11

LANDSCAPE AND VISUAL

PUBLIC

11 LANDSCAPE AND VISUAL

11.1 INTRODUCTION

This document has been prepared by Cunnane Stratton Reynolds Ltd (CSR), Landscape Architects and Planners.

This Landscape and Visual Impact Assessment (LVIA) was informed by a desktop study and a survey of the site and receiving environment in November 2023. This LVIA has been prepared to accompany an application for permission for further development of a quarry at Athgarrett, Philipstown and Redbog, Co. Kildare. The site of the proposed development is located along and just within the border of northeast County Kildare and lies ca.1.8 km northwest of Blessington in County Wicklow.

This Landscape and Visual Impact Assessment and accompanying Restoration Plan was carried out by Ronan Finnegan (BSc PG Fip LA CMLI). Ronan is a Chartered Landscape Architect (Charted Member of the Landscape Institute UK) with over 13 years' experience in LVIA in Ireland and the UK for a wide range of development types.

Oversight of the chapter was provided by Jamie Ball, MILI, Senior Landscape Planner of Cunnane Stratton Reynolds.

Macro Works Ltd., a Dublin-based landscape consultancy firm specialising in LVIA, generated Viewpoint maps, Zone of Theoretical Visibility Maps and 13 No. verified photomontages as part of this application.

11.1.1 STUDY AREA

According to Section 5.2 of the Guidelines for Landscape and Visual Impact Assessment (3rd Edition 2013):

"*The study area should include the site itself and the full extent of the wider landscape around it, which the proposed development may influence in a significant manner.*"

The study area extents for this LVIA derives from the nature of the existing site's quarrying activity and consideration of the proposed development.



Figure 11-1 - 5 km Study Area Extents Map

While there is a low capacity for significant impacts to arise beyond 2km from the site, due to the nature and location of the proposed development, a 5km study area has been selected in this instance (Figure 11-1, above). However, an emphasis will be placed on receptors within 0-2km of the site, as these are more/most likely to have the capacity to experience significant visual effects. It should not be inferred that the proposed development is unlikely to be visible from any location beyond the study area, but, more importantly, that the subject development is unlikely to influence such receptors in a significant manner.

EIA Project Area

The EIA project area, defined in Figure 11-2 below, is referred to under the heading 'Site and Immediate Vicinity'. However, the LVIA study area also includes the wider landscape, as specified in Figure 11-1, above.

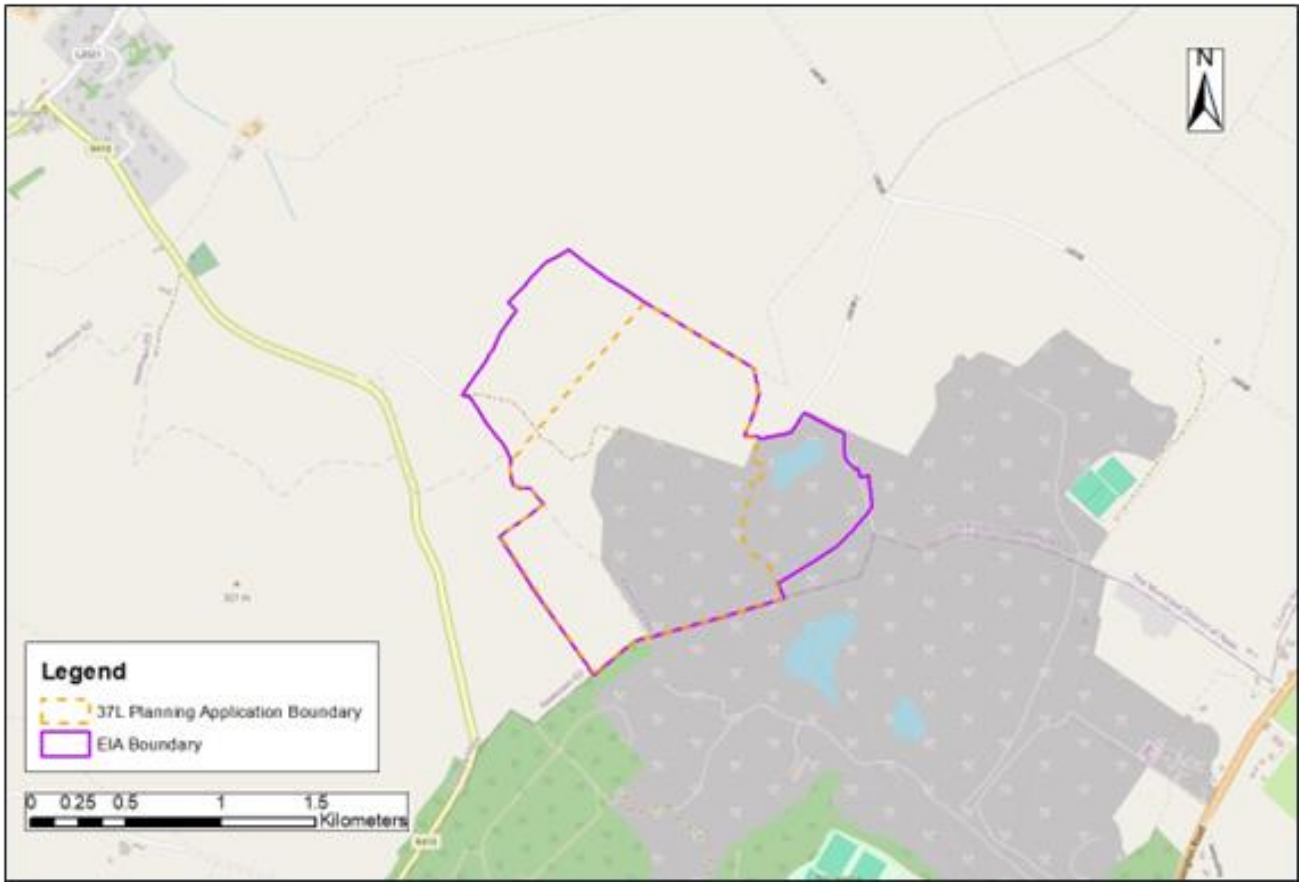


Figure 11-2 - Section 37L application area and the lands the subject of the EIAR.

11.1.2 GEOGRAPHICAL AND TEMPORAL SCOPE

This LVIA forms part of an Environmental Impact Assessment Report (EIAR) has been prepared to accompany an application for permission for further development of a quarry within the townlands of Athgarrett, Philipstown and Redbog, Co. Kildare. The EIAR has been prepared in tandem with an rEIAR to accompany an application for substitute consent for that existing quarry by the same applicant, Hudson Brothers Ltd, (HBL).

The further development of the quarry is proposed over areas directly adjacent to the main operational lands already excavated, as well as within the existing quarry for the purpose of recovering the economic reserve that remains in the void. The proposed development site (i.e. the application site), extending the excavation to the north and west, lies at the centre of an established landholding.

The centre of this landholding has been the subject of historic, current and intended future extraction. The southern boundary is delineated by the Wicklow and Kildare County boundaries and the western and northern boundaries of this area are delineated by the Philipstown townland boundary. The east of the area is within the Redbog townland and delineated by field/property boundaries. This area extends to approximately 95.8 ha. and constitutes the EIA project boundary for this quarry, (see Figure 11-2).

The lands subject to this EIAR are approximately 95.8 ha. and entirely encompass the application area of approximately 64.0 ha, (see Figure 11-2). The application area holds the main pit extraction area of the quarry and a proposed northern extension (approximately 21.2 ha in total, with an internal extraction area of approximately 17.7 ha) and a proposed western extension (approximately 10.2 ha in total, with an internal extraction area of approximately 9.4 ha)..

The reserve at this quarry is greywacke rock, overlain by sand and gravel, currently worked to a maximum depth of 188 mAOD. The rock reserve is traditionally excavated by blasting and mechanical means, primarily processed by mobile plant at the working face. Excavated sand, gravel and rock will be extracted to the west and north and transported internally to a centrally located existing administration and processing area over approximately 5 ha. that holds further processing plant (washing, screening, grading). This plant and processing area is an established part of the quarry area.

HBL are the owners and operators of a quarry and aggregate product land use site located across the counties of Kildare and Wicklow, since the 1950s, formally becoming a company in 1971.

The trans-county HBL operational facility summarily consists of: a pit, processing plant and offices at New Paddocks, Blessington, County Wicklow where the main entrance to their operation exists onto a local road that accesses the N81; and a quarry with processing plant and staff welfare facilities to the rear (north west) of their Wicklow lands over Philipstown and Redbog in Co. Kildare. The HBL operation in Kildare is adjacent to other quarry and associated land uses operated by unrelated parties.

11.2 LEGISLATIVE AND POLICY CONTEXT

11.2.1 LEGISLATION

The importance of the role of landscape and protection of its character through establishing planning policies and designations as part of the decision making at national, through to county council level, is governed by the Planning and Development Act 2000 (as amended).

The Planning and Development Act has applied the same meaning to landscape as in Article 1 of the European Landscape Convention (ELC) 2000, ratified by Ireland in 2004, which states Landscape as being an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors. The Irish Government has produced the National Landscape Strategy 2014-2025 to implement the ELC which aims to implement six core objectives through decision making including recognise landscape in law, national landscape character assessment, landscape policies, increased landscape awareness, education and public participation.

The general EIA legislation and guidance documents are listed in Chapter 1, (Introduction) of this EIAR.

11.2.2 RELEVANT POLICIES AND PLANS

This section sets out a review of landscape related planning policy of the county development plans of Kildare County Council (KCC) and neighbouring Wicklow County Council (WCC), as both local authorities fall within the extent of the study area. It includes:

- Adopted Kildare County Development Plan 2023-2029.
- Adopted Wicklow County Development Plan 2022-2028.

The local planning and other policies from the above development plans are reviewed, which identify key relevant development objectives and policies.

11.2.2.1 Adopted Kildare County Development Plan 2023-2029

The Kildare County Development Plan 2023-2029 (hereafter referred to as KCDP) was adopted on 28th January 2023.

Section 9.9 Mineral Resources & Extractive Industry

Section 9.9.1 'Post Closure of Extractive Industry After-Use Strategy for Quarries,' sets out the County Council's 'after use' strategy for quarries. Rehabilitating ecology and biodiversity and restoration plans will provide for a mosaic of habitats. Infilling and backfilling may be preferable than reverting to agricultural grassland for ecological and biodiversity purposes. It states:

'The conditions of quarry after-use and rehabilitation frequently involves the restoration of quarries, as far as possible, to their original appearance. This may result in the loss of key features that may ironically, have some ecological benefit or rich biodiversity interest…

'Therefore, in developing any after-use strategy and/or restoration plan, there will be a requirement to prepare a detailed survey and assessment of the intrinsic ecological character first (by an appropriate ecologist), identifying the range and location of key species of flora and fauna on site. The rehabilitation plan should work around these habitats and species in a process known as Rehabilitation Ecology. Ideally, the final restoration plan will provide for a mosaic of habitats, including, for example, cliff/sand or gravel banks, ponds, wetlands, open meadow (appropriately seeded), naturally recolonizing scrubland and planted woodland (i.e., saplings of native tree species) …'

RD O44 Require applications for mineral or other extraction to include (but not limited to):

'…A detailed landscaping plan to be submitted indicating proposed screening for the operational life of the site. The predominant use of native plant species in the proposed landscaping plan will be expected. Detailed landscaping and quarry restoration plans. Habitats and species surveying shall be carried out and shall influence the restoration plan for the site…'

Thus, a restoration plan has been included as part of this application and can be found in Appendix 11A.

Section 13.3 Landscape Character Assessment

A Landscape Character Assessment was carried out in 2004 which divided the county into distinct Landscape Character Areas (LCAs). The site lies within the 'Eastern Uplands' Landscape Character Area (LCA) which has been graded with a landscape sensitivity rating of 'Class 3 - High,' which is regarded as:

"Areas with reduced capacity to accommodate uses without significant adverse effects on the appearance or character of the landscape having regard to prevalent sensitivity factors."

Table 13.3 of the KCDP (Figure 11-3) sets out the likely compatibility between a range of land-uses and each of the county's principal LCAs. This table outlines the 'Eastern Uplands', within which the application site is located, as having its most compatible land uses being "agriculture, forestry and tourism projects." For all other land-uses, including extraction (i.e. sand & gravel), it has rated these as having a "medium" compatibility.

Table 13.4 (Figure 11-4) further sets out the “likely compatibility between a range of land-uses and proximity to Principal Landscape Sensitivity Factors.” The compatibility matrix considers not only the confines of the Site and its location but its proximity within 300m of Principal Landscape Sensitivity Factors.

The application site consists of an active quarry and pasture, with the pastureland in the southwest being located close (i.e. within 300 m) to a ridgeline, as illustrated in Figure 11-5, below. The KCDP identifies a somewhat broad, conceptual parameter that should apply between certain landscape sensitivities and specific land uses. Thus, ‘sand and gravel extraction,’ is “very unlikely to be compatible” (i.e. ‘0’ rating) if located within 300 m of a ridgeline; “compatible only in certain circumstances” (i.e. ‘2’ rating) if located within 300 m of mixed forestry and is “likely to be compatible with great care” (i.e. ‘3’ rating) if located within 300 m of “agricultural land with natural vegetation.” However, such broad parameters that apply conceptually across the entire County of Kildare, may not be as applicable in more localised contexts, where more complex or nuanced landscape elements are in place.

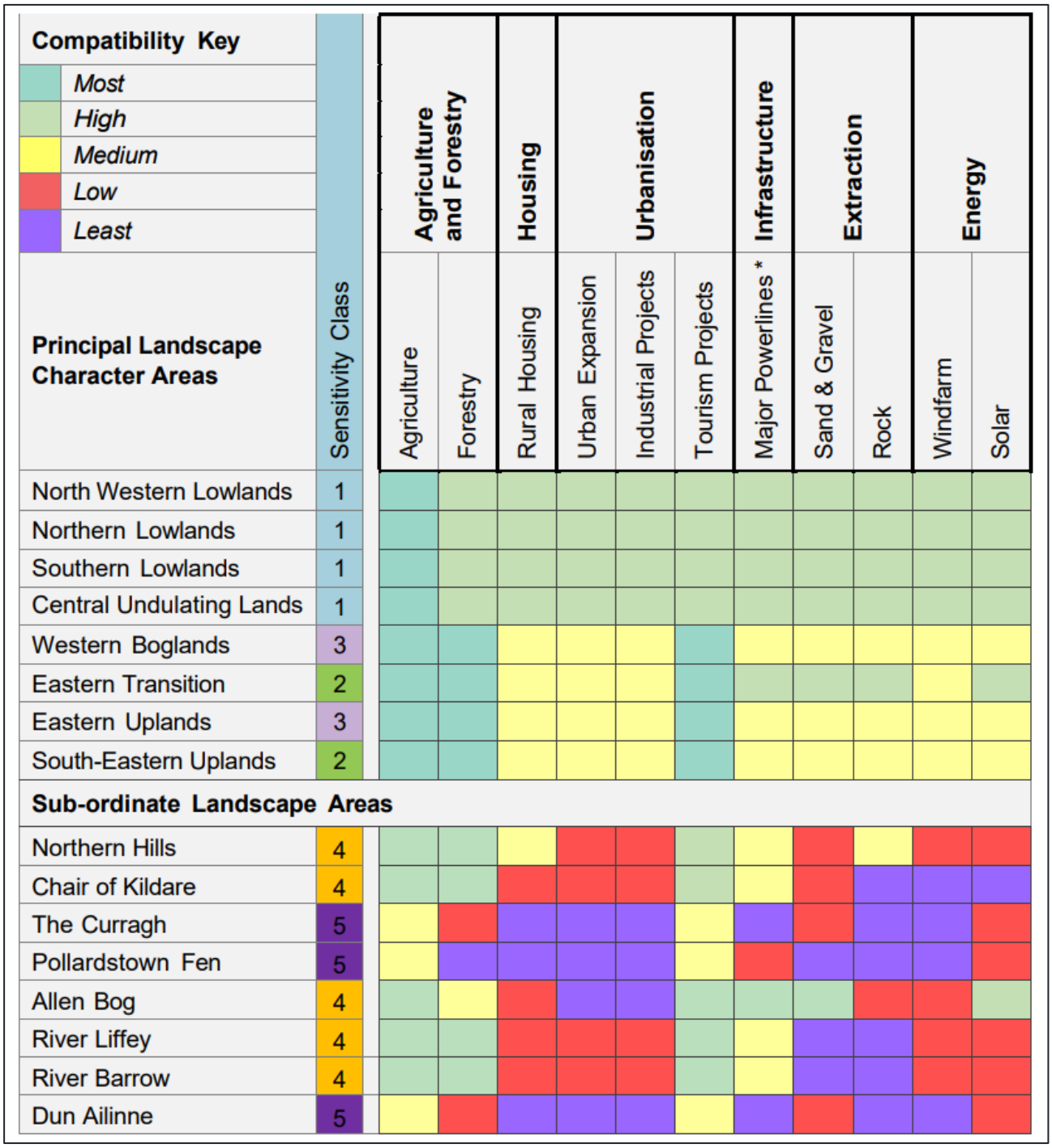


Figure 11-3: ***Table 13.3*** **from the KCDP –** ***'Likely compatibility between a range of land-uses and Principal Landscape Areas.'***

5 - Likely to be very compatible in most circumstances. 4 - Likely to be compatible with reasonable care. 3 - Likely to be compatible with great care. 2 - Compatible only in certain circumstances. 1 - Compatible only in exceptional circumstances. 0 - Very unlikely to be compatible.	Agriculture and Forestry		Housing	Urbanisation			infrastructure	Extraction		Energy	
Proximity within 300m of Principal Landscape Sensitivity Factors.	Agriculture	Forestry	Rural Housing	Urban Expansion	Industrial Projects	Tourism Projects	Major Powerlines	Sand and Gravel	Rock	Windfarm	Solar
Major Rivers and Water bodies	5	5	2	2	2	3	2	1	0	1	0
Canals	5	5	2	2	2	3	2	1	0	1	1
Ridgelines	5	5	1	1	1	1	1	0	0	2	0
Green Urban Areas	4	5	2	0	0	4	3	3	3	2	2
Broad-Leaved Forestry	3	5	2	2	2	4	3	2	3	1	2
Mixed Forestry	3	5	2	2	2	4	3	2	3	1	2
Natural Grasslands	5	2	2	1	1	4	2	1	1	2	2
Moors and Heathlands	2	2	1	0	0	1	2	1	0	2	1
Agricultural Land with Natural Vegetation	5	5	2	2	2	3	3	3	3	4	2
Peat Bogs	0	0	0	0	0	3	2	0	0	2	1
Scenic View	5	5	2	1	1	5	1	3	0	0	2
Scenic Route	5	5	2	1	1	5	1	3	0	0	2

Figure 11-4: ***Table 13.4 from the KCDP – 'Likely compatibility between a range of land-uses and proximity to Principal Landscape Sensitivity Factors.'***

Figure 11-5, below, which is taken from KCDP Landscape Sensitivity Map (V1-13.2), indicates that the Site is located within 300m of a 'ridgeline' and a 'Broadleaved forest' (i.e. Deerpark), as well as within 300m of Redbog pNHA and SPA.

