate vicinity of the proposed Project.

Landscape and Visual Baseline

The landscape baseline represents the existing landscape context and is the scenario against which any changes to the landscape and visual context brought about by the proposed Project will be assessed.

A description of the landscape context of the proposed application site and wider study area is provided below under the headings of landform and drainage, vegetation and land use, centres of population and houses, transport routes and public amenities and facilities and the site context. Although this description forms part of the landscape baseline, many of the landscape elements identified also relate to visual receptors i.e. places and transport routes from which viewers can potentially see the proposed Project.

Landform and Drainage

The proposed Project is situated in an area of relatively flat terrain that drains in a northerly direction towards the River Loobagh some 3km north of the site. Aside from several small streams and drainage ditches situated in the northern and western half of the study area, the River Loobagh is the most notable watercourse in the wider surrounds of the study area. South of the proposal site, just outside the study area, the terrain begins to ascend towards the rolling foothills of the Ballyhoura Mountains, which are the most notable landscape feature within the surrounding landscape context.

Vegetation and Land Use

The site is located within an area of agricultural farmland comprising of a mixture cropping and pasture. Irregular shaped field patterns vary from small to medium in size with a mixture and are often bound by a mix of mature tree lined hedgerows and low clipped hedgerows (see Inset Figure 13.2). Other notable land uses include both the Dublin-Cork Railway Line and the R515 regional road transport corridor.

Inset Figure 13.2: Aerial view of the proposed Project (red) and its immediate landscape context

Centres of Population and Houses

The most notable centre of population in relation to the proposed Project is that of Charleville which is situated outside of the study area some 4km southwest of the proposal site. The settlement of Kilmallock is situated in the opposite direction to the northeast just over 4.5km from the proposed Project. There is a modest rural population located along the local and regional roads in the surrounds of the proposed Project. The nearest residences to the proposed Project are located along the local road immediately east of the alignment.

Transport Routes

The most notable transport corridor in relation to the proposed Project is that of the Dublin-Cork Railway Line which the proposed Project will cross over. Another notable route is that of the R515 regional road which occurs at the most northerly extent of the proposed alignment. Aside from the R515, the study area comprises a low

number of local roads the nearest of which is situated just east of the proposed crossing. The N20 national primary route passes west of the proposed just under 4km from the proposed Project at its nearest point.

Public Amenities and Facilities

Effin GAA club is situated just over 1km southeast of the proposed Project. Aside from this, there are no other noteworthy public amenities and facilities within the study are or its wider surrounds.

Survey Work

Fieldwork was undertaken to inform the project specific landscape character assessment to identify sensitive landscape features. Potentially affected visual receptors identified during the desktop phase were investigated and the final viewpoint set (basis if the visual impact appraisal) was refined on the basis of scheme visibility or illustrating the absence of visibility from key receptor locations. High resolution 360° photography was captured for use in the preparation of photomontages (see Volume 5, Appendix 13B).

13.4.3 XC209 Ballyhay

Landscape and Visual Baseline

The proposed Project is located in the townland of Pruntus immediately west of the River Awbeg corridor. The surrounding landscape is comprised of flat to low rolling terrain, much of which drains into the River Awebeg and its surrounding tributaries. Agricultural farmland is the most prominent land uses within the immediate surrounds of the project and is typically enclosed by mixed hedgerow vegetation. One of the most prominent land uses in relation to the proposed project is that of the national railway line corridor, whilst the N20 national primary route occurs just under 1km to the west of the site.

Inset Figure 13.3: Aerial view of the proposed Project (red) and its immediate landscape context

A modest rural population exists to the west of the site where a number of linear clusters of dwellings flank the local road corridor. The nearest residential dwelling to the proposed Project occurs immediately to the west of the Dublin – Cork Railway Line. The remnants of an old church and graveyard situated to the southwest of the proposed Project generate some sense of heritage whist the only notable sense of recreational amenity is that of the Ballyhea GAA club which is situated at the intersection of two local roads some 500m to the southwest of the site at its nearest point.

In terms of landscape designations, the proposed Project is wholly contained within LCT 5 – Fertile Plain with Moorland Ridge. LCT5 is identified as having a 'Very high' landscape value, a 'Very high' Landscape Sensitivity and has a Landscape Importance at a 'County' level. The proposed Project is also situated within the westernmost periphery of an area designated 'High Value Landscape'. There are no designated scenic routes or views located within the immediate or wider surrounds of the proposed Project.

13.4.4 XC211 Newtown & XC212 Ballycoskery

Desk Top Study

Landscape and Visual Policy Context and Designations

Cork County Development Plan 2014 – 2020: Cork Landscape Character Assessment

Note: Cork County Council has commenced the preparation of a new County Development Plan for the period of 2022-2028. Until such time that this is adopted, the current Cork County Development Plan 2014-2020 will remain as the overriding CDP for County Cork.

A Landscape Character Assessment was undertaken as part of the Draft Cork Landscape Strategy (2007), which has been incorporated within the Cork County Development Plan (CCDP) 2014-2020 and divides the county into 16 No. Landscape Character Types (LCTs) (Inset Figure 13.4 refers). The site and study area in question is wholly contained within LCT 5 – Fertile Plain with Moorland Ridge.

LCT5 is identified as having a 'Very high' landscape value, a 'Very high' Landscape Sensitivity and has a Landscape Importance at a 'County' level. LCTs categorised with 'Very high' Landscape Values are described *as "scenic landscapes with highest natural and cultural quality, areas with conservation interest and of national importance."* Landscape Sensitivity of a LCT is derived from a combination of the Landscape Character Sensitivity and Visual Sensitivity and LCTs ranked as having 'Very high' Landscape Sensitivity are described as being "*extra vulnerable landscapes (for example, seascape area with national importance) likely to be fragile and susceptible to change*."

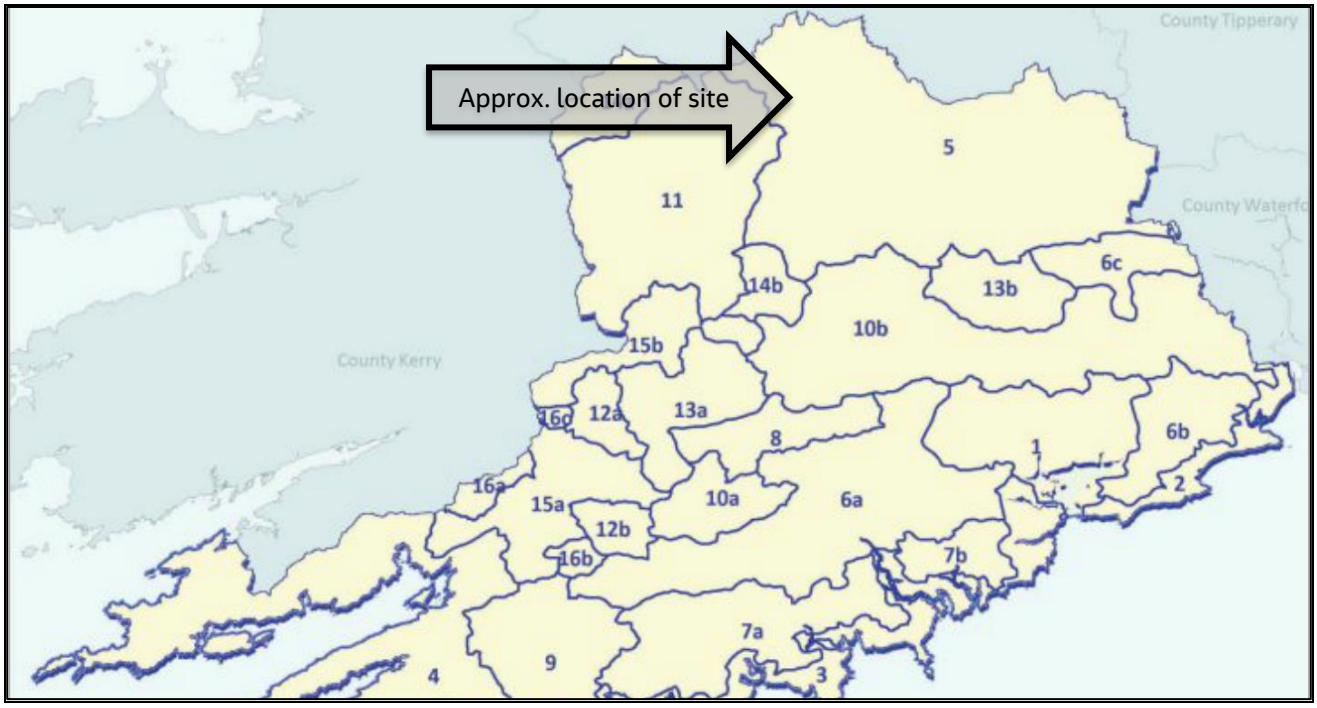
It should be noted that there is a further designation of 'High Value Landscapes' (HVL) for the County that is based on LCTs and a combination of the 'value', 'sensitivity' and 'importance' judgements attributed to each. In this instance the proposed Project is situated within the westernmost periphery of an area designated HVL (HVLs are dealt with in greater detail later in this section).

Within the Cork Landscape Strategy (2007),(see Inset Figure 13.5 the LCT 5 'Fertile Plain with Moorland Ridge' is described as follows:

"This landscape is generally referred to as the "Golden Vale" and occupies a substantial proportion of northeast Cork. This is a low-lying landscape, which comprises an extensive area of predominantly flat or gently undulating topography along the River Blackwater, and which is contained in its periphery by low ridges. The latter include the southern slopes of the Ballyhoura and Galtee Mountains to the north, the northern slopes of the Nagles to the south and the western ridges of the Knockmealdown Mountains."

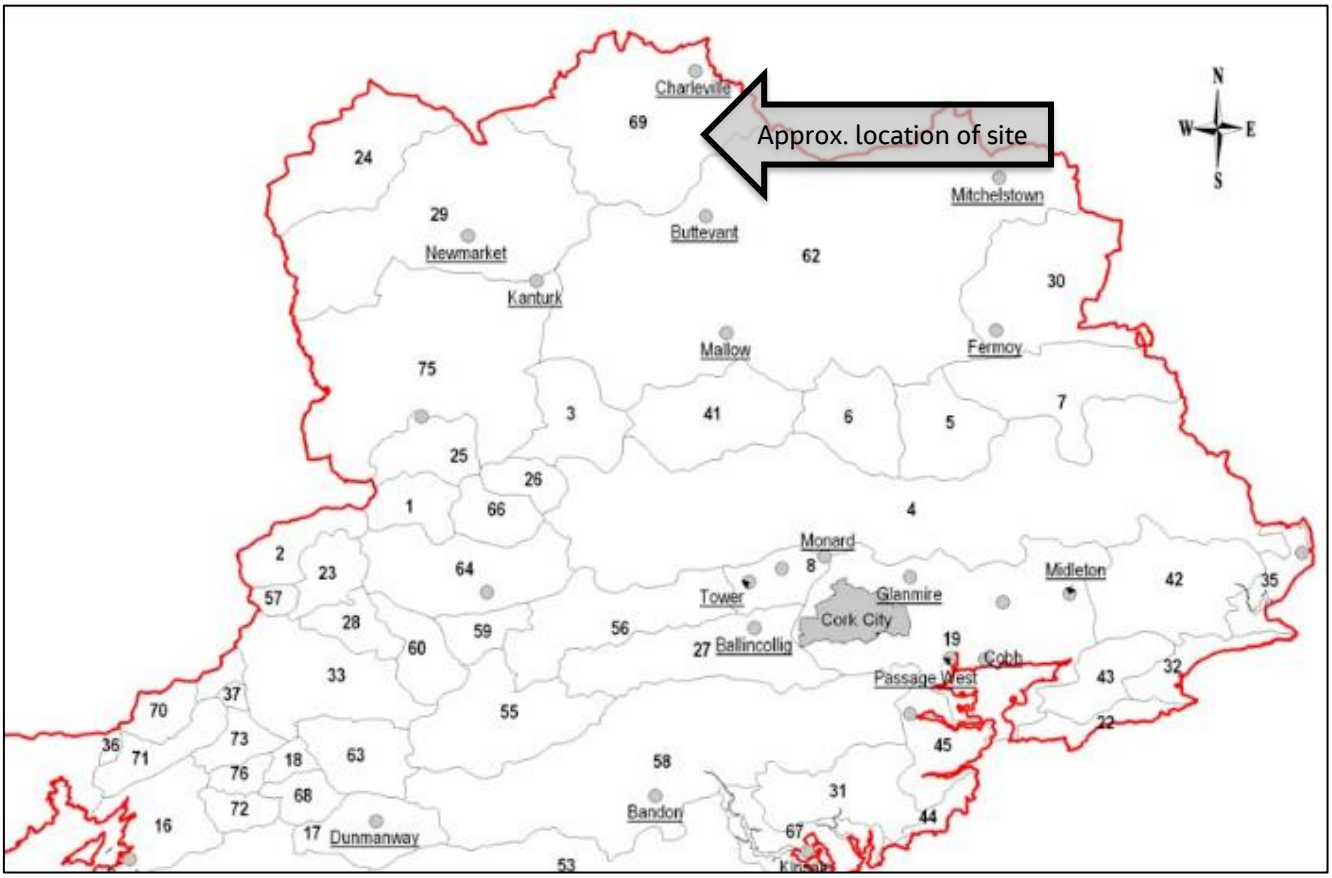
The 16 LCTs identified in the Draft Landscape Strategy (2007) are further sub-divided into 76 geographically distinct Landscape Character Areas (LCAs) (Inset Figure 13.6 refers). The site is contained in an area of transition between LCA 69 – Dromina/Charleville and LCA 69 – The Golden Vale (Moorland Ridge and Broad Undulating Patchwork Middle Valley).

Inset Figure 13.4: Excerpt from CCDP (2014). Appendix E, Map 2 showing approximate location of proposed site in relation to Landscape Character Types.



Inset Figure 13.5: Showing Cork Landscape Character Types; LCT 5 – Fertile Plain with Moorland Ridge in relation to the proposed Project (red outline) and the study area (blue circle).

Inset Figure 13.6: Excerpt from County Cork Draft Landscape Strategy 2007. Map 1 showing approximate location of proposed site in relation to Landscape Character Areas.



Landscape Policies

The CCDP lists a number of objectives in relation to landscape in Chapter 13. These include:

CCDP Objective GI 6-1: Landscape

a) *"Protect the visual and scenic amenities of County Cork's built and natural environment.*

b) *Landscape issues will be an important factor in all land use proposals, ensuring that a proactive view of development is undertaken while maintaining respect for the environment and heritage generally in line with the principle of sustainability.*

c) *Ensure that new development meets high standards of siting and design.*

d) *Protect skylines and ridgelines from development.*

e) *Discourage proposals necessitating the removal of extensive amounts of trees, hedgerows and historic walls or other distinctive boundary treatments."*

A number of general recommendations are outlined in the Draft Landscape Strategy (2007) regarding 'LCT 5 – Fertile Plain with Moorland Ridge', some of which relate to the Project in question:

"Have regard to the rich heritage in this area and the concentration of buildings that are protected under the list of protected structures.

Protect and preserve the Awbeg River as a valuable resource for scenic and amenity values.

Reflect existing vegetation species and patterns in new planting schemes in the LCT.

Encourage further planting of deciduous trees as they are a dominant feature in this landscape and their continuation is important in retaining the character of this landscape.

Minimise disturbance of hedgerows in rural areas. Encourage appropriate landscaping and screen planting of proposed developments by using predominantly indigenous/local species and groupings."

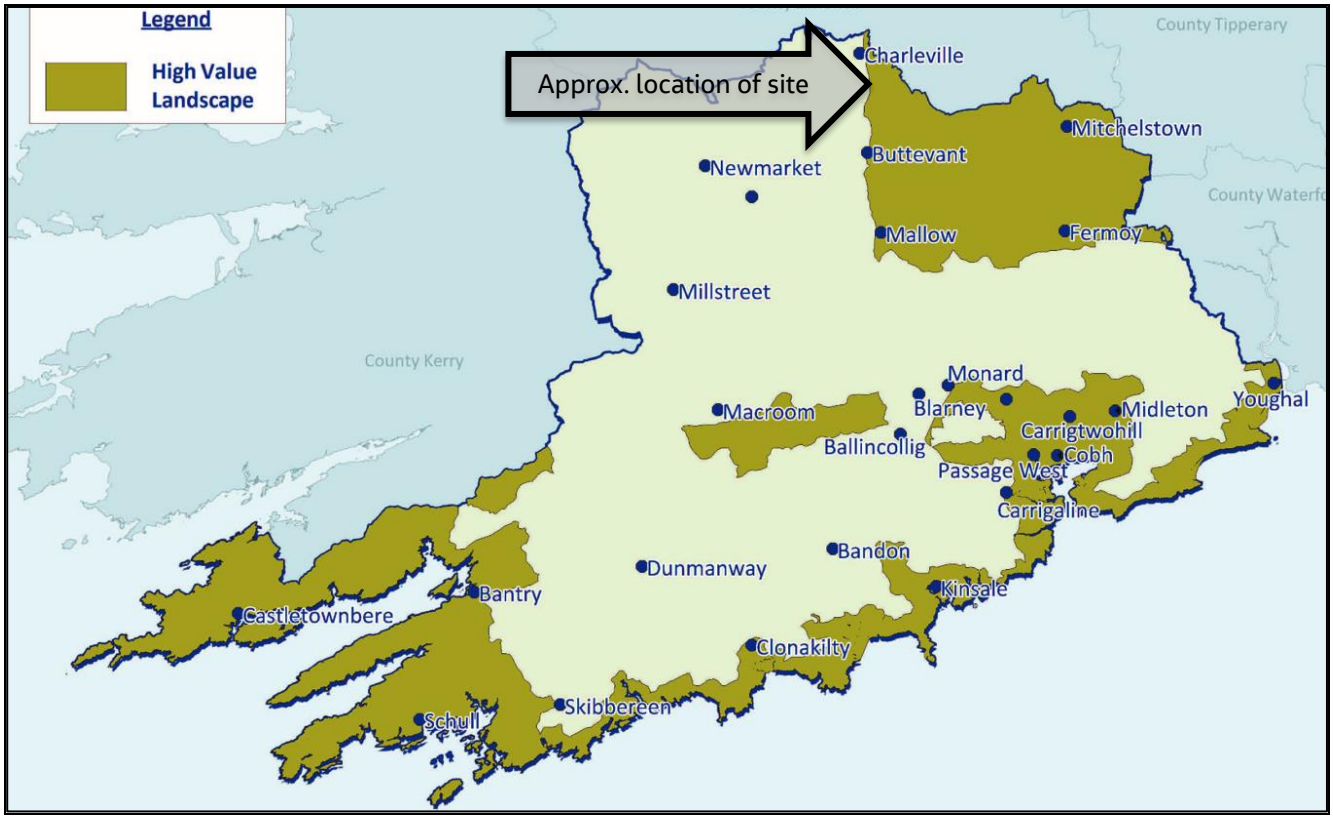
High Value Landscapes

The CCDP has taken Landscape Character Types from the Landscape Character Assessment and designated those which have a very high/high landscape value and very high/high landscape sensitivity and are of county or national importance and designated them as being a High Value Landscape (HVL). Essentially, HVL designations are a representation of the information already contained within the Landscape Character Assessment. Both of the proposed alignments are situated within the westernmost periphery of a HVL designation which spans across a large extent of northern County Cork (Inset Figure 13.7 and Inset Figure 13.8 refers) and consequently it is important to include objectives relating to HVLs outlined in the CCDP:

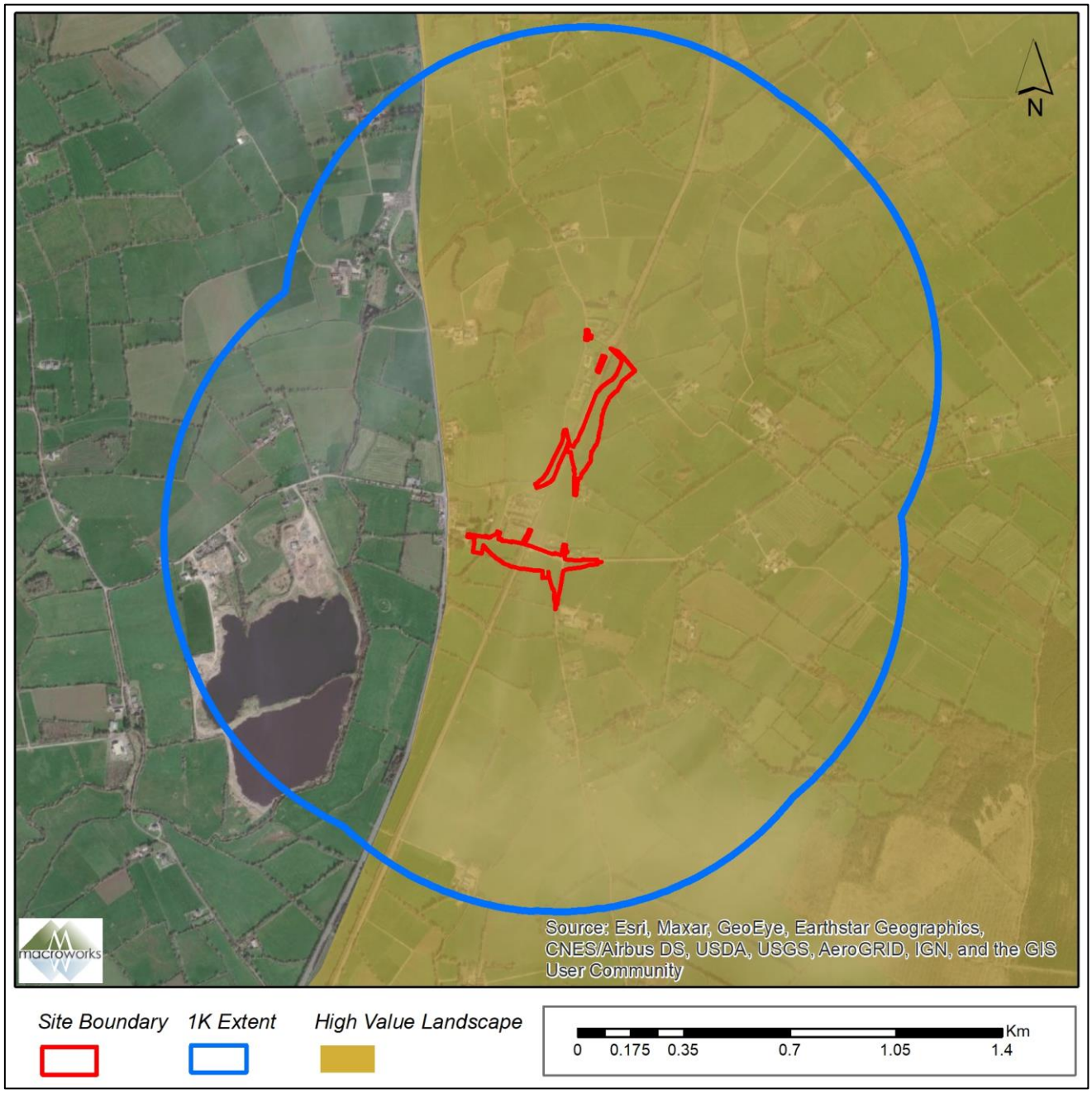
CCDP Objective GI 6-2: Draft Landscape Strategy

"Ensure that the management of development throughout the County will have regard for the value of the landscape, its character, distinctiveness and sensitivity as recognised in the Cork County Draft Landscape Strategy and its recommendations, in order to minimize the visual and environmental impact of development, particularly in areas designated as High Value Landscapes where higher development standards (layout, design, landscaping, materials used) will be required."

Inset Figure 13.7: Excerpt from CCDP (2014). Chapter 13, Figure 13.2 showing approximate location of proposed site in relation to high value landscapes.



Inset Figure 13.8: Showing Cork's areas of High Value Landscape (HVL), in relation to the proposed Project (red outline) and the study area (blue circle).



Note: Landscape Sensitivity of LCTs, as set out in the Cork Landscape Character Assessment, is not automatically equivalent with the Landscape Sensitivity judgment determined within this chapter in Section 13.5, which applies universal criteria derived from GLVIA-2013.