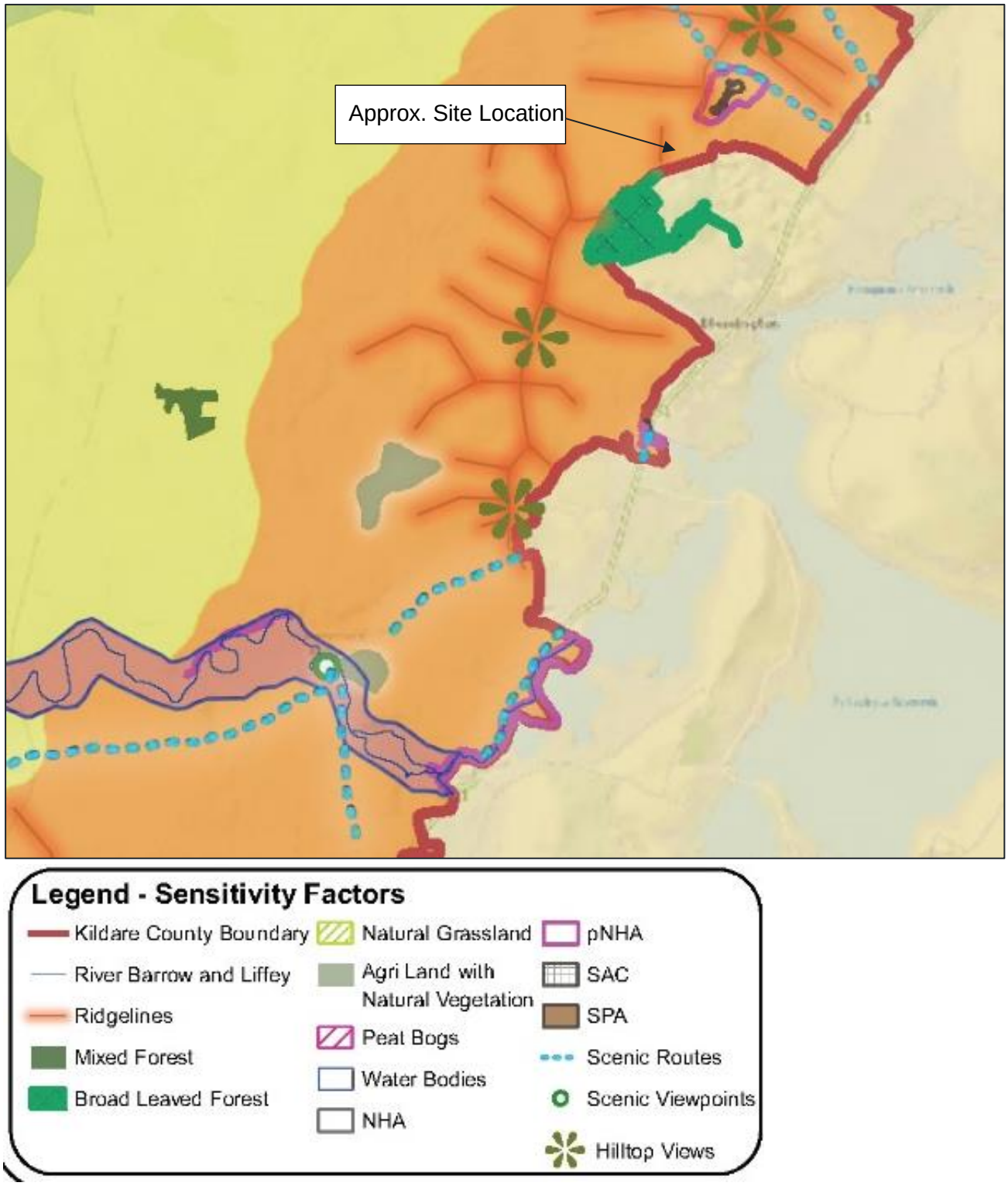


Figure 11-5: Extract of KCDP Landscape Sensitivity Map V1-13.2

In terms of policy for the protection and enhancement of the landscape policy LR P1 states:

'LR P1 Protect and enhance the county's landscape, by ensuring that development retains, protects and, where necessary, enhances the appearance and character of the existing local landscape.'

Objectives in relation to landscape impact of quarrying:

'LR O7 Restrict the quarrying of sensitive sites within the Landscape Character Areas in line with Table 13.3 and Table 13.4 above and to protect and conserve the ecological, archaeological, biodiversity and visual amenity surrounding quarry sites.'

'LR O8 Ensure that all quarrying activities and projects associated with the extractive industry comply with all relevant Planning and Environmental Legislation and the Guidelines for the Protection of Biodiversity within the Extractive Industry document 'Wildlife, Habitats & the Extractive Industry'.

Section 13.4 Areas of High Amenity

The Site is located within the East Kildare Uplands Area of High Amenity, which covers the same extent as the East Kildare Landscape Character Area. The KCDP describes the East Kildare Uplands Area of High Amenity (KCDP Section 13.4.12) as:

'The Eastern Uplands are located in the east of the county and are part of the Wicklow Mountain complex. The topography rises from the lowland plains, through undulating terrain to the highest point of 379m above sea level (O.D.) at Cupidstownhill, east of Kilteel. The elevated nature of this area provides a defined skyline with scenic views over the central plains of Kildare and the neighbouring Wicklow Mountains which further define the skyline and the extent of visibility. The East Kildare Uplands are rural in character with a number of scenic views from elevated vantage points. The general land use on the uplands is pasture, with some tillage, quarrying and forestry.

'Along a number of roads, which cross the upper and lower slopes of the uplands, there are long-distance views towards the Kildare lowlands and the Chair of Kildare. The sloping land provides this area with its distinctive character and intensifies the visual prominence and potential adverse impact of any feature over greater distances. Public roads traversing the slope provides an increased potential for development to penetrate primary and secondary ridgelines when viewed from lower areas and in a few areas the recent pattern of ribbon development obscures views across the plains of Kildare.

'In the Eastern Kildare Uplands, nearly all ridgelines are secondary when viewed from the lowland areas, as the Wicklow Mountains to the east define the skyline (i.e. form primary ridgelines). Gently undulating topography and shelter vegetation provided by conifer and woodland plantation can provide a shielding of built form. Views of the River Liffey Valley as well as of the Poulaphouca Reservoir are available from the hilltops and high points on some of the local roads.'

Relevant policy for the protection of high amenity areas includes:

LR P2 Protect High Amenity areas from inappropriate development and reinforce their character, distinctiveness and sense of place.

Section 13.4 Scenic Routes and Protected Views

The KCDP has designated a number of scenic routes, hilltop views and scenic viewpoints across the county which are highly valued. These are listed in the KCDP's Tables 13.5, 13.6 and 13.7 and the locations are mapped on Map V1 - 13.3 of the KCDP. The current KCDP has expanded on the previous KCDP views by labelling the hilltop views, as well as relabelling the previous scenic route no. 22 (from the 2017-2023 KCDP) to become scenic route Nos. 20 and 30, in the current KDCP. However, Scenic Route no. 12 remains the same in both the previous and current KDCPs.

The scenic routes and views considered relevant to the site due to their proximity or potential for some degree of visibility include (see Figure 11-6):

- *Scenic Route 12 - Views west of the Kildare Plains from the Redbog Area and views towards Caureen from Rathmore crossroads to Pipershall along the L6038 road.*
- *Hilltop View 08 – Caurcen Hill*

Section 13.5.1 'Views to and from Hills' states:

"As the landform of the county is generally flat, with very little variation in topography and predominantly low vegetation, extensive views can be obtained from hilltops, allowing vistas over long distances, and similarly from the lowland areas the eye is drawn to the primary and secondary ridgelines that define the skyline throughout the county. Ridgelines are conspicuous features of the natural landscape as they perform an important role as dominant landscape focal points. It is important that development does not interrupt the integrity of ridgelines. Development on steeply sloping land can be viewed over greater distances."

However, it is worth noting that the overwhelming majority of such Hilltop Views listed within the KCDP, are from within private and/or agricultural land, with no public accessibility. Therefore these views tend to solely represent landowners, or their employees, actively working the land. This is also the case for the aforementioned Hilltop View 08 – Caurcen Hill', which is located more than 1.5km northeast of this application site, whose major land use is intensive pastoral production. In addition, the primary views from Caurcen Hill are to the east/southeast, across the picturesque Blessington Lakes and towards the Wicklow Mountains, whereas the site is located more than 1.5km to the southwest of Caurcen Hill.

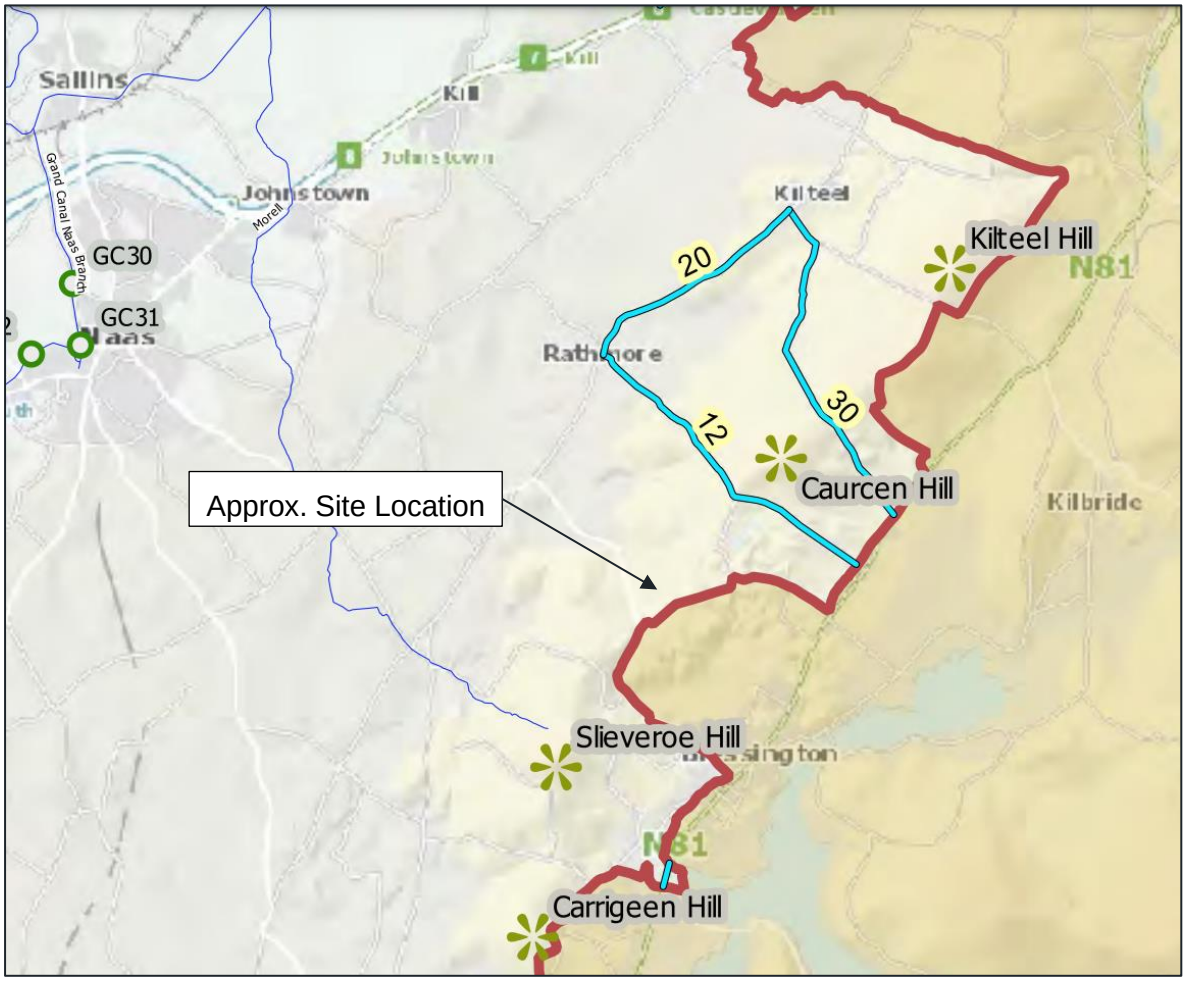


Figure 11-6: Extract of KCDP Scenic Route and Viewpoints Map V1 - 13.3

Section 12.6 - Designated Sites

The EU Birds Directive (Council Directive 79/409/ EEC) and the EU Habitats Directive (European Directive 92/43/EEC) provides for the establishment of the Natura 2000 network of sites of highest biodiversity importance for rare and threatened habitats and species across the EU. The Natura 2000 network of European sites comprises Special Areas of Conservation (SAC), and Special Protection Areas (SPA).

Under the Wildlife (Amendment) Act 2000, Natural Heritage Areas (NHAs) are designated to conserve species and habitats of national importance and sites of geological interest.

There are no Designated Sites within the Site. The Designated Sites within Kildare County Boundary that are closest to the Site are:

- Red Bog 000397 SAC
- Red Bog 000397 pNHA

These Designated Sites are located to the immediate northeast and east of the Site.

Relevant policy includes:

'BI P1 Integrate in the development management process the protection and enhancement of biodiversity and landscape features by applying the mitigation hierarchy to potential adverse impacts on important ecological features (whether designated or not), i.e. avoiding impacts where possible, minimising adverse impacts, and if significant effects are unavoidable by including mitigation and/or compensation measures, as appropriate. Opportunities for biodiversity net gain are encouraged.

BI P2 Seek to contribute to maintaining or restoring the conservation status of all sites designated for nature conservation or proposed for designation in accordance with European and national legislation and agreements. These include Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Natural Heritage Areas (NHAs), Ramsar Sites and Statutory Nature Reserves.

BI P3 Ensure that any proposal for development within or adjacent to a Natural Heritage Area (NHA), Ramsar Sites and Nature Reserves is designed and sited to minimise its impact on the biodiversity, ecological, geological and landscape value of the site, particularly plant and animal species listed under the Wildlife Acts and the Habitats and Birds Directive including their habitats.

BI P4 Ensure that any new development proposal does not have a significant adverse impact, incapable of satisfactory mitigation on plant, animal or bird species which are protected by law.'

Section 12.7 - Protected Habitats and species

'BI P4 Ensure that any new development proposal does not have a significant adverse impact, incapable of satisfactory mitigation on plant, animal or bird species which are protected by law.'

Section 12.9 - Trees, Woodlands and Hedgerows

'BI P6 Recognise the important contribution trees and hedgerows make to the county biodiversity resource climate mitigation, resilience and adaptation.

'BI P8 Ensure that Kildare's wetlands and watercourses are retained for their biodiversity, climate change mitigation properties and flood protection values and at a minimum to achieve and maintain at least good ecological status for all wetlands and watercourses in the county by, at the latest, 2027 in line with the Water Framework Directive and Ramsar Convention.'

Extractive Industries:

Chapter 9 of this KCDP outlines the council policies and objectives for the extraction industry and its restoration with regards to landscape include:

Relevant policy governing quarries and the extractive industries includes the following:

RD P8: Support and manage the appropriate future development of Kildare's natural aggregate resources in appropriate locations to ensure adequate supplies are available to meet the future needs of the county and the region in line with the principles of sustainable development and environmental management and tor require operators to appropriately manage extraction sites when extraction has ceased.

Relevant objectives covering quarries and the extractive industries include the following:

RD 042: Ensure that development for aggregate extraction, processing and associated concrete production does not significantly impact the following:

- Special Areas of Conservation (SACs)

- Special Protection Areas (SPAs)

- Natural Heritage Areas (NHAs)

- Other areas of importance for the conservation of flora and fauna.

- Zones of Archaeological Potential.

- The vicinity of a recorded monument.

- Sensitive landscape areas as identified in Chapter 13 of this Plan.

- Scenic views and prospects.

- Protected Structures.

- Established rights of way and walking routes.

- Potential World Heritage Sites in Kildare on the UNESCO Tentative List, Ireland.

RD O44:

A detailed landscaping plan to be submitted indicating proposed screening for the operational life of the site. The predominant use of native plant species in the proposed landscaping plan will be expected.

Detailed landscaping and quarry restoration plans. Habitats and species surveying shall be carried out and shall influence the restoration plan for the site.

Comprehensive Site Restoration Plan and/or After-Use Strategy should have regard to the principles of 'Rehabilitation Ecology' as follows:

RD O50:

Ensure the satisfactory and sensitive re-instatement and/or re-use of disused quarries and extraction facilities, where active extraction use has ceased. Future uses should include amenity, recreation and biodiversity areas shall be informed by an assessment of the specific site/lands and shall be subject to an ecological impact assessment or other environmental assessments as appropriate. Where it is proposed to reclaim, regenerate, or rehabilitate old quarries by filling or re-grading with inert soil or

similar material, or to use worked-out quarries as disposal locations for inert materials, the acceptability of the proposal shall be evaluated against the criteria set out in Section 15.9.6 of this Plan. The Council will resist development that would significantly or unnecessarily alter the natural landscape and topography, including land infilling/ reclamation projects or projects involving significant landscape remodelling, unless it can be demonstrated that the development would enhance the landscape and / or not give rise to adverse impacts.

RD O51: Require that quarry remediation plans provide for environmental benefit, biodiversity and re-wilding in all instances. The 80% requirement for environmental/biodiversity may be waived at sites closer to urban areas where a significant portion of the site is being provided for sports, recreation, and amenity.

11.2.2.2 Adopted Wicklow County Development Plan 2022-2028

The adopted Wicklow CDP has been considered within this section in relation to any protected views or scenic routes that may be of relevance to the site and/or development. Out of the 48 designated "Views of Special Amenity value or Special Interest" listed in Chapter 17 of the CDP, only two of these fall within the study area (i.e. View 33 and View 34). However, neither of these are orientated in the general direction of the Site, and therefore can be discounted from further consideration.

In addition to the above designated views, there are 66 designated "Prospects of Special Amenity value or Special Interest" listed in Chapter 17 of the Wicklow CDP, which take the form of routes along some of the county roads. Of these routes, only Prospect 20 and Prospect 21 (Figure 11-6 below) fall within the study area. However, the eastern oriented views are facing away from the Site, and therefore require no further assessment. Potential for views from Prospect 20: "R758, L8369, L4364 & L4365, Lake Drive from the N81 at Glashina to Oldcourt." is noted as "Prospect of Poulaphouca" as it runs on the eastern side of the lake. However, the Site is located more than 2 km from the Poulaphouca Reservoir and therefore does not merit further assessment



Figure 11-7: Extract of WCDP 2022-2028 Map 17.11 of those prospects within the study area -

Policy:

CPO 17.38: *To protect listed views and prospects from development that would either obstruct the view / prospect from the identified vantage point or form an obtrusive or incongruous feature in that view / prospect. Due regard will be paid in assessing development applications to the span and scope of the view / prospect and the location of the development within that view / prospect.*

The nearest county landscape designations within the study area are two Areas of Outstanding Natural Beauty (AONB), which include the Mountain Uplands AONB and Poulaphouca Reservoir AONB. Both of these are more than 2 km from the Site, with potential visibility from both considered within the Visual Impact Assessment of this report.

11.2.3 RELEVANT GUIDANCE

The Guidelines for Landscape and Visual Impact Assessment 2013 (abbreviated to GLVIA 2013) notes that as a cultural resource, the landscape functions as the setting for our day-to-day lives, also providing opportunities for recreational and aesthetic enjoyment and inspiration. It contributes to the sense of place experienced by individuals and communities and provides a link to the past as a record

of historic socio-economic and environmental conditions. As an environmental resource, the landscape provides habitat for fauna and flora. It receives, stores, conveys, and cleans water, and vegetation in the landscape stores carbon and produces oxygen. As an economic resource, the landscape provides the raw materials and space for the production of food, materials (e.g. timber, aggregates) and energy (e.g. carbon-based fuels, wind, solar), living space and for recreation and tourism activities.

The GLVIA (2013) notes that landscape is not unchanging. Many different pressures have progressively altered familiar landscapes over time and will continue to do so in the future, creating new landscapes. For example, within the receiving environment, the environs of the proposed development have altered over the last thousand years, from wilderness to agriculture and settlement or townscape.

Many of the drivers for change arise from the requirement for development to meet the needs of a growing population and economy. The concept of sustainable development recognises that change must and will occur to meet the needs of the present, but that it should not compromise the ability of future generations to meet their needs. This involves finding an appropriate balance between economic, social and environmental forces and values.

The reversibility of change is also described as an important consideration. If change must occur to meet a current need, can it be reversed to return the resource (in this case, the landscape) to its previous state to allow for development or management for future needs.

Climate change is one of the major factors likely to bring about future change in the landscape, and it is accepted to be the most serious long-term threat to the natural environment, as well as economic activity (particularly primary production) and society. The need for climate change mitigation and adaptation, which includes the management of water and more extreme weather and rainfall patterns, is part of this.

11.2.3.1 Key Guidance Documents

LVIA is a tool used to identify and assess the significance of and the effects of change resulting from a proposed development on both the landscape as an environmental resource in its own right and on people's views and visual amenity.

The methodology for assessment of the landscape and visual effects is informed by the following key guidance documents, namely:

- *Guidelines for Landscape and Visual Impact Assessment*, 3rd Edition Landscape Institute and the Institute of Environmental Management and Assessment (2013) (hereafter referred to as the GLVIA 2013).
- *Guidelines on the Information to be Contained in Environmental Impact Statements*. (EPA, 2022)

This guidance is authored by the Landscape Institute in the UK and the IEMA, which contains a network of members in UK and Ireland and internationally. The guidance was prepared within the parameters of relevant EU directives at the time and is updated, where necessary, by Landscape Institute bulletins online. The GLIVA 2013 is used internationally and is the industry standard for LVIA in Ireland.

The EPA guidance (2022) refers to the use of topic specific guidance and specifically references the GLVIA 2013 in relation to professional judgement. It recognises (at para 3.72) that:

"Some uncertainty is unavoidable in EIA, especially about matters that involve an element of judgement, such as assigning a level of significance to an effect. Such judgements should be explicit and substantiated rather than presented as objective fact. This is best done using agreed referable approaches, e.g. the Guidelines on Landscape and Visual Impacts Assessment provide guidance on what constitutes a severe visual effect".

References are also made to the *'Landscape and Landscape Assessment – Consultation Draft of Guidelines for Planning Authorities*' document, published in 2000 by the Department of Environment, Heritage and Local Government.

11.3 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

The GLVIA 2013 outlines the assessment process, which combines judgements on the sensitivity of the resource, and the magnitude of the change as a result of the proposed development. These are then combined to reach an assessment of the significance of the effect.

Another key distinction to make is that in the GLVIA methodology, a distinction is made between landscape effects and the visual effects of a proposed development.

'Landscape' results from the interplay between the physical, natural and cultural components of our surroundings. Different combinations of these elements and their spatial distribution create distinctive character of landscape in different places. 'Landscape character assessment' is the method used in LVIA to describe landscape, and by which to understand the potential effects of a development on the landscape as 'a resource'. Character is not just about the physical elements and features that make up a landscape, but also embraces the aesthetic, perceptual and experiential aspects of landscape that make a place distinctive.

Views and 'visual amenity' refer to the interrelationship between people and the landscape. The GLVIA 2013 prescribes that effects on views and visual amenity should be assessed separately from landscape, although the two topics are inherently linked. Visual assessment is concerned with changes that arise in the composition of available views, the response of people to these changes and the overall effects on the area's visual amenity.

11.3.1 ESTABLISHMENT OF THE BASELINE

The process set out in the GLVIA 2013 and in the EPA (2022) involves the preparation of the baseline or receiving environment characteristics. This includes two stages, which are a desk-based study and site visit/field study. These allow the assessor to establish the existing receiving environment and key landscape and visual characteristics and their sensitivities.

<u>The desk-based study includes:</u>

- Review of preliminary proposals and identification of preliminary study area
- Review of the history of the site including past activity and planning applications
- Review of the current and recent expired Development Plan(s) within the study area, and any other plans as appropriate, to identify relevant national and local designations and polices.
- This may include designations such as scenic routes, protected views and other landscape designations including any Landscape Character Assessments International designations such as UNESCO designations would also be relevant here, if present.
- Other information that may be consulted include aerial imagery, OSI Discovery series mapping, historic (6-inch and 25 inch) mapping and CORINE Landcover Maps (2018).

A site visit was then carried out to review and/or confirm the findings of the desk-based study and provide a more detailed description of the landscape and visual character of the study area. Based on both the desk study and site visit, the assessor identifies landscape and visual receptors and their relative sensitivity. The site visit was carried out in November 2023.

11.3.2 ASSESSMENT OF EFFECTS:

Once the baseline is established, and the proposed development drawings and descriptions reviewed, the assessment process is commenced, the methodology for which is outlined in Section 11.3.3 - 11.3.4.

Use of 'Impact and 'Effect

Section 1.16 of the GLVIA (referring to the EIA Directive), advises that the terms 'impact' and 'effect' should be clearly distinguished and consistently used in the preparation of an LVIA.

'Impact' is defined as the action being taken. In the case of the proposed development, the impact would include the extraction of aggregates and the associated activities related to the onsite processing of this extracted material.

'Effect' is defined as the change or changes resulting from those actions, e.g. a change in landscape character, or changes to the composition, character and quality of views in the receiving environment. This report focusses on these effects.

11.3.3 METHODOLOGY FOR LANDSCAPE ASSESSMENT

When assessing the landscape, the nature and scale of changes to the landscape elements and characteristics are identified, and the consequential effect on landscape character and value are discussed. Trends of change in the landscape are taken into account. The assessment of the significance of the effects takes account of the sensitivity of the landscape resource and the magnitude of change to the landscape, which resulted from the proposed development.

Definitions and descriptions of sensitivity, magnitude of change and quality and longevity of effects are derived from the GLVIA 2013. The GLVIA 2013 does not set out specific definitions of descriptions used but contains widely used principles and case studies / examples that are intended to inform a professional's methodology, supported by their experience and judgements in relation to landscape and landscape change. These descriptions expand and complement the EPA guidelines as intended, in relation to topic-specific guidance.

Sensitivity of the Landscape Resource

Sensitivity is a combination of Landscape Value and Landscape Sensitivity:

- Landscape values can be identified by the presence of landscape designations or policies, which indicate particular values, either on a national or local level. In addition, a number of criteria are used to assess the value of a landscape.

- Landscape susceptibility is defined in the GLVIA as, "*the ability of the landscape receptor to accommodate the proposed development without undue consequences for the maintenance of the baseline scenario and/or the achievement of landscape planning policies and strategies.*" Susceptibility is a function of its land use, landscape patterns and scale, visual enclosure and distribution of visual receptors, scope for mitigation, and the value placed on the landscape.

Susceptibility also relates to the type of development – a landscape may be highly susceptible to certain types of development but have a low susceptibility to other types of development.

It includes consideration of landscape values as well as the susceptibility of the landscape to change.

With regard to landscape effects, a proposed development has the potential to improve the environment as well as damage it. In certain situations, there might be policy encouraging a type of change in the landscape, and a particular development may achieve this. Landscape Sensitivity ranges from Low to Very High as outlined in Table 11-1**.**

Table 11-1 – Categories of Landscape Sensitivity

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

Magnitude of Landscape Change

The magnitude of change is a factor of the scale, extent and degree of change imposed on the landscape with reference to its key elements, features and characteristics (also known as 'landscape receptors'). Five categories are used to classify magnitude of landscape change.

For the purpose of assessment, five categories are used to classify the landscape sensitivity of the receiving environment, from Very High sensitivity to Negligible. These categories are defined in Table 11-2, below.

Table 11-2 – Magnitude of Landscape Change

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

11.3.4 METHODOLOGY FOR VISUAL ASSESSMENT

In Section 11.6.2 *Visual Effects* of this report, the visual effects of the proposed development are assessed. Visual assessment considers the sensitivity of the viewers (i.e., groups of people) and the magnitude of the changes to the composition and character of views. The assessment is made for a number of viewpoints selected to represent the range of visual receptors in the receiving environment. The significance of the visual effects experienced at these locations is assessed by measuring the visual receptor sensitivity against the magnitude of change to the view resulting from the development.

Sensitivity of the Visual Receptor

Visual receptor sensitivity is a function of two main considerations:

- Susceptibility of the visual receptor to change. This depends on the occupation or activity of the people experiencing the view, and the extent to which their attention or interest is focussed on the views or visual amenity they experience at that location.

Visual receptors most susceptible to change include residents at home, people engaged in outdoor recreation focused on the landscape (e.g. Trail users), and visitors to heritage or other attractions and places of community congregation where the setting contributes to the experience.

Visual receptors less susceptible to change include travellers on road, rail and other transport routes (unless on recognised scenic routes which would be more susceptible), people engaged in outdoor recreation or sports where the surrounding landscape does not influence the experience, and people in their place of work or shopping where the setting does not influence their experience.

- Value attached to the view. This depends to a large extent on the subjective opinion of the visual receptor but also on factors such as policy and designations (e.g. scenic routes, protected views), or the view or setting being associated with a heritage asset, visitor attraction or having some other cultural status (e.g. by appearing in arts).

For the purpose of assessment, five categories are used to classify visual receptor sensitivity. These categories range from Very High to Negligible and are described in Table 11-3.

Table 11-3 – Categories of Visual Receptor Sensitivity

Sensitivity	Description
Very High	Viewers at iconic viewpoints - towards or from a landscape feature or area - that are recognised in policy or otherwise regarded as being of very high value or national value. This may also include residential viewers whose primary view is of very high value.
High	Viewers at viewpoints that are recognised in policy or otherwise designated as being of high value, or viewpoints that are highly valued by people that experience them regularly (such as views from houses or outdoor recreation features) and are valued by the local community. This would include tourist attractions, and heritage features of regional or county value, and viewers travelling on scenic routes.
Medium	Viewers at viewpoints representing people travelling at slow or moderate speed through or past the affected landscape in cars or on public transport, where they are partly but not entirely focused on the landscape, or where the landscape has some valued views. The views are generally not designated, but which include panoramic views or views judged to be of some scenic quality, which demonstrate some sense of naturalness, tranquillity, or some rare element in the view.
Low	Viewers at viewpoints reflecting people involved in activities not focused on the landscape e.g. people at their place of work or engaged in similar activities such as shopping, etc. The view may present an attractive backdrop to these activities but there is no evidence that the view is valued, or that it is regarded as an important element of these activities.

	Viewers travelling at high speeds (e.g. motorways) may also be considered of low susceptibility.
Negligible	Viewpoints reflecting people involved in activities not focused on the landscape e.g. people at their place of work or engaged in similar activities, such as shopping, where the view has no relevance or is of poor quality and not valued.

Magnitude of Change to the view

Classification of the magnitude of change takes into account the size or scale of the intrusion of the proposed development into the view, relative to the other elements and features in the composition (i.e. its relative visual dominance), the degree to which it contrasts or integrates with the other elements and the general character of the view, and the way in which the change will be experienced (e.g. in full view, partial or peripheral, or glimpses). It also takes into account the geographical extent of the change, the duration and the reversibility of the visual effects.

Five categories are used to classify magnitude of change to a view. These range from Very High to Negligible and are defined in Table 11-4.

Table 11-4 – Magnitude of Visual Change

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

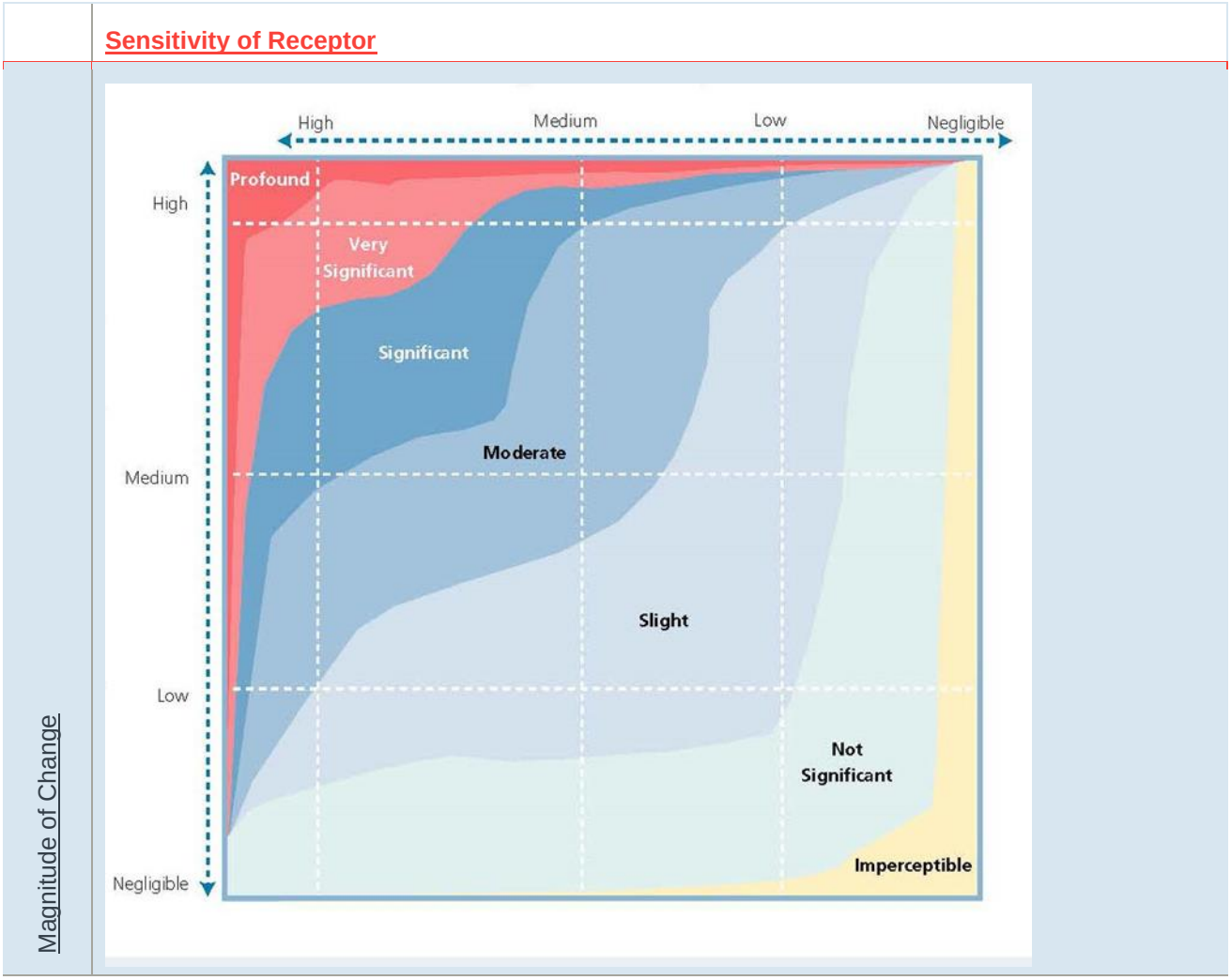
Significance of Effects

In order to classify the significance of landscape and visual effects, the predicted magnitude of change is measured against the sensitivity of the landscape/viewpoint. The definitions used by the EPA (2022) provide a useful scale to describe the significance of the effects.

There are seven classifications of significance, namely: (1) imperceptible, (2) not significant, (3) slight, (4) moderate, (5) significant, (6) very significant, (7) profound.

The relationship between the magnitude of change and sensitivity of the receptor with the varying classifications of Significance is illustrated on the below extract from the EPA (2022) Guidelines (with labels amended and simplified based on GLVIA (2013 guidance):

Table 11-5 – Significance of Effect (Source: EPA 2022)



Note: This graphic is a guideline only, and an element of professional judgment is also applied. The assessor also uses professional judgement informed by their expertise, experience and common sense, to arrive at a classification of significance that is reasonable and justifiable.

The GLVIA 3rd Edition recognises (at para 2.23) that:

"*professional judgement is a very important part of LVIA. While there is scope for quantitative measurement of some relatively objective matters, much of the assessment must rely on qualitative judgements.*"

Quality and Timescale

In accordance with the EPA (2022), the predicted impacts are also classified as beneficial, neutral, or adverse.

This is not an absolute exercise; in particular, visual receptors' attitudes to development, and thus their response to the impact of a proposed development, will vary. However, the methodology applied is designed to provide robust justification for the conclusions drawn. These qualitative definitions are included in Table 11-6, below. Impacts/effects are also categorised according to their longevity or timescale as in Table 11-7 further below.:

Table 11-6 – Quality of Effect (Source CSR based on GLVIA 2013)

Definition of quality of effects	
Adverse/negative	Scheme at variance with landform, scale, pattern. Would degrade, diminish or destroy the integrity of valued features, elements or their setting or cause the quality of the landscape (townscape) view to be diminished;
Neutral	Scheme complements (or does not detract from) the scale, landform and pattern of the landscape (townscape)/view and maintains landscape quality;
Beneficial /positive	Improves landscape (townscape)/view quality and character, fits with the scale, landform and pattern and enables the restoration of valued characteristic features or repairs / removes damage caused by existing land uses.

Table 11-7 – Duration of Effect (Source: EPA 2022)

Definition of duration of effects	
Duration	Description
Temporary	Effects lasting one year or less
Short Term	Effects lasting one to seven years
Medium Term	Effects lasting seven to fifteen years
Long Term	Effects lasting fifteen to sixty years
Permanent	Effects lasting over sixty years

11.4 BASELINE

11.4.1 LANDSCAPE CHARACTER

Landscape character is described in terms of landform (topography and drainage), landcover (vegetation, built form, natural and cultural heritage) and Transport & Settlement Pattern. The Site (i.e. the EIAR project boundary) and immediate surrounds are described separately from the wider landscape.

11.4.1.1 Landform - Topography and drainage

Site and immediate vicinity

The existing landform within the quarry consists of a large ridgeline near the southern site boundary, which sharply drops down to the quarry floor. This area is divided up by elevated internal roadways with the lower heavily worked lands on either side of the road. There are some small ridges within this space and platforms cut into their steep slopes to allow working out of these outcrops (Figure 11-8, below). Three small water bodies have formed where the area of extraction has fallen below the existing ground water table level.