Views of Recognised Scenic Value

Subsection 13.7 of the current CCDP deals with landscape views and prospects and notes that in Cork, "*the scenery and landscape is of enormous amenity value to residents and tourists and constitutes a valuable economic asset. The protection of this asset is therefore of primary importance in developing the potential of the County*".

With regard to the proposed Project, no designated scenic routes or views within the study area or its immediate surrounds.

Landscape and Visual Baseline

The landscape baseline represents the existing landscape context and is the scenario against which any changes to the landscape and visual context brought about by the proposed Project will be assessed.

A description of the landscape context of the proposed application site and wider study area is provided below under the headings of landform and drainage, vegetation and land use, centres of population and houses, transport routes and public amenities and facilities and the site context. Although this description forms part of the landscape baseline, many of the landscape elements identified also relate to visual receptors i.e. places and transport routes from which viewers can potentially see the proposed Project.

Landform and Drainage

The landscape of the study area is generally flat to mildly undulating. On the eastern periphery of the study area the terrain begins to rise towards the rolling foothills of the Ballyhoura Mountains which are the most prominent landscape feature within the wider surrounds of the proposed Project. The Awbeg River is the most prominent watercourse within the study area and flows in a southerly direction just over 400m west of the proposed Project at its nearest point. A number of small tributaries of the River Awbeg flow through the northern and southern half of the study area, the nearest of which flows in a westerly direction some 250m south of the proposed Project at XC212 Ballycoskery. A modest-sized lake created by the extraction of gravel is also situated just west of the River Awbeg c.500m southwest of XC212 Ballycoskery and 800m southwest of the proposed Project at XC211 Newtown.

Vegetation and Land Use

Pastoral farming and tillage is the predominant land use of the study area and this is contained within a matrix of small to medium sized fields that are generally defined by a mix of low clipped hedgerows and dense mature tree lined hedgerows (see Inset Figure 13.9). A small patch of broadleaf woodland occurs to the north of the proposed Project whilst an area of gravel extraction to the southwest of the site is the only notable industrial land use within the study area. Other notable land uses within the study area include the transport corridors of the Dublin-Cork Railway Line and the N20 national primary route and the small settlement of Ballyhea which the proposed Project is situated immediately adjacent to.

Inset Figure 13.9: Aerial view of the proposed Project (red) and its immediate landscape context

Centres of Population and Houses

The small settlement of Ballyhea is the most notable centre of population with regard to the proposed Project and occurs immediately north and west of XC212 Ballycoskery and southwest of the proposed new access road at XC211 Newtown. The nearest residential dwellings to XC212 Ballycoskery are situated in Beechwood Drive, a residential estate immediately north of the proposed Project. Several residential dwellings are also situated immediately adjacent to the easternmost periphery of the proposed Project at XC212 Ballycoskery. A number of small linear clusters of residential dwellings also occur within the immediate surrounds of the proposed Project at XC211 Newtown, the nearest of which is situated immediately adjacent to the southern end of the proposed new access road and a second cluster is situated on the western side of the railway tracks just over 50m from the proposed new access road at its nearest point. A single two-storey residential dwelling is also situated adjacent to the proposed new access road's intersection with a local road at the northern end of the proposed Project.

Transport Routes

The most notable transport route in the vicinity is the Dublin-Cork Railway Line which the proposed Project is located immediately adjacent to and crosses. The N20 national primary route is situated immediately west of the proposed Project. A modest number of local roads also traverse the study area.

Public Amenities and Facilities

A section of the 70km Kilmallock Cycle Hub route passes through the eastern half of the study area and is situated just over 200m south of the proposed Project. Aside from this, there are no other notable public amenities and facilities within the study area.

Survey Work

Fieldwork was undertaken to inform the project specific landscape character assessment to identify sensitive landscape features. Potentially affected visual receptors identified during the desktop phase were investigated and the final viewpoint set (basis if the visual impact appraisal) was refined on the basis of scheme visibility or illustrating the absence of visibility from key receptor locations. High resolution 360° photography was captured for use in the preparation of photomontages (see Volume 5, Appendix 13B).

13.4.5 XC215 Shinanagh

Desk Top Study

Landscape and Visual Policy Context and Designations

Cork County Development Plan 2014 – 2020: Cork Landscape Character Assessment

Note: Cork County Council has commenced the preparation of a new County Development Plan for the period of 2022-2028. Until such time that this is adopted, the current Cork County Development Plan 2014-2020 will remain as the overriding CDP for County Cork.

A Landscape Character Assessment was undertaken as part of the Draft Cork Landscape Strategy (2007), which has been incorporated within the CCDP 2014-2020 and divides the county into 16 No. Landscape Character Types (LCTs) (Inset Figure 13.10 refers). The site and study area in question is wholly contained within LCT 5 – Fertile Plain with Moorland Ridge.

LCT5 is identified as having a 'Very high' landscape value, a 'Very high' Landscape Sensitivity and has a Landscape Importance at a 'County' level. LCTs categorised with 'Very high' Landscape Values are described as "*scenic landscapes with highest natural and cultural quality, areas with conservation interest and of national importance.*" Landscape Sensitivity of a LCT is derived from a combination of the Landscape Character Sensitivity and Visual Sensitivity and LCTs ranked as having 'Very high' Landscape Sensitivity are described as being "*extra vulnerable landscapes (for example, seascape area with national importance) likely to be fragile and susceptible to change.*"

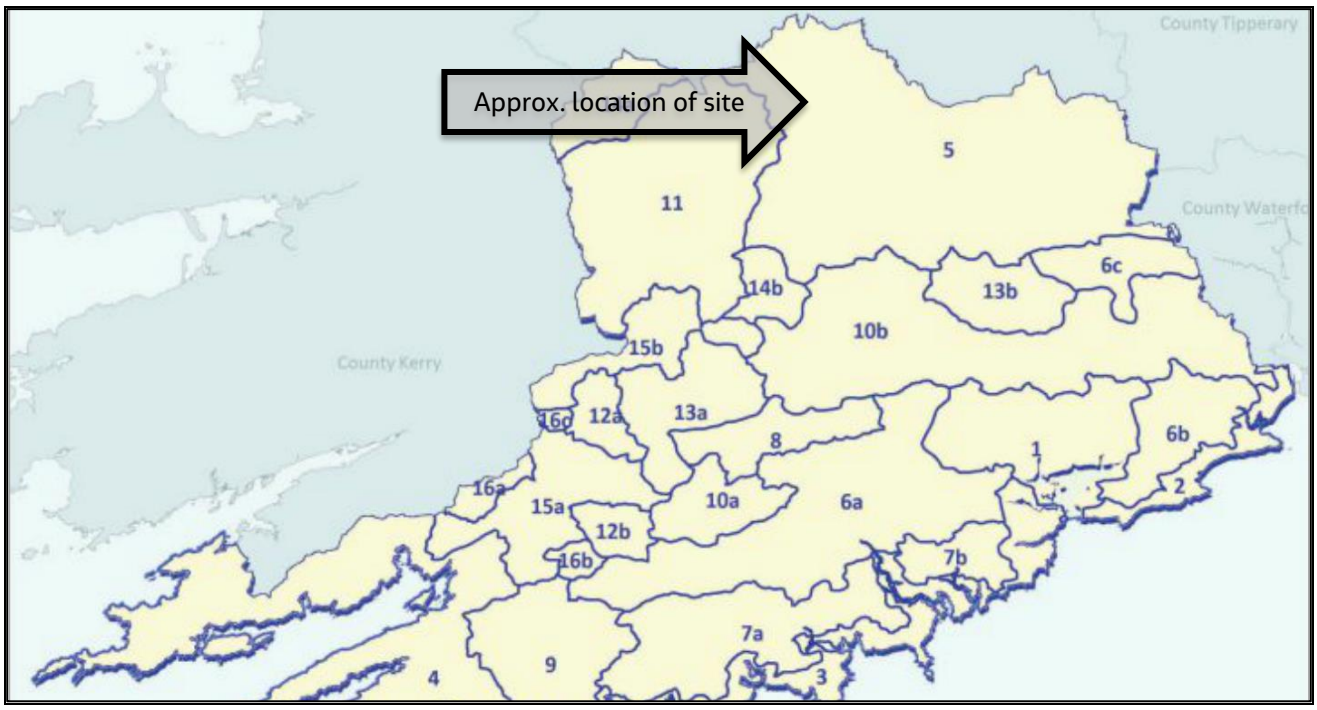
It should be noted that there is a further designation of 'High Value Landscapes' (HVL) for the County that is based on LCTs and a combination of the 'value', 'sensitivity' and 'importance' judgements attributed to each. In this instance the proposed Project is situated within the westernmost periphery of an area designated HVL (HVLs are dealt with in greater detail later in this section).

Within the Cork Landscape Strategy (2007), the LCT 5 'Fertile Plain with Moorland Ridge' is described as follows:

"This landscape is generally referred to as the "Golden Vale" and occupies a substantial proportion of northeast Cork. This is a low-lying landscape, which comprises an extensive area of predominantly flat or gently undulating topography along the River Blackwater, and which is contained in its periphery by low ridges. The latter include the southern slopes of the Ballyhoura and Galtee Mountains to the north, the northern slopes of the Nagles to the south and the western ridges of the Knockmealdown Mountains." (see Inset Figure 13.11)

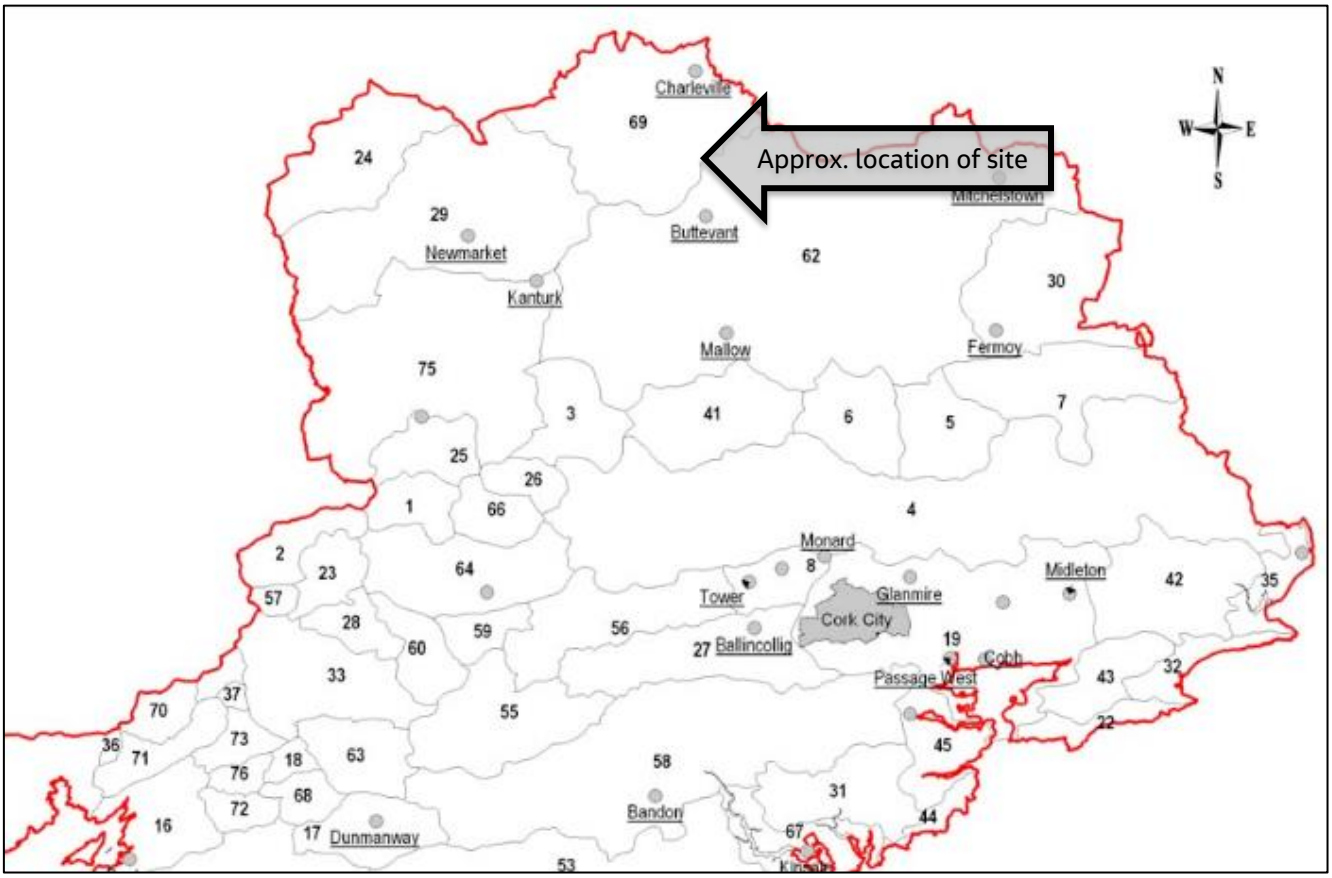
The 16 LCTs identified in the Draft Landscape Strategy (2007) are further sub-divided into 76 geographically distinct Landscape Character Areas (LCAs) (Inset Figure 13.12 refers). The site is contained in LCA 62 – The Golden Vale (Moorland Ridge and Broad Undulating Patchwork Middle Valley) and situated just south of its border with LCA 69 – Dromina/Charleville (Fertile Planar and Gently Undulating Mosaic farmland and Moorland Ridge).

Inset Figure 13.10: Excerpt from CCDP (2014). Appendix E, Map 2 showing approximate location of proposed site in relation to Landscape Character Types.



Inset Figure 13.11: Showing Cork Landscape Character Types; LCT 5 – Fertile Plain with Moorland Ridge in relation to the proposed Project (red outline).

Inset Figure 13.12: Excerpt from County Cork Draft Landscape Strategy 2007. Map 1 showing approximate location of proposed site in relation to Landscape Character Areas.



Landscape Policies

The CCDP lists a number of objectives in relation to landscape in Chapter 13. These include:

CCDP Objective GI 6-1: Landscape

f) *"Protect the visual and scenic amenities of County Cork's built and natural environment.*

g) *Landscape issues will be an important factor in all land use proposals, ensuring that a proactive view of development is undertaken while maintaining respect for the environment and heritage generally in line with the principle of sustainability.*

h) *Ensure that new development meets high standards of siting and design.*

i) *Protect skylines and ridgelines from development.*

j) *Discourage proposals necessitating the removal of extensive amounts of trees, hedgerows and historic walls or other distinctive boundary treatments."*

A number of general recommendations are outlined in the Draft Landscape Strategy (2007) regarding 'LCT 5 – Fertile Plain with Moorland Ridge', some of which relate to the Project in question:

"Have regard to the rich heritage in this area and the concentration of buildings that are protected under the list of protected structures.

Protect and preserve the Awbeg River as a valuable resource for scenic and amenity values.

Reflect existing vegetation species and patterns in new planting schemes in the LCT.

Encourage further planting of deciduous trees as they are a dominant feature in this landscape and their continuation is important in retaining the character of this landscape.

Minimise disturbance of hedgerows in rural areas. Encourage appropriate landscaping and screen planting of proposed developments by using predominantly indigenous/local species and groupings."

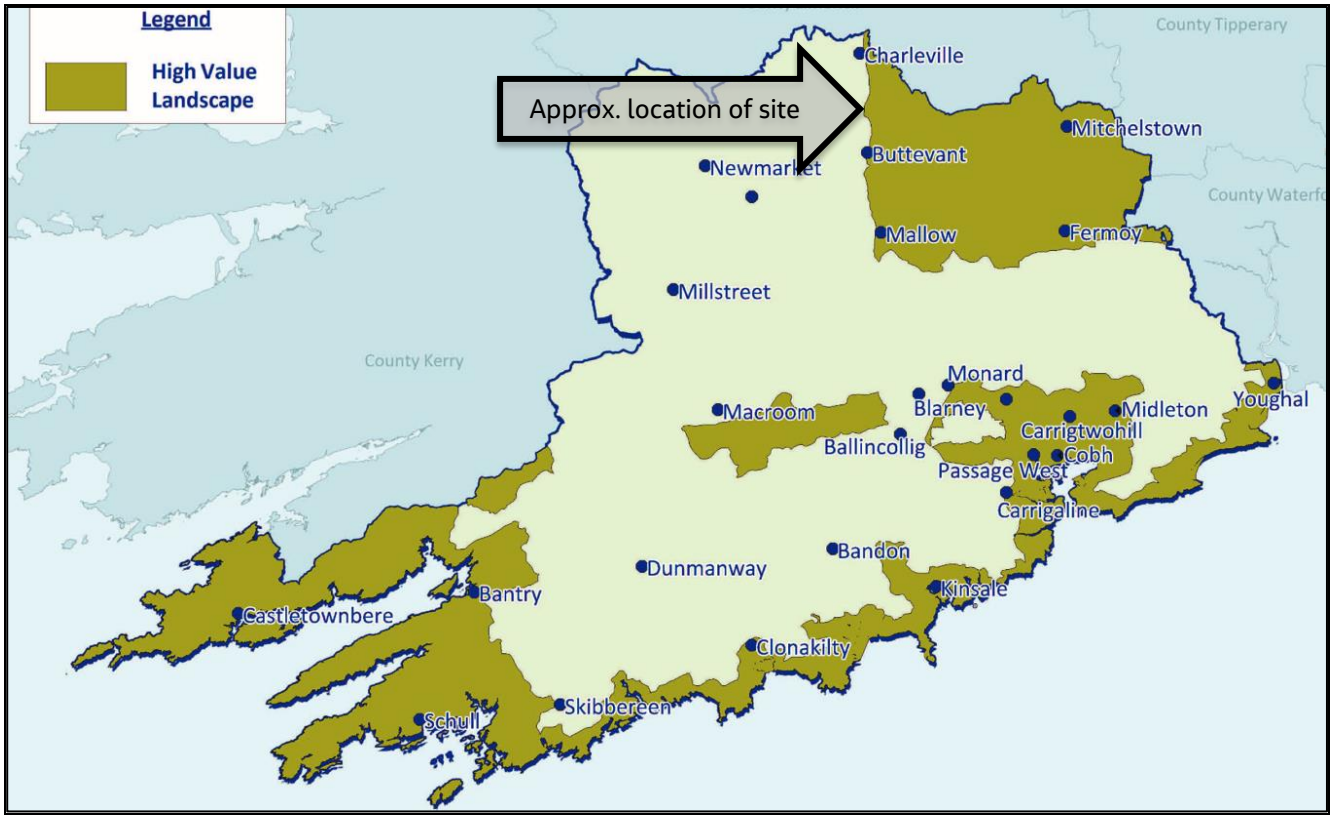
High Value Landscapes

The CCDP has taken Landscape Character Types from the Landscape Character Assessment and designated those which have a very high/high landscape value and very high/high landscape sensitivity and are of county or national importance and designated them as being a High Value Landscape (HVL). Essentially, HVL designations are a representation of the information already contained within the Landscape Character Assessment. The proposed Project is predominantly situated immediately west of the HVL designation whilst some sections are situated within the westernmost periphery of the HVL designation. This HVL designation which spans across a large extent of northern county Cork and encompasses the Ballyhoura mountains and its surrounds (Inset Figure 13.12 and Inset Figure 13.13 refers). Although a large extent of the proposed Project itself is not situated in an area designated as HVL, its near distance to this area identifies that it is located in an area of transition, and consequently it is important to include objectives relating to HVLs outlines in the CCDP:

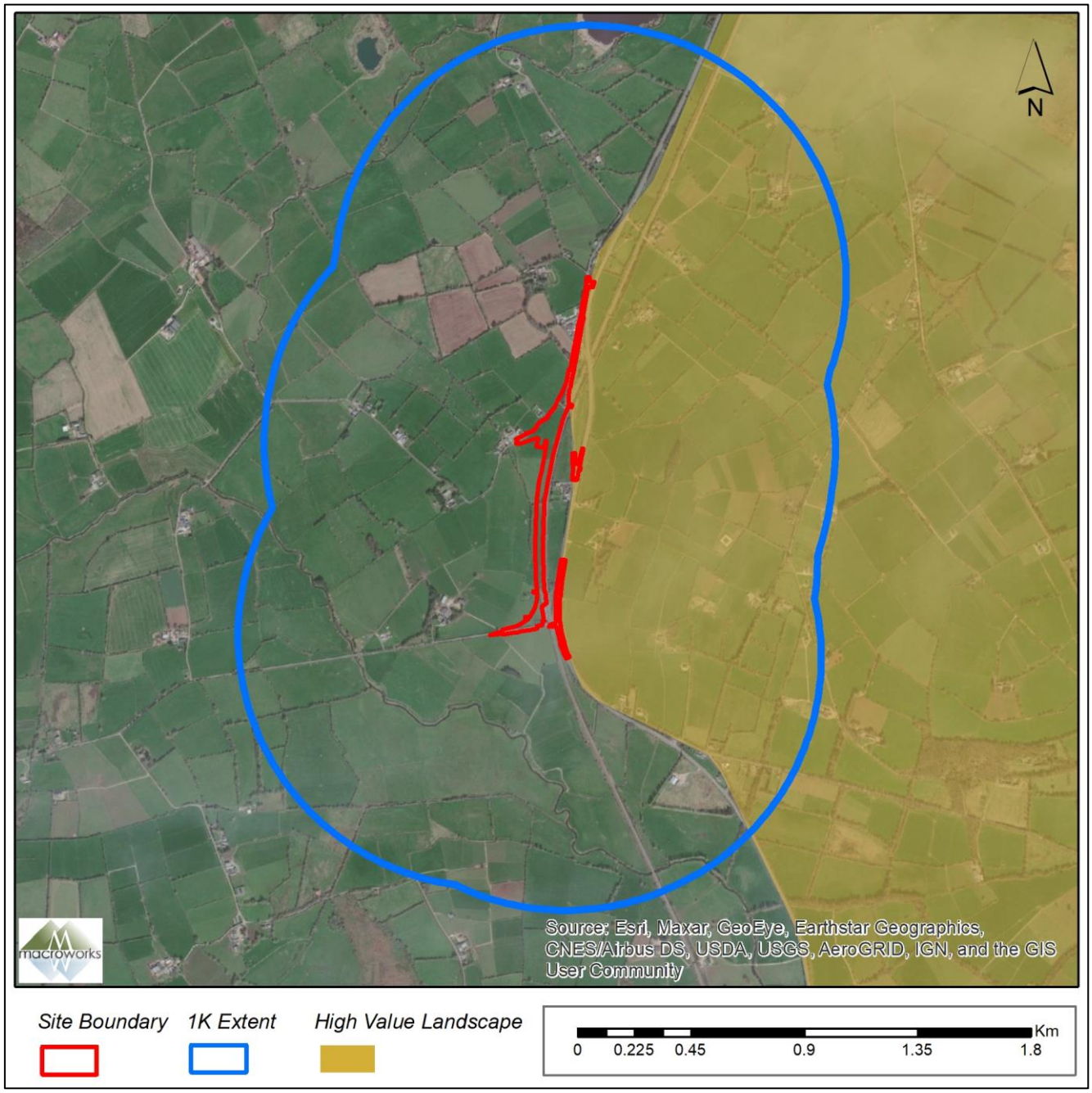
<u>County Development Plan Objective GI 6-2: Draft Landscape Strategy</u>

"Ensure that the management of development throughout the County will have regard for the value of the landscape, its character, distinctiveness and sensitivity as recognised in the Cork County Draft Landscape Strategy and its recommendations, in order to minimize the visual and environmental impact of development, particularly in areas designated as High Value Landscapes where higher development standards (layout, design, landscaping, materials used) will be required."

Inset Figure 13.13: Excerpt from CCDP Plan (2014). Chapter 13, Figure 13.2 showing approximate location of proposed site in relation to high value landscapes.



Inset Figure 13.14: Showing Cork's areas of High Value Landscape (HVL), in relation to the proposed Project (red outline).



Note: Landscape Sensitivity of LCTs, as set out in the Cork Landscape Character Assessment, is not automatically equivalent with the Landscape Sensitivity judgment determined within this chapter in Section 13.5, which applies universal criteria derived from GLVIA-2013.