The quarry's terrain varies from a high point of approximately 270 mAOD by the rock face marking its southern boundary to the lowest point of approximately 188 mAOD, found on the quarry floor. A small waterbody sits within this area of farmland directly north of the quarry's boundary edge (Figure 11-9, below).



Figure 11-8: Internal views of the quarry's worked out land (a) looking southwest towards the southern boundary by thewoodlands at Deerpark and (b) looking west towards the homes and farmsteads off the R410 road



Figure 11-9: View of small waterbody within the site located just north of the existing quarry limits.

Wider Area

The landform found throughout the study area is distinguished by two distinctive characters, which result in the 'sense of place' being considerably different as one moves from west to east, and north to south. This is largely due to the distinct hill range running northeast-southwest through the study area, rising from 281 mAOD in the southwest at Carrigeen, to 379 mAOD at Cupidstown, in the northeast, which principally separates County Wicklow (i.e. east of the range) from County Kildare (i.e. west of the range). West of the range, land undulates between 100 mAOD and 200 mAOD, and is relatively mild in terrain, punctuated by a handful of small streams. East of the range, in County Wicklow, landform is more dramatic, varied and picturesque. The lower slopes of the Wicklow Mountains lie in the south and southeast of the study area (Figure 11-10), with the "Blessington Lakes" (i.e. Poulaphouca Reservoir) occupying the large basin in between the mountains and the aforementioned hill range (Figure 11-11). The River Liffey feeds into the reservoir in the far east of the study area.



Figure 11-10: The Wicklow Mountains, as seen in the distance, are in the south and southeast of the study area



Figure 11-11: Poulaphouca Reservoir with the aforementioned hill range in the distance, which runs northeast- southwest through the study area

11.4.1.2 Landcover – Built Form, Vegetation and Cultural Heritage

Land use

Site and immediate vicinity

The land use within the Site consists of the operating quarry and adjoining pasture. Farmland within the Site contains approximately eight small to medium scale fields bounded by hedgerows of mature individual hawthorns, among other low-tree species (Figures 11-14 & 11-15). The Site is also bounded

on its south by the northeastern edges by farmland (identified in the background of Figure 11-12), and that of Deerpark, a public, mixed deciduous and conifer woodland. Contained with the worked lands of the quarry are supporting ancillary structures, including offices, welfare facilities, processing plant machinery and temporary stockpiles, the plant machinery workshop and parking (Figure 11-13).



Figure 11-12: Current extraction activity occurring at the northwest end of the existing quarry

In terms of protected recorded protected structures (RPS), national recorded monuments and places (RMP) or non-protected National Inventory of Architectural Interests (NIAI) buildings and structures, there are none such within the site, nor any other cultural heritage assets found within the Site limits or its immediate surroundings.



Figure 11-13: Current temporary stockpiling off of the extracted material next to the processing plant in southeastern end of the quarry



Figure 11-14: The existing field hedgerows, as viewed from the northern edges of the existing quarry limits.



Figure 11-15: Pastoral fields partially visible to the west of the existing pit outline, where the proposed development is proposed to marginally extend into – viewed from the northeastern site boundary, looking across existing quarry pit.

Wider Area

The immediate lands next to the Site include other existing operational quarries to the south and east, which align the Kildare and Wicklow County border. The nearest of these is Hudson Wicklow quarry, from which the Site is accessed, which is also located off the N81. This collection of quarries, including the Site, extends across an area of land covering approx. 2 km (northwest-southeast) by approx. 1.4 km (northeast-southwest), in places. The elevated and/or hilltop location of these quarries results in them being visible from several local receptors (Figure 11-16). Another nearby former quarry is located on the opposite/easter side of the N81, within the northern end of Blessington town. Other quarries within the wider extent of the study area include approx. 2.3km east of the Site at Hempstown Commons and approx. 3.6 km west of the Site at Walshestown.



Figure 11-16: Overview of hill range (in distance) along which opencast quarries are evident for over 2 km.

Other land uses across the County Kildare and Wicklow sections of the study area are overwhelmingly pastoral in nature, with medium-large sized fields with mature field boundaries (Figure 11-17). Some small conifer plantations and deciduous woods are scattered through this farmland. The largest mixed woods are found next to the Site at Deerpark and along the southwestern end of the study area by the Poulaphouca Reservoir. The various small settlements/villages and town of Blessington found within the study area are mostly of residential use, although there are also some retail/commercial/educational uses, along with the above-mentioned quarries within the town limits. The large Poulaphouca reservoir on the edge of Blessington serves as a rich natural habitat designated as a SPA and pNHA and provides various recreational activities and a public water resource.

There are various cultural heritage assets found across the wider study area reflecting its rich historic past. Many of those assets found across the rural lands are RMPs (Record of Monuments and Places), which consist of the likes of enclosures or burials, and are typically located on higher lands. RPS built structures are also found within the centre of the settlements of Blessington, Easdestown and Rathmore and include the likes of churches, houses and other public buildings. However, some other non-protected historic buildings within these settlements are listed within the NIAI.



Figure 11-17: View towards the site, from lower slopes of the Wicklow Mountains, in the south and southeast of the study area.

11.4.1.3 Transport and settlement pattern

The regional R410 road is located within 400m to the west of the Site and the N81 National Road is located approximately1.5km to the southeast. This national secondary road connecting Tullow, Co. Carlow, with the M50, is the primary transport corridor within the study area and runs through the centre of Blessington town. There are some regional roads leading off the N81, but most roads within the study area are local/minor roads serving the rural hinterland. The Site is located directly north of the town boundary of Blessington. This northern end of the town boundary includes the adjoining quarries and woodlands, with the town centre of Blessington located approximately 2.14 km northwest of the Site's southern boundary edge.

Wider Area

The nearest settlements to the Site within County Kildare include the small villages of Eadestown (approx. 2 km northwest of the Site) and Rathmore (approximately 2.7 km north of the Site). Across the various regional and local networks are individual and clusters of rural dwellings, of which there are 25 rural 'one off' dwellings found within 500m west, northwest, north and northeast of the Site. The relatively high density of these settlements and clustering of rural residences is reflective of the area's popularity due to its well-renowned natural beauty and proximity to the city of Dublin.

11.4.2 LANDSCAPE VALUE

The landscape values of a site can be identified through formal designations which infer landscape value, as well as values which are not enshrined in policy but are evident on the site. These values are listed below and can be further categorised in two ways: values which should be conserved, and values that provide opportunity for enhancement. However, in addition to formal designations at international, national and local level, the GLVIA 2013 recommend the use of a number of criteria which can help to describe landscape values. These include:

Landscape Quality/Condition

- Heritage/Conservation interests
- Scenic Quality
- Rarity
- Perceptual aspects
- Recreation Value

Conservation values

The conservation values indicate those aspects of the receiving environment which are sensitive and could be negatively impacted on by the development. These values form the potential landscape and visual constraints to the proposed development. These include:

- Rural characteristics of the section of fields that make up part of the Site.
- Conserving trees/treelines and hedgerows across field boundaries of the site and the adjoining woodland.
- The small water bodies and tree/bush lined ridgelines.
- Scenic or picturesque views experienced from the surrounding area which include some designated views and include views towards the Wicklow Hills and Poulaphouca Reservoir.

Enhancement Values

The enhancement values reflect change that is occurring in the landscape and its inherent robustness and identify elements which could be enhanced. These could relate to achieving socio-economic benefits. These include:

- Area of intensive quarrying active within part of the Site and surrounding lands.
- Weak field hedgerows boundaries and large parts of land of low ecological value.
- Proximity to settlement of Blessington and future pressure for its continued growth.

11.5 SELECTION OF SENSITIVE RECEPTORS

11.5.1 VISUAL RECEPTORS

Visual receptors, as outlined in the visual methodology section, can range from High to Negligible sensitivity. More sensitive visual receptors include those involved in recreation, or at amenity areas where there is a focus on a scenic landscape, or residents with views of scenic quality. Less sensitive receptors would include those driving at higher speeds or those engaged in activities where there is not a focus on the landscape and where the views are not considered of high quality.

A total of 13 no. viewpoints have been selected for assessment in this LVIA, which considered a range of views, including those from nearby residential properties, elevated sections of road and designated county Kildare/Wicklow scenic routes and views within the study area.

Viewpoints

The 13 No. selected viewpoints are listed in Table 11-8 and mapped in Figure 11-18 below. The potential visual impact of the proposed development upon these receptors are assessed in the visual assessment section.

Table 11-8 – Viewpoint Locations

Viewpoint Number	Viewpoint Description	Distance and Direction from site boundary
1	Elevated local road at Kilbride townland	4.07 km E
2	Designated Wicklow County “Prospect” overlooking Poulaphouca Reservoir	4.19 km SE
3	Designated Wicklow County “Prospect” at Baltyboys along the R758	4.35 km S
4	Ring road along northern periphery of Blessington Town	1.67 km S
5	Elevated third class road southwest of site, at Newtownpark townland	1.18 km SW
6	R410 west of site, at Athgarrett townland	270 m NW
7	R410 northwest of site near Carter’s Hill	1.19 km NW
8	Third class road at Baysland townland	3.75 km NW
9	County Kildare scenic route, near Kilteel village	3.74 km NE
10	Dead-end third class road east/north-east of site	60 m E
11	County Kildare scenic route, at Greenmount townland	700 m NE
12	Residences along the R410, southwest of site	280 m SE
13	Residences along short cul de sac at Wolfestone townland	5 m W

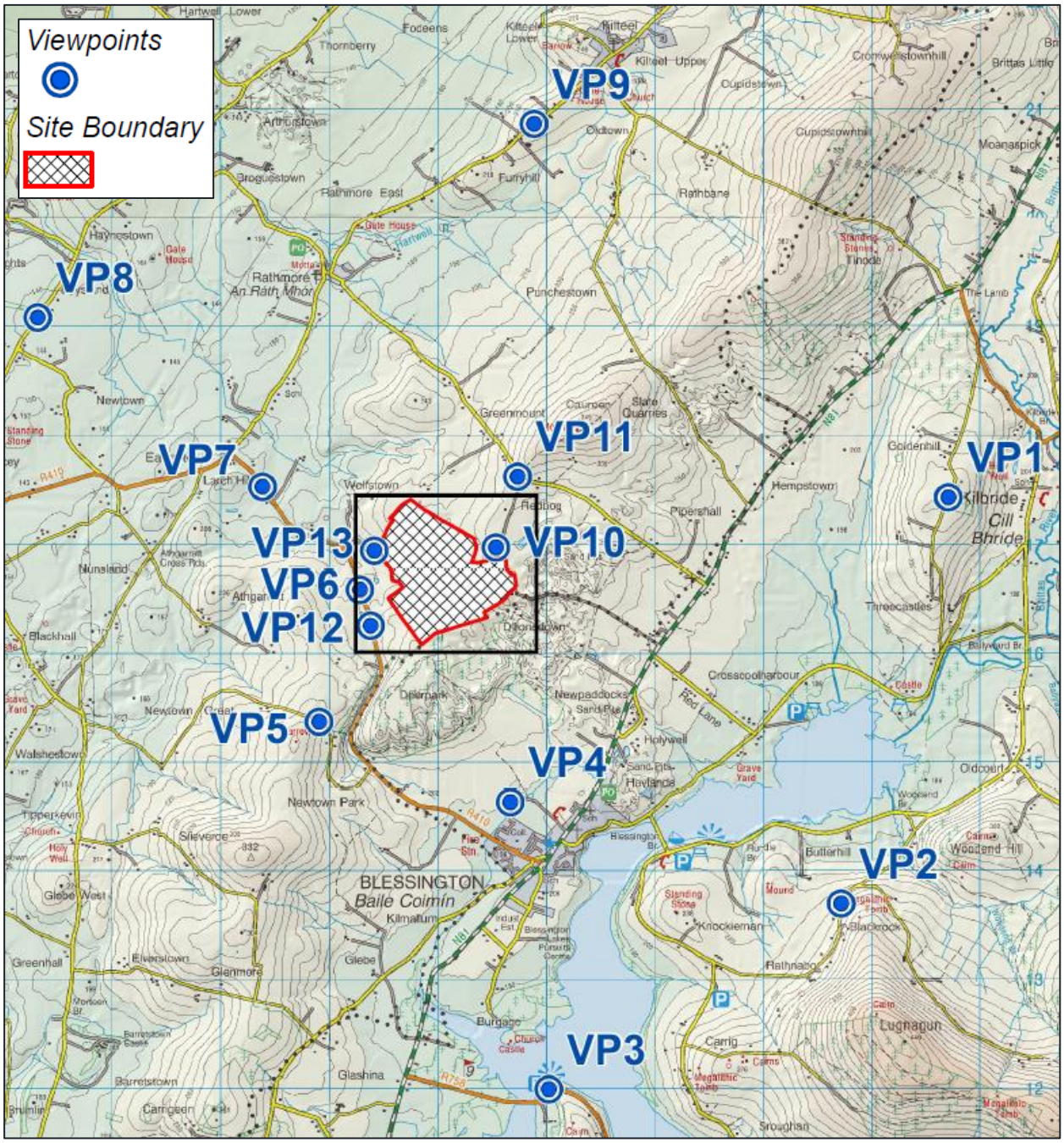


Figure 11-18: Viewpoint Location Map (Source: Macro Works Ltd)

11.6 POTENTIAL EFFECTS

11.6.1 LANDSCAPE EFFECTS

11.6.1.1 Landscape Sensitivity

Application Site and Immediate Vicinity

The site of the development consists of an active quarry with some pastoral fields to the north, with the pastureland in the southwest being located on or close to a ridgeline. It is worth noting that the site

is within 300 m of a ridgeline, mixed forestry and “agricultural land with natural vegetation.” Thus, the compatibility of sand and gravel extraction is “very unlikely to be compatible” (i.e. ‘0’ rating) if located within 300 m of a ridgeline; “compatible only in certain circumstances” (i.e. ‘2’ rating) if located within 300 m of mixed forestry and is “likely to be compatible with great care” (i.e. ‘3’ rating) if located within 300 m of “agricultural land with natural vegetation.”

The Site’s existing quarry and the neighbouring operational quarries within county Kildare and Wicklow are of ‘Low sensitivity.’ The surrounding pastureland and field boundaries within the site and the surrounding rural landscape is of a ‘Medium sensitivity.’

Thus, overall, the landscape of the site and immediate vicinity is deemed to be of ‘**Medium-low.**’

Wider Study Area

The areas of higher sloping lands and hills of the Eastern Uplands LCA, which are designated by KCC as a High Amenity Area, are noted as having a ‘High sensitivity.’ This is defined by the council in the KCDP as:

“Areas with reduced capacity to accommodate uses without significant adverse effects on the appearance or character of the landscape having regard to prevalent sensitivity factors.”

This ‘High Sensitivity’ is due, in part, to the profiles of these hillsides being viewed alongside the Wicklow Hills against the skyline from the lowland plains that cover much of the county and provided elevated views of the county, as well as towards the Wicklow hills and Poulaphouca Reservoir. The Landscape character assessment also considered the compatibility of the Eastern Uplands as having ‘medium compatibility’ for sand and gravel extraction.

Thus, the wider landscape is deemed to be of a ‘**High**’ sensitivity.

11.6.1.2 Magnitude of Landscape Effects

Summary of Operational Stage Effects on the Physical Landscape of the Site

From an LVIA perspective, the leading objectives of the proposed development have been addressed above, in Section 11.1.2 and is set out in considerably more depth in Chapter 2 Project Description. It should be noted that it is proposed to extend the existing quarry void in a phased manor. In order to better address and assess the effects on the physical landscape of the Site, the four phases of the proposed works require examination.

Phase 1:

It is proposed to maintain the existing fence along the length of the Site boundary and to maintain native hedgerows that align this fence. In addition, new areas for extraction will be securely fenced around the perimeter and planted with native hedgerow species to provide screening.

A buffer area will be developed around the existing pond/surface water body located to the north of the main extraction area and east of the northern lateral extension. The area surrounding this waterbody will be planted and will extend 3-5 m surrounding the waterbody. The buffer will be composed of a wet woodland mix of willow and alder and the remainder of the buffer areas will be allowed to naturally colonise with aquatic and marginal plants. Topsoil and overburden stripped from the proposed extraction areas (Areas A, B, C, D & E) will be removed and used to construct new existing safety/screening berms in appropriate locations to screen active working areas. A new 6 m

safety/screening berm in the northeast of the lateral northern extension will be constructed to establish visual, safety and acoustic screening.

The security fence around the perimeter of the Site (i.e. planning boundary) will be maintained, with a perimeter access track around the inside of the security fence and outside the screening berm.

Phase 2:

During this phase of the development, it is proposed to continue to develop the quarry in Areas B, C and D to allow for blending of this valuable resource, with topsoil and overburden being striped ahead of the advancing faces. This phase will include a:

- 3D topographical survey and planning boundary of the site.
- 3m wide access track between planning boundary and outside edge of screening berm.
- 2m high screening berm with 1 in 1.5 slopes on either side.
- 1 in 2 excavation slope from edge of inside access track surface to base of overburden.
- 1 in 1.5 excavation slope from base of overburden to base of sand and gravel.
- 3m stand-off on rock-head (i.e. between base of sand and gravel slope and top of rock 'cut').
- 7.5m wide benches with edge protection.
- 70º slope from top of rock-head to bottom of quarry face (depending on ground conditions).
- Maximum 20m high benches where design and ground conditions allow.
- Safety berms/edge protection should be >1.5m or higher than the radius of the largest wheel/tyre.

Safety/screening berms will be constructed outside the appropriate exclusion zones. Boundary hedgerows will be developed and left intact for the life of the quarry (and in perpetuity to continue to provide biodiversity to the Site and the local environment). Berms and planting in this area will serve to mitigate against noise and potential dust emissions from the Site, as well as offer reduced visibility of the Site from surrounding lands.

Phase 3

It is proposed that during this Phase of the development that ongoing production from Area B will take place for rock, and from Areas C, and Area E for sand and gravel. Extraction of rock will continue in Area B in a westerly direction to the Site boundary, with extraction of sand and gravel continuing in Areas C but ceasing in Area D. Stripping of topsoil and overburden will continue in Area E, with stripped materials used in the construction of screening berms. Surplus stripped materials from Area E will be stored in temporary stockpiles for use in the restoration on cessation of quarrying. During this Phase of the operation, Area D will undergo restoration.

Having a number of different operating faces will allow for blending of materials of variable quality from different parts of the Site and help to ensure efficient use of this valuable resource. However, as noted previously, not all faces identified will be operational at any one time. During this phase of the operation, the quarry faces will be pushed back to their extraction limits

Phase 4 - Restoration

Following cessation of extraction, the Site will be restored to a mixture of grassland, hedgerows, woodland and two waterbodies. The Site restoration will be carried out in line with the Site Restoration Plan (submitted with this Application).

It is expected that the final restoration will be completed in 2 to 3 years following the cessation of extraction activities. An additional waterbody will be located in the northern section of the main pit, following cessation of quarrying, which will also add to the biodiversity of the area. Water is trapped by clay/silt layers in the sand and gravel deposit in this region. Similar features exist throughout the landscape to the west and north of the Site and also the Red Bog SAC. It is anticipated that this waterbody and the waterbody identified in Phase 1 will be of similar composition and complement each other in the restored landscape with both enhanced with planting up of native marginal and wet woodland species offset from their water edges

In addition, the Site will undergo planting of grassland, native tree and shrub species. Indigenous plant species will be encouraged to re-colonize worked out areas (benches) to develop unique habitats and provide for increased biodiversity in the area. A native wildflower and grassland mix will be planted on finished sand and gravel faces (not steeper than 1(V): 2.5(H)). All seed mixes will be agreed with the local authority in advance. Inter-mixed with the planting of native trees and scrubs, restoration surfaces will be seeded with native grasses and wildflowers to provide increased biodiversity. Areas for grassland restoration will be dressed with ca. 0.3 m of topsoil and re-seeded with a grass seed mixture, similar to that used on adjoining lands. The Site's northern end will consist of reinstated agricultural lands and its southern half of native grassland meadow.

Vertical faces which remain along the southern and western part of the Site will be maintained and enhanced to promote biodiversity. Upon decommissioning of the Site, it is the Applicant's intention to reinstate the majority of the site back to agricultural use, with a waterbody in the mid-western part of the Site. All plant, equipment and temporary structures shall be decommissioned and removed from the Site.

Assessment of Magnitude of Operational Landscape Effects

In terms of physical effects on the Site, the proposed development will result in a distinct and permanent alteration to the topography, drainage and landcover of the Site. Ca. 28 ha of existing pasture, ca. 2.75km of hedgerows and treelines; ca. 2.7 ha of dry meadows and grassy verges and ca. 0.19 ha of scrub will be removed as a result of the proposed pit extension.

However, as part of the restoration plan, it is proposed to plant ca. 2.88 km of hedgerows; 4.79 ha of a woodland mix (to serve as a screening buffer along site boundaries); 15.9 ha of a Wet Woodland Mix (by the two water bodies and by northeast corner of the site); 890 m^2 of marginal planting around the two water bodies (in addition to the wet woodland areas); 13.1 ha of reinstated agricultural grassland; 23.1 ha of native grassland meadows, as well as 18.16 ha for natural colonization. Consequently, to facilitate the phased expansion of the proposed quarry, it will have a permanent effect on the landform and land cover of the Site.

During the operational phase of the proposed development, the movement of heavy vehicles within, as well as to and from, the Site will add further intensity of activity and movement, albeit within a context of an already existing busy quarry and study area where other operational open-cast quarries are present, along with their attendant number of heavy vehicles during working hours. In relation to landscape character, this proposed development is essentially a measured but sizeable extension of the existing pit. The magnitude of landscape effects is also softened by the:

- Extent of existing and proposed native planting aligning the boundaries
- Extent of proposed screening berm system aligning the boundaries
- Extent of the Phase 4/ restoration phase of the proposed development.

As previously noted, there are several other quarries within the vicinity that contribute to the landscape character of the area. In this regard, the proposed development does not represent a new or uncharacteristic form of development within this landscape setting, and, therefore, is not considered that the proposal is out of keeping with the receiving landscape context. Consequently, landscape and visual mitigation measures are 'embedded' within the design of the proposed development, and no additional mitigation measures would be likely to discernibly reduce any potentially unfavourable/unwanted landscape or visual impacts associated with this scheme.

In terms of duration, the proposed development is anticipated to have an approximate 13–15-year life (i.e. Phases 1-3), depending on market conditions,. According to the Environmental Protection Agency's (EPA) EIA *Guidelines,* "medium-term effects" are defined as lasting 7-15 years. The operational life cycle of the proposed development, therefore, is characterised as having medium-term effects.

On the basis of the factors discussed above, it is considered that the magnitude of operational landscape impact on the Application Site will be Medium, in accordance with Table 11-2. Meanwhile, the **magnitude** of landscape effects on the study area is likely to be **Low-negligible**, in accordance with Table 11-2.

Summary of Operational Landscape Effect Significance

Application Site and Immediate Vicinity:

With reference to the significance matrix (see Table 11.5, above), the magnitude of landscape impact within the Application Site is deemed to be Medium. Thus, when combined with a Medium-low sensitivity, the significance of operational landscape impact is not considered, on balance, to likely be any greater than **Moderate** within the immediate context of the Site. In addition, the quality of Effect is deemed to be Adverse/negative (in accordance with Table 11-6, above) and the Duration of Effect is deemed to be 'Medium Term' (in accordance with Table 11-7, above).

Wider Study Area:

With reference to the significance matrix (see Table 11.5, above), the magnitude of landscape impact within the wider study area is likely to be Low-negligible, based in part on the presence of multiple quarrying activities within 2km of the site. Thus, when combined with a High sensitivity, the significance of operational landscape impact is not considered, on balance, to likely be any greater than **Not Significant** within the wider study area.

Summary of Restoration Stage Landscape Effects

The proposed restoration will involve a reduction in the severity of internal slopes and pit faces for safety reasons and also to facilitate planting of native grassland, hedgerows, woodland and waterbody, but is by no means a reinstatement of the pre-existing landform or land cover. Indeed, a sizeable void will remain in this landscape, albeit softened in appearance by moderated slopes and planting. Agricultural land use is envisaged to return to some parts of the restored quarry, but not to the extent that currently exists. Another important factor is that intense quarrying activity and heavy vehicle movements will cease once the operational stage of the quarry ends and restoration works are complete.

Application Site and Immediate Vicinity:

On the basis of the factors discussed above, , it is considered that the **magnitude** of restoration landscape effects on the Application Site will reduce to **Medium-low**.

When combined with Medium-low sensitivity judgment, the **significance** of restoration-stage landscape effects is not considered, on balance, to be any greater than **Moderate-slight** within the immediate context of the Site, in conjunction with Table 11-5, above.

In terms of duration of effects, the proposed restoration is anticipated to take 2-3 years. According to the Environmental Protection Agency's (EPA, 2022) EIA *Guidelines,* "short-term effects" are defined as lasting 1-7 years. The restoration stage of the proposed development, therefore, is characterised as having short-term effects.

Wider Study Area:

On the basis of the factors discussed above, it is considered that the **magnitude** of restoration-phase landscape effects on the wider study area is likely to reduce to **Low-negligible**.

Thus, when combined with a High sensitivity, the **significance** of restoration-phase landscape effects is likely to reduce rapidly to **Imperceptible** with increasing distance from the site, in conjunction with Table 11-5, above.

In terms of duration of effects, the proposed restoration is anticipated to take 2-3 years. According to the Environmental Protection Agency's (EPA, 2022) EIA *Guidelines,* "short-term effects" are defined as lasting 1-7 years. The restoration stage of the proposed development, therefore, is characterised as having short-term effects.

11.6.2 VISUAL EFFECTS

11.6.2.1 Zone of Theoretical Visibility (ZTV)

Computer generated Zone of Theoretical Visibility (ZTV) maps have been produced as part of this LVIA. A ZTV map indicates areas of the landscape that have potential visibility of the site in a bare-ground scenario. In this high-level context, one of the main benefits of this computer-generated analysis is to understand where in the surrounding landscape the development definitely will not be visible, due to terrain or other screening.

In this instance, two separate ZTVs were prepared in order to determine the potential visibility of the proposed development in a bare-ground scenario. The first is a ZTV entailing the EIA Study Area includes the Site Application Area and proposed pit extension areas (Figure 11-18). The second is a 'Delta' (i.e. a comparative) ZTV, which compares visibility between the existing quarry and the proposed extension areas (Figure 11-20).

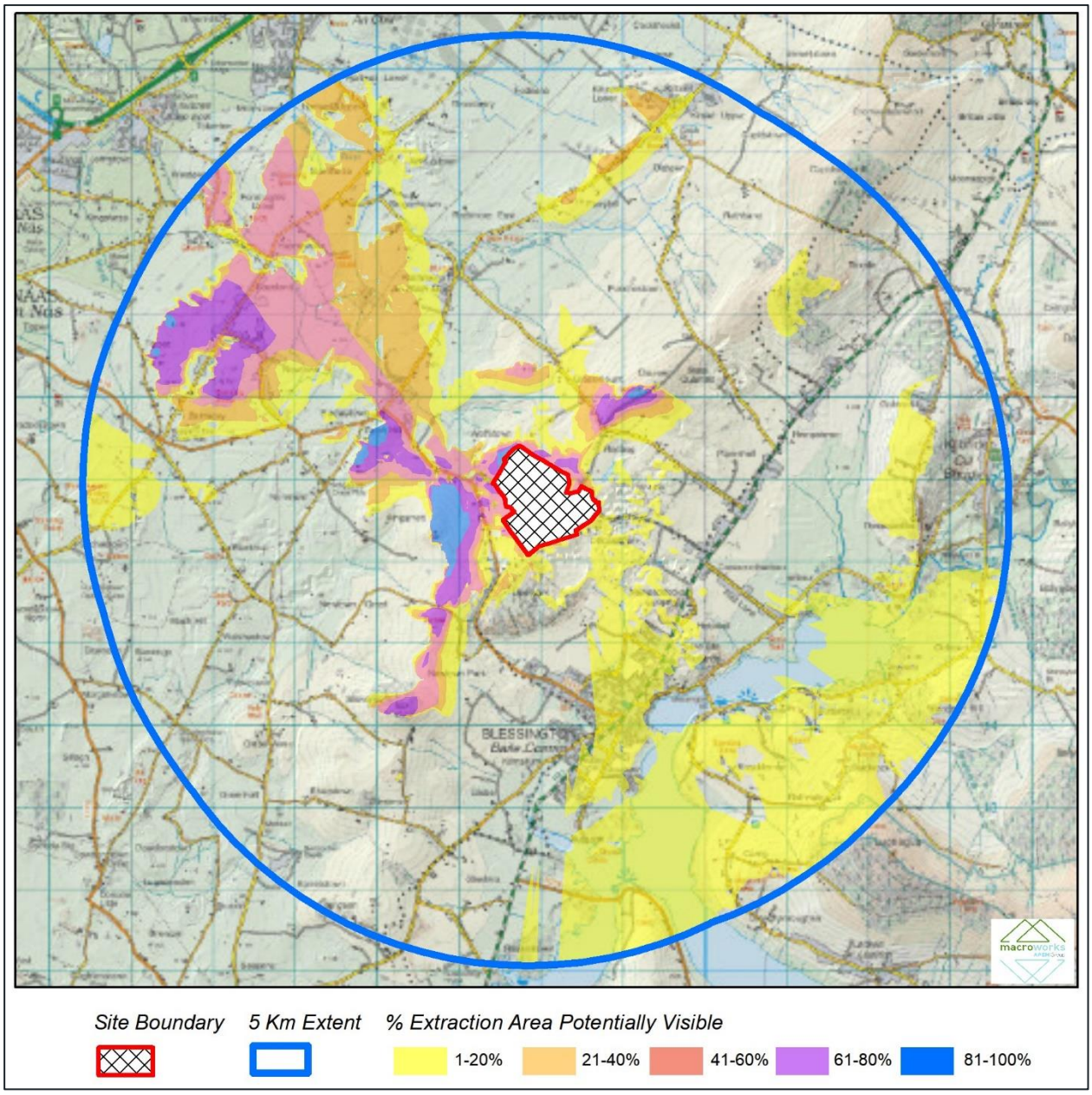


Figure 11-19: ZTV entailing the site application area, including the existing *and* proposed extension areas

The main points in relation to the ZTV map on **Figure 11-19** (above) entail:

- More than half of the study area will have no potential for visibility of the existing pit and proposed extension areas. This is principally a result of the aforementioned hill range, which the Site is located adjacent to.
- The highest theoretical visibility (i.e. 81-100% of extraction area) will be experienced within elevated, private agricultural land less than 1 km west of the Site boundary (i.e. not in the public realm and containing no known residences).
- Within Co. Wicklow, there will be an exclusively low theoretical visibility (i.e. 1-20% of extraction area) of the existing pit and proposed extension areas from the Poulaphouca Reservoir (i.e. Blessington Lakes) and the foothills of the Wicklow Mountains. These areas

include two Areas of Outstanding Natural Beauty (the Mountain Uplands AONB and the Poulaphouca Reservoir AONB), as well as a Special Protection Area and two Proposed Natural Heritage areas, in addition to the two aforementioned Co. Wicklow designated prospects.

- Within Co. Kildare, there will be a range from low to high theoretical visibility of the existing pit and proposed extension areas, along up to 2 km of the aforementioned Scenic Route located within 1 km northeast of the Site.
- In the northwest of the study area, there is a relatively high theoretical visibility (i.e. 61-80% of extraction area) within mostly private agricultural land, as well as less than 1km of public roads. However, such areas are located more than 3km from the site.
- For the majority of the town of Blessington - the largest settlement in the study area - there is a low theoretical visibility (i.e. 1-20% of extraction area) of the existing pit and proposed extension areas, while extensive areas of the wider town will be 'out of' ZTV (i.e. no theoretical potential for views of the proposed development).

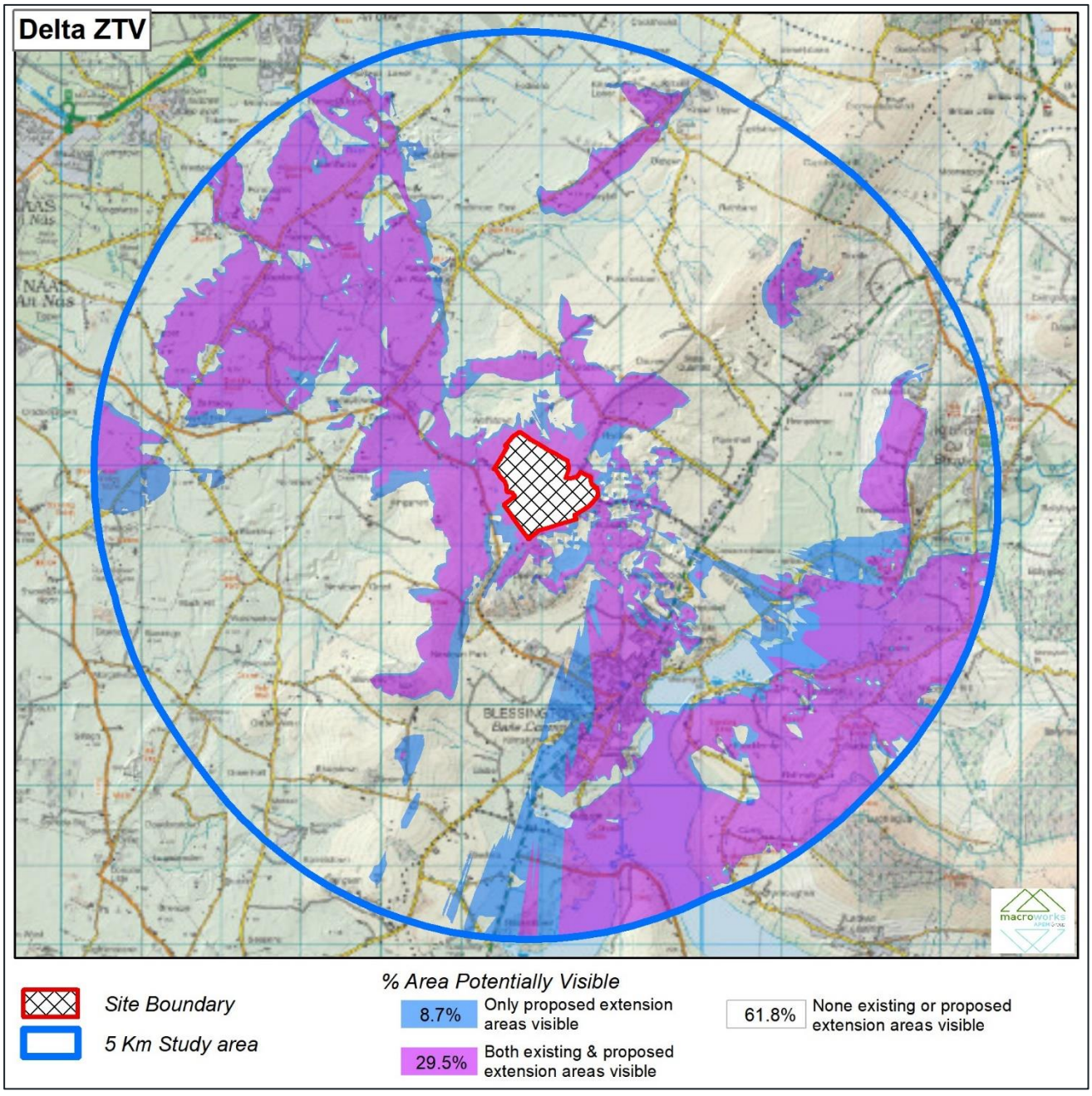


Figure 11-20: Comparative ZTV entailing the site application area, including the existing pit & proposed pit extension

The main points in relation to **Figure 11-20** entail:

- Less than 9% of the study area experiences theoretical visibility of only the proposed extension areas in isolation.
- Less than 30% of the study area experiences theoretical visibility of both the existing pit and the proposed extension areas. These areas include most of Blessington, the Poulaphouca Reservoir (i.e. Blessington Lakes) and the foothills of the Wicklow Mountains. These areas include two Areas of Outstanding Natural Beauty (the Mountain Uplands AONB and the Poulaphouca Reservoir AONB), as well as a Special Protection Area and two Proposed Natural Heritage areas, in addition to two Co. Wicklow designated prospects.

- Almost 62% of the study area has no potential for visibility of either the existing pit or the proposed extension areas.

However, it is worth emphasising that any ZTV map only indicates areas of the landscape that have potential visibility of the site in a bare-ground scenario. It does not take into account the multiple factors that may, and typically do, screen a proposed development from a series of viewpoints, such as intervening vegetation, buildings, energy/communications infrastructure, walls and/or roadside embankments/ditches. In relation to likely visibility of any proposed development, a ZTV's major value is in determining those areas in the study area where the development definitely will not be visible.

11.6.2.2 Viewpoint Assessment

The 13 No. viewpoints to be assessed in this section are listed and mapped on Table 11-8 and Figure 11-18. This section should be read in conjunction with the attached Appendix 11-B of this EIAR, which includes verified photomontages from all 13 No. Viewpoints.

Viewpoint 1 - Elevated local road at Kilbride townland

Existing View

The view is located along a third-class road which is aligned along the top of a local hill that rises to just over 280 mAOD and which contains groups of rural residences. Outward views are contained by the roadside embankment and low scrub vegetation, although there are breaks across to the surrounding hillside which the Site is located along. The foreground view includes a pasture field enclosed by wire fencing alongside the road. Beyond the field the land drops down for over 1km before rising to form distant hills in the background. Set within these hills amongst pastures and conifer plantations are large areas of partially visible open cast quarrying. However, the partially visible quarry's workings do not belong to the Site or its immediate vicinity, as the site is hidden from view by the intervening ridgeline.

The viewpoint sensitivity is **Medium-Low** as representative of local community views

Visual Effects

The proposed development will not be visible from this location due to screening by the ridgeline and presence of vegetation along it. Thus, it will have no potential for visual effect on the existing view.

The magnitude of change will be **None.**

The significance of change will be **No Change** in the Short, Medium and Long Term.

Qualitatively, the effect will be **N/A** (i.e. Not Applicable).