Views of Recognised Scenic Value

Subsection 13.7 of the current CCDP deals with landscape views and prospects and notes that in Cork, "*the scenery and landscape is of enormous amenity value to residents and tourists and constitutes a valuable economic asset. The protection of this asset is therefore of primary importance in developing the potential of the County*".

With regard to the proposed Project, no designated scenic routes or views within the study area or its immediate surrounds.

Landscape and Visual Baseline

The landscape baseline represents the existing landscape context and is the scenario against which any changes to the landscape and visual context brought about by the proposed Project will be assessed.

A description of the landscape context of the proposed application site and wider study area is provided below under the headings of landform and drainage, vegetation and land use, centres of population and houses, transport routes and public amenities and facilities and the site context. Although this description forms part of the landscape baseline, many of the landscape elements identified also relate to visual receptors i.e. places and transport routes from which viewers can potentially see the proposed Project.

Landform and Drainage

The proposed Project is situated in a low valley like feature within the landscape and is flanked to the east by the steeply ascending foothills of the Ballyhoura Mountains and to the west by a locally elevated hill reaching a maximum of c. 110m AOD. The River Awbeg flows in a southerly direction throughout the western half of the study area just over 600m from the proposed Project and is the most notable watercourse in relation to the proposed Project.

Vegetation and Land Use

The landscape of the study area comprises predominantly of mixed farmland with an extensive network of geometric fields generally contained in pastoral farming and cropping. These fields are often bound by mature tree lined hedgerows and post and wire fencing (see Inset Figure 13.15). Some mature stands of trees also occur along field boundaries and surround dwellings within the study area. The transport corridors of the N20 national primary route and the Dublin-Cork Railway Line are also notable land uses within the study area.

Inset Figure 13.15: Aerial view of the proposed Project (red) and its immediate landscape context

Centres of Population and Houses

There are no notable settlements within the immediate study area. The nearest and most notable settlement in relation to the proposed Project is that of the village of Churchtown situated 3.5km to the southwest. A small cluster of dwellings occurs immediately north of the proposed Project in the townland of Shinanagh, whilst several dwellings also occur along a local road immediately to the west. A small cluster of dwellings also occurs immediately west of the N20 national primary route on the eastern side of the Dublin-Cork Railway Line corridor. A large farmstead is situated 200m west of the proposed Project at its most southern extent.

Transport Routes

The most notable transport routes in relation to the proposed Project are the Dublin-Cork Railway Line and the N20 national primary route, both of which are situated to the east of the proposed Project and are similarly

oriented in a north-south direction. The Dublin-Cork Railway Line is situated immediately adjacent to the proposed Project, whilst the N20 national secondary route is situated just over 60m to the east at its nearest point. A number of local roads also traverse the study area, the nearest of which is the L1320 local road which passes directly south of the proposed Project.

Public Amenities, Facilities and Heritage features

A section of the 89km Ballyhoura Way national waymarked trail enters the study area from the north and passes immediately north and west of the proposed Project. The route then follows the local road to the west of the site and exits the study area in its northwest quadrant. Aside from this, there are no notable public amenities and facilities within the study area. The remnants of the Imphrick Church and Graveyard are situated in an agricultural field northwest of the existing railway crossing with a the L1320 local road.

Survey Work

Fieldwork was undertaken to inform the project specific landscape character assessment to identify sensitive landscape features. Potentially affected visual receptors identified during the desktop phase were investigated and the final viewpoint set (basis if the visual impact appraisal) was refined on the basis of scheme visibility or illustrating the absence of visibility from key receptor locations. High resolution 360° photography was captured for use in the preparation of photomontages (see Volume 5, Appendix 13B).

13.4.6 XC219 Buttevant

Desk Top Study

Landscape and Visual Policy Context and Designations:

Cork County Development Plan 2014 – 2020: Cork Landscape Character Assessment

Note: Cork County Council has commenced the preparation of a new County Development Plan for the period of 2022-2028. Until such time that this is adopted, the current Cork County Development Plan 2014-2020 will remain as the overriding CDP for County Cork.

A Landscape Character Assessment was undertaken as part of the Draft Cork Landscape Strategy (2007), which has been incorporated within the CCDP) 2014-2020 and divides the county into 16 No. Landscape Character Types (LCTs) (Inset Figure 13.16 refers). The site and study area in question is wholly contained within LCT 5 – Fertile Plain with Moorland Ridge.

LCT5 is identified as having a 'Very high' landscape value, a 'Very high' Landscape Sensitivity and has a Landscape Importance at a 'County' level. LCTs categorised with 'Very high' Landscape Values are described as *"scenic landscapes with highest natural and cultural quality, areas with conservation interest and of national importance."* Landscape Sensitivity of a LCT is derived from a combination of the Landscape Character Sensitivity and Visual Sensitivity and LCTs ranked as having 'Very high' Landscape Sensitivity are described as being *"extra vulnerable landscapes (for example, seascape area with national importance) likely to be fragile and susceptible to change*."

It should be noted that there is a further designation of 'High Value Landscapes' (HVL) for the County that is based on LCTs and a combination of the 'value', 'sensitivity' and 'importance' judgements attributed to each. In this instance the proposed Project is situated within the westernmost periphery of an area designated HVL (HVLs are dealt with in greater detail later in this section).

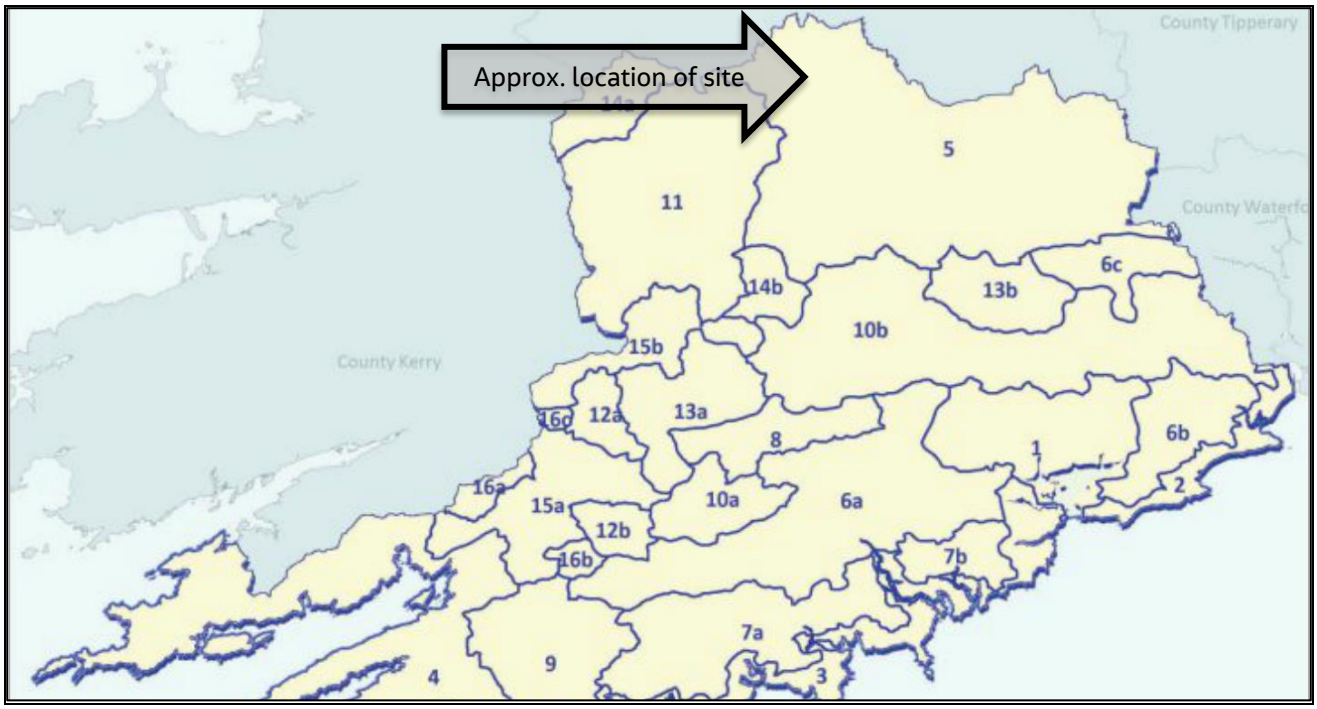
Within the Cork Landscape Strategy (2007), the LCT 5 'Fertile Plain with Moorland Ridge' is described as follows:

"This landscape is generally referred to as the "Golden Vale" and occupies a substantial proportion of northeast Cork. This is a low-lying landscape, which comprises an extensive area of predominantly flat or gently undulating topography along the River Blackwater, and which is contained in its periphery by low ridges. The latter include the

southern slopes of the Ballyhoura and Galtee Mountains to the north, the northern slopes of the Nagles to the south and the western ridges of the Knockmealdown Mountains." See Inset Figure 13.17.

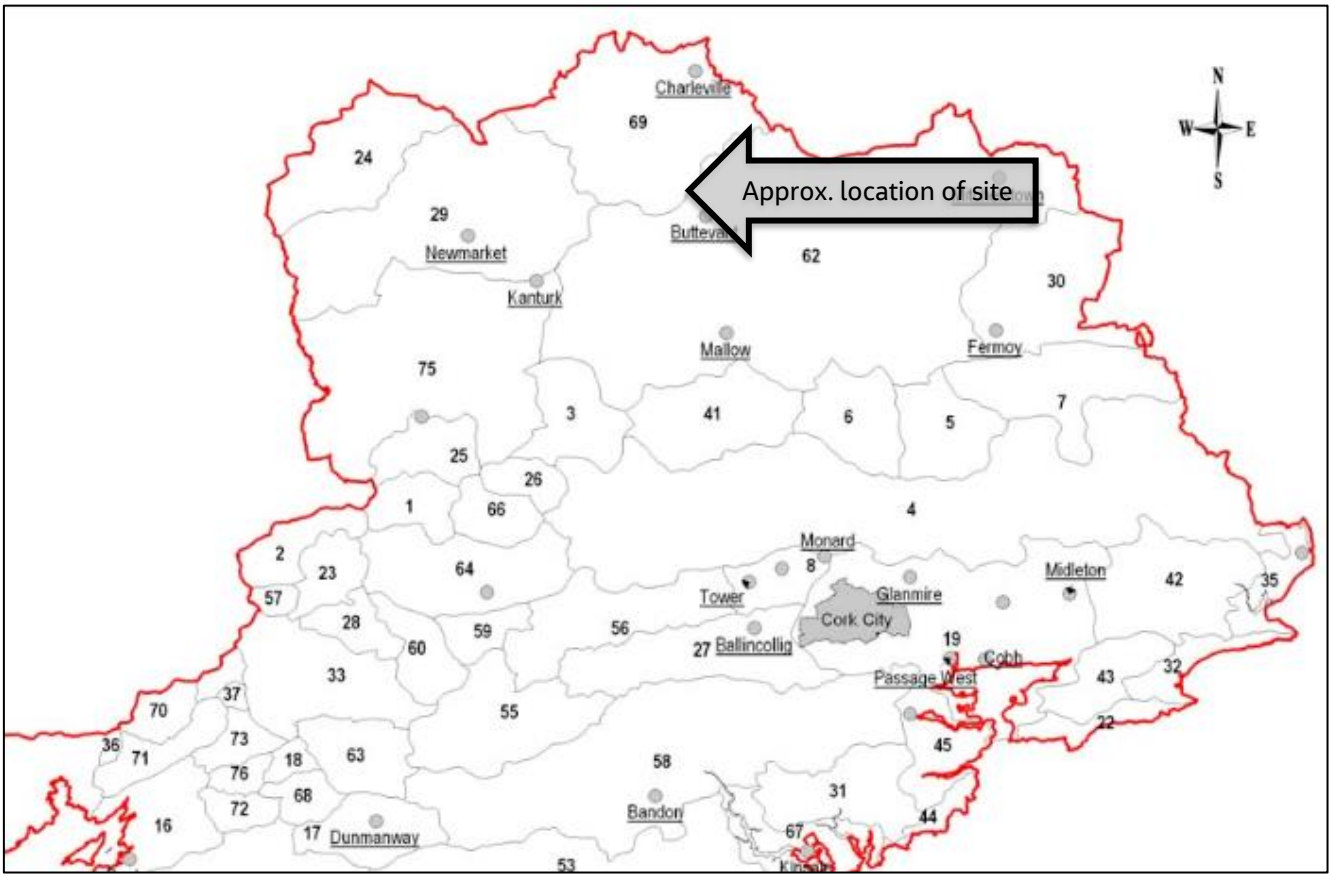
The 16 LCTs identified in the Draft Landscape Strategy (2007) are further sub-divided into 76 geographically distinct Landscape Character Areas (LCAs) (Inset Figure 13.18 refers). The site is contained in LCA 62 – The Golden Vale (Moorland Ridge and Broad Undulating Patchwork Middle Valley) and situated just south of its border with LCA 69 – Dromina/Charleville (Fertile Planar and Gently Undulating Mosaic farmland and Moorland Ridge).

Inset Figure 13.16: Excerpt from CCDP (2014). Appendix E, Map 2 showing approximate location of proposed site in relation to Landscape Character Types.



Inset Figure 13.17: Showing Cork Landscape Character Types; LCT 5 – Fertile Plain with Moorland Ridge in relation to the proposed Project (red outline).

Inset Figure 13.18: Excerpt from County Cork Draft Landscape Strategy 2007. Map 1 showing approximate location of proposed site in relation to Landscape Character Areas.



Landscape Policies

The CCDP lists a number of objectives in relation to landscape in Chapter 13. These include:

CCDP Objective GI 6-1: Landscape

k) "Protect the visual and scenic amenities of County Cork's built and natural environment.

l) Landscape issues will be an important factor in all land use proposals, ensuring that a proactive view of development is undertaken while maintaining respect for the environment and heritage generally in line with the principle of sustainability.

m) Ensure that new development meets high standards of siting and design.

n) Protect skylines and ridgelines from development.

o) Discourage proposals necessitating the removal of extensive amounts of trees, hedgerows and historic walls or other distinctive boundary treatments."

A number of general recommendations are outlined in the Draft Landscape Strategy (2007) regarding 'LCT 5 – Fertile Plain with Moorland Ridge', some of which relate to the Project in question:

- *"Have regard to the rich heritage in this area and the concentration of buildings that are protected under the list of protected structures.*
- *Protect and preserve the Awbeg River as a valuable resource for scenic and amenity values.*

- *Reflect existing vegetation species and patterns in new planting schemes in the LCT.*
- *Encourage further planting of deciduous trees as they are a dominant feature in this landscape and their continuation is important in retaining the character of this landscape.*
- *Minimise disturbance of hedgerows in rural areas. Encourage appropriate landscaping and screen planting of proposed developments by using predominantly indigenous/local species and groupings."*

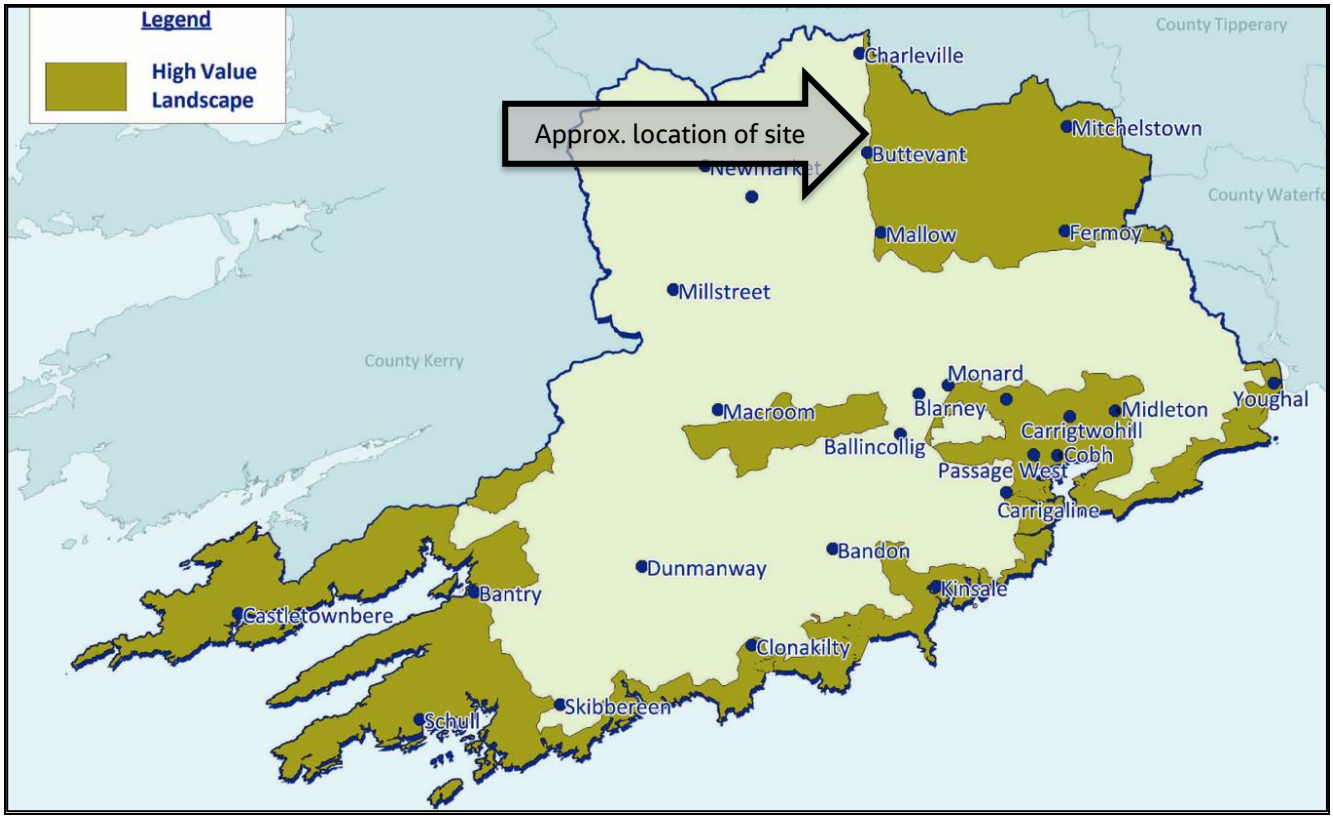
High Value Landscapes

The CCDP has taken Landscape Character Types from the Landscape Character Assessment and designated those which have a very high/high landscape value and very high/high landscape sensitivity and are of county or national importance and designated them as being a High Value Landscape (HVL). Essentially, HVL designations are a representation of the information already contained within the Landscape Character Assessment. The site is situated c. 1km west of the western periphery of a HVL designation which spans across a large extent of northern county Cork (Inset Figure 13.19 and Inset Figure 13.20 refers). Although the site itself is not situated in an area designated as HVL, its near distance to this area identifies that it is located in an area of transition, and consequently it is important to include objectives relating to HVLs outlines in the CCDP:

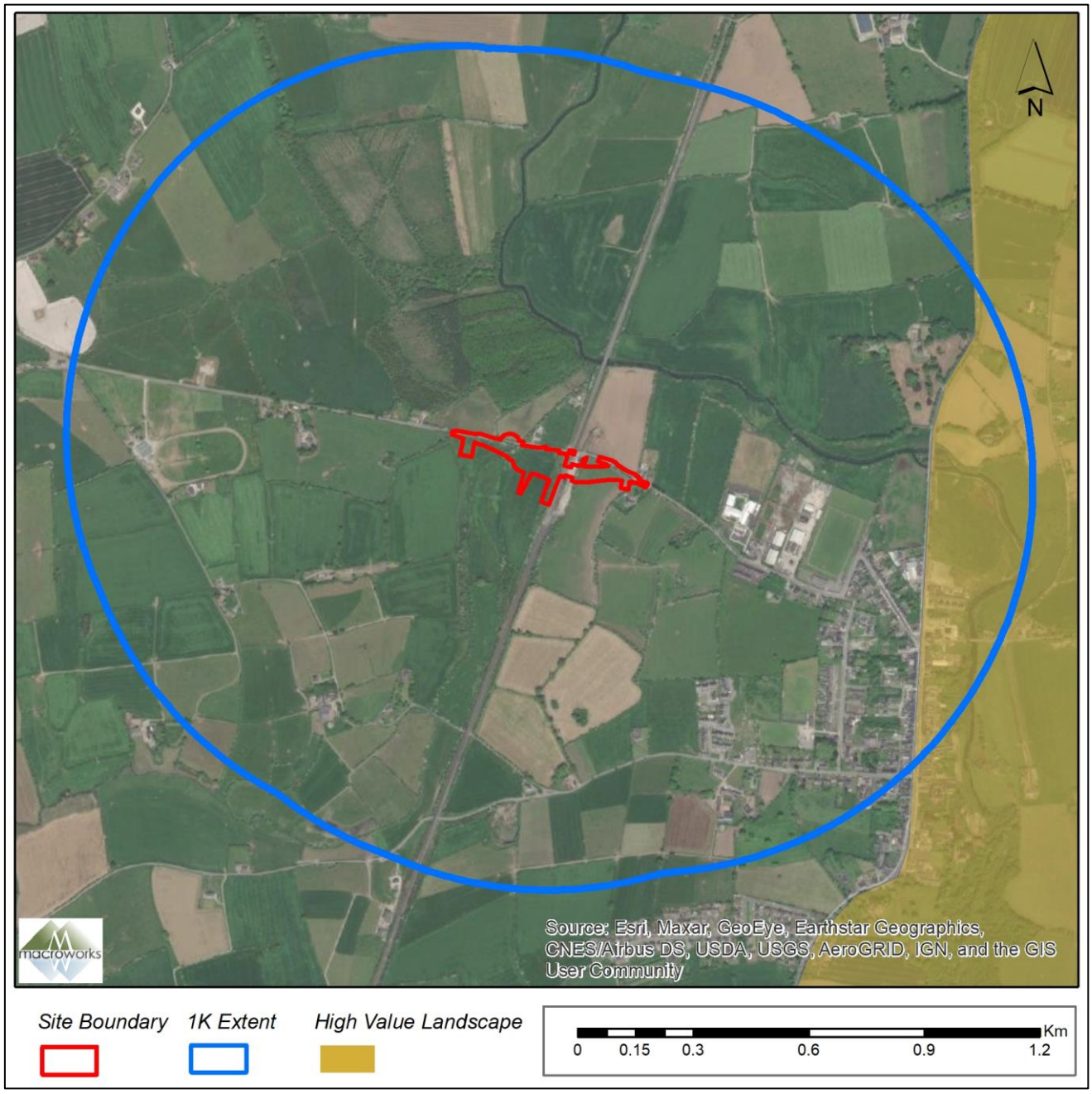
County Development Plan Objective GI 6-2: Draft Landscape Strategy

"Ensure that the management of development throughout the County will have regard for the value of the landscape, its character, distinctiveness and sensitivity as recognised in the Cork County Draft Landscape Strategy and its recommendations, in order to minimize the visual and environmental impact of development, particularly in areas designated as High Value Landscapes where higher development standards (layout, design, landscaping, materials used) will be required."

Inset Figure 13.19: Excerpt from CCDP (2014). Chapter 13, Figure 13.2 showing approximate location of proposed site in relation to high value landscapes.



Inset Figure 13.20: Showing Cork's areas of High Value Landscape (HVL), in relation to the proposed Project (red outline).



Note: Landscape Sensitivity of LCTs, as set out in the Cork Landscape Character Assessment, is not automatically equivalent with the Landscape Sensitivity judgment determined within this chapter in Section 13.5, which applies universal criteria derived from GLVIA-2013.

Views of Recognised Scenic Value

Subsection 13.7 of the current CCDP deals with landscape views and prospects and notes that in Cork, "*the scenery and landscape is of enormous amenity value to residents and tourists and constitutes a valuable economic asset. The protection of this asset is therefore of primary importance in developing the potential of the County*".

With regard to the proposed Project, no designated scenic routes or views within the study area or its immediate surrounds.

Landscape and Visual Baseline

The landscape baseline represents the existing landscape context and is the scenario against which any changes to the landscape and visual context brought about by the proposed Project will be assessed.