Viewpoint 2 - Designated Wicklow County "Prospect" overlooking Poulaphouca Reservoir

Existing View

This viewpoint is from a local road that is designated as 'Prospect 20' scenic route in the Wicklow County Council. This location unveils picturesque views of its listed features (i.e. designated views) that is the Poulaphouca Reservoir/Blessington Lakes. However, the proposed development is set

back more than 2km from the Poulaphouca Reservoir. In this view, the low hillscape on which the Site is set, appears as a low sweeping horizon. At over 4 km distance, little detail can be determined about land use upon the hillscape, aside from clumps of pasture and woodland/forestry. An irregular, soil-coloured area along the distant hillscape infers the presence of open cast quarrying. However, the Site is hidden from view by the intervening landform and vegetation.

The viewpoint sensitivity is **Medium**, as representative of local community views.

Visual Effects

The proposed development will not be visible from this location, due to screening by the ridgeline and presence of vegetation along it. Thus, it will have no visual impact or effect on this viewpoint.

The magnitude of change will be **None.**

The significance of change will be **No Change i**n the Short, Medium and Long Term.

Qualitatively the effect will be **N/A**.

Viewpoint 3 - Designated Wicklow County "Prospect" at Baltyboys along the R758

Existing View

The viewpoint is located further along the same Wicklow County Council designated scenic route 'Prospect 20'. Similarly, this scenic view primarily unveils picturesque views of its listed features (i.e. designated views) that is the Poulaphouca Reservoir/Blessington Lakes. However, the development is set back more than 2 km from the Poulaphouca Reservoir. Across the lake/reservoir, an abundance of tall deciduous woodland tends to block most views, including that of Blessington town. Upon the skyline above these lakeside trees, the mature trees within the hilltop Deerpark woodland can be made out. This hill's ridgeline and the lines of trees help to prevent the Site's existing quarry being visible from this point.

The viewpoint sensitivity is **Medium**, as the view is representative of local community views and major routes.

Visual Effects

The proposed development will not be visible from this point, due to screening by the ridgeline and presence of vegetation along it. Thus, it will have no visual effect on this viewpoint.

The magnitude of change will be **None.**

The significance of change will be **No Change** in the Short, Medium and Long Term.

Qualitatively, the effect will be **N/A.**

Viewpoint 4 - Ring road along northern periphery of Blessington Town

Existing View

The viewpoint is located along a ring road on the northern periphery of Blessington town. This area of the town has experienced considerable expansion, construction and settlement in the last 20 years, and is characterised by several relatively recent housing developments, with further expansion of housing anticipated in this area. This location offers the clearest potential for views in the direction of

the Site. The field in the foreground once formed part of the Blessington Demesne and is hitherto free of any residential development. In the distance, evidence of an adjacent open cast quarrying can be discerned on the skyline. However, the Site's existing quarry is not visible from this point due to its location set behind the existing hillside.

The viewpoint sensitivity is **Low** as the view is representative of a centre of population.

Visual Effects

The proposed development will not be visible from this point, due to screening by intervening vegetation and/or landform. Thus, it will have no visual effect on this viewpoint.

The magnitude of change will be **None.**

The significance of change will be **No Change** in the Short, Medium and Long Term.

Qualitatively the effect will be **N/A.**

Viewpoint 5 - Elevated third class road southwest of site, at Newtownpark townland

Existing View

The viewpoint is located along a short, elevated section on the brow of a hill along a quiet third-class road with few residences along it, located more than 1km southwest of the Site. This elevation allows for partially open views in the direction of the Site. Beyond the field in the foreground is the distinctive block of mature trees of the Deerpark woodland, which blankets that low hill. Further to the north of this woodland, and set below the more distant hills, is a particularly small section of the Site that can be faintly discerned from this location. This includes some of the upper worked quarry faces on its northern end, which can be faintly made out by their paler buff colour. However, this minute sliver of the site in unlikely to be noticed, in light of the more compelling and attractive hillscape scenery to the fore and beyond the site.

The viewpoint sensitivity is **Medium-Low**, as the view is representative of local community views.

Visual Effects following completion of Phase 3

A thin horizontal sliver of land use within the proposed development will be barely discernible, at over 1 km distance. In addition, some of the trees within the Site will have been removed. However, these changes will be highly unlikely to be detected by the observer, and even if located, will have no bearing upon the inherent visual amenity on offer from this location. Consequently, the magnitude of visual effect will be **negligible**.

Residual Visual Effects (i.e. post-mitigation)

Following the establishment of screen planting that will be part of the proposed development, the only tangible difference this residual view will offer will be the maturation of that planting. However, at over 1km away, such planting will be highly unlikely to be discernible. Thus, the magnitude of visual impact will remain **negligible**.

The significance of change will be **Imperceptible** in the Short, Medium and Long Term.

Qualitatively the effect will be **Neutral.**

Viewpoint 6 - R410 west of site, at Athgarrett townland

Existing View

This viewpoint is located along a busy regional road connecting Blessington with Naas. The road is well populated by single residences, of which there are four residences located within 140m of this location. Between a marginally taller roadside hedgerow (i.e. above eye level) and through a roadside field entrance, an undulating pastoral field is evident, visually 'split' by foreground trees. To the right/south of these trees, pasture ascends to a skyline marked by a mature, tree-lined field boundary, with the mature Deerpark woodland discernible on the most southerly skyline. To the left/north of the aforementioned trees, the terrain descends, while in the middle ground two berms (containing a gas network pipeline) are partially visible with their angular form backdropped by the undulating pastoral lands. Against the background and below the skyline, quarried materials from the existing Hudson Quarry can be made out, albeit at approx. 300 m distance and partially contained by the mature trees along the field boundaries.

The viewpoint sensitivity is **Medium-Low** - as the view is representative of local community views and major routes.

Visual Effects following completion of Phase 3

Upon completion of Phase 3 of the proposed development, some elements of the scheme will be visible. Beyond the aforementioned foreground trees, above a recently constructed berm, the upper 'lip' of the proposed quarry face will be discernible. This 'lip' will flow with the contours of the surrounding landform but will nonetheless demarcate the new skyline. To the left/north of the aforementioned trees, no visual change to the baseline is likely.

The loss of the treeline on the skyline will marginally detract from the visual amenity of this view, when combined with the 'foreshortening' of that skyline by at least 150m (i.e. from this viewpoint, the skyline at this location has moved approx. 150m westwards, in the direction of this viewpoint). However, while the lip of the proposed quarry extension will now define the skyline at this location, it is consistent with the undulating sweep of surrounding/pre-existing terrain. Nonetheless, such views through field entrances tend to be momentary and fleeting. In addition, this quarry lip is tangibly connected to, and consistent with, the quarry materials evident elsewhere in this scene. As a result of these factors, the magnitude of visual impact is deemed to be **Low**.

Residual Visual Effects (i.e. post-mitigation)

The former treeline on the skyline will be replaced with that of another. However, this new skyline will 'foreshorten' the skyline in this location, which signifies a fractional loss in visual amenity, when compared to the base line, although this will be partially offset by the creation of a more aesthetic treeline along the berm. On balance, the magnitude of visual impact is deemed to be **Low-negligible**.

The significance of change will be **Slight** up until completion of Phase 3, thereafter it will reduce to **Imperceptible** in the Long Term.

Qualitatively the effect will be **Adverse/negative.**

Viewpoint 7 - R410 northwest of site near Carter's Hill

Existing View

The viewpoint is located along the busy regional road on the southern approach to the small village of Carter's Hill and is over 1 km northwest of the Site's western boundary edge. The Site lands including the existing quarry is not visible from this location due to screening by the varied landform and roadside planting, as well as mature, tree lined field boundaries. Instead, the scene is of a rich pastoral landscape.

The viewpoint sensitivity is **Medium-Low**, as the view is representative of local community views and major routes.

Visual Effects following completion of Phase 3

Between branches of the foreground, roadside trees, a miniscule sliver of visibility of the proposed pit extension area will be partially revealed. This will disclose a somewhat tiny window onto the new quarry excavation. However, at over 1km distance, such a minute segment of the proposed development will be highly unlikely to be noticed by even the stationary passer-by, and even if discerned, will be unlikely to detract from the visual amenity on offer. On balance, it is deemed that the magnitude of visual impact is **negligible**.

Residual Visual Effects (i.e. post-mitigation)

Owing to intervening landform and/or vegetation, between this location and the proposed quarry extension area, the residual view of the proposed development from this location is unlikely to be any different to that available upon completion of Phase 1. Thus, the magnitude of visual impact remains **negligible.**

The significance of change will be **Imperceptible** in the Short, Medium and Long Term.

Qualitatively the effect will be **Neutral.**

Viewpoint 8 - Third class road at Baysland townland

Existing View

This viewpoint provides a brief vantage point at a field entrance along this a section of a third-class road (L2019), over 3.5 km from the site. This section of road contains ribbon development, from which several residences experience comparable views out over the countryside in the direction of the site. The mature tall field boundaries found in the direction of the Site obscure any views of the Site lands, including the existing quarry.

The viewpoint sensitivity is **Medium-Low**, representative of local community views.

Visual Effects

The proposed development will not be visible from this point, due to screening by intervening vegetation and/or landform. Thus, it will have no visual effect on this viewpoint.

The magnitude of change will be **None.**

The significance of change will be **No Change** in the Short, Medium and Long Term.

Qualitatively, the effect will be **N/A.**

Viewpoint 9 - County Kildare scenic route, near Kilteel village

Existing View

This view is located along the County Kildare Scenic Route 22, and this location is approx. 1km southwest of the small village of Kilteel. There are numerous residences located to either side of this low hilltop, third-class road that offers, in places, compelling views both north and south. Views from the road look beyond the sheep fencing and pastureland in the foreground across to the series of low undulating hills with some hill tops covered by small blocks of woodland. The intervening vegetation and landform screen any views of the Site and existing quarry.

The viewpoint sensitivity is **Medium**, as the view is representative of local community views.

Visual Effects

The proposed development will not be visible from this point, due to screening by intervening vegetation and/or landform. Thus, it will have no visual effect on this viewpoint.

The magnitude of change will be **None.**

The significance of change will be **No Change** in the Short, Medium and Long Term.

Qualitatively the effect will be **N/A.**

Viewpoint 10 - Dead-end third class road east/north-east of site

Existing View

This view is located along a *cul de sac* road, approx. 700 m long, off a third-class road, with approx. 10 rural residences located on the western side of the road. This viewpoint is located approx. 60m from the termination of the road and is also marginally inside the aforementioned Red Bog pNHA and lies adjacent to Red Bog SAC. Looking over a low, cut/maintained roadside hedge, views in the direction of the Site can be had. However, views largely entail a distant pastoral hillside, which lies considerably west of the development with the county's plains discernible, between foreground trees, further in the background. At the end of this short public road, a private laneway extends in the direction of the existing quarry, whose presence is implied by the perceived drop in more distant terrain. Part of the existing quarry's eastern end and far western end is faintly visible through the narrow gap between the tall trees either side of this laneway.

The viewpoint sensitivity is **Medium-Low**, as the view is representative of local community views.

Visual Effects

The proposed development will not be visible from this point, due to screening by intervening vegetation and/or landform. Thus, it will have no visual effect on this viewpoint.

The magnitude of change will be **Negligible.**

The significance of change will be **Imperceptible** in the Short, Medium and Long Term.

Qualitatively the impact will be **Neutral.**

Viewpoint 11 - County Kildare scenic route, at Greenmount townland

Existing View

This view is located along the County Kildare Scenic Route 12 and approx. 750m from the existing quarry limits. The section of road allows for elevated views looking down onto the lower undulating hills and distant plains within County Kildare to the northwest. The predominant land use of pasture is punctuated by mature tree-line field boundaries and some blocks of woodland on higher lands, including Deerpark. Similar visual amenity is experienced by residences located within the vicinity of this section of road. The varied landform and intervening vegetation make it challenging to discern the presence of the Site's existing quarry located in the bottom of this lowland valley.

The viewpoint sensitivity is **Medium**, as the view is representative of local community views.

Visual Effects following completion of Phase 3

Between and above intervening trees, a minute area of the proposed pit extension area will be partially revealed, which will form part of the proposed western extension of the quarry. However, at over 1 km distance, such a segment of the proposed development will be unlikely to be noticed by even the stationary passer-by. Thus, it is high unlikely to be noticed by road users along this scenic route and even if discerned, will be unlikely to detract from the visual amenity on offer. While this small segment may be more discernible to the nearby residents, it is also unlikely to have any discernible effect upon the inherent visual amenity of the scene. On balance, it is deemed that the magnitude of visual impact is **negligible**.

Residual Visual Effects (i.e. post-mitigation)

Owing primarily to the elevated terrain of this viewpoint (in comparison to the site), the proposed mitigation measures are unlikely to have any material bearing. Thus, the magnitude of visual impact will remain **negligible.**

The significance of change will be **Imperceptible** in the Short, Medium and Long Term.

Qualitatively the effect will be **Neutral.**

Viewpoint 12 - Residences along the R410, southwest of site

Existing View

This busy regional road connects Naas and Blessington and runs within 300m west of the Site. Along this section of road, there are upwards of eight residences. Most of these are on the western side of the road, with easterly views in the broader direction of the site, albeit often full or partially screened by roadside vegetation.

Partially screened by roadside vegetation, this view looks eastward across the road, to the undulating pastureland that includes the western edge of the Site that runs southwest to the edges of Deerpark forest. However, the Site's quarry workings are not visible. The partially screened mid-ground field contains the stone ruins of a historic icehouse, as well as numerous relatively low trees scattered about the undulating pasture. It is worth observing that the roadside hedgerow is in a robust state of regrowth. Thus, it is fair to assume that for several months of the year, views beyond the roadside, in the direction of the site, are only attainable from field entrances.

The viewpoint sensitivity is **Medium-Low**, as the view is representative of local community views and major routes.

Visual Effects following completion of Phase 3

Upon completion of Phase 3 of the proposed development, some elements of the scheme will be visible. Beyond the undulating mid-ground field, the pre-existing treeline (in the west of the site) will have been felled and above a recently constructed berm, the upper 'lip' of the proposed quarry face will be discernible. This 'lip' will flow with the contours of the surrounding landform but will nonetheless demarcate a small section of the new skyline. To the left/north of the aforementioned icehouse, no visual change to the baseline is likely.

The loss of the treeline on the skyline will marginally detract from the visual amenity of this view, when combined with the 'foreshortening' of that skyline by at least 150m (i.e. from this viewpoint, the skyline at this location has moved approx. 150m westwards, in the direction of this viewpoint). However, while the lip of the proposed quarry extension will now define a small section of the skyline at this location, it is consistent with the undulating sweep of surrounding/pre-existing terrain. In addition, this quarry lip is tangibly connected to, and consistent with, the quarry materials evident elsewhere in this scene. As a result of these factors, the magnitude of visual impact is deemed to be **Low**.

Residual Visual Effects (i.e. post-mitigation)

The former aforementioned treeline on the small section of skyline will be replaced with that of another. However, this new skyline will 'foreshorten' the skyline in this location, which signifies a fractional loss in visual amenity, when compared to the base line, although this will be partially offset by the creation of a more aesthetic treeline along the berm. On balance, the magnitude of visual impact is deemed to be **Low-negligible**.

The significance of change will be **Slight** up until the completion of Phase 3, thereafter reducing to **Not Significant** in the long term.

Qualitatively the effect will be **Adverse/Negative.**

Viewpoint 13 - Residences along short *cul de sac* at Wolfestone townland

Existing View

This viewpoint is located at the end of a short *cul de sac* near the northwest corner of the site boundary, where it enters into the Site. The short *cul de sac* road is located off the R410 Naas-Blessington Road and has four rural residences along it, with two residences located within 50m of this viewpoint. However, this view is contained by the high hedgerow along the site's western boundary. A gate marks the entrance to the Site, with a rough agricultural-style track leading into the site's pastoral lands. Upon the distant skyline, a mature tree-lined field boundary is apparent. However, the Site's existing active quarry workings are not visible from this location.

The viewpoint sensitivity is **Medium-Low**, as the view is representative of local community views.

Visual Effects

The proposed development will not be visible from this point, due to screening by intervening vegetation and/or landform. Thus, it will have no visual effect on this viewpoint.

The magnitude of change will be **None.**

The significance of change will be **No Change** in the Short, Medium and Long Term.

Qualitatively the effect will be **N/A.**

11.6.2.3 Summary of Visual Effects

The visual effects are summarised in Table 11-9, below.

Table 11-9 – Viewpoint Locations and summary of effects

Viewpoint Number	Viewpoint Description	Sensitivity	Magnitude of Change	Significance and Qualitatively
1	Elevated local road at Kilbride townland	Medium-Low	None	No Change
2	Designated Wicklow County "Prospect" overlooking Poulaphouca Reservoir	Medium	None	No Change
3	Designated Wicklow County "Prospect" at Baltyboys along the R758	Medium	None	No Change
4	Ring road along northern periphery of Blessington Town	Low	None	No Change
5	Elevated third class road southwest of site, at Newtownpark townland	Medium-Low	Negligible	Imperceptible & Neutral
6	R410 west of site, at Athgarrett townland	Medium-Low	Low (post-Phase 3) Low-negligible (post-Phase 4)	Slight, Imperceptible & Adverse/negative
7	R410 northwest of site near Carter's Hill	Medium-Low	Negligible	Imperceptible & Neutral
8	Third class road at Baysland townland	Medium-Low	None	No Change
9	County Kildare scenic route, near Kilteel village	Medium	None	No Change
10	Dead-end third class road east/north-east of site	Medium-Low	Negligible	Imperceptible & Neutral
11	County Kildare scenic route, at Greenmount townland	Medium	Negligible	Imperceptible & Neutral
12	Residences along the R410, southwest of site	Medium-Low	Low (post-Phase 3) Low-negligible (post-Phase 4)	Slight, Not Significant & adverse/negative
13	Residences along short *cul de sac* at Wolfestone townland	Medium-Low	None	No Change

Thus, in summary, visual effects associated with the proposed development will be **Not Significant.**

11.7 MITIGATION MEASURES

The proposed Mitigation Measures are addressed in this section, which are listed between operational stage and restoration stage mitigation measures.

11.7.1 OPERATIONAL STAGE

Mitigation measures include:

- Clearance of the existing agricultural land and field hedgerow boundaries within the site will occur on a phased basis as areas A to E of the quarry are made available to be worked out.
- Soils and overburden stripped will be used in the creation of screening berms along the perimeter of the proposed development. Perimeter bunds will be 2 m high and 8 m wide and seeded to help reduce the likely visual impact of the proposed development.
- Existing hedgerows will be remediated by the planting of additional native species which will help to fill out any gaps and provide further screening of the quarry, as these hedgerows thicken out overtime.
- Protection of existing water bodies including establishing a buffer area around the existing pond/surface water body located to the north of the main extraction area and east of the northern lateral extension and planted up with a proposed 3-5 m wide wet woodland mix of native willow and alder species.
- Annual review/management of the new boundary planting to ensure that it becomes established and provides adequate visual screening, with generic improvements and spot fixes (including supplementary planting or thinning) to be implemented where required.

11.7.2 RESTORATION STAGE

The proposed restoration measures will seek to reinstate some of the lands to a suitable agricultural use upon cessation of works, while also providing a net ecological gain by habitat creation and use of native planting species throughout the site. These measures are outlined in the Restoration Plan, within Appendix 11-A and will be implemented at the cessation of all works across the site, with all details to be agreed in advance with KCC.

- The Restoration Plan outlines additional measures to assist in assimilating the Proposed Development into the landscape and enhancing vegetation cover and biodiversity to offset the effects of vegetation and habitat loss.
- New habitat provision under the Restoration Plan will include provisions for native trees, hedgerow, shrub planting and wildflower meadow grassland along with the provision of bird/bat boxes and invertebrate housing over and above the current situation. Species assemblages to be agreed with Kildare County Council.
- The landscape mitigation measures will seek to provide additional visual screening of the site from visual receptors.

Mitigation measures include:

- The existing soils of the screen berms and the extracted outcrop waste material will be reused across the site to regrade the worked lands quarry floor and provide a suitable growing media for the proposed planting. Evidence of the former quarry will remain in the form of some exposed rock faces and sand and gravel faces, which are left to provide ecological benefits in the form of nesting sites.
- The proposed planting will include a mix of native meadow grasses and wildflowers, shrubs and trees species, which are typical of planting mixes found within the field hedgerows, woods and alongside waterbodies across the local area. These mixes are identified on the Restoration Plan and include the likes of hawthorn and blackthorn mix for the hedgerows, and deciduous trees of oak, alder and birch within proposed woodland. Specific species assemblages will be agreed with Kildare County Council. The proposed planting will help re-establish field patterns previously lost to the Site's former large void and will bring about numerous ecological benefits in the form of new habitat creation, ecological corridors and rich food sources. The Site's northern end lands will be reinstated to agricultural grasslands returning this part of the site to pasture.
- The new planting will be maintained for a minimum period of 3 years as part of the initial landscape contract to ensure the planting becomes established and that any planting which fails in this period is replaced with similar by the landscape contractor.
- Over time, the Site Management will include periodic inspection and maintenance of the boundary planting to ensure its effectiveness as a visual screen and in forming dense field boundary edges. The grassland/meadow areas will likewise be continually managed, as a part of a grazing or mowing regime.
- Management/Improvement of the retained site boundary hedgerows and trees: The existing Site boundary hedgerows and trees to be surveyed and appraised in terms of (a) species mix - for biodiversity and maximum screening (height, density of foliage), and (b) intactness/continuity. Generic improvements and spot planting to be made where required to optimise the health of the hedgerows, their biodiversity value and visual screening function.
- The majority of the site will be restored to improved agricultural grassland and native grassland meadows in keeping with the wider agricultural land use in the locality.
- At the centre of the site, a new waterbody will be established, with marginal and wet woodland native planting alongside it.
- In the northeast of the site, the existing waterbody will be retained, and enhanced with wetland marginal and woodland planting. This area will ultimately be covered by water as the quarry fills to its natural level (determined by the water table), forming a permanent lake. The shallow areas will provide suitable substrate for aquatic invertebrates, with gentle grading of shoreline and marginal planting added (to be determined at the time, with the advice of an ecologist).
- In the west of the site, near-vertical banks along sand and gravel faces will create suitable Sand Martin sites. Rockfaces and benches will create areas for natural colonization aided with some strategic planting to provide for an optimum ecological habitat.
- Enhancement of existing boundary screening with native vegetation is proposed and planting should comprise native species of local provenance. Where this is not possible, plants will be selected for their fruit, berry, or nectar bearing qualities. All landscape planting within the Site will

be managed for the benefit of wildlife. Any gaps in the boundary vegetation are to be planted with native hedgerows.

- Quarry benches: At a number of locations (to be determined at the time, with the advice of an ecologist) a mixture of trees and shrub species will be planted in an engineered substrate to form patches of habitat. This will create a platform for a more diverse flora to develop naturally and provide habitat and food resources for birds, mammals, insects and other invertebrates.
- Quarry faces: Whilst recognising the geological value of the exposed quarry faces, it is proposed that some native tree and shrub species be planted in/on fissures and ledges, to help break up the bare profile of the rock face (the southern quarry face in particular.) Other plant species will be allowed to find and colonise the area by natural means, and these will include various mosses, lichens, algae, ferns, flowering plants, etc. The gradually increasing native plant diversity will, over time, ensure that a correspondingly diverse list of animal species (birds, mammals, butterflies and other insects, other invertebrates, etc.), can become established.
- Safety measures: An agricultural fence to be installed around the edge of the excavation, to act as a visual indicator of the edge and a physical barrier for people and animals. Safety signs are also proposed to be erected on and outside the boundary fence. In addition, similar fencing will be constructed around all water bodies, with appropriate safety signs.

11.8 RESIDUAL EFFECTS

The residual effects are those as described by EPA EIAR guidance as "*The degree of environmental change that will occur after the proposed mitigation measures have taken effect."*

Landscape Effects:

The residual landscape effects are as described and assessed in the above landscape assessment. Consequently, there are no significant residual landscape effects.

Visual Effects:

The residual visual effects are as described and assessed in the above visual assessment. Consequently, there are no significant residual visual effects.

11.9 CUMULATIVE EFFECTS

The main cumulative impacts that are likely to arise from the proposed development are those derived from the proximity and scale of the existing Hudson Bros. Ltd. quarry. However, the proposed development is a measured but sizeable extension of the existing pit. When taken in the context of the presence of multiple quarrying activities within 1-2 km of the site, the proposed development represents a minor intensification of an existing land use.

Consequently, the proposed development is not considered to give rise to any significant cumulative impacts.

11.10 DIFFICULTIES ENCOUNTERED

The visual assessment was structured upon viewpoints from surrounding public roads, which meant that it was not always possible to assert a residential receptor's exact views towards the existing site (i.e.as the exact residential receptors/homes are on private property, rather than in the public domain).

Where this occurred, professional judgement was used, in keeping with best practice, to describe the likely visual effects from such receptors. However, this is quite standard during the LVIA process.

In addition, as part of the Site is a working quarry, it is not possible to safely access its full extent. However, full visibility into the quarry was established at all times, during the site visit. However, this is quite standard for the LVIA process when the site in question is that of a quarry and/or quarry extension.

11.11 SUMMARY AND CONCLUSIONS

Landscape

The Site is located within an area of modified landscape in the form of established quarrying activity and existing farmed pastureland on the Kildare/Wicklow County border. In terms of landscape impacts, the Site displays a robust set of features that will help to assimilate, absorb and integrate itself into the surrounding landscape of the study area and its documented landscape character.

Quarry projects tend to highlight the difference between landscape impacts and visual impacts more than most other developments. That is, the distinct physical impacts on landform and land cover are not always apparent in changes to prevailing landscape character or visual amenity. The lands subject to this EIAR are ca. 95.8 ha. and encompass an application area of ca. 64.0 ha., represent the continuation and extension of the existing quarry, a traditional and long-established land use for this part of the study area.

Approximately 28 ha of existing pasture, approximately 2.75 km of hedgerows and treelines; approximately 2.7 ha of dry meadows and grassy verges and approximately 0.19 ha of scrub will be removed as a result of the proposed pit extension. However, as part of the restoration plan, it is proposed to plant c. 2.88km of hedgerows; 4.79 ha of a woodland mix (to serve as a screening buffer along site boundaries); 15.9ha of a Wet Woodland Mix (by the two water bodies and by northeast corner of the site); 890m2 of marginal planting around the two water bodies (in addition to the wet woodland areas); 13.1ha of reinstated agricultural grassland; 23.1 ha of native grassland meadows, as well as 18.16 ha for natural colonization.

Indeed, in this much-modified and ever-evolving landscape, quarrying has traditionally sat alongside pasture, tillage, commercial forestry, and the proposed quarry extension is likely to represent the continuation of that diverse status quo. In spite of this, it cannot be ignored that the Application Site is located within a Kildare County Landscape character Area that is designated as having a “high sensitivity.” Furthermore, the proposed development will result in a distinct and permanent alteration to the topography and land cover of the Site. However, landscape and visual mitigation measures are ‘embedded’ within the proposed development design, and no additional mitigation measures would be likely to discernibly reduce any potentially unfavourable/unwanted landscape or visual impacts associated with this scheme.

On balance, the significance of landscape impact is not considered to be any greater than **Moderate** within the immediate context of the Site, and not considered to be any greater than **Not Significant** across the wider study area, as the proposed development becomes a comparatively smaller component of the overall landscape fabric.

In terms of the Restoration Stage, the significance of landscape effects is not considered to be any greater than **Moderate-slight** within the immediate context of the Site. This is likely to reduce rapidly to **Imperceptible** within the wider study area, with increasing distance from the site.

Visual

In terms of **visual impacts**, it ought to be remembered that any quarrying operation has the potential to be a conspicuous and severe element in any landscape: while some people will perceive it as an economic gain for the local community, others can concurrently perceive it as devaluing, degrading or scaring that landscape. On balance, such perspectives are influenced by the precedence, scale, shape and duration of the proposal, and how it may complement or contrast with its immediate surroundings, as well as how the impact of proximity to local/neighbouring properties or roads can be a major determinant in shaping such perspectives.

13 No. visual receptors/viewpoints were selected for the above Visual Impact Assessment, from a range of viewing angles, distances and contexts. All of these viewpoints were from the public realm, between Co. Wicklow and Co. Kildare, and covered a range of visual sensitivities. However, the assessment established that the proposed development will be largely obscured from most receptors by either intervening landform or vegetation, and that the range of potential residual visible impacts that are likely to be generated as a result of the proposed development is notably low.

An analysis of 13 selected Viewshed Reference Points within the study area varied from **'No Change'** (in 7 out of the 13 locations) to **'Imperceptible'** (in 5 out of the 13 locations) to **'Not Significant'** (in 1 out of the 13 locations). This is a distinctively low range of likely visual impacts for most proposed developments, even more so for an open cast quarry.

Conclusion

As determined within this assessment, the proposed development will not result in any significant landscape or visual effects.

11.12 REFERENCES

- Kildare County Council (2022) Kildare County Development Plans 2022-2028 https://kildarecoco.ie/AllServices/Planning/DevelopmentPlans/
- Wicklow County Council (2022) Wicklow County Development Plans 2022-2028 & 2016-2022 https://www.wicklow.ie/Living/Services/Planning/Development-Plans-Strategies/National-Regional-County-Plans/Wicklow-County-Development-Plan
- Kildare County Council Planning Enquiry (Online Search Facility) https://kildarecoco.ie/AllServices/OnlineServices/OnlinePlanningEnquiries/
- Wicklow County Council Planning Enquiry (Online Search Facility)
- https://www.wicklow.ie/Living/Services/Planning/Planning-Applications/Online-Planning
- Department of Housing, Local Government and Heritage (DHLGH) (2021) *National Land scape Strategy 2014-2025* Dublin: DHLGH. https://www.gov.ie/en/publication/8a59b-national-landscape-strategy/
- Department of the Environment, Heritage and Local Government (April 2004) *Quarries and Ancillary Activities- Guidelines for Planning Authorities.* Dublin: https://www.gov.ie/en/publication/a61d3-quarries-and-ancillary-activities/
- Environmental Protection Agency (EPA) (2022). *Guidelines on the Information to be Contained in Environmental Impact Reports (EIAR).* Environmental Protection Agency, Wexford. https://www.epa.ie/publications/monitoring--assessment/assessment/guidelines-on-the-information-to-be-contained-in-environmental-impact-assessment-reports-eiar.php
- Landscape Institute and the Institute of Environmental Management and Assessment (2013) *Guidelines for Landscape and Visual Impact Assessment*, 3rd edition, London: Routledge.
- Landscape Institute (2015) *GLVIA3 – Statements of clarification*, London: Landscape Institute. https://www.landscapeinstitute.org/technical-resource/glvia3-clarifications/
- Landscape Institute (2019) *Visualisation of development*, London: Landscape Institute. https://www.landscapeinstitute.org/visualisation/

Appendix 11A

RESTORATION PLAN

Public

EXISTING AGRICULTURAL LAND TO REMAIN IN CURRENT USE.
NO CHANGE IN RESTORATION PLAN

EXISTING AGRICULTURAL LAND TO REMAIN IN CURRENT USE.
NO CHANGE IN RESTORATION PLAN

GAS PIPELINE AND 14m WAYLEAVE

PROPOSED PLANTING WITHIN WAYLEAVE WILL BE GRASSES ONLY. NEW HEDGES AND TREES ARE SET OUTSIDE OF WAYLEAVE. ANY WORKS HERE TO BE AGREED WITH GAS NETWORKS IRELAND AND KILDARE CC.

NEW WATERBODY WITH MARGINAL & WET WOODLAND PLANTING

STEEPER BANKS ALONG SAND AND GRAVEL FACES TO CREATE SUITABLE SAND MARTIN NESTING SITES

EXISTING FIELD HEDGEROWS ACTIVELY MANAGED WITH SUPPLEMENTARY PLANTING WHERE REQUIRED FOR OPTIMUM SCREENING AND HABITAT

FORMER HEDGEROW BOUNDARIES REESTABLISHED TO PROVIDE HABITAT AND ENCLOSURE

ANY FORMER BERMS AND STOCKPILES FOUND ACROSS THE QUARRY TO BE REMOVED AND THEIR SOIL AND GRAVEL MATERIALS REUSED IN THE RESTORATION WORKS.

AGRICULTURAL GRASSLANDS

NATIVE GRASSLAND MEADOW

ECOLOGICAL BUFFER PLANTING AREA ALLOWED TO NATURAL COLONIZATION WITH WETLAND PLANTING

EXISTING WATER BODY RETAINED AND ENHANCED WITH WETLAND MARGINAL AND WOODLAND PLANTING

ANY OPEN SECTIONS OF THE SITE BOUNDARY FILLED OUT WITH NEW THICK HEDGEROW TO FORM A DENSE BARRIER AND IMPROVED ECOLOGICAL CONNECTIVITY.
ACCESS POINTS PROVIDED CONNECT INTO EXISTING ENTRANCES TO ADJOINING LANDS/LANES.

NEW ACCESS ROUTE TO FARMLAND

FENCING PROVIDED AS REQUIRED TO SECURE FACES, PLANTING, PONDS AND TO RESTRICT SITE ACCESS. OUTER FENCE LINES TIED INTO EXISTING/ENHANCED FIELD BOUNDARY EDGES.
SECURE ACCESS POINTS TO BE PROVIDED AS REQUIRED FOR FARMING AND MAINTENANCE ACCESS.

QUARRY FLOOR TO CONSIST OF BOTH LARGE AREAS OF BARE EARTH ALLOWING FOR NATURAL COLONIZATION AND AREAS DIRECTLY SOWN WITH MIXES OF NATIVE POLLINATOR FRIENDLY SPECIES TO CREATE NATIVE GRASSLAND MEADOWS TO PROVIDE A DIVERSE RANGE OF HABITATS TYPES
.

DEER PARK PLANTATION

LARGER NATIVE WOODLAND PLANTING AREA NEXT TO THE EDGES OF DEER PARK PLANTATION

ECOLOGICAL HOUSING PROVIDED THROUGH SITE IN THE FORM OF BIRD/BAT BOXES AND INVERTEBRATE HOUSING

ROCKFACES AND BENCHES CREATE AREAS FOR NATURAL COLONIZATION AIDED WITH SOME STRATEGIC PLANTING TO PROVIDE FOR OPTIMUM HABITAT

Quarry Pond

LEGEND

- APPLICATION SITE BOUNDARY
- LANDOWNER BOUNDARY
- TIMBER POST AND WIRE FENCING
- EXISTING CONTOURS
- AREAS AROUND ROCK FACE FOR NATURAL COLONIZATION
- BIRD BOX (x5 no.) (indicative location)
- PROPOSED CONTOURS
- AREAS FOR REGENERATION AROUND WATER BODIES
- BAT BOX (x5no.) (indicative location)
- EXISTING RETAINED HEDGEROWS SUPPLEMENTED BY INFILL PLANTING AS REQUIRED WITHIN SITE
- WATER BODIES BUFFER MARGINAL EDGE PLANTING
- INVERTEBRATE HOUSING (x5no.) (indicative location)
- NOTABLE BLOCKS OF MATURE HEDGE AND WOODS NEXT TO SITE
- WATER BODY
- ACCESS ROUTE
- EXISTING GAS PIPELINE AND BUFFER ZONE (15m)
- SAND MARTIN BANKS
- EXISTING AGRICULTURAL LANDS WITHIN THE LANDOWNER BOUNDARY BUT OUTSIDE OF QUARRY'S RESTORED AREA
- AREAS AROUND QUARRY FOR NATURAL COLONIZATION
- PROPOSED HEDGEROW
- AREAS REINSTATED TO AGRICULTURAL GRASSLAND
- NEW WOODLAND FRAMEWORK FOR SCREENING AND HABITAT ENHANCEMENT
- AREAS ACROSS QUARRY FLOOR REINSTATED TO NATIVE GRASSLAND MEADOW

PLANTING SCHEDULE

Woodland Mix - Boundary Screening Buffer
To include species from the following

Trees - 0.6-0.9m ht. - min 2-3m. ctrs	**Understorey Shrubs - 60-90cm ht., in random groups of 5-15 no at min 1.5-2m c/cs**
Alnus glutinosa - 10% *Betula pubescens - 10%* *Corylus avellana - 5%* *Euonymus europaeus - 3%* *Pinus Sylvestris -15%* *Prunus padus - 2%* *Quercus petrea - 20%* *Sorbus aucuparia - 5%*	*Crataegus monogyna -10%* *Prunus spinosa - 5%* *Ilex aquifolium - 5%* *Rosa canina - 2%* *Viburnum opulus - 3%* Salix aurita - 5%

Wet Woodland Mix - Next to Ponds
To include species from the following

Trees - 0.6-0.9m ht. - planted at min 3m ctrs	**Marginal Planting - CG P9 & 2L, in random groups of 5-7 no at 4/sq.m**
Alnus glutinosa - 40% *Salix alba - 25%* *Salix cinera - 25%* *Salix caprea - 10%*	*Iris pseudacorus, 20%* *Juncus effusus, 20%* *Juncus aerticulatus, 20%* *Cardamine pratenis, 10%* *Filipendula ulmaria, 10%* *Caltha palustris, 10%* *Potentilla palustris, 10%*

Hedgerow Planting
- Along lengths of the new hedgerows and as infill to gaps within existing hedges.

Hedgerow Trees - br 120-150cm ht. Planted individually at approx. 10-15m c/cs through the hedges	Hedge - br 60-90cm ht., planted in random groups of 5-15 at 5/lin m and double staggered
Malus sylvestris - 20% *Pinus Sylvestris -10%* *Quercus petrea - 50%* *Sorbus aucuparia - 20%*	*Corylus avellana* - Hazel - 10% *Crategus monogyna* - Hawthorn - 45% *Euonymus europaeus* - Spindle - 5% *Ilex aquifolium* - Holly - 3% *Ligustrum vulgare* - Privet- 10% *Prunus spinosa* - Blackthorn - 15% *Rosa canina* - Dog Rose - 2% *Viburnum opulus* - Guelder Rose- 10%

Meadow & Agricultural Grassland Mixes:
Areas of grassland sown across the quarry floor over an added topsoil layer of 0.3m depth. Selected Native Meadow Grassland mix to contain pollinator friendly rich native wildflowers species which flower at various times. Source of seed mix from an approved Irish grown supplier. e.g. Design By Nature MM12 Wild Flora for Raw improvised sub soil mix with a suitable grass nursery crop of bent and fescue grass species. Agricultural Mix of a suitable grassland cover similar to that within the surrounding fields.