A description of the landscape context of the proposed Project at XC219 Buttevant and wider study area is provided below under the headings of landform and drainage, vegetation and land use, centres of population and houses, transport routes and public amenities and facilities and the site context. Although this description forms part of the landscape baseline, many of the landscape elements identified also relate to visual receptors i.e. places and transport routes from which viewers can potentially see the proposed Project.

Landform and Drainage

The landform of the study area is that of a low rolling landscape that contains a number of locally elevated rolling hills. The terrain in the central areas of the site and its surrounds generally drains in a northerly direction towards the River Awbeg. The River Awbeg is the most notable watercourse within the study area and enters the study area from the north, flowing in a southerly direction. The river then verges off in an easterly direction exiting the study are just north of Buttevant. A small stream also flows through the proposed Project site on the western side of the existing Dublin-Cork Railway Line before emptying into the River Awbeg north of the proposed Project.

Vegetation and Land Use

Agricultural farmland comprising or pasture and tillage are the primary land use within the study area and are often bound by dense mature tree-lined hedgerows (see Inset Figure 13.21). A conifer plantation occurs immediately north of the proposed Project whilst small areas of scrubby woodland occur along the corridor of the railway line and to the south. Small patches of riparian vegetation also occur along the corridor of the River Awbeg in the northern half of the study area. The north-western extents of Buttevant town also occur within the eastern half of the study area and are the most notable urban land use within the study area.

Inset Figure 13.21: Aerial view of the proposed Project (red) and its immediate landscape context

Centres of Population and Houses

The most notable centre of population in relation to the proposed Project is that of Buttevant town which is within the eastern half of the study area approximately 500m from the proposed Project. Several small residential estates and linear clusters of dwellings occur within the southeast quadrant of the study area on the outskirts of the town. A number of residential dwellings are also situated along the R522 regional road immediately north of the proposed Project.

Transport Routes

The R522 regional road passes directly north of the proposed Project in an east-west orientation and dissects the study area into its northern and southern halves. The R580 regional road extends out from the settlement of Buttevant in a south-westerly direction and is situated just over 700m south of the site at its nearest point. A

section of the N20 national primary route passes through the centre of Buttevant and is located 800m east of the site at its nearest point. The nearest local road to the proposed Project is 600m to the southwest at its nearest point.

Public Amenities and Facilities

Buttevant GAA club and sports pitches are situated on the northern outskirts of Buttevant and are just over 500m east of the proposed Project. There are no other notable public amenities and facilities within the study area.

Survey Work

Fieldwork was undertaken to inform the project specific landscape character assessment to identify sensitive landscape features. Potentially affected visual receptors identified during the desktop phase were investigated and the final viewpoint set (basis if the visual impact appraisal) was refined on the basis of scheme visibility or illustrating the absence of visibility from key receptor locations. High resolution 360° photography was captured for use in the preparation of photomontages (see Volume 5, Appendix 13B).

13.5 Assessment Methodology

13.5.1 Legislation, Policy & Guidance

This LVIA uses methodology as prescribed in the following guidance documents:

- Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be contained in Environmental Impact Statements (revised draft 2017) and the accompanying Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (revised draft 2017); and
- Landscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape and Visual Impact Assessment (2013).

13.5.2 Assessment Methodology

Production of this Landscape and Visual Impact Assessment involved;

- A desktop study to establish an appropriate study area, relevant landscape and visual designations in the Limerick County Development Plan and Cork County Development Plan as well as other sensitive visual receptors. This stage culminates in the selection of a set of potential viewpoints from which to study the effects of the proposal;
- Fieldwork to establish the landscape character of the receiving environment and to confirm and refine the set of viewpoints to be used for the visual assessment stage;
- Assessment of the significance of the landscape impact of the Project as a function of landscape sensitivity weighed against the magnitude of the landscape impact;
- Assessment of the significance of the visual impact of the Project as a function of visual receptor sensitivity weighed against the magnitude of the visual impact. This aspect of the assessment is supported by photomontages prepared in respect of the selected viewpoints; and
- Incorporation of mitigation measures to reduce potential impacts and estimation of residual impacts once mitigation has become established.

Landscape Impact Assessment Criteria

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

- Landscape character, value and sensitivity;
- Magnitude of likely impacts; and

- Significance of landscape effects.

Landscape Character, Value and Sensitivity

The sensitivity of the landscape to change is the degree to which a particular landscape receptor (Landscape Character Area (LCA) or feature) can accommodate changes or new elements without unacceptable detrimental effects to its essential characteristics. Landscape Value and Sensitivity is classified using the following criteria set out in Table 13.2

Table 13.2 Landscape Value and Sensitivity

Landscape Sensitivity	Description
Very High	Areas where the landscape character exhibits a very low capacity for change in the form of development. Examples of which are high value landscapes, protected at an international or national level (World Heritage Site/National Park), where the principal management objectives are likely to be protection of the existing character
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 or regional level (Area of Outstanding Natural Beauty), where the principal management objectives are likely to be considered conservation of the existing character
Medium	Areas where the landscape character exhibits some capacity and scope for development. Examples of which are landscapes, which have a designation of protection at a county level or at non-designated local level where there is evidence of local value and use.
Low	Areas where the landscape character exhibits a higher capacity for change from development. Typically, this would include lower value, non-designated landscapes that may also have some elements or features of recognisable quality, where landscape management objectives include, enhancement, repair and restoration.
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.

Landscape Impact Magnitude

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 site boundary that may have an effect on the landscape character of the area. Table 13.3 refers.

Table 13.3 Magnitude of Landscape Effects

Magnitude of Landscape Effect	Description
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.

Magnitude of Landscape Effect	Description
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.

Landscape Impact Significance

The significance of a landscape impact is based on a balance between the sensitivity of the landscape receptor and the magnitude of the impact. The significance of landscape impacts is arrived at using the following matrix set out in Table 13.4.

Table 13.4 Impact Significance Matrix (Used for both Landscape Impact significance and Visual Impact Significance)

	Sensitivity of Receptor				
Magnitude	*Very High*	*High*	*Medium*	*Low*	*Negligible*
Very High	Profound	Profound-substantial	Substantial	Moderate	Slight
High	Profound-substantial	Substantial	Substantial - moderate	Moderate-slight	Slight-imperceptible
Medium	Substantial	Substantial - moderate	Moderate	Slight	Imperceptible
Low	Moderate	Moderate-slight	Slight	Slight-imperceptible	Imperceptible
Negligible	Slight	Slight-imperceptible	Imperceptible	Imperceptible	Imperceptible

Note: The significance matrix provides an indicative framework from which the significance of impact is derived. The significance judgement is ultimately determined by the assessor using professional judgement. Due to nuances within the constituent sensitivity and magnitude judgements, this may be up to one category higher or lower than indicated by the matrix. Judgements indicated in grey are considered to be 'significant impacts' in EIA terms.

Visual Impact Assessment Criteria

As with the landscape impact, the visual impact of the proposed Project will be assessed as a function of sensitivity versus magnitude. In this instance, the sensitivity of the visual receptor, weighed against the magnitude of the visual effect.

Sensitivity of Visual Receptors

Unlike landscape sensitivity, the sensitivity of visual receptors has an anthropocentric 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. A list of the factors considered by the assessor in estimating the level of sensitivity for a particular visual receptor is outlined below and used in the relevant sections to each of the proposed crossings below to establish visual receptor sensitivity at each VRP:

1) **Susceptibility of Receptors** - In accordance with the Institute of Environmental Management and Assessment (IEMA) Guidelines for Landscape and Visual Assessment (3rd edition 2013) visual receptors most susceptible to changes in views and visual amenity are;

- *"Residents at home;*

- *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;*
- *Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience;*
- *Communities where views contribute to the landscape setting enjoyed by residents in the area; and*
- *Travellers on road rail or other transport routes where such travel involves recognised scenic routes and awareness of views is likely to be heightened".*

Visual receptors that are less susceptible to changes in views and visual amenity include;

- *"People engaged in outdoor sport or recreation, 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".*

2) **Recognised scenic value of the view** (County Development Plan designations, guidebooks, touring maps, postcards etc). These represent a consensus in terms of which scenic views and routes within an area are strongly valued by the population because in the case of County Developments Plans, for example, a public consultation process is required;

3) **Views from within highly sensitive landscape areas**. Again, highly sensitive landscape designations are usually part of a county's Landscape Character Assessment, which is then incorporated within the County Development Plan and is therefore subject to the public consultation process. Viewers within such areas are likely to be highly attuned to the landscape around them;

4) **Primary views from dwellings**. A proposed Project might be seen from anywhere within a particular residential property with varying degrees of sensitivity. Therefore, this category is reserved for those instances in which the design of dwellings or housing estates, has been influenced by the desire to take in a particular view. This might involve the use of a slope or the specific orientation of a house and/or its internal social rooms and exterior spaces;

5) **Intensity of use, popularity**. This relates to the number of viewers likely to experience a view on a regular basis and whether this is significant at county or regional scale;

6) **Connection with the landscape**. This considers whether or not receptors are likely to be highly attuned to views of the landscape i.e. commuters hurriedly driving on busy national route versus hill walkers directly engaged with the landscape enjoying changing sequential views over it;

7) **Provision of elevated panoramic views**. This relates to the extent of the view on offer and the tendency for receptors to become more attuned to the surrounding landscape at locations that afford broad vistas;

8) **Sense of remoteness and/or tranquillity**. Receptors taking in a remote and tranquil scene, which is likely to be fairly static, are likely to be more receptive to changes in the view than those taking in the view of a busy street scene, for example;

9) **Degree of perceived naturalness.** Where a view is valued for the sense of naturalness of the surrounding landscape it is likely to be highly sensitive to visual intrusion by distinctly manmade features;

10) **Presence of striking or noteworthy features**. A view might be strongly valued because it contains a distinctive and memorable landscape feature such as a promontory headland, lough or castle;

11) **Historical, cultural and / or spiritual significance**. Such attributes may be evident or sensed by receptors at certain viewing locations, which may attract visitors for the purposes of contemplation or reflection heightening the sense of their surroundings;

12) **Rarity or uniqueness of the view.** This might include the noteworthy representativeness of a certain landscape type and considers whether the receptor could take in similar views anywhere in the broader region or the country;

13) **Integrity of the landscape character**. This looks at the condition and intactness of the landscape in view and whether the landscape pattern is a regular one of few strongly related components or an irregular one containing a variety of disparate components;

14) **Sense of place**. This considers whether there is special sense of wholeness and harmony at the viewing location; and

15) **Sense of awe**. This considers whether the view inspires an overwhelming sense of scale or the power of nature.

Those locations which are deemed to satisfy many of the above criteria are likely to be of higher sensitivity. No relative importance is inferred by the order of listing in 'Outline Description of Selected Viewshed Reference Points'. Overall sensitivity may be a result of a number of these factors or, alternatively, a strong association with one or two in particular.

Visual Impact Magnitude

The magnitude of visual effects is determined on the basis of two factors; the visual presence (relative visual dominance) of the proposal and its effect on visual amenity. The magnitude of visual impacts is classified in Table 13.5 below.

Table 13.5 Magnitude of Visual Impact

Magnitude of Visual Impact	Description
Very High	The proposal intrudes into a large proportion or critical part of the available vista and is without question the most noticeable element. A high degree of visual disorder 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. A considerable degree of visual disorder 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 disorder or disharmony, thereby reducing the visual amenity of the scene. 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
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

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 and applies the same EPA definitions of significance as used earlier in respect of landscape impacts Table 13.4 refers).

13.6 Potential Effects of the proposed Project

13.6.1 XC201 Thomastown

Landscape Impacts

Landscape Sensitivity

This is a fairly typical lowland rural landscape comprising of pastoral farmland where any notable sense of openness is diminished by the dense mature tree-lined hedgerows that line the local roads and field boundaries. Situated between the settlements of Charleville and Killmallock, the character of the central study area is that of a productive working landscape where the most notable landscape elements are the linear transport corridors of the Dublin-Cork Railway Line and the R515 regional road. The study area and its wider surrounds also possess some aspects of a transitional landscape as the study area is located near the county border with Cork and as the landform begins to transition into the foothills of the Ballhoura Mountains some 5km south of the proposed Project. This is also reflected in the Landscape Character Assessment in the LCDP where the proposed Project is situated on the northern periphery of the 'Balyhoura/Slieve Reagh' LCA and borders the 'Agricultural Lowlands' LCA only a very short distance north of the proposed Project.

On the basis of the considerations outlined above, it is considered that this is a productive rural landscape of reasonable integrity and that contributes to the rural subsistence and amenity of the surrounding rural hinterland population. The study area does not identify as a unique or distinctive landscape and for these reasons, the landscape sensitivity is deemed to be **Medium-low**.

Magnitude and Significance of Landscape Impacts

Do Nothing

In a 'do-nothing' scenario the landscape and visual setting of each of the projects would remain in its current form and there would be no landscape or visual effects.

Construction Phase

During the construction phase there will be a far higher intensity of activity at the site than during the operational phase. This will consist of heavy vehicle movement to and from the site as well as construction machinery within the site. There will be permanent physical disruption of the land cover of the site to prepare for the incoming roadway and crossing embankments. Material arising from topsoil stripping will be stockpiled for later use in the landscape mitigation of the site and there will also be some stockpiling of construction materials on site. There will be movement of workers vehicles to and from the site as well as the presence of welfare facilities. A crane and crane pad will also be erected to lift sections of the crossing into place. All of these aspects of the construction phases will detract slightly from the low intensity pastoral character of the rural surrounds of the proposed rail overpass, but only within the immediate landscape context of the works.

On the basis that physical construction stage works, although permanent, are relatively modest in scale and occur in the same context as other major transport corridors, they are considered to be minor. Construction related activity and its effect on landscape character will be temporary in duration. For these reasons the magnitude of landscape impact during the construction stage is deemed to be **Medium.**

On the basis of a Medium-low landscape sensitivity (see Table 13.2) coupled with a Medium magnitude of landscape impact (see Table 13.3), the overall significance of construction stage landscape effects is deemed to be **Moderate-slight** (See Table 13.4).

Operational Phase

The most notable operational phase landscape impact will be the introduction of a new piece of elevated road infrastructure and its associated signage, fencing and safety barriers into an area primarily comprising of pastoral farmland. Landscape impacts are likely to arise from the modifications to the landform generated by the engineered elevated embankments which will gradually rise from its intersections with the regional and local road laneway, along the proposed new road-over-rail bridge corridor to a maximum height of c. 7.63m above the existing ground levels as it crosses the existing Dublin-Cork Railway Line. Once mitigation planting has become fully established (c. 3-4 years), the engineered embankments will blend more readily with the surrounding fields and hedgerows, however, the precast concrete sections of the bridge and metal crash barriers and signage will contrast with the natural tones and textures of the pastoral fields of the surrounding rural context. Whilst there is a considerable buffer distance between many of the residential dwellings in the vicinity of the proposed embankment at this location, it will generate a stronger sense of enclosure at a single storey dwelling situated c.60m to the west of the proposed alignment on the southern side of the existing Dublin-Cork Railway Line. However, these effects are likely to be slightly offset by the dense hedgerow vegetation that occurs between this dwelling and the proposed Project.

In terms of the landscape character, the proposed Project is not an unexpected or unfamiliar form of upgrade development in the context of major transport infrastructure such as the Dublin-Cork Railway Line and R515 regional road and other existing road-over-rail bridge crossings situated northeast and southwest of the proposed Project. In this sense, the proposed Project represents the intensification of road infrastructure within the study area rather than the introduction of a new or distinctive form of development. While it is not expected that the proposed crossing will generate a much higher quantum of traffic, vehicles, their lights and the proposed roadside lighting will all potentially be visible in the immediate surrounds of the proposed Project at the most elevated sections of the crossing situated over the existing railway crossing. It is important to note here that the proposed road corridor will never be in direct alignment with nearby dwellings, and thus there will never be instances where car lights will shine directly at or in the direction of nearby residential dwellings.

Many of the surrounding roads and dwellings also avail of dense screening in the form of existing hedgerow networks, which will also help to reduce the visual presence of the proposed Project within the immediate and wider landscape context. Sections of semi-mature and mature hedgerow vegetation will also be removed to facilitate the proposed alignment and its associated sightlines; however, this will be offset by the newly proposed areas of planting outlined in the mitigation strategy in Section 13.6 of this chapter.

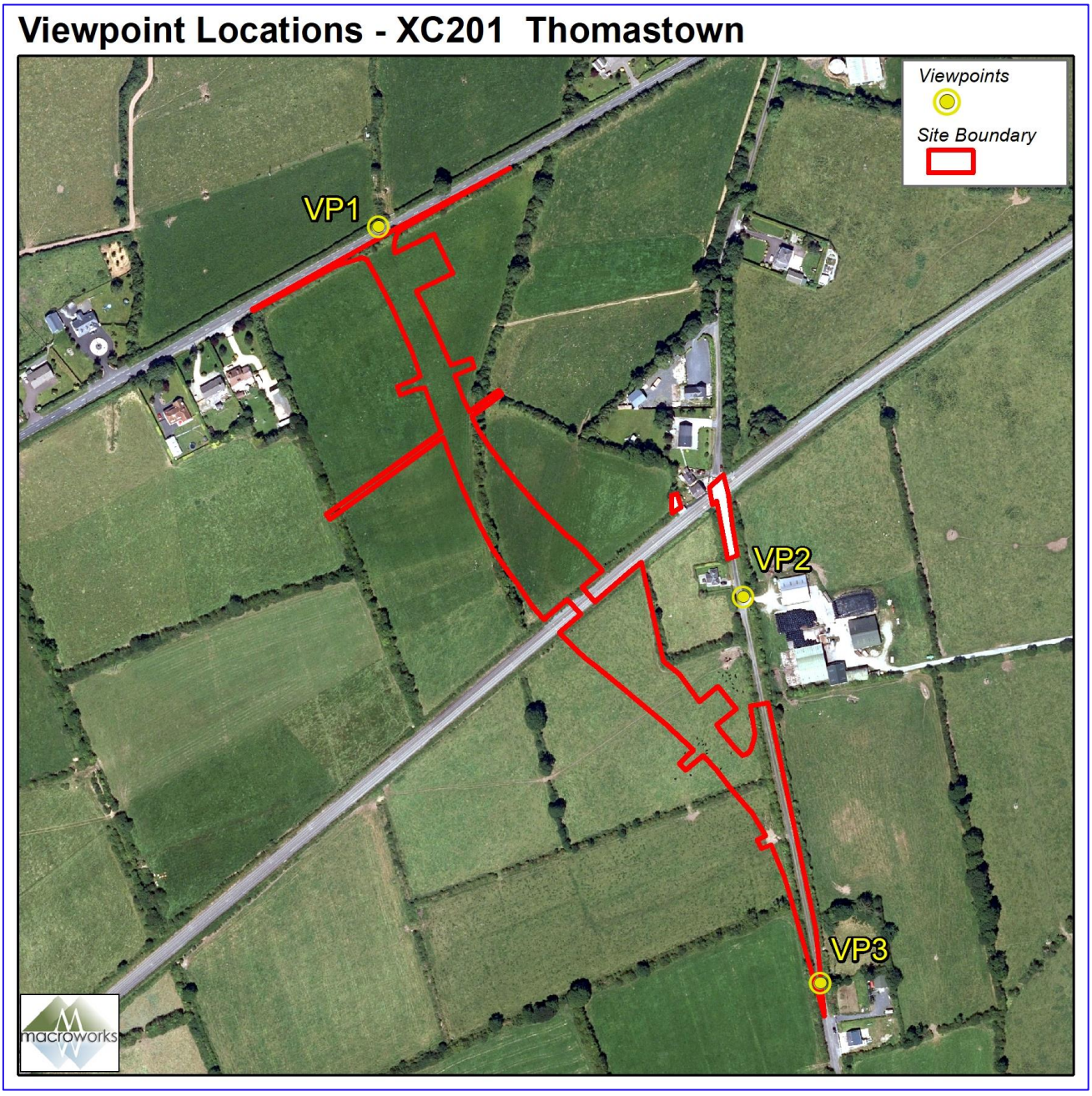
On the basis of the reasons outlined above, the magnitude of operation stage landscape impacts is deemed to be **Medium-low**. When combined with the **Medium-low** landscape sensitivity rating, the significance effect is judged to be ***Slight.***

Visual Impacts

Visual Receptor Sensitivity

Three representative viewpoints have been selected for the purposes of the visual impact appraisal. VP1 is situated at the northern end of the proposed alignment at its intersection with the R515 regional road whilst the remaining two viewpoint locations are on the southern side of the existing Dublin-Cork Railway Line along a local road. VP2 is situated adjacent to a single storey dwelling just over 80m to the east of the proposed Project, whilst VP3 is situated just south of the proposed Project where it will merge with the local road laneway. The viewpoint locations can be seen in Inset Figure 13.22 below.

Inset Figure 13.22: XC201 Thomastown Viewpoint Location Map



Visual receptor sensitivity is determined on the basis of the 'susceptibility' and 'view value' criteria contained in Section 13.4.2 of this chapter. In this instance VP1 is a relatively channelled view along the R515 regional road corridor which is predominately enclosed by a clipped hedgerow on one side and a dense tree lined hedgerow on the other. VP1 affords a small glimpse into the neighbouring pastoral field through a minor gap in the hedgerow vegetation where a view is afforded towards the rolling Ballyhoura Mountains. Both VP2 and VP3 are situated on the same local road laneway on the southern side of the existing railway corridor and are located approximately 270m from one and other. VP2 is situated adjacent to a single storey residential dwelling and a farmstead whilst VP3 is situated further to the south and is located at a slightly higher elevation to the front of another single storey dwelling. The local road laneway is heavily contained by dense mature hedgerows (c. 2-3m high) that line its corridor with the only views afforded through gaps in the dense hedgerows and from agricultural gateways. The sensitivity judgments for each viewpoint are set out in Table 13.6 below.

Table 13.6 Outline Description of Selected Viewshed Reference Points (VRPs)

Viewpoint	Location	View direction	Sensitivity (Derived from section 13.4.2 Sensitivity of visual receptors)
VP1	R515 north of Project	S	Medium low
VP2	Local road east of Project	W	Medium low
VP3	Local road southeast of Project	NW	Medium low

Magnitude and Significance of Visual Impacts

Do Nothing

In a 'do-nothing' scenario the landscape and visual setting of each of the projects would remain in its current form and there would be no landscape or visual effects.

Construction

During construction, the main visual impacts will arise from frequent heavy vehicle movements and worker vehicles travelling to and from the site and using the site entrance. There will be construction machinery on site, which may rise above intervening vegetation and buildings. There will also be stockpiles of stripped topsoil as well as construction materials awaiting use. However, a large part of this temporary activity within the site will remain screened from view by the hedgerows and mature tree lines that surround the site and its immediate landscape context. Furthermore, construction related activity is temporary in nature and will cease once the development becomes fully operational. For these reasons, the magnitude of visual impact at construction stage is deemed to be **Medium.** Combined with a medium-low sensitivity for each viewpoint, the significance of impact would be moderate - slight.

Operational Phase

Viewshed Reference Point		Direction of View
VP1	R515 north of Project	S
Representative of:	Major route Local community views	
Receptor Sensitivity	Medium-low	
Existing View	This is a view from the roadside verge of the R515 regional road in the townland of Effin. The view is channelled through one of the few small gaps on the southern side of the dense roadside hedgerow. A glimpse into the neighbouring pastoral field is afforded and the view is contained on the opposite side of the field by a hedgerow and dense stacked vegetation beyond. The dark silhouette of the Ballhoura Mountains appears just above this vegetation and contains the background of the view.	
Magnitude of Visual Impact (pre-mitigation)	The proposed northern end of the proposed Project will be visible from here where it intersects with the R515 regional road. A section of the existing roadside hedgerow will be removed to facilitate the intersection with the proposed Project and its associated sightlines beyond which, the proposed alignment will cross the foreground field at a slightly higher elevation than the existing ground levels as it continues to ascend towards the proposed overpass of the Dublin-Cork Railway Line. The proposed alignment will be flanked by a timber post and rail fence as it crosses the foreground field. A section of hedgerow that defines the western bounds of the agricultural field will also be removed to facilitate the road alignment. The concrete bridge structure will just be visible above and between the mature tree lined hedgerow that defines the western boundary of the foreground field. Both the proposed signage and safety barriers that line the proposed road corridor will generate a built contrast against the typical natural tones and textures of the pastoral field. Consequently, the magnitude of visual impact is deemed to be Medium.	
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5, the significance of residual visual impact is summarised below.	

Viewshed Reference Point			Direction of View
	Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of Visual Impact
Pre-mitigation	Medium-low	Medium	Moderate-slight

Viewshed Reference Point			Direction of View
VP2	Local road east of Project		W
Representative of:	Local community views		
Receptor Sensitivity	Medium-low		
Existing View	This is a heavily contained view along a local road south of its intersection with the Dublin-Cork Railway Line. A small single storey dwelling is situated in the near foreground and is bound by a tightly clipped hedgerow. The remaining parts of the local road laneway area heavily enclosed by dense roadside hedgerow. The view is truncated at a near distance by the roadside vegetation and single storey dwelling, with only glimpses of vegetation in the fields beyond afforded over top of the tightly clipped hedgerow in the foreground.		
Magnitude of Visual Impact (pre-mitigation)	The proposed Project will be partially and intermittently visible from this enclosed part of the local road laneway. The proposed crossing will be visible in two portions of the view, to the rear of the single storey dwelling in a westerly direction and at the point where the proposed alignment intersects with the local road laneway south of the viewpoint. The proposed concrete bridge structure and the most elevated parts of the east facing roadside embankments will be visible above and through the scrubby hedgerow vegetation situated at the rear of the single storey dwelling. A view of the safety barrier that line the roadway corridors will also be visible from here. The elevated nature of the road corridor will make it a prominent feature when viewed from the rear of this dwelling and will generate a sense of enclosure where views of the neighbouring pastoral fields were likely once afforded. The visual change to the channelled view along the road to the south will be minimal as the proposed road alignment intersects with the existing local road laneway with an additional off ramp provided for access to the neighbouring dwelling. For the reasons outlined above, the magnitude of visual impact is deemed to be Medium from this location.		
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5 the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of Visual Impact
Pre-mitigation	Medium-low	Medium	Moderate-slight

Viewshed Reference Point			Direction of View
VP3	Local road southeast of Project		NW
Representative of:	Local community views		
Receptor Sensitivity	Medium-low		
Existing View	This is a heavily enclosed and channelled view from a local road on the border of the townlands of Thomastown and Effin, south of its intersection with the Dublin-Cork Railway Line. A dense roadside hedgerow lines the local road corridor and channels the view directly along the roadway corridor screening any potential eastward or westward views into the neighbouring fields. The view is truncated at its intersection with the national railway line by a neighbouring residential dwelling in the middle ground.		
Magnitude of Visual Impact (pre-mitigation)	The most southerly portions of the proposed Project will be visible from here where it intersects with the local road laneway and veers off in a north-westerly direction. The proposed alignment will result in a loss of vegetation on the western roadside hedgerow which will slightly alter the channelled and enclosed nature of the existing local road laneway. Two roadside signposts will also be visible from here, although the adjacent hedgerow on the western side of the road will screen any potential for further views of the proposed Project. On balance, the visual impact of the proposed Project is deemed to be Low.		
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5, the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of Visual Impact

Viewshed Reference Point			Direction of View
Pre-mitigation	Medium-low	Low	Slight-imperceptible

13.6.2 XC209 Ballyhay

Landscape Impacts

Landscape Sensitivity

This is a relatively typical rural setting, which at a local level is heavily influenced by the Dublin – Cork Railway Line . The most prominent land use is that of pastoral farmland which is often bound by mature tree-lined hedgerows whilst the nearest centre of population occurs c.500m to the west of the site and comprises of linear clusters of residential dwelling that hug the local road network. There is also some sense of heritage in the immediate surrounds of the site in the form of the remnants of an old church and graveyard situated to the southwest of the proposed Project. Nevertheless, this is a robust working landscape setting that has values relating to rural productivity and subsistence for the local population as opposed to sensitive scenic, naturalistic or recreational values.

On the basis of the reasons outlined above it is considered that this landscape context is working rural landscape and on balance, the landscape sensitivity is judged to be **Medium-low.**

Magnitude of Landscape Impacts

Do Nothing

In a 'do-nothing' scenario the landscape and visual setting of each of the projects would remain in its current form and there would be no landscape or visual effects.

Construction Phase

During the construction stage, there will be a slightly higher intensity of activity at the site than during the operational phase, however, this is limited by the very modest degree of construction works required at XC209 Ballyhay. The proposed REB building will require a gravel foundation, and therefore a minor amount of soil striping will be required to facilitate the full footprint of the proposed building. Some soil stripping and stripping of the existing road surface will also be required as part of the upgrade to the CCTV-controlled level crossing. The potential for construction stage landscape impacts is notably reduced due to the modest scale of the proposed Project and the relatively remote setting of the crossing. Construction stage effects on the landscape character will also be temporary in duration. For these reasons, the magnitude of landscape impacts during the construction stage is deemed to be **Low**.

Operational Phase

The most notable operational phase landscape impacts will arise from the introduction of new barriers, the construction of a single storey REB building, lighting towers, CCTV towers, and all associated fencing, surfacing signage and ancillary works, all of which will result in an intensification of railway infrastructure within the immediate context of the proposed Project. In terms of the landscape character, key elements of railway infrastructure are not uncommon in the immediate surrounding landscape, and therefore, will not be viewed as incongruous features. Furthermore, due to the relatively modest scale of the proposed Project, landscape impacts will be very localised, much of which will be contained within the immediate surrounds of the existing crossing, and consequently, the magnitude of operational phase landscape impacts is considered to be in the order of **Low-negligible**. When combined with the **Medium-low** landscape sensitivity rating, the significance effect is judged to be **Slight-imperceptible.**

Visual Impacts

Magnitude and Significance of Visual Impacts

Do Nothing

In a 'do-nothing' scenario the landscape and visual setting of each of the projects would remain in its current form and there would be no landscape or visual effects.

Construction

During construction, the main visual impacts will arise from some heavy vehicle movements and worker vehicles traveling to and from the proposed Project. There will be some construction machinery on site to facilitate the lifting of the REB building into place and to facilitate the road widening upgrade. There may be some small stockpiles of stripped topsoil as well as construction materials awaiting use. However, due to the very minor degree of upgrade works required here, the magnitude of visual impact at construction stage is deemed to be **Low**.

Operational Phase

In terms of visual effects, the proposed upgrade will result in an increased intensity of railway related development within the immediate surrounds of the level crossing. New traffic signals, a lighting tower and a camera tower will be erected at the level crossing, whilst new road barriers will control the flow of traffic on both sides of the crossing. The largest piece of infrastructure here will be the proposed REB building which will be finished in a dull muted tone to help it visually blend with the surrounding vegetation. The proposed REB building will be around 2.4m wide and 9m long and will have a max height of approximately 3.5m. As this would likely result in very minor works that may marginally increase the intensity of railway infrastructure in the immediate locality, these effects would not be considered significant in EIA terms.

13.6.3 XC211 Newtown & XC212 Ballycoskery

Landscape Impacts

Landscape Sensitivity

The landscape of the study area and its wider surrounds is typically a landscape of transition where fertile lowlands meet the foothills of the Ballyhoura Mountains. In terms of land use, the study area predominately comprises of pastoral farmland lined by dense mature tree-lined hedgerows that often inhibit any chance of broad and distant views. The notable landscape elements are the Dublin-Cork Railway Line and the N20 national primary route, which have a strong influence on the character of the local landscape whilst the presence of extractive industry in the southwest quadrant of the study area also contributes to a sense that this a robust working landscape. Despite these strongly anthropogenic features, there is some degree of rural tranquillity within the study area as a consequence of the dense hedgerow vegetation that screens many of the busy linear transport corridors, however this is a typical small rural village settlement identified by the local school, church and small residential housing estate. Recreational amenity is also present in the form of the Kilmallock Cycle Hub route, for which, views across the surrounding countryside are a key component for users.

The proposed Project is situated in 'LCT5 – Fertile Plain with Moorland Ridge' which has been identified as 'Very High' landscape value and a 'Very High' landscape sensitivity. However, it is important to note that LCT5 is one of the largest landscape character types within Cork and encompasses many different landscape features of varying sensitivities such as the River Blackwater, the Galtee Mountains, and the Ballyhoura Mountains. The proposed Project is also situated at the westernmost periphery of a large area designated a 'High Value Landscape' in Cork which further reflects the transitional nature of the study area. Despite these higher order landscape sensitivity designations, the study area of the proposed Project must be examined at a more localised scale for the purposes of this appraisal. In this localised context the study area presents as a robust, working, rural landscape that encompasses several major transport corridors and large-scale industry such as the Lidl distribution centre

situated along the N20 corridor just over 2km north of the site and Rathnacally Wind Farm situated just over 3km northwest of the proposed Project. Indeed, this is a highly anthropogenic landscape that is not a particularly rare or distinctive landscape at a localised scale. Rather than scenic or naturalistic values, the landscape of the study area and its immediate surrounds has landscape values associated with rural productivity and subsistence for the local population.

On the basis of the reasons outlined above it is considered that this landscape context is working rural landscape and on balance, the landscape sensitivity is judged to be **Medium-low.**

Magnitude of Landscape Impacts

Do Nothing

If the proposed Project were not to proceed the site and its immediate surrounds would remain in its present form. The existing crossing and local road would remain, and the pastoral fields would also remain in situ. The existing vegetation would likely continue to grow and be managed and maintained as it is presently.

Construction Phase

During the construction phase there will be a far higher intensity of activity at the site than during the operational phase. This will consist of heavy vehicle movement to and from the site as well as construction machinery within the site. There will be permanent physical disruption of the land cover of the site to prepare for the incoming roadways and crossing embankments. Material arising from topsoil stripping will be stockpiled for later use in the landscape mitigation of the site and there will also be some stockpiling of construction materials on site. There will be movement of workers vehicles to and from the site as well as the presence of welfare facilities. A crane and crane pad will also be erected to lift sections of the crossing into place at XC212 Ballycoskery. There will also be some notable areas of cut and fill along the corridor of the XC211 Newtown. All of these aspects of the construction phases will detract slightly from the low intensity pastoral character of the receiving environment, but predominantly within the immediate landscape context of the works. The existing building and shed immediately east of the existing railway crossing at XC212 Ballycoskery will also be demolished as part of the proposed Project.

On the basis that physical construction stage works, although permanent, are relatively modest in scale and occur in the same context as other major transport corridors, and whilst these are in relatively close proximity to the school and some residences construction is only likely to last approximately 20 weeks at X211 Newtown and up to 63 weeks at XC212 Ballcoskery. Construction related activity and its effect on landscape character will also be temporary/short-term in duration. For these reasons the magnitude of landscape impact during the construction stage is deemed to be **Medium.**

On the basis of a Medium-low landscape sensitivity (see Table 13.2) coupled with a Medium magnitude of landscape impact (see Table 13.3), the overall significance of construction stage landscape effects is deemed to be **Moderate-Slight** (See Table 13.4).

Operational Phase

The most notable operational phase landscape impact will be the introduction of a new piece of road infrastructure and its associated signage, lighting, fencing and safety barriers into an area comprising of pastoral farmland. Landscape impacts are likely to arise at XC212 Ballycoskery from modifications to the landform generated by the engineered embankments, which will gradually rise from the existing ground levels along the local road corridor to a maximum of c. 10.8m above the existing ground levels where the proposed Project crosses the existing Dublin-Cork Railway Line. There will also be some embankments at the XC211 Newtown site, however much of the terrain modifications relate to areas of cut. Once mitigation planting has become fully established, the engineered embankments at both sites will blend more readily with the surrounding fields and hedgerows, however, the precast concrete sections of the road-over-rail bridge, the concrete retaining walls, metal crash barriers and signage will contrast with the natural tones and textures of the surrounding rural context. While there is a considerable buffer distance between many of the residential dwellings in the vicinity of the proposed

embankment / retaining wall at the XC212 Ballycoskery crossing, it will generate a stronger sense of enclosure and foreshortening of views to the front of the national school as well as a stronger influence from built transport infrastructure on the localised landscape character. The latter effect is likely to be reduced by the introduction of amenity planting to the front of both the retaining wall and embankments and will likely soften their 'engineered' appearance. On the western side of the existing Dublin-Cork Railway Line the presence of the proposed Project will be much less as it will be located to the rear of a dense mature tree lined hedgerow that lines the existing local road, which will be retained in so far as is possible. The existing trees surrounding the small grassed area to the front of the residential estate will also provide an additional layer of vegetative screening. In terms of the proposed new access road for XC211 Newtown, it may be briefly and intermittently visible from the linear cluster of dwellings on the western side of the railway tracks however, the presence of the proposed Project will be considerably less than those dwellings north and south of the alignment, as the proposed road corridor will be located beyond two sections of hedgerow that currently flank Dublin-Cork Railway Line.

In terms of the landscape character, the proposed Project is not an unexpected or unfamiliar form of upgrade development in the context of major transport infrastructure such as the national Dublin-Cork Railway Line, which encompasses numerous other railway overbridges, and N20 national primary route. In this sense, the proposed Project represents the intensification of road infrastructure within the study area rather than the introduction of a new or distinctive form of development. The proposed Project at XC212 Ballycoskery is situated within and adjacent to the settlement of Ballyhea which is already influence by the existing Dublin-Cork Railway Line infrastructure and the N20 which occurs immediately to the west, and consequently the proposed new road alignment will not appear incongruous within this small village. While it is not expected that the proposed crossing will generate a much higher quantum of traffic, vehicles, their lights and the proposed roadside lighting will all potentially be visible in the immediate surrounds of the proposed Project and at the most elevated sections of the crossing at Ballycoskery where it passes over the existing railway crossing. It is important to note here that the proposed road corridor will never be in direct alignment with nearby dwellings, and thus there will never be instances where car lights will shine directly at or in the direction of nearby residential dwellings.

Many of the surrounding roads and dwellings also avail of dense screening in the form of existing hedgerow networks, which will also help to reduce the visual presence of the proposed Project within the immediate and wider landscape context. Sections of semi-mature and mature hedgerow vegetation, including approximately 15 mature trees, will also be removed to facilitate the proposed alignment and its associated sightlines; however, this will be offset by the newly proposed areas of planting outlined in the mitigation strategy in Section 13.7 of this chapter.

On the basis of the reasons outlined above, the magnitude of operational stage landscape impacts is deemed to be **Medium-low**. When combined with the **Medium-low** landscape sensitivity rating, the significance effect is judged to be **Slight.**

Visual Impacts

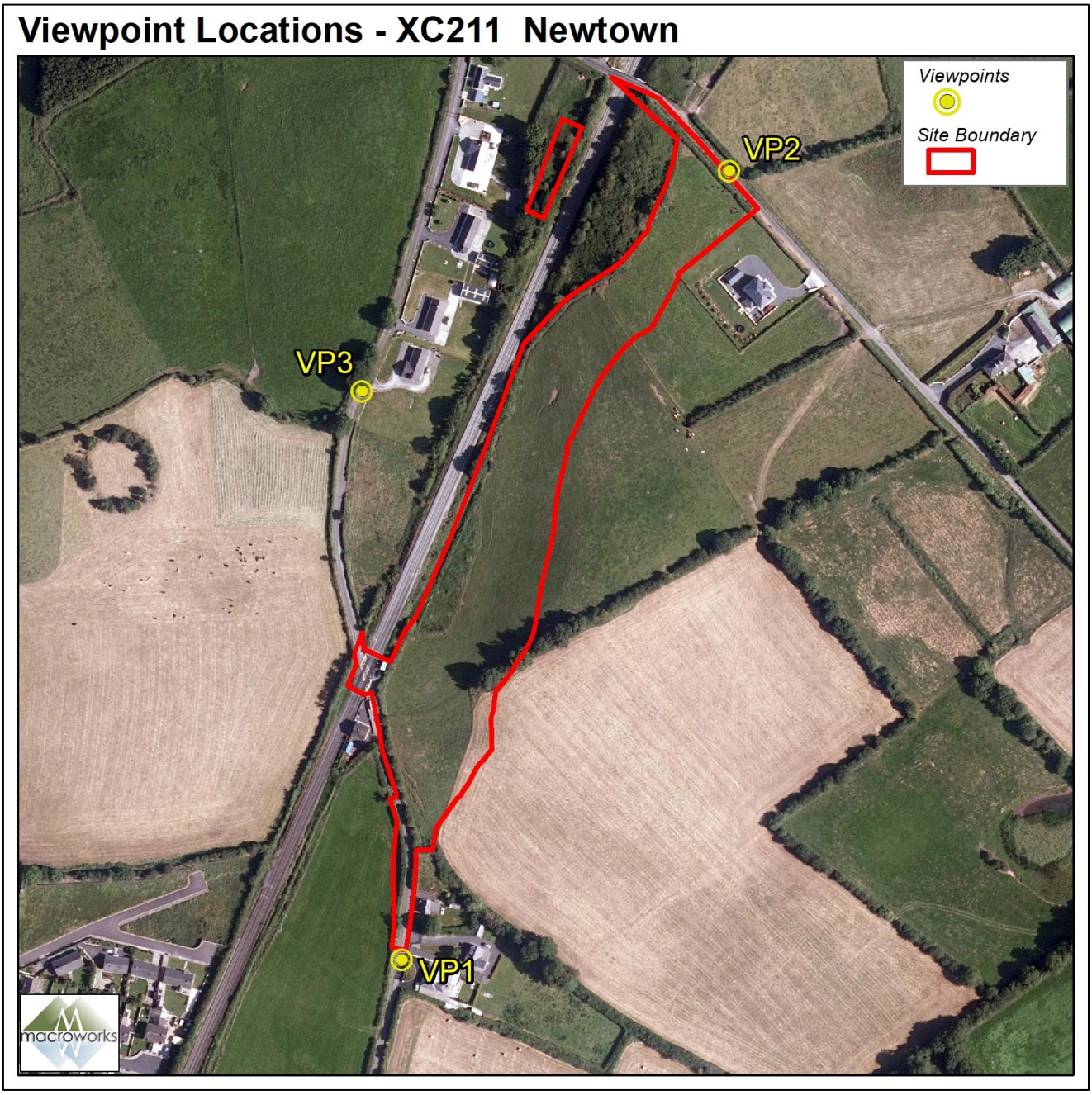
Visual Receptor Sensitivity

Three representative viewpoints for each of the proposed alignments (XC211 Newtown and XC212 Ballycoskery) have been selected for the purposes of the visual impact appraisal and are identified below.

XC211 Newtown

VP1 is situated where the southern portion of the alignment merges with the local road adjacent to a cluster of residential dwellings. VP2 is situated at the northern end of the alignment, similarly, at its intersection with a local road and is positioned immediately north of a large residential dwelling. VP3 is situated on the western side of the Dublin-Cork Railway Line along a local road immediately south of a linear cluster of residential dwellings. The viewpoint locations can be seen in Inset Figure 13.23 below.

Inset Figure 13.23: XC211 Newtown Viewpoint Location Map



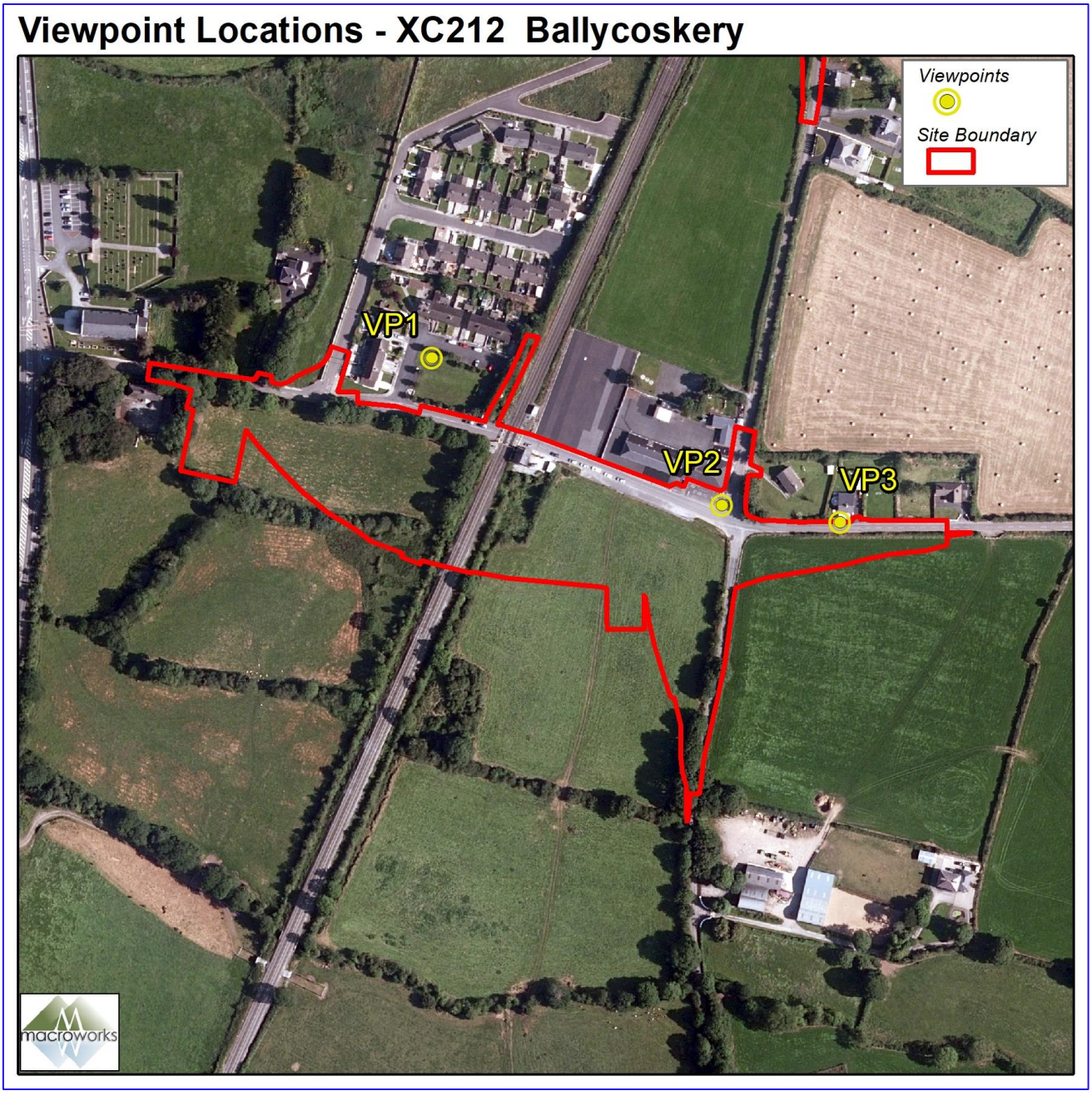
Visual receptor sensitivity is determined on the basis of the 'susceptibility' and 'view value' criteria contained in section 13.5.2 of this chapter. In this instance all three of the viewpoints are representative of local community views. VP1 represents views from local road users in addition to views from the nearby cluster of dwellings situated immediately adjacent to the view. Similar to VP1, VP2 represents views from the local road corridor and the nearby two-storey dwelling situated to the south of the viewpoint. VP3 is situated along the local road corridor on the western side of the Dublin-Cork Railway Line. This viewpoint is also a representative of views along this local roadway in addition to views from the linear cluster of dwelling situated immediately north of the viewpoint. The sensitivity judgements for each viewpoint are set out in Table 13.7 below.

XC212 Ballycoskery

VP1 is situated to the front of Beechwood Drive residential estate on the western side of the Dublin-Cork Railway Line corridor whilst both VP2 and VP3 are situated to the east of the railway corridor. VP2 is located at the front of

the local national school adjacent to Dooley's Cross roads and VP3 is situated just to the east of the cross roads adjacent to a small linear cluster of residential dwellings situated on the northern side of the local road corridor. The viewpoint locations can be seen in Inset Figure 13.24 below.

Inset Figure 13.24: XC212 Ballycoskery Viewpoint Location Map



Visual receptor sensitivity is determined on the basis of the 'susceptibility' and 'view value' criteria contained in Section 13.5.2 of this chapter. In this instance VP1 represents views from the dwellings in Beechwood Drive which look across a small area of amenity grassland towards the L1533 local road corridor which is enclosed on the opposite side by a dense mature tree-lined hedgerow. To the east of these residence views are also truncated at a short distance by a dense mature tree-lined hedgerow which screens the Dublin-Cork Railway Line corridor. Both VP2 and VP3 are situated only a short distance from each other with VP2 representing views from the national school and local roads, whilst VP3 is a representative of views from the adjacent residences and local road corridor which also hosts a section of the Kilmallock Hub Cycle Route. Both VP2 and VP3 afford views to the south across

the neighbouring pastoral fields and to the southeast towards the rolling ridges of the Ballyhoura Mountains. The sensitivity judgments for each viewpoint are set out in Table 13.7 below.

Table 13.7 Outline Description of Selected Viewshed Reference Points (VRPs)

Viewpoint	Location	View direction	Sensitivity (Derived from section 13.4.2 Sensitivity of visual receptors)
XC211 Newtown			
VP1	Local road at Newtown south of Project	N	Medium-low
VP2	Local road at Newtown north of Project	E	Medium-low
VP3	Local road at Newtown north of Project	SW	Medium-low
XC212 Ballycoskery			
VP1	Beechwood Drive north of Project	S	Medium low
VP2	L1533 at Ballyhea National School	S/SW	Medium low
VP3	L1533 west of Dooleys Cross Roads	W	Medium low

Magnitude of Visual Impacts

Do Nothing

In a 'do-nothing' scenario the landscape and visual setting of each of the projects would remain in its current form and there would be no landscape or visual effects.

Construction

During construction, the main visual impacts will arise from frequent heavy vehicle movements and worker vehicles travelling to and from the site and using the site entrance. There will be construction machinery on site which may rise above intervening vegetation and buildings. There will also be stockpiles of stripped topsoil as well as construction materials awaiting use. However, a large part of this temporary activity within the site will remain screened from view by the hedgerows and mature tree lines that surround the site. Furthermore, construction related activity is temporary in nature and will cease once the development becomes fully operational. For these reasons, the magnitude of visual impact at construction stage is deemed to be **Medium-low**.

Operational Phase

XC211 - Newtown

Viewshed Reference Point			Direction of View
VP1	Local road at Newtown south of Project		N
Representative of:	Local community views		
Receptor Sensitivity	Medium-low		
Existing View	This is a heavily enclosed view from a local road just east of the Dublin-Cork Railway Line in the townland of Newtown. The depicted view is oriented in a northerly direction along the local road corridor which is heavily enclosed by dense (even in winter) roadside hedgerows on both sides. The entrances to a number of residential dwellings are also situated immediately east of the road alignment in the foreground whilst the roof of a small dwelling is discernible just above the dense coniferous hedge that surrounds it. A number of utility poles and overhead cables also criss-cross the local road corridor in the foreground.		
Magnitude Visual Impact (pre-mitigation)	The proposed Project will be visible immediately north of the viewpoint with the proposed new intersection situated where the existing local road curves out of view. A section of the dense roadside hedgerow on the eastern side of the road corridor will be removed to facilitate the proposed road alignment opening views up to a sloping pastoral field. The proposed alignment will cut into the terrain in the adjacent agricultural field creating a low roadside embankment before it snakes out of view, screened by the vegetation located to the front of the small dwelling in the foreground. The removal of the dense roadside hedgerow will result in an increased sense of openness from here, however the proposed Project will also slightly increase the intensity of built development in the immediate context of this view. On balance of the above reasons, the magnitude of visual impact is deemed to be **Medium**.		
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5 the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Pre-mitigation	**Medium-low**	**Medium**	**Moderate-Slight**

Viewshed Reference Point			Direction of View
VP2	Local road at Newtown north of Project		SW
Representative of:	Local community views		
Receptor Sensitivity	Medium-low		
Existing View	This is a view from a local road corridor immediately north of the proposed Project. The local road is enclosed on both sides by roadside vegetation c.2m in height. The view is partially channelled along the road alignment in and south-easterly direction towards the foothills of the Ballyhoura Mountains which contain this view in the background. A large residential dwelling is visible in the near foreground just above the dense roadside vegetation.		
Magnitude of Visual Impact (pre-mitigation)	The proposed Project will be clearly visible here immediately adjacent to the viewpoint. A substantial section of the southern roadside hedgerow will be removed to facilitate the proposed alignment and its associated sightlines and will generate an increased sense of openness along this local road corridor. The proposed road alignment will be visible in the near distance as it cuts into the terrain in the adjacent field and is bound on both sides by low grassed embankments. A low hedge denotes the property boundary of the residential dwelling immediately east of the proposed road corridor in the foreground. The road gently ascends away from the viewpoint in a general southerly direction where it reaches a high point and then dips out of view. The proposed Project will represent a notable increase in the intensity of build road infrastructure in the immediate vicinity of this viewpoint, however it will not impede views towards the Ballyhoura Mountains which are the most notable landscape feature here. On balance, the magnitude of visual impact is **Medium**.		
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5 , the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**

Viewshed Reference Point			Direction of View
Pre-mitigation	Medium-low	Medium	**Moderate-Slight**

Viewshed Reference Point			Direction of View
VP3	Local road at Newtown west of Project		E
Representative of:	Local community views		
Receptor Sensitivity	Medium-low		
Existing View	This is a view from a local road situated just over 50m east of the Dublin-Cork Railway Line. The view looks across the side garden of a single storey residential dwelling towards the railway corridor which is partially and intermittently visible from here through a veil of winter vegetation in the foreground. The railway track and its stone embankments are more clearly visible towards the southeast where there is very little trackside vegetation. A number of other single-storey dwellings line the local road to the north of the view and are similarly oriented in an east-west direction. Beyond this linear cluster of dwellings, the railway corridor is backed by sloping pastoral fields in the middle ground, some of which are topped with mature tree-lined hedgerows. The strong contrast of the conifer forest cloaked Ballyhoura Mountains are visible in the distance and contain the background this view.		
Magnitude of Visual Impacts (pre-mitigation)	Small sections of the proposed Project will be partially visible from here just beyond the railway corridor. The majority of the road corridor will be screened here by the raised railway corridor in addition to the trackside vegetation. Small sections of the roadside embankment will theoretically be visible; however, this will visually blend with the existing rolling agricultural fields and are likely to go unnoticed by the casual observer. However, moving vehicles will potentially be visible here as they pass along sections of the proposed road corridor. Nevertheless, this is in the context of train carriages which routinely pass along the slightly elevated embankments to the rear of the dwellings in the foreground. Overall, the proposed Project will be barely visible here and will likely be further screened once the trackside vegetation comes to leaf. As a result, the magnitude of visual impact is deemed to be **Low-negligible**.		
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5 , the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Pre-mitigation	Medium-low	Low-negligible	**Slight-imperceptible**

XC212 – Ballycoskery

Viewshed Reference Point			Direction of View
VP1	Beechwood drive north of Project		S
Representative of:	Centre of population Local community views		
Receptor Sensitivity	Medium-low		
Existing View	This is a relatively contained view from Beechwood Drive residential estate situated immediately north of the L1533 local road. The view takes in an open green space that fronts the residential estate and is truncated a short distance beyond by a dense mature tree line that borders the southern side of the local road corridor. A dense line of poplar trees situated at the western fringe of the residential estate also truncates the westward view in the direction of the neighbouring Dublin-Cork Railway Line. It is important to note here that the nearest residential dwellings to the proposed Project are oriented in an east-west direction and not directly towards the proposed road alignment.		
Magnitude Visual Impact (pre-mitigation)	The proposed road embankment will be visible beyond the mature tree lined hedgerow that lines the southern side of the L1533 roadway. The natural tones of the roadside embankment will back the near tree-lined hedgerow and blend with its muted tones and textures. A notable section of the mature tree-lined hedgerow will be removed to facilitate the full footprint of the proposed development and will reduce the natural enclosure that was once generated by the dense tree line, allowing a clearer view of the proposed road alignment and its engineered embankments. Just beyond the existing railway crossing, a partial view of the concrete retaining walls of the proposed road-over-rail bridge will also be afforded whilst the unoccupied railway house on the eastern side of the railway tracks will be removed to facilitate construction works. Whilst the proposed Project increases the intensity of built development and provides an increased sense of enclosure from this location, it will only ever be partially visible as the near mature roadside hedgerow will screen the full extent of the proposed alignment and road-over-rail bridge and soften the anthropogenic forms of the embankments and ancillary elements . On balance, the magnitude of visual impact is deemed to be High-**Medium**.		
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5, the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Pre-mitigation	Medium-low	High-Medium	**Moderate**

Viewshed Reference Point			Direction of View
VP2	L1533 at Ballyhea National School		S/SW
Representative of:	Local community views.		
Receptor Sensitivity	Medium-low		
Existing View	This is a view from the front of the National School along the L1533 local road situated just east of Dooley's Cross Roads. The view extends across the local road corridor towards a neighbouring pastoral field which is bound on the near side by a post and wire fence. The view extends a short distance further across the field where it is contained on the opposite side by a mature tree lined hedgerow.		
Magnitude of Visual Impact (pre-mitigation)	The proposed road embankment will be viewed at a short distance, will foreshorten the view across the neighbouring pastoral field and therefore represents considerable visual change to this scene. The near view of the elevated roadside embankments and retaining walls will generate a strong sense of enclosure to the front of the national school and in combination with the concrete road-over-rail bridge and stacked view of the proposed safety barriers, lighting poles and pedestrian guard rail, the proposed Project presents with a distinctly utilitarian appearance. The vacant railway building on the southern side of the Dublin-Cork Railway Line and the scrubby vegetation that surrounds it will also be demolished and removed to facilitate the full footprint of the construction works with views of the national railway line now afforded. A partial view of the pedestrian ramp on the western side of the railway tracks will also be afforded from this location. Despite the strong sense of enclosure generated by the proposed works at the front of the national school, distant views to the foothills of the Ballyhoura Mountains to the southeast will be retained. Overall, the proposed Project represents a considerable increase in the scale of transport infrastructure development in the immediate setting of the national school and consequently, the magnitude of pre-mitigation visual impact is deemed to be **High**.		
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5, the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Pre-mitigation	Medium-low	High	**Substantial-moderate**

Viewshed Reference Point			Direction of View
VP3	L1533 west of Dooley's Cross Roads		W
Representative of:	Local community views Amenity Feature (Kilmallock Cycle Hub Route)		
Receptor Sensitivity	Medium-low		
Existing View	This is a view from the L1533 local road corridor immediately east of Dooley's Cross roads. This section of local road forms part of the Kilmallock Cycle Hub Route on road cycling trail. A dense roadside hedgerow encloses the northern side of the local road whilst to the south the road is bound by a low hedgerow and wooden post and rail fence. A view of a nearby pastoral field is afforded at the southwest corner of Dooley's Cross roads, however the view is contained a short distance further beyond by stacked layers of mature vegetation.		
Magnitude of Visual Impacts (pre-mitigation)	The proposed road-over-rail bridge will be visible at a relatively short distance from the front of a single-storey residential dwelling on the L1533 local road immediately east of Dooley's crossroads. A section of low scrubby hedgerow that once lined the southern side of the L1533 local road will be removed to facilitate the footprint of the proposed road alignment. The existing crossroads will now take the form of two separate intersections, the further of which is situated at a slightly higher elevation than the nearer and more openly visible intersection. A small section of hedgerow will be removed to facilitate the new footprint of the more distant intersection whilst the retained sections of hedgerow will partially screen the proposed road corridor that veers off in a southerly direction. The proposed road-over-rail bridge ascends in the middle ground where the north-facing roadside embankment is visible and is backed by a set of stairs leading to a pedestrian walkway. The proposed retaining wall is also just visible before the proposed overpass is screened from view by a patch of foreground vegetation. A post and rail fence denotes the boundary of the proposed Project in the neighbouring agricultural field to the south of the viewpoint whilst steel safety barriers line the elevated road corridor throughout the near middle ground. A corridor of lighting poles lines the southern side of the carriageway increasing the vertical envelope of the proposed Project. It is important to note that whilst the depicted south-westerly view is somewhat foreshortened by the proposed Project, the more sensitive aspect of this view to the south and southeast towards the Ballyhoura mountains is retained and uninterrupted. On balance, the magnitude of visual impact is deemed to be **Medium.**		
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5, the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Pre-mitigation	Medium-low	Medium	**Moderate-slight**

13.6.4 XC215 Shinanagh

Landscape Impacts

Landscape Sensitivity

As noted for XC211 Newtown and XC212 Ballycoskery, the study area for XC215 Shinanagh and its surrounds is also typical of a transitional landscape that encompasses aspects of the uplands and the fertile lowlands. The proposed Project is situated in a subtly enclosed area of terrain, nestled between a locally elevated hill to the west and the sloping foothills of the Ballyhoura Mountains to the east. Aside from the locally elevated hill immediately west of the proposed Project, the terrain levels out to form fertile lowland plains for much of the further western extents of the study area. Although the proposed Project is situated immediately adjacent to two busy transport corridors that have a strong influence of the character of the immediate landscape (the Dublin-Cork Railway Line and the N20), a traditional pastoral aesthetic also prevails in some locations within the study area as a result of the rolling pastoral fields enclosed by mature tree-lined hedgerows. Whilst some recreational amenity is present in the form of the Ballyhoura Way national waymarked trail the overriding character of the study area and its surrounds is that of a working rural landscape. A sense of heritage also exists in the immediate study area as a result of the remnants of the old Imphrick Church and Graveyard.

The proposed Project is situated in 'LCT5 – Fertile Plain with Moorland Ridge' which has been identified as 'Very High' landscape value and a 'Very High' landscape sensitivity. However, it is important to note here that LCT5 is

one of the largest landscape character types within Cork and encompasses many different landscape features of varying sensitivities such as the River Blackwater, the Galtee Mountains, and the Ballyhoura Mountains. The proposed Project is also situated just outside a large area designated 'High Value Landscape' in Cork which highlights the transitional character of the study area. Despite the high designations, the study area of the proposed Project must be examined at a more localised scale and in this sense the study area and its wider surrounds reflect that of a robust working rural landscape that is heavily influenced by major transport corridors. It is not a particularly rare landscape at a localised scale, nor is it a distinctive one. Rather than scenic or naturalistic values, the landscape of the study area and its immediate surrounds has landscape values associated with rural productivity and subsistence for the local population.

On the basis of the reasons outlined above it is considered that this landscape context is that of a typical working rural landscape and on balance, the landscape sensitivity is judged to be **Medium-low.**

Magnitude of Landscape Impacts

Do Nothing

If the proposed Project were not to proceed the site and its immediate surrounds would remain in its present form. The existing local road network would remain, and the pastoral fields would also remain in their present form. The existing vegetation would likely continue to grow, and hedgerows would be managed and maintained as they are at present.

Construction Phase

During the construction phase there will be a far higher intensity of activity at the site than during the operational phase. This will consist of heavy vehicle movement to and from the site as well as construction machinery within the site. There will be permanent physical disruption of the land cover of the site to prepare for the incoming roadway and its associated embankments. Material arising from topsoil stripping will be stockpiled for later use in the landscape mitigation of the site and there will also be some stockpiling of construction materials on site. There will be movement of workers vehicles to and from the site as well as the presence of welfare facilities. All of these aspects of the construction phases will detract slightly from the low intensity pastoral character of the nearest surrounds of the proposed alignment, but only within the immediate landscape context of the works. It is also important to note that the proposed Project is located immediately adjacent to the busy Dublin-Cork Railway Line and just over 600m to the west of the busy N20 national primary route corridor.

On the basis that physical construction stage works, although permanent, are relatively modest in scale and occur in the same context as other major transport corridors, they are considered to be minor. Construction related activity and its effect on landscape character will be temporary in duration. For these reasons the magnitude of landscape impact during the construction stage is deemed to be **Medium.**

On the basis of a Medium-low landscape sensitivity (see Table 13.2) coupled with a Medium magnitude of landscape impact (see Table 13.3), the overall significance of construction stage landscape effects is deemed to be **Moderate-slight** (see Table 13.4).

Operational Phase

The most notable operational phase landscape impact will be the introduction of a new piece of road infrastructure and its associated signage, fencing and safety barriers into an area comprising of pastoral farmland. Landscape impacts are likely to arise from modifications to the landform generated by ay areas of cut and fill, most notably where the proposed Project will merge with the existing Shinanagh bridge to the east of the proposed alignment and will rise to the c. 5.4m above the existing ground levels. Once fully vegetated any engineered embankments will blend with the surrounding grasslands and pastoral fields however, the proposed Project will generate a notable increase in built development in the immediate surrounds of the alignment.

In terms of the landscape character, the proposed Project is not an unexpected or unfamiliar form of upgrade development in the context of major transport infrastructure such as the Dublin-Cork Railway Line and N20 national primary route which the proposed Project will run parallel too. In this sense, the proposed Project represents the intensification of road infrastructure within the study area rather than the introduction of a new form of development. While it is not expected that the proposed Project will generate a much higher quantum of traffic, vehicles and their lights will likely be visible in areas where pastoral farmland once existed, however this will be in the immediate context of the existing road and rail infrastructure which occurs immediately east of the proposed Project.

Much of the surrounding roads and dwellings also avail of dense screening in the form of existing hedgerow networks which will also help to reduce the presence of the proposed Project within the immediate and wider landscape context. Small sections of hedgerow vegetation will also be removed to facilitate the proposed alignment and its associated sightlines however, this will be offset by the newly proposed areas of planting outlined in the mitigation strategy in Section 13.6 of this chapter.

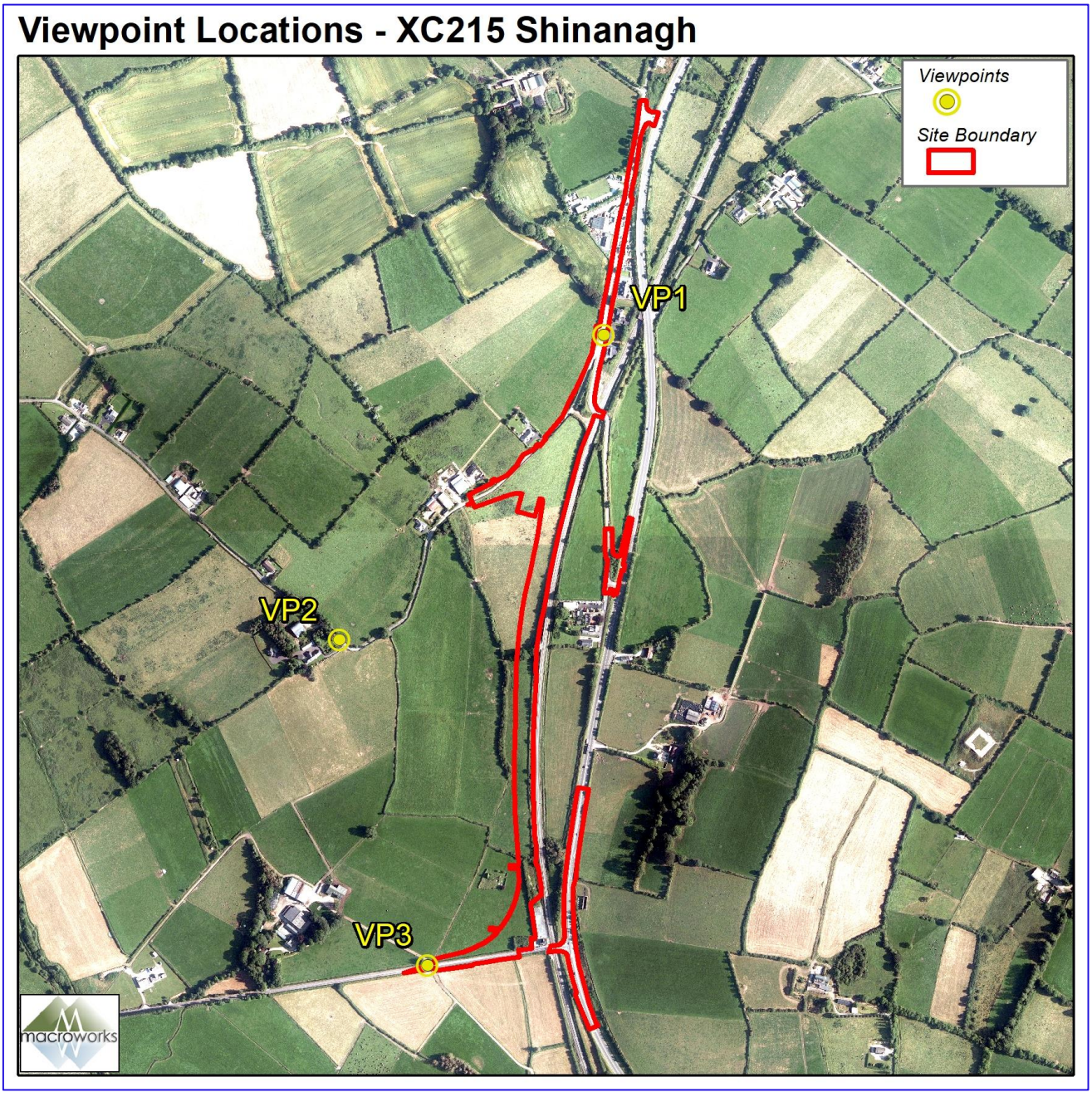
On the basis of the reasons outlined above, the magnitude of operation stage landscape impacts is deemed to be **Medium-low**. When combined with the **Medium-low** landscape sensitivity rating, the significance effect is judged to be **Slight.**

Visual Impacts

Visual Receptor Sensitivity

Three representative viewpoints have been selected for the purposes of the visual impact appraisal. All three of the viewpoints are situated on local roads in the immediate surrounds of the proposed Project with VP1 situated at the northern end of the proposed alignment and VP3 situated at the most southerly point of the proposed alignment. VP2 is situated just under 300m to the west of the proposed Project on a locally elevated section of a local road. The viewpoint locations can be seen in Inset Figure 13.25 below.

Inset Figure 13.25: XC215 Shinanagh Viewpoint Location Map



Visual receptor sensitivity is determined on the basis of the 'susceptibility' and 'view value' criteria contained in section 13.5.2 of this chapter. In this instance both VP1 and VP3 are relatively channelled views along local road corridors with little pronounced scenic amenity. Although the Imphrick Church and Graveyard a visible in VP3, they are viewed through a paladin fence at an entranceway to a neighbouring farmstead. VP2 is similarly situated along a local road corridor however the elevated views to the northeast from here provide a break from the typical enclosed and contained nature of much surrounding low-lying parts of the study area. This viewpoint is also a representative of the Ballyhoura Way national waymarked trail which passes along this section of the local road. The sensitivity judgments for each viewpoint are set out in Table 13.8 below.

Table 13.8 Outline Description of Selected Viewshed Reference Points (VRPs)

Viewpoint	Location	View direction	Sensitivity (Derived from section 13.4.2 Sensitivity of visual receptors)
VP1	Local road north of Shinanagh Bridge	S	Medium low
VP2	Local road at Ballynageragh	E	Medium low
VP3	L1320 at Imphrick	NE	Medium low

Magnitude of Visual Impacts

Construction

During construction, the main visual impacts will arise from frequent heavy vehicle movements and worker vehicles travelling to and from the site and using the site entrance. There will be construction machinery on site which may rise above intervening vegetation and buildings. There will also be stockpiles of stripped topsoil as well as construction materials awaiting use. However, a large part of this temporary activity within the site will remain screened from view by the hedgerows and mature tree lines that surround the site. Furthermore, construction related activity is temporary in nature and will cease once the development becomes fully operational. For these reasons, the magnitude of visual impact at construction stage is deemed to be Medium.

Operational Phase

Viewshed Reference Point			Direction of View
VP1	Local road north of Shinanagh Bridge		S
Representative of:	Local community views Amenity feature – Ballyhoura Way		
Receptor Sensitivity	Medium-low		
Existing View	This is a relatively contained view oriented in a southerly direction along a local road corridor. On the eastern verge of the local road in the foreground is a small pub and car park, whilst a dense low hedgerow truncates the westward view. The view extends along the local road corridor where it begins to rise slightly towards Shinanagh Bridge in the middle ground of the view. Partial glimpses of the low rolling landscape beyond are afforded through small gaps in the roadside hedgerow.		
Magnitude of Visual Impact (pre-mitigation)	The proposed Project will be visible in the immediate foreground where the proposed corridor will replace the existing acute angle intersection with an adjoining local road. The existing intersection will be closed off whilst the low stone wall backed by scrubby vegetation that lines the local road corridor will be removed to facilitate the proposed construction works. The proposed carriageway will shift slightly to the west and a new sign posted intersection with the existing Shinanagh Bridge will be constructed. A series of safety barriers will also line the proposed road corridor as it ascends towards its intersection with the existing bridge generating an increased utilitarian sense than the existing low stone walls and roadside vegetation. Despite this, the proposed Project represents a much cleaner and well-defined road layout here than the existing complex road intersection, and on balance, the magnitude of visual impact is deemed to be Low-negligible.		
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5 , the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Pre-mitigation	Medium-low	Low-negligible	**Slight-Imperceptible**

Viewshed Reference Point			Direction of View
VP2	Local road at Ballynageragh		E
Representative of:	Local community views Amenity feature – Ballyhoura Way		
Receptor Sensitivity	Medium-low		
Existing View	This is a locally elevated view situated immediately west of a bend in a local road in the townland of Ballynageragh. The terrain slopes away from the view in the foreground where the neighbouring pastoral field is separated from the local road corridor by a low grass embankment. In the middle ground, the rolling terrain is cloaked in a patchwork of pastoral farmland bound by a mix dense mature tree lined hedgerows, isolated farmsteads, and residential dwellings. The strong linear transport corridors of the N20 and Dublin-Cork Railway Line are barely discernible from here in the middle ground as they are screened by dense mature hedgerow vegetation. The rolling foothills of the Ballyhoura mountains ascend just beyond these linear transport corridors and contain the background of this view.		
Magnitude of Visual Impact (pre-mitigation)	The proposed Project will be seen from here in the distant middle ground adjacent to the existing Shinanagh Bridge. A large section of the proposed alignment will be almost entirely screened from view here by the layers of hedgerow vegetation throughout the fore-to-middle ground. The proposed road alignment will be visible cutting through an area of pastoral farmland where its roadside embankments will partially blend with the grassed fields it sits within. Where visible, the darker tones of the tarmacadam road carriageways will contrast with the verdant greens of the pastoral fields that the proposed Project bisects. A timber post and rail fence will also be visible on the near side of the road corridor whilst an area of hedgerow vegetation adjacent to the existing Shinanagh bridge will be removed to facilitate the proposed Projects' full footprint. Although the proposed Project will represent a slight increase in the intensity of built development in this view, it will not noticeably alter the character of the view nor will it foreshorten views or generate any sense of enclosure from this location. Consequently, the magnitude of visual impact pre mitigation is deemed to be **Low**.		
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5 , the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Pre-mitigation	Medium-low	Low	**Slight-imperceptible**

Viewshed Reference Point			Direction of View
VP3	L1320 local road at Imphrick		W
Representative of:	Local community views Heritage feature		
Receptor Sensitivity	Medium-low		
Existing View	This is a view from the entrance to a farmstead along the L1320 local road in the townland of Imphrick. The view extends across a collection of pastoral fields in the foreground which are divided by a varied mix of fence types. On the far side of these fences, the remnants of the old Imphrick Church and Graveyard bound by a low stone wall and scrubby vegetation are just discernible in the central middle ground of the view. The view is contained in the middle distance by a dense hedgerow that denotes the boundary of the Dublin-Cork Railway Line and an area of stacked mature vegetation situated on a low ridge immediately beyond this.		
Magnitude of Visual Impact (pre-mitigation)	The proposed Project will be visible here immediately adjacent to the viewpoint as it crosses the neighbouring pastoral field on the northern side of the local road and passes between the remains of Imphrick Church and Graveyard and the dense hedgerow that lines the Dublin-Cork Railway Line corridor. Whilst the road will be slightly elevated above the existing ground level, it typically follows the existing gradients of the agricultural field. A large section of the existing roadside hedgerow on the northern side of the existing local road will be removed to facilitate the proposed road alignment and its newly proposed intersection with the local road situated further east of the viewpoint. The removal of the existing roadside hedgerow will generate a slightly increased sense of openness here and the proposed safety barriers that line the proposed road corridor will also give rise to a slightly increased utilitarian appearance. For the reasons outlined above, the magnitude of visual impact is deemed to be **Low** from this location.		
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5 , the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Pre-mitigation	Medium-low	Low	**Slight**

13.6.5 XC219 Buttevant

Landscape Impacts

Landscape Sensitivity

This is a predominantly rural hinterland landscape of pastoral farmland, hedgerows and mature tree lines that is located on the western outskirts of the settlement of Buttevant. The settlement of Buttevant and its urban features heavily influence the eastern half of the study area and comprises a school, an industrial estate and several small residential housing estates. Notable transport infrastructure such as the Dublin-Cork Railway Line, the R522 and R580 regional roads and the N20 national primary route also influence the character of the central study area. Despite the high degree of urban influences on the study area, much of the immediate landscape context of the proposed Project is that of a low intensity productive rural character albeit on the fringe of the urban settlement of Buttevant. In terms of natural elements, the River Awbeg runs a course just over 200m to the north of the existing railway crossing whilst two small streams flow under the existing R522 regional road immediately adjacent and crossed by the proposed Project. One aspect of notable heritage value in the immediate vicinity of the proposed Project is the small remembrance plaque and garden to those that died in the Buttevant Rail disaster which is situated on the eastern side of the existing railway crossing.

The proposed Project is situated in 'LCT5 – Fertile Plain with Moorland Ridge' which has been identified as 'Very High' landscape value and a 'Very High' landscape sensitivity. However, it is important to note here that LCT5 is one of the largest landscape character types within Cork and encompasses many different landscape features of varying sensitivities such as the River Blackwater, the Galtee Mountains, and the Ballyhoura Mountains. The proposed Project is also situated just outside a large area designated 'High Value Landscape' in Cork which highlights the transitional character of the study area. Despite the high designations, the study area of the proposed Project must be examined at a more localised scale and in this sense the study area and its wider surrounds reflect that of a robust working rural landscape that is heavily influenced by the nearby transport

corridors and urban features on the outskirts of Buttevant. It is not a particularly rare landscape at a localised scale, nor is it a distinctive one. Rather than scenic or naturalistic values, the landscape of the study area and its immediate surrounds has landscape values associated with rural productivity and subsistence for the local population.

On the basis of the reasons outlined above it is considered that this landscape context is that of a typical working rural landscape and on balance, the landscape sensitivity is judged to be **Medium-low.**

Magnitude of Landscape Impacts

Do Nothing

If the proposed Project were not to proceed the site and its immediate surrounds would remain in its present form. The existing regional road would remain as is and the pastoral fields would also remain in their present form. The existing vegetation would likely continue to grow, and hedgerows would be managed and maintained as was before.

Construction Phase

During the construction phase there will be a far higher intensity of activity at the site than during the operational phase. This will consist of heavy vehicle movement to and from the site as well as construction machinery within the site. There will be permanent physical disruption of the land cover of the site to prepare for the incoming roadway and crossing embankments. Material arising from topsoil stripping will be stockpiled for later use in the landscape mitigation of the site and there will also be some stockpiling of construction materials on site. There will be movement of workers vehicles to and from the site as well as the presence of welfare facilities. A crane and crane pad will also be erected to lift sections of the crossing and box culverts into place. All of these aspects of the construction phases will detract slightly from the rural hinterland and pastoral character of the nearest surrounds of the proposed alignment and crossing, but only within the immediate landscape context of the works.

On the basis that physical construction stage works, although permanent, are relatively modest in scale and occur in the same context as other major transport corridors, they are considered to be minor. Construction related activity and its effect on landscape character will be temporary in duration. For these reasons the magnitude of landscape impact during the construction stage is deemed to be **Medium.**

On the basis of a Medium-low landscape sensitivity (see Table 13.2) coupled with a Medium magnitude of landscape impact (see Table 13.3), the overall significance of construction stage landscape effects is deemed to be **Moderate-Slight** (see Table 13.4).

Operational Phase

The most notable operational phase landscape impact will be the introduction of a new piece of road infrastructure and its associated signage, lighting, fencing and safety barriers into an area comprising of pastoral farmland. Landscape impacts are likely to arise from modifications to the landform generated by the engineered elevated embankments which will gradually rise from the existing levels of the regional road along the proposed alignments corridor to a maximum of c. 8.6m above the existing ground levels. Once mitigation has become fully established, the engineered embankments will blend more readily with the surrounding fields and hedgerows, however, the precast concrete sections of the railway overpass, the concrete retaining walls and box culverts, metal crash barriers and signage will contrast with the natural tones and textures of the surrounding rural context. The nearest residential dwelling to the proposed elevated section of the alignment is a single storey dwelling located on the northern side of the R552 regional road corridor c.40m from the proposed engineered embankments. Although this will be a larger buffer than from the existing regional road corridor, the elevated nature of the proposed Project may generate a sense of enclosure and containment at this dwelling. However, these effects are likely to be slightly offset by the retained sections of existing hedgerow vegetation that occurs between this dwelling and the proposed Project.

In terms of the landscape character, the proposed Project is not an unexpected or unfamiliar form of upgrade development in the context of major transport infrastructure such as the Dublin-Cork Railway Line and R552 regional road. In this sense, the proposed Project represents the intensification of road infrastructure within the study area rather than the introduction of a new or distinctive form of development. While it is not expected that the proposed crossing will generate a much higher quantum of traffic, vehicles, their lights and the proposed roadside lighting will all potentially be visible in the immediate surrounds of the proposed Project at the most elevated sections of the crossing.

Much of the surrounding roads and dwellings also avail of dense screening in the form of existing hedgerow networks which will also help to reduce the presence of the proposed Project within the immediate and wider landscape context. Sections of hedgerow vegetation will also be removed to facilitate the proposed alignment and its associated sightlines however, this will be offset by the proposed areas of new planting outlined in the mitigation strategy in Section 13.7 of this chapter.

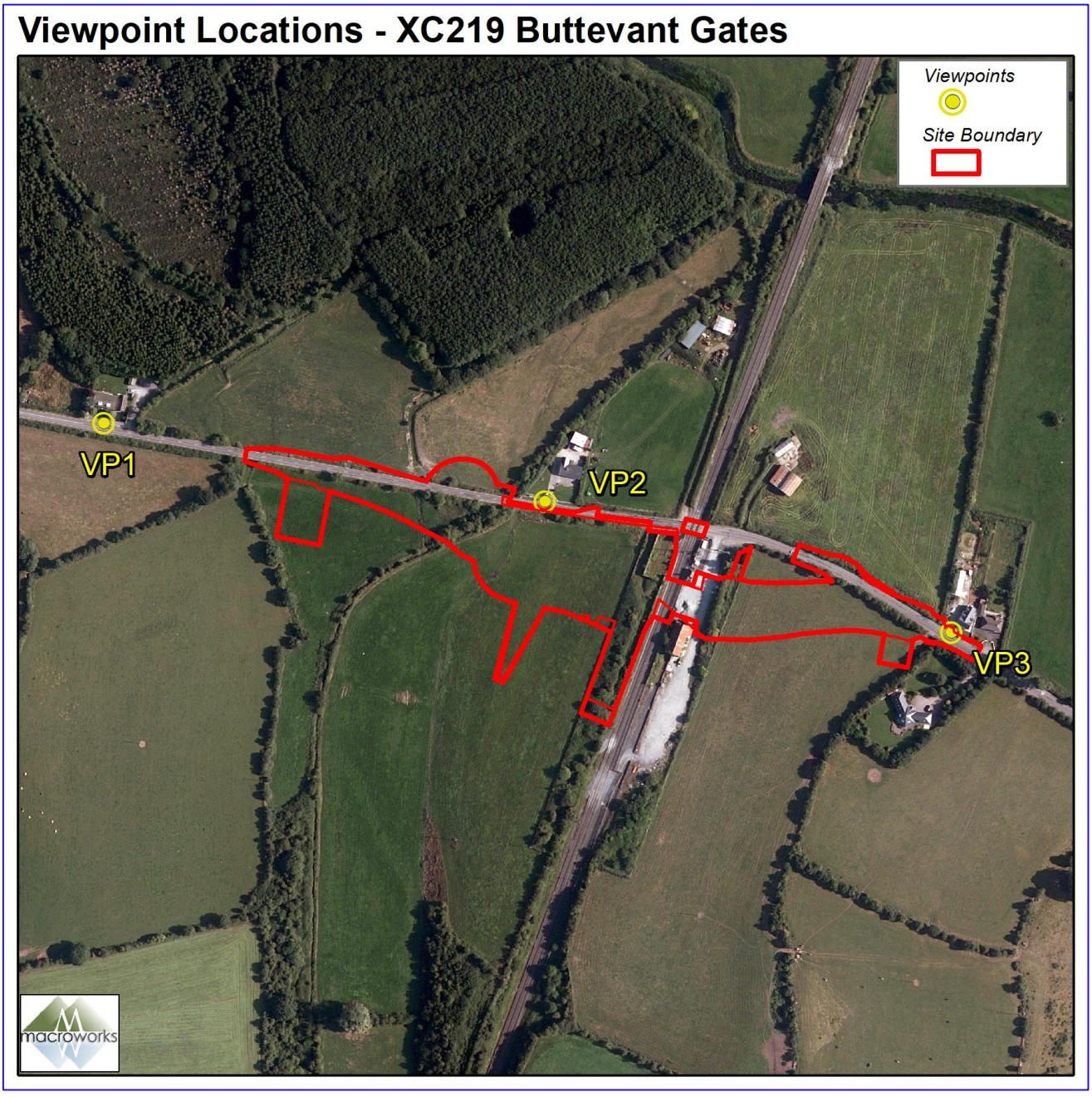
On the basis of the reasons outlined above, the magnitude of operation stage landscape impacts is deemed to be **Medium-low.** When combined with the **Medium-low** landscape sensitivity rating, the significance effect is judged to be **Slight.**

Visual Impacts

Visual Receptor Sensitivity

Three representative viewpoints have been selected for the purposes of the visual impact appraisal. All of the viewpoints VP1-3 are situated along the R522 regional road corridor and represent the nearest dwellings to the proposed Project. The viewpoint locations can be seen in Inset Figure 13.26 below.

Inset Figure 13.26: XC219 Buttevant Viewpoint Location Map



Visual receptor sensitivity is determined on the basis of the 'susceptibility' and 'view value' criteria contained in Section 13.5.2 of this chapter. VP1 is situated to the west of the proposed Project along the regional road corridor at the front of single storey residential dwelling that is surrounded by dense mature vegetation. Much of the regional road to the west of the existing railway crossing is heavily contained by dense mature vegetation. VP2 is also situated on the western side of the crossing and is located at the front of a single storey dwelling similarly situated on the northern side of the regional road corridor. A small respite in the dense roadside vegetation occurs here where views are afforded into the neighbouring pastoral fields on the southern side of the regional road corridor. VP3 is the only viewpoint on the eastern side of the railway crossing and is a representative for the small cluster of dwellings that line the regional road corridor. While much of the visibility to the south is truncated by the dense roadside vegetation on the southern side of the road corridor, this is counterbalanced by the locally elevated views to the north towards the river Awbeg. The sensitivity judgments for each viewpoint are set out in Table 13.9 below.

Table 13.9 Outline Description of Selected Viewshed Reference Points (VRPs)

Viewpoint	Location	View direction	Sensitivity (Derived from section 13.4.2 Sensitivity of visual receptors)
VP1	R522 regional road west of Project	E	Medium low
VP2	R522 regional road north of Project	S	Medium low
VP3	R522 regional road east of Project	W	Medium low

Magnitude of Visual Impacts

Construction

During construction, the main visual impacts will arise from frequent heavy vehicle movements and worker vehicles travelling to and from the site and using the site entrance. There will be construction machinery on site, which may rise above intervening vegetation and buildings. There will also be stockpiles of stripped topsoil as well as construction materials awaiting use. However, a large part of this temporary activity within the site will remain screened from view by the hedgerows and mature tree lines that surround the site. Furthermore, construction related activity is temporary in nature and will cease once the development becomes fully operational. For these reasons, the magnitude of visual impact at construction stage is deemed to be **Medium.**

Operational Phase

Viewshed Reference Point			Direction of View
VP1	R522 regional road west of Project		E
Representative of:	Major route Local community views		
Receptor Sensitivity	Medium-low		
Existing View	This is a heavily enclosed view from the entrance to a residential dwelling along R522 regional road corridor west of the proposed alignment. The regional road corridor is bound on both sides by dense mature planting which truncates much of the view at a near distance.		
Magnitude of Visual Impact (pre-mitigation)	The channelled view of the proposed Project will be visible here at a distance of just over 100m. The proposed alignment will veer away from the strict linear alignment of the existing regional road corridor into the neighbouring pastoral field on the southern side of the R522. A section of the southern roadside hedgerow will be removed to facilitate the proposed road corridor and its associated embankments. Whilst the proposed Project will slightly alter the nature of this channelled view, the proposed new road alignment will likely be screened from view at the residential dwelling situated adjacent to the viewpoint. Consequently, the magnitude of visual impact pre mitigation is deemed to be **Low**.		
Summary	Based on the assessment criteria and matrices outlined at Table 13.3 and Table 13.4, the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Pre-mitigation	Medium-low	Low	**Slight**

Viewshed Reference Point			Direction of View
VP2	R522 regional road north of Project		S
Representative of:	Local community views Major route		
Receptor Sensitivity	Medium-low		
Existing View	This is a brief view from a gap in the dense hedgerow vegetation along the R522 regional road adjacent to an entrance to a single storey residential dwelling. The view extends across the local road corridor in the foreground through a gap in the dense roadside hedgerow, towards a neighbouring slightly sloping pastoral field. A series of further rolling agricultural farmland are contained in the background of the view and are similarly bound by dense mature tree-lined hedgerows.		
Magnitude of Visual Impact (pre-mitigation)	The proposed Project is visible here at close quarters with the proposed road corridor situated in the neighbouring agricultural field aligned parallel to the existing regional road corridor. A section of the dense roadside hedgerow will be removed on both sides of the existing road corridor to the west of the adjacent dwelling to facilitate the proposed road corridor and newly proposed meandering off-ramp. The proposed road-over-real bridge structure and the majority of the further eastern sections of the proposed Project will be screened from here by an area of dense roadside hedgerow which is to be retained. The proposed concrete box culvert and steel road safety barriers will contrast with the natural colours of the existing vegetation here however, the principal visual effect here is the sense of enclosure and foreshortening of views generated by the proposed roadside embankments from the adjacent single-storey dwelling. For the reasons outlined above, the magnitude of visual impact before mitigation is **High**.		
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5, the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Pre-mitigation	Medium-low	High	**Substantial-Moderate**

Viewshed Reference Point			Direction of View
VP3	R522 regional road east of project		W
Representative of:	Local community views Major route		
Receptor Sensitivity	Medium-low		
Existing View	This is a partially contained from the R522 regional road corridor on the western outskirts of Buttevant. A dense hedgerow lines the southern side of the regional road corridor and partially contains the view at a short distance. A glimpse into the neighbouring pastoral field is afforded through an agricultural gateway along the southern side of the road corridor where the view is contained only a short distance further by dense stacked mature vegetation.		
Magnitude of Visual Impact (pre-mitigation)	The proposed Project will be visible here immediately adjacent to the viewpoint where it traverses the immediate landscape context. A section of the dense road side hedgerow and remnants of a stone wall will be removed to facilitate the proposed alignment which will generate a noticeable sense of openness in comparison to the previous enclosed regional road corridor. The proposed road corridor will ascend towards the pre-cast concrete road-over-rail bridge where the road corridor will also be flanked by steel safety barriers. The south facing embankments of the proposed Project will also be visible from here whilst a timber post and rail fence will flank the southern boundary of the proposed road project. Although the proposed project will lead to an increased utilitarian presence and will noticeably increase the degree of built development in the immediate context of this view, it will not appear out of place here where a busy regional road already exists. On balance of these reasons, the magnitude of impact is deemed to be **Medium**.		
Summary	Based on the assessment criteria and matrices outlined at Table 13.4 and Table 13.5, the significance of residual visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	**Significance of Visual Impact**
Pre-mitigation	Medium-low	Medium	**Moderate-slight**

13.6.6 Combined Effects of all Sites

Do Nothing

Were the proposed project not to proceed the immediate landscape context of the combined sites would remain in their present form. All existing rail crossings would remain as they are, and traffic flow would likely remain the same. The existing vegetation within each of the proposed Project sites would remain in situ and would likely continue to grow and hedgerows would be managed and maintained as they currently are.

Construction

In terms of the combined landscape effect at construction stage, there would be a slight increase in construction related activity along the corridor of the Dublin-Cork Railway Line between XC201 Thomastown and XC219 Buttevant, most notably along the linear receptor of the N20 national primary route. However, this is a busy haulage route connecting the cities of Limerick and Cork, and consequently the additional construction related presence will likely be very minor in comparison to the high number of HGVs that currently use this route. Nevertheless, construction related activities will be discernible in the near vicinity of the proposed Project sites and will be a noticeable feature along the local and regional roads situated immediately adjacent to them. With regard to the combined visual effect at construction stage, there will be no intervisibility afforded between each of the five sites due to separation distance and the enclosed nature of this lowland landscape, and therefore there will be no combined visual effects.

Operational

The most discernible operational phase combined effect will be the increase in intensity of transport infrastructure in the surrounds of the existing Dublin-Cork Railway Line corridor and in the immediate landscape context of the proposed Project. The most noticeable of these will be at XC201 Thomastown, XC212 Ballycoskery, and XC219

Buttevant all of which comprise of elevated precast concrete bridge structures. The additional lighting, road signage and steel crash barriers and other anthropogenic elements will also slightly increase the utilitarian feel at these locations, albeit to a very minor extent. Despite this, the only combined visual effect may arise between XC211 Newtown and XC212 Ballycoskery where a very minimal amount of development intervisibility could be afforded when road users and pedestrians travel across the most elevated sections of XC212 Ballycoskery. However, once all mitigation planting has fully established, the potential for intervisibility between both sites will considerably diminish.

In terms of the remaining project locations, no intervisibility will be afforded between these sites as a consequence of the low rolling terrain and dense vegetation that occurs in the immediate surrounds of these sites. Consequently, there will be no additional visual effects and only a very minor effect on the landscape fabric and landscape character of the combined study areas in the form of the marginally increased intensity of road infrastructure.

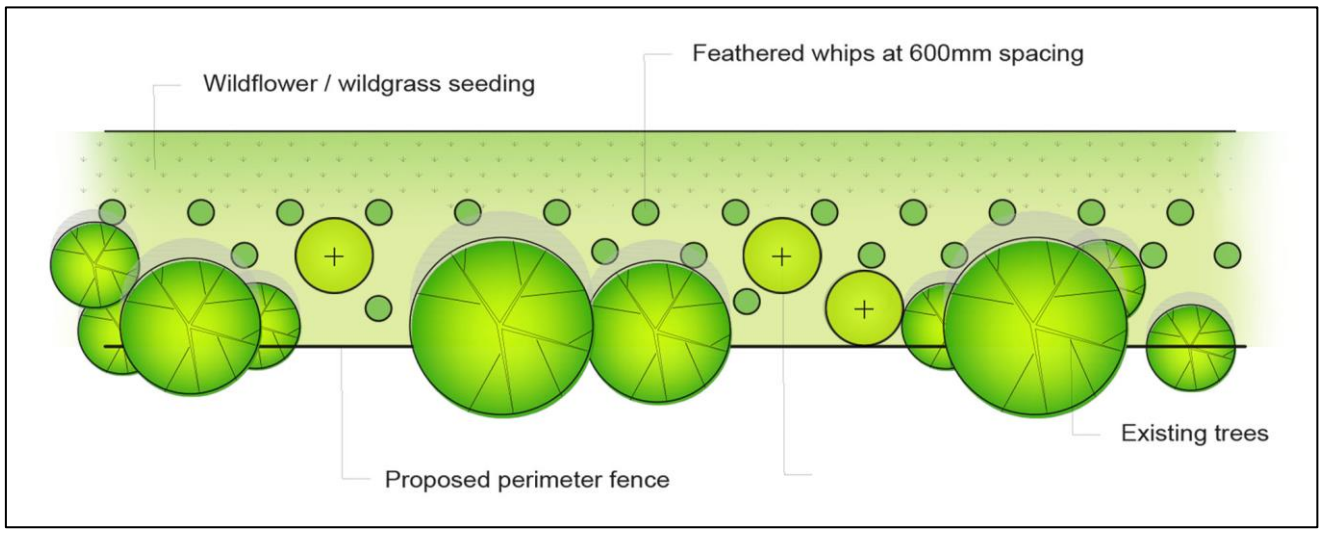
13.7 Mitigation Measures

Mitigation measures in this instance are employed to assimilate all of the proposed Projects into their immediate landscape setting whilst also enhancing ecological corridors that already exist within the surrounding hedgerows and heavily vegetated areas. The main mitigation by avoidance measure employed in this instance is the minimisation of elevated, engineered structures and embankments insofar as possible to reduce the footprint and overall visibility of the overpasses.

Areas of existing vegetation at all sites of the proposed Project will be retained and enhanced insofar as possible. Retention of existing hedgerow boundaries within and surrounding the proposed alignments prevents a sense of disregard, aids visual screening and maintains existing fields patterns. Where hedgerows or trees need to be removed to facilitate the footprint of the proposed Project, these will be offset with areas of additional planting.

It is also proposed to bolster areas of existing hedgerows with under-planting and inter-planting of whip transplants (i.e. Hedgerow Type 1 – see Inset Figure 13.27) in order to ensure dense and consistent screening of the proposed structures and traffic in perpetuity. Advanced nursery stock in the form of 8-10cm girth trees will be used to fill any noticeable gaps and plant species will be selected to complement the existing broadleaf hedgerow species mix around the site and will be of local provenance.

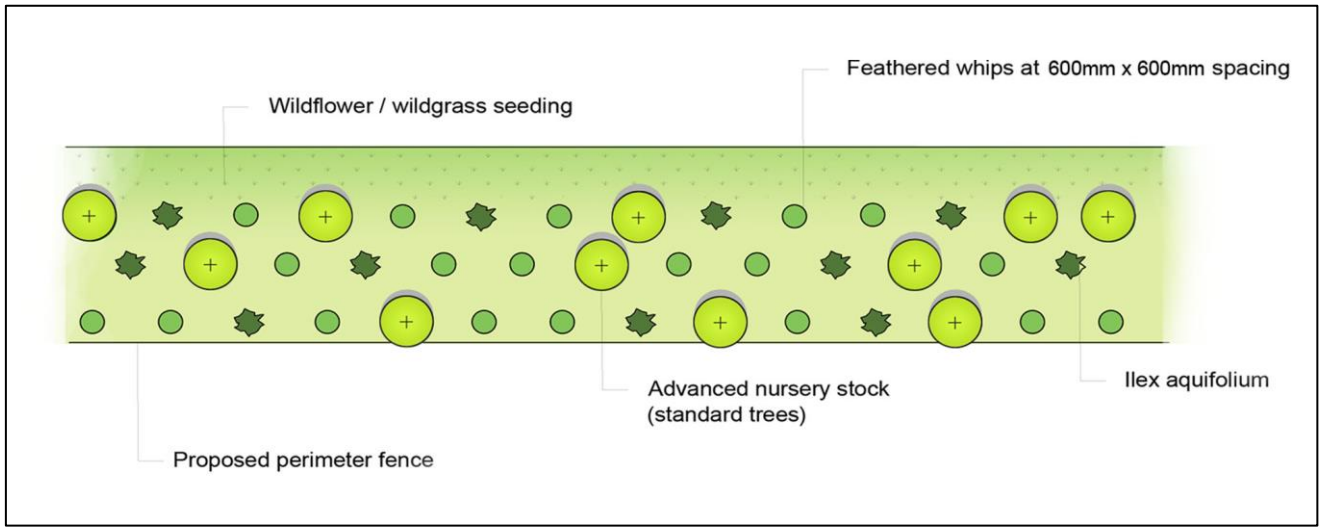
Inset Figure 13.27: Hedgerow Type 1: indicative hedgerow bolstering detail showing the approach to inter-planting and under- planting of existing hedgerow (where consolidation is needed).



It is also proposed to plant new 'Hedgerow Type 2' (Inset Figure 13.28 refers), with whips and a high proportion of advanced nursery stock (c.3m planted height), along all of the proposed timber post and rail fencing that encircles the proposed Projects (refer to Table and individual Project landscape mitigation plans for site specific landscape measures). Areas where hedgerows have been removed and are to be reinstated will also be planted as per

'Hedgerow Type 2'. This landscape measure will be allowed to mature up to a maintained height of 3-4m to provide screening of the proposed alignments from nearby dwellings whilst still maintaining any distant views afforded of hills and ridges.

Inset Figure 13.28: Hedgerow Type 1: indicative hedgerow planting detail showing the approach to inter-planting and under- planting of existing hedgerow (where consolidation is needed).



A low shrub mix will carpet the lower portions of the proposed engineered embankments which will soften their appearance and aid in visually blending them with their immediate landscape context. Once mitigation planting is fully established, this landscape measure will also contribute to screening moving vehicles, their lights and lower anthropogenic elements such as road signage and safety barriers from the view of nearby receptors. The low shrub species mix will comprise of Low-canopy: Sub-dominants (<10%), Understorey and Fringe: High-Shrubs (40-50%) and Understorey and Edge: Lower-Shrubs (40-50%). Planting on embankments will be allowed to grow to reach maturity and will be concentrated on the lower portions of the embankments so as not to generate any further sense of enclosure at nearby dwellings and local roads. Any residual space between the landscape measures identified above will be planted with a wild grass seeding mix of local provenance.

As there will also be some areas of habitat loss, a number of ecological mitigation measures are outlined for the proposed Projects. Some of these are highlighted on the landscape mitigation plans (refer to Volume 5, Appendix 13A) and are described in further detail in Volume 3, Chapter 7:-Biodiversity and Volume 5, Appendix 7G Mitigation Strategy.

Each of the proposed Projects has specific landscape measures which are identified on each of the separate landscape mitigation plans and are described in Table 13.10 below.

Table 13.10 Outline Description of Project Specific mitigation measures.

Project Site	Site Specific Mitigation Measures
XC201 – Thomastown	Any areas of existing retained hedgerow within the proposed Project site are to be supplemented as per 'Hedgerow Type 1' where necessary. Areas of hedgerow removed to facilitate sightlines at the northern end of the proposed project are to be reinstated as per 'Hedgerow Type 2' to the rear of the identified sightlines. Hedgerow Type 2 to be planted along the project side of the proposed timber post and rail fencing. A corridor of low shrub mix will straddle the proposed alignment and the lower portions of the proposed engineered embankments.

Project Site	Site Specific Mitigation Measures
XC211 – Newtown	Any areas of existing retained hedgerow within the proposed Project site are to be supplemented as per 'Hedgerow Type 1' where necessary. Areas of hedgerow removed to facilitate sightlines at the northern and southern intersections with the existing local roads are to be reinstated as per 'Hedgerow Type 2' to the rear of the identified sightlines. Hedgerow Type 2 to be planted along the project side of the proposed timber post and rail fencing.
XC212 – Ballycoskery	Any areas of existing retained hedgerow within the proposed Project site are to be supplemented as per 'Hedgerow Type 1' where necessary. The dense mature tree lined hedgerow situated on the southern verge of the L1533 local road south of the Beechwood residential estate to be retained in so far as possible. Areas of hedgerow removed/trimmed back to facilitate construction works to be reinstate as per Hedgerow Type 2 in so far as possible. Hedgerow Type 2 to be planted along the project side of the proposed timber post and rail fencing. A corridor of low shrub mix will straddle the proposed embankments on both sides of the Dublin-Cork Railway Line. Specific landscape measures to be implemented to north-facing embankments to the front of the national school to include areas of amenity planting (may include non-native species) creating year round visual interest. Street trees planted along proposed footpaths south of the National school and surrounding the proposed parking spaces. Native Ivy to be planted at the base of retaining concrete walls. Section of native hedgerow planted as per Hedgerow Type 2 and a row of street trees planted on the eastern boundary of the existing railway corridor.
XC215 – Shinanagh	Any areas of existing retained hedgerow within the proposed Project site are to be supplemented as per 'Hedgerow Type 1' where necessary. Hedgerow Type 2 to be planted along the project side of the proposed timber post and rail fencing. An area of low shrub mix to be planted along the proposed east facing embankment at the northern end of the proposed alignment. The proposed low shrub mix to be planted along the lower portions of the embankment.
XC219 – Buttevant	Any areas of existing retained hedgerow within the proposed Project site are to be supplemented as per 'Hedgerow Type 1' where necessary. Hedgerow vegetation to be retained and supplemented in so far as possible along the southern and northern verge of the R522 regional road on the western side of the Dublin-Cork Railway Line. Areas of hedgerow removed/trimmed back to facilitate construction works to be reinstate as per Hedgerow Type 2 in so far as possible. Hedgerow Type 2 to be planted along the project side of the proposed timber post and rail fencing. A corridor of low shrub mix to straddle the lower slopes of proposed embankments on both sides of the Dublin-Cork Railway Line. Native Ivy to be planted at the base of retaining concrete walls.

13.8 Residual Effects

Based on the effective establishment of proposed mitigation measures (c.3-4 years) described in Section 13.6, residual visual impacts are predicted below (see Table 13.11 to Table 13.14) for each of the projects. The mitigation measures will in some cases continue to mature well beyond 3-4 years, but in this instance the 'effective establishment' period refers to the likely time scale for mitigation planting to noticeably begin to achieve its screening / softening objective.

Table 13.11 : Residual Visual Impact Assessment XC201 Thomastown

XC201 Thomastown: Residual Visual Impacts			
VRP			
XC201 Thomastown – VP1			
Once the proposed mitigation has established the proposed road alignment will be embedded into its landscape setting. The proposed hedgerows at the northern end of the alignment will partially screen views into the neighbouring pastoral fields without intruding on the distant views of rolling hills and ridges in the background. The low shrub mix that straddles the road alignment will visually soften the proposed Project and will screen the view of the engineered embankments and concrete bridge structure further south of the view. On balance, the magnitude of visual impact will reduce to Low once mitigation has fully established.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	Medium	**Moderate-slight**
Residual (post-mitigation)	Medium-low	Low	**Slight**
XC201 Thomastown – VP2			
Once established, the proposed mitigation will be seen here to blend the proposed roadside embankments further into their immediate landscape setting. The low shrub mix will screen the strict linear forms of the elevated engineered embankments and its steel safety barriers and will partially screen the concrete overbridge structure. When established the low shrub mix will visually assimilate with the hedgerow vegetation to the rear of the adjacent dwelling and screen some of its more utilitarian features. However, from this near distance the employed mitigation will do little to reduce the sense of enclosure generate by the proposed project at this dwelling, and consequently the visual impact magnitude will remain at Medium.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	Medium	**Moderate-slight**
Residual (post-mitigation)	Medium-low	Medium	**Moderate-slight**
XC201 Thomastown – VP3			
The proposed mitigation will not be visible from here and as a result the visual impact magnitude will remain at Low.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	Low	**Slight**
Residual (post-mitigation)	Medium-low	Low	**Slight**

Table 13.12 Residual Visual Impact Assessment XC211 Newtown & XC212 Ballycoskery

XC211 & Xc212 Newtown and Ballycoskery: Residual Visual Impacts			
VRP			
XC211 Newtown – VP1			
The proposed mitigation planting will introduce a new section of hedgerow where the existing hedgerow was removed resulting in a similar conditions to the baseline scenario. Consequently, the magnitude of visual impact post-mitigation will reduce to Medium-low.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	Medium	**Moderate-Slight**
Residual (post-mitigation)	Medium-low	Medium-Low	**Slight**
XC211 Newtown – VP2			
Whilst the proposed mitigation planting will slightly enhance the visual amenity of this scene and will partially screen the road corridor from the nearby dwelling, it will have little screening effect from the local road. Overall, the visual impact post mitigation will reduce to Medium-Low.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	Medium	**Moderate-Slight**

XC211 & Xc212 Newtown and Ballycoskery: Residual Visual Impacts			
Residual (post-mitigation)	Medium-low	Medium-Low	**Slight**
XC211 Newtown – VP3			
Once fully established the proposed mitigation planting will add an additional layer of vegetative screening beyond the tree-lined hedgerows that already enclose the national railway line corridor. Nevertheless, partial glimpses of the proposed road corridor could still potentially be afforded from dwellings along this local road, and consequently, the magnitude of visual impact remains at Low-negligible.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	Low-negligible	**Slight-Imperceptible**
Residual (post-mitigation)	Medium-low	Low-negligible	**Slight-imperceptible**
XC212 Ballycoskery – VP1			
Once fully established the proposed mitigation will visually soften the overall mass of the partially visible engineered embankments from the view. The low shrub mix and newly planted semi-mature trees will screen the strict linear profile of the elevated road alignment and will further soften the road safety barriers, pedestrian guard rails and lighting poles that follow the elevated road corridor. The muted tones of the proposed low shrub mix will visually blend with the remaining sections of the dense tree lined hedgerow and newly planted trees situated on the southern side of the local road, and with the dense vegetation to the rear of the lower visible portions of the road alignment to the southwest (210°-240°). The existing railway crossing will be planted with a new hedgerow and once fully established will partially screen the brief view of the proposed concrete retaining walls. Once all the mitigation planting has fully established, the proposed Project will be less discernible even at this short distance, and consequently the residual visual impact magnitude will reduce to Medium.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	High-Medium	**Moderate**
Residual (post-mitigation)	Medium-low	Medium	**Moderate-Slight**
XC212 Ballycoskery – VP2			
Once fully established the proposed mitigation will screen a large part of the elevated sections of the proposed road alignment. The low shrub mix will soften the overall mass of the proposed project and will screen many of the projects associated utilitarian elements such as road safety barriers and road signage. The proposed planting will also add year round visual interest whilst the areas of trailing Ivy that extend across the concrete retaining walls will aid in reducing its perceived visual mass. The proposed hedgerow planted on the eastern side of the railway track will further screen the large concrete bridge structure and will blend with the mature vegetation beyond. The corridor of street trees situated adjacent to the pedestrian walkway will also partially screen views of the more elevated sections of the precast concrete road-over-rail bridge. Once fully establish the proposed mitigation will help to further assimilate this piece of road infrastructure into its immediate landscape setting, and consequently the residual visual impact is judged to be Medium.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	High	**Substantial-moderate**
Residual (post-mitigation)	Medium-low	Medium	**Moderate**
XC212 Ballycoskery – VP3			
Following the establishment of mitigation screen planting, the overall mass of the proposed Project will visually reduce, and the proposed road alignment will further blend with its immediate landscape context. A hedgerow will screen the near timber post and rail fence on the opposite side of the road corridor and will partially screen the immediate parts of the adjoining pastoral field whilst maintaining the distant views of the rolling vegetated hills in the background. The area of low shrub mix planted on the north facing roadside embankments will also screen the most elevated sections of the overpass in the middle ground of the view. It is considered that the residual visual impact will reduce to Low as a result.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	Medium	**Moderate-slight**
Residual (post-mitigation)	Medium-low	Low	**Slight**

Table 13.13 Residual Visual Impact Assessment XC215 Shinanagh

XC215 Shinanagh: Residual Visual Impacts
VRP

XC215 Shinanagh: Residual Visual Impacts			
XC215 Shinanagh – VP1			
Only a very small section of the proposed mitigation screen planting will be visible here along the west facing roadside embankments. The proposed low shrub mix will slightly soften the overall appearance of the embankments from here, however, this will not have a marked consequence on the visual amenity of this view and therefore the residual visual impact will remain at Low-negligible.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	Low-negligible	**Slight-imperceptible**
Residual (post-mitigation)	Medium-low	Low-negligible	**Slight-imperceptible**
XC215 Shinanagh – VP2			
Once fully established the proposed mitigation will help to further assimilate the proposed road alignment into its surrounding landscape context. The proposed west facing roadside embankment at the northern end of the alignment will be carpeted in a low shrub mix and will blend with the dull tones of the dense existing hedgerows in its immediate context, whilst the proposed hedgerows that line the road corridor will partially screen the low roadside embankments that snake through the pastoral fields in the middle ground. Although the employed mitigation will visibly soften the proposed Project, the visible area of the proposed project will not noticeably reduce. Consequently, the residual visual impact magnitude will remain at Low.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	Low	**Slight**
Residual (post-mitigation)	Medium-low	Low-negligible	**Slight-imperceptible**
XC215 Shinanagh – VP3			
Once fully established the proposed mitigation will screen a small section of the proposed corridor as it weaves through the neighbouring pastoral field. The proposed hedgerow vegetation will soften the appearance of the proposed road corridor and will reduce the visible area of the proposed Project. The proposed hedgerow will visually blend with the hedgerow vegetation that lines the existing railway corridor and consequently, the magnitude of visual impact will reduce to Low-negligible.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	Low	**Slight**
Residual (post-mitigation)	Medium-low	Low-negligible	**Slight-imperceptible**

Table 13.14 Residual Visual Impact Assessment XC219 Buttevant

Residual Visual Impacts			
VRP			
XC219 Buttevant – VP1			
Once fully established the proposed mitigation will soften the appearance of the proposed Project from this brief channelled view. The low shrub mix will partially screen the precast concrete river culvert structures and sections of the engineered roadside embankment and will further assimilate the proposed road corridor with its immediate landscape context. Consequently, the residual visual impact magnitude is deemed to slightly reduce to Low-negligible.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	Low	**Slight**
Residual (post-mitigation)	Medium-low	Low-negligible	**Slight-imperceptible**
XC219 Buttevant – VP2			
Following the establishment of mitigation screen planting the proposed roadside embankment will be carpeted in a layer of the low shrub mix and will appear as a dense wooded thicket screening the roadside embankments from this near distance. The proposed mitigation screen planting will further screen the safety barriers and partially screen any moving vehicles travelling along the proposed alignment. Whilst the screen planting will generate a further sense of enclosure, it will heavily reduce the engineered and utilitarian feel of the pre-mitigated scenario. The proposed planting will soften the strict linear form of the engineered embankments and take the form of dense roadside planting. As a result, the residual visual impact magnitude will reduce to Medium			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**

Pre-mitigation	Medium-low	High	**Substantial-moderate**
Residual (post-mitigation)	Medium-low	Medium	**Moderate**
XC219 Buttevant – VP3			
Once mitigation planting within and around the site has become established, the visible area of the proposed alignment and its associated embankments will slightly reduce. The proposed hedgerow situated adjacent to the timber post and rail fence in the foreground will screen the embankments beyond whilst the low shrub mix will partially screen the southern side of the road corridor which includes sections of the concrete bridge structure and steel safety barriers. The proposed mitigation will also partially screen the most elevated sections of the road corridor from here and the vehicles that travel across it. Thus, the residual magnitude of visual impact will reduce to Low following mitigation establishment.			
	Sensitivity	Visual Impact Magnitude	**Visual Impact Significance**
Pre-mitigation	Medium-low	Medium	**Moderate-slight**
Residual (post-mitigation)	Medium-low	Low	**Slight**

Summary tables are provided below (Table 13.15 and Table 13.16), which collate the assessments of landscape and visual impacts.

Table 13.15 Summary Landscape Impact Assessment

Project Site	Construction Phase	Operational Phase
XC201 – Thomastown	Moderate-Slight	Slight
XC209 – Ballyhay	Slight	Slight-imperceptible
XC211 – Newtown	Moderate-Slight	Slight
XC212 – Ballycoskery	Moderate-Slight	Slight
XC215 – Shinanagh	Moderate-Slight	Slight
XC219 – Buttevant	Moderate-Slight	Slight

Table 13.16 Summary Visual Impact Assessment

VRP	Visual Receptor Sensitivity	Magnitude of Visual Impact (pre-mitigation)	Visual Impact Significance (pre-mitigation)	Magnitude of Visual Impact (post-mitigation)	Residual Visual Impact Significance (post-mitigation)
XC201 Thomastown–VP1	Medium-low	Medium	Moderate-slight	Low	Slight
XC201 Thomastown – VP2	Medium-low	Medium	Moderate-slight	Medium	Moderate-slight
XC201 Thomastown – VP3	Medium-low	Low	Slight	Low	Slight
XC211 Newtown – VP1	Medium-low	Medium	Moderate-Slight	Medium-Low	Slight

VRP	Visual Receptor Sensitivity	Magnitude of Visual Impact (pre-mitigation)	Visual Impact Significance (pre-mitigation)	Magnitude of Visual Impact (post-mitigation)	Residual Visual Impact Significance (post-mitigation)
XC211 Newtown – VP2	Medium-low	Medium	Moderate-Slight	Medium-Low	Slight
XC211 Newtown – VP3	Medium-low	Low-negligible	Slight-imperceptible	Low-negligible	Slight-imperceptible
XC212 Ballycoskery – VP1	Medium-low	High-medium	Moderate	Medium	Moderate-slight
XC212 Ballycoskery – VP2	Medium-low	High	Substantial-moderate	Medium	Moderate
XC212 Ballycoskery – VP3	Medium-low	Medium	Moderate-slight	Low	Slight
XC215 Shinanagh – VP1	Medium-low	Low	Slight	Low-negligible	Slight-imperceptible
XC215 Shinanagh – VP2	Medium-low	Low	Slight-imperceptible	Low-negligible	Slight-imperceptible
XC215 Shinanagh – VP3	Medium-low	Low	Slight	Low-negligible	Slight-imperceptible
XC219 Buttevant – VP1	Medium-low	Low	Slight	Low-negligible	Slight-imperceptible
XC219 Buttevant – VP2	Medium-low	High	Substantial-moderate	Medium	Moderate
XC219 Buttevant – VP3	Medium-low	Medium	Moderate-slight	Low	Slight

13.9 Overall Significance of Impact

Based on the landscape and visual impact judgements provided throughout this LVIA, the proposed Project is not considered to give rise to any significant residual impacts. The proposed Project sites are all contained within a robust working rural landscape setting that already avails of considerable areas of vegetative screening. Furthermore, in most cases the proposed mitigation measures will reduce the pre-mitigation impacts and will help to assimilate the proposed Projects within their immediate and surrounding landscape context.

13.10 Interactions

The main interaction with the landscape and visual environmental factor relates to the archaeology and heritage in relation to the remnants of Imphrick Church and Graveyard situated within the study area of XC215 Shinanagh. In this instance, the church remnants are not a prominent feature that contributes to visual amenity in the public realm.

13.11 Cumulative Effects

The main aspect of the cumulative assessment of landscape and visual effects relates to the potential for impacts with the proposed upgrade of the N20 national primary route to a motorway (M20) which occurs in the near vicinity of almost all of the proposed Project sites. The landscape and visual impact assessment encompasses the existing N20 national primary route and the assessment notes that the proposed Project will represent an intensification of road infrastructure within the surrounds of the proposed road alignments. Any further upgrades to the existing N20 corridor will contribute to a further intensification of road infrastructure, however, as this is an established existing land use, it is not considered that significant adverse cumulative effects will be generated by the proposed Project in combination with the proposed N20 upgrade.

A number of other developments were considered in relation to the cumulative impacts (see Volume 3, Chapter 17 Interactions and Cumulative Impacts), however, due to the scale, nature and proximity of these to the proposed Project it is not considered that there will be any material cumulative impacts.

13.12 Difficulties Encountered in Compiling Information

There were no particular difficulties encountered compiling this assessment.

13.13 References

Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be contained in Environmental Impact Statements (2018) and the accompanying Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (2018).

Landscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape and Visual Impact Assessment (2013).

National Roads Authority (NRA) publication 'A Guide to Landscape Treatments for National Road Schemes in Ireland' (2006).

Limerick County Council publication 'Limerick County Development Plan 2010-2016' (2010)

Cork County Council publication 'Cork County Development Plan 2014' (2014)