Note: Species assemblages to be agreed with Kildare County Council

REV	DATE	AMENDMENT
B	23/02/2024	UPDATE LAYOUT
A	22/02/2024	UPDATE LAYOUT AND LEGEND

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PROJECT: **HUDSON BROTHERS LTD SECTION 37L APPLICATION CO. KILDARE**	DATE: FEBRUARY 2024
	SCALE: 1:2000 @ A1
	DRAWN: RF CHECKED: JB
DRAWING: **APPENDIX 11-A RESTORATION PLAN**	DRAWING NO: **23386-2-101**

Appendix 11B

VERIFIED PHOTOMONTAGES

Public

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APPENDIX 11B VERIFIED PHOTOMONTAGES

Hudson Brothers Limited, Section 37L Application,
Co. Kildare

This book contains imagery for the viewpoints chosen for the LVIA study

February 2024



LVIA I TVIA I Landscape Design I Visibility Analysis I Glint and Glare I Verified Photomontages I CGI I Shadow Flicker Analysis

INDEX

Viewpoint 1 - Existing View*

Viewpoint 2 - Existing View*

Viewpoint 3 - Existing View*

Viewpoint 4 - Existing View*

Viewpoint 5 - Existing View + Montage View
Viewpoint 5 - Montage View + Mitigated View

Viewpoint 6 - Existing View + Montage View
Viewpoint 6 - Montage View + Mitigated View

Viewpoint 7 - Existing View + Montage View
Viewpoint 7 - Montage View + Mitigated View

Viewpoint 8 - Existing View*

Viewpoint 9 - Existing View*

Viewpoint 10 - Existing View*

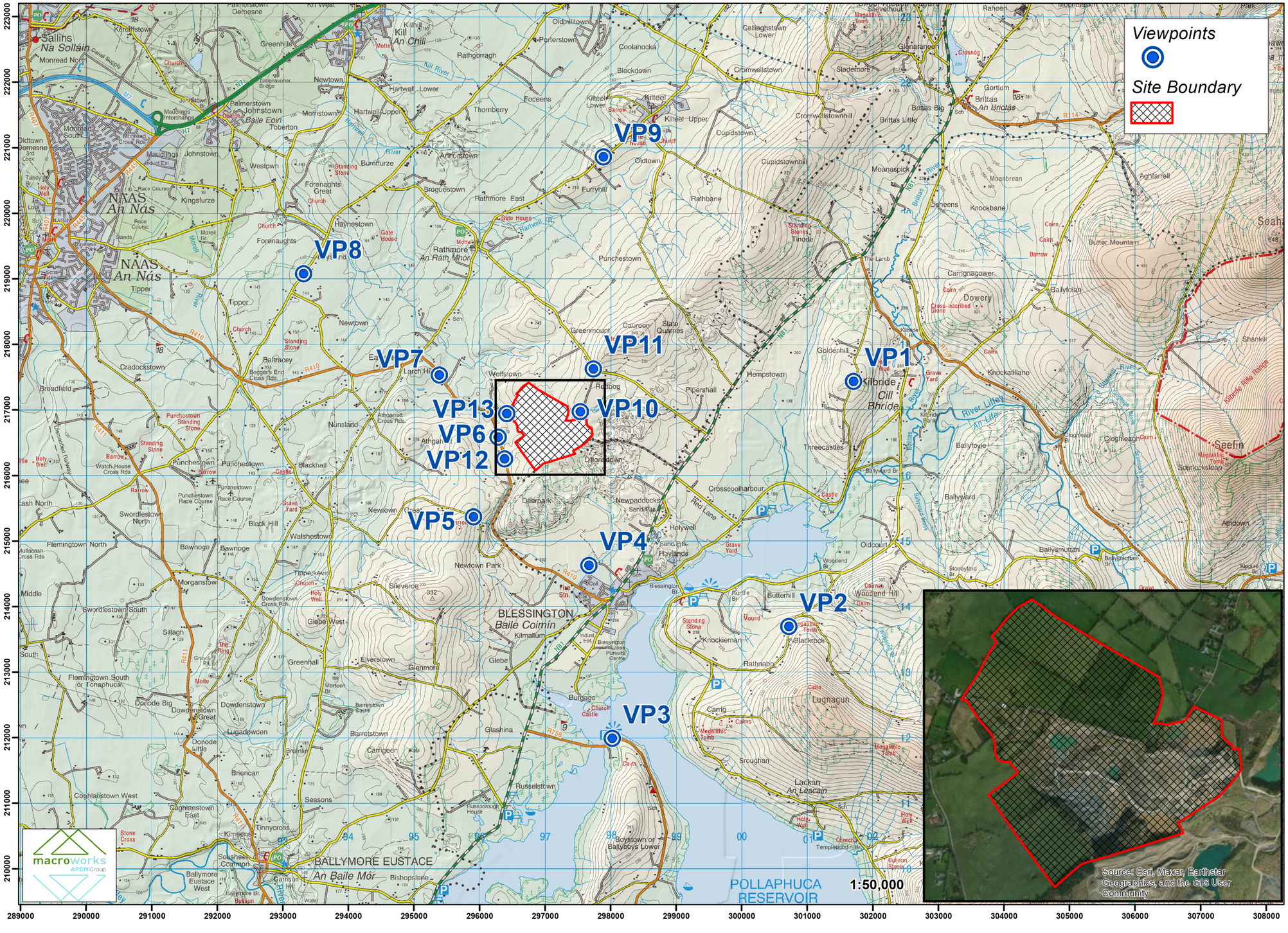
Viewpoint 11 - Existing View + Outline View
Viewpoint 11 - Montage View + Mitigated View

Viewpoint 12 - Existing View + Outline View
Viewpoint 12 - Montage View + Mitigated View

Viewpoint 13 - Existing View + Outline View
Viewpoint 13 - Montage View + Mitigated View

*** There is no Montage or Mitigated Montage for this viewpoint**

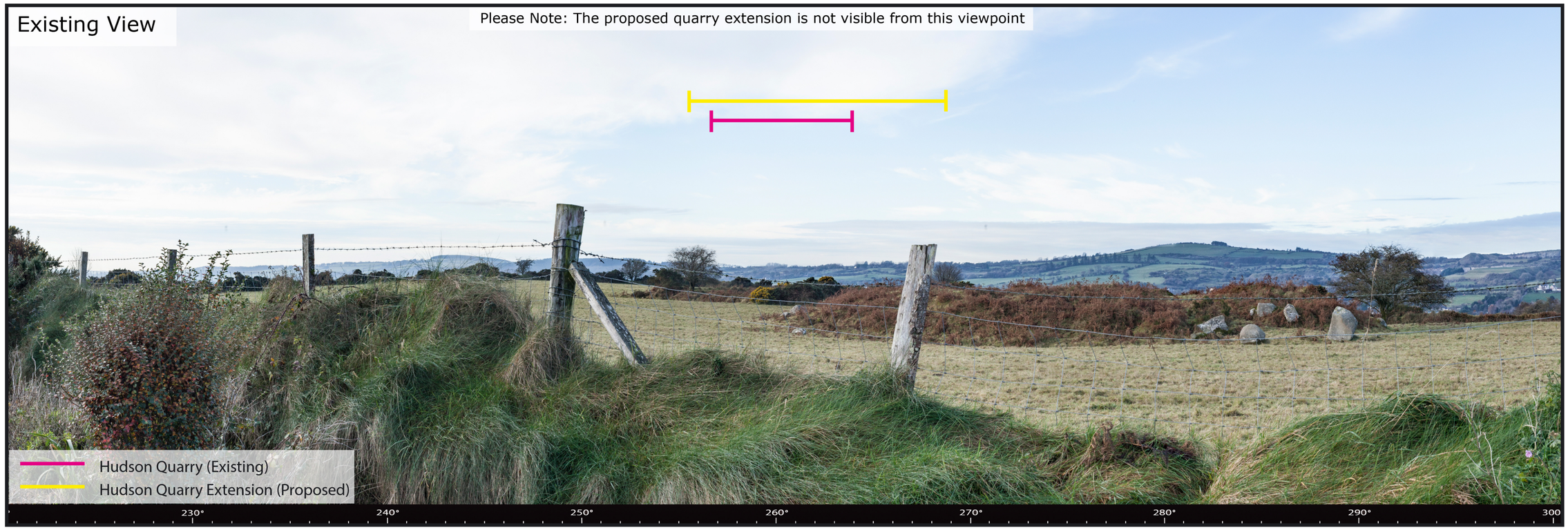
LVIA viewpoint locations selected for the Hudson Brothers Limited, Section 37L Application - EIAR



Hudson Brothers Limited, Section 37L Application - EIAR

Imagery depicting the view towards the site (Existing)

Elevated local road at Kilbride townland VP1



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

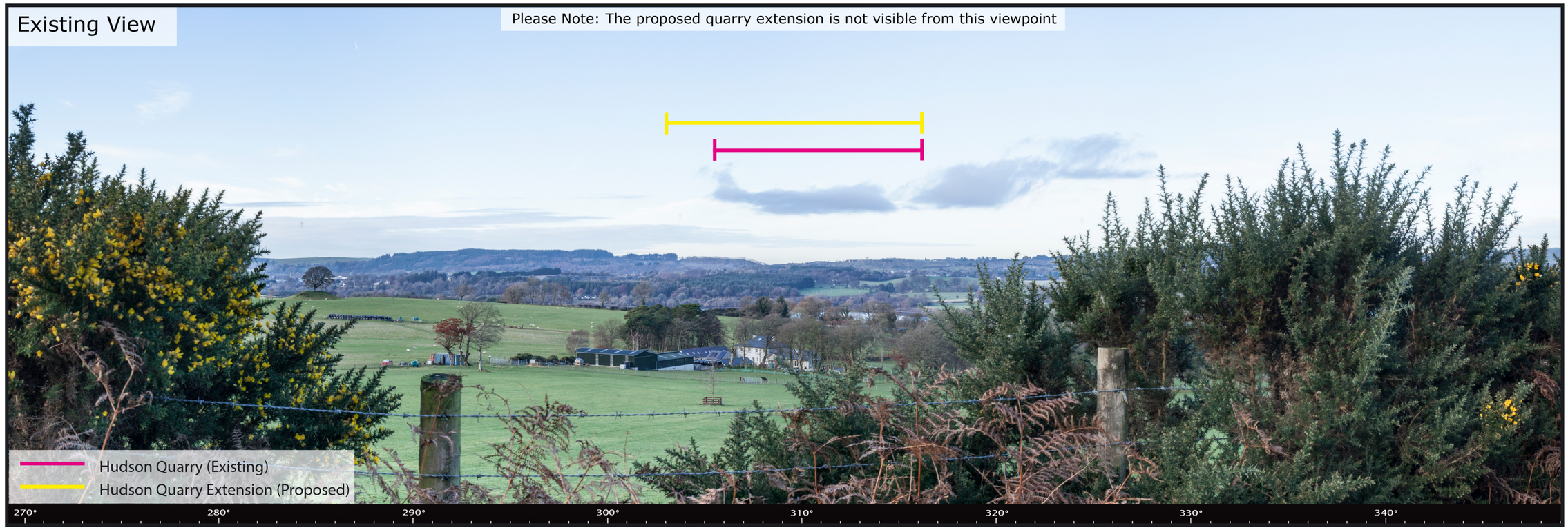
To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (ITM):	701639	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	717468	Camera:	Canon 1-D Mark II digital SLR	Time:	13:33
Direction of View	100° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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APEM Group

Imagery depicting the view towards the site (Existing)

Designated Wicklow County "Prospect" overlooking Poulaphuca Reservoir VP2



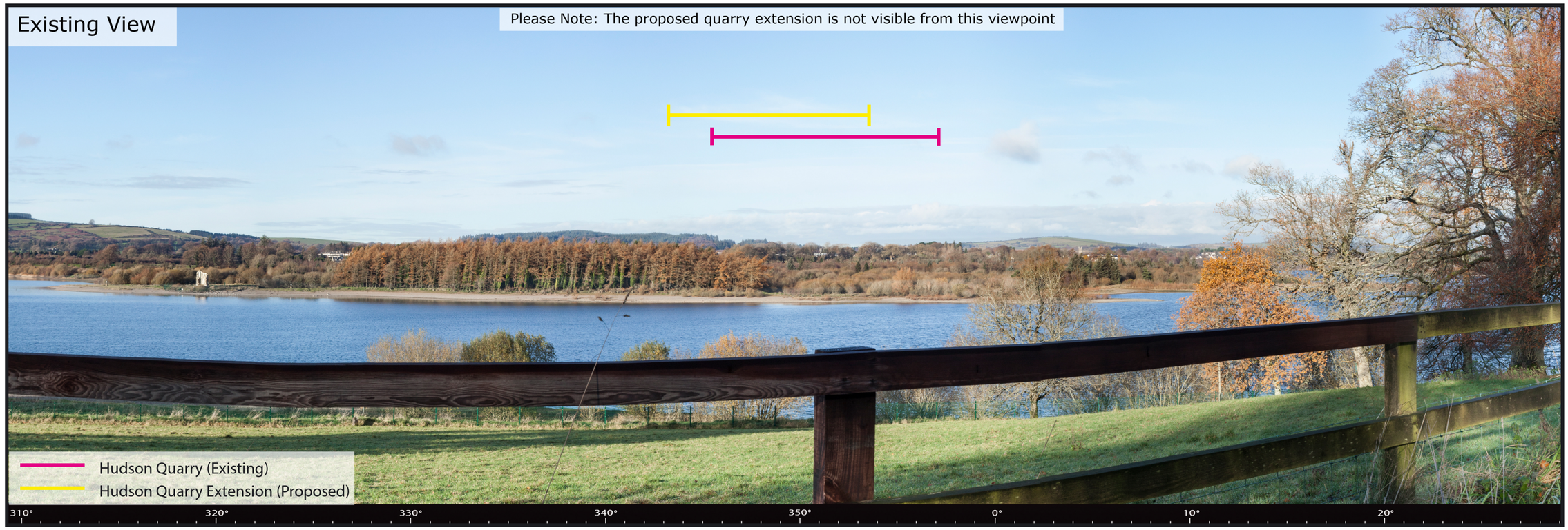
These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

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

Easting (ITM):	700649	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	713728	Camera:	Canon 1-D Mark II digital SLR	Time:	13:56
Direction of View	51° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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Designated Wicklow County "Prospect" at Baltyboys along the R758 VP3



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

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

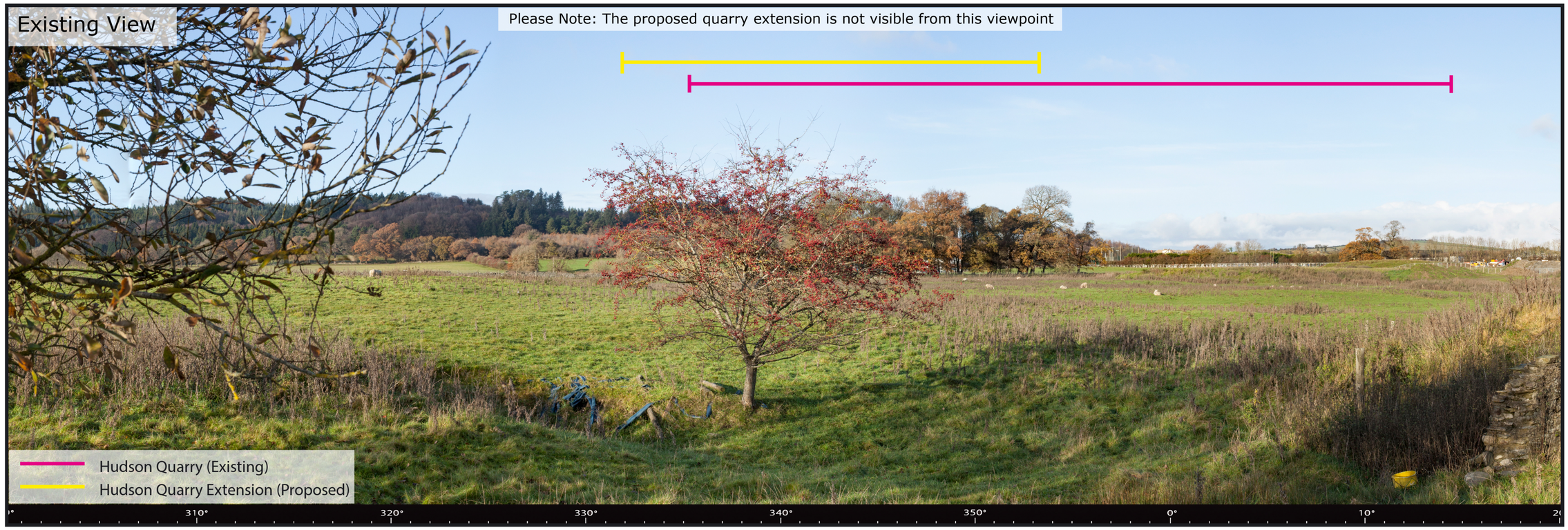
Easting (ITM):	697955	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	712023	Camera:	Canon 1-D Mark II digital SLR	Time:	14:52
Direction of View	16° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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Hudson Brothers Limited, Section 37L Application - EIAR

Imagery depicting the view towards the site (Existing)

Ring road along northern periphery of Blessington Town VP4



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

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

Easting (ITM):	697599	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	714662	Camera:	Canon 1-D Mark II digital SLR	Time:	15:06
Direction of View	20° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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

Elevated third class road southwest of site, at Newtownpark townland VP5





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

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

Easting (ITM):	695837	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	715403	Camera:	Canon 1-D Mark II digital SLR	Time:	15:15
Direction of View	43° E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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Imagery depicting the view towards the site (Mitigated Montage)

Elevated third class road southwest of site, at Newtownpark townland VP5



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

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

Easting (ITM):	695837	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	715403	Camera:	Canon 1-D Mark II digital SLR	Time:	15:15
Direction of View	43° E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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

R410 west of site, at Athgarrett townland VP6





These are 120° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 80°.

Easting (ITM):	696214	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	716616	Camera:	Canon 1-D Mark II digital SLR	Time:	15:33
Direction of View	78° E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	120°				

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Imagery depicting the view towards the site (Mitigated Montage)

R410 west of site, at Athgarrett townland VP6



These are 120° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 80°.

Easting (ITM):	696214	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	716616	Camera:	Canon 1-D Mark II digital SLR	Time:	15:33
Direction of View	78° E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	120°				

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R410 northwest of site near Carter's Hill VP7





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

Easting (ITM):	695319	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	717563	Camera:	Canon 1-D Mark II digital SLR	Time:	15:55
Direction of View 112°	E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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Imagery depicting the view towards the site (Mitigated Montage)

R410 northwest of site near Carter's Hill VP7



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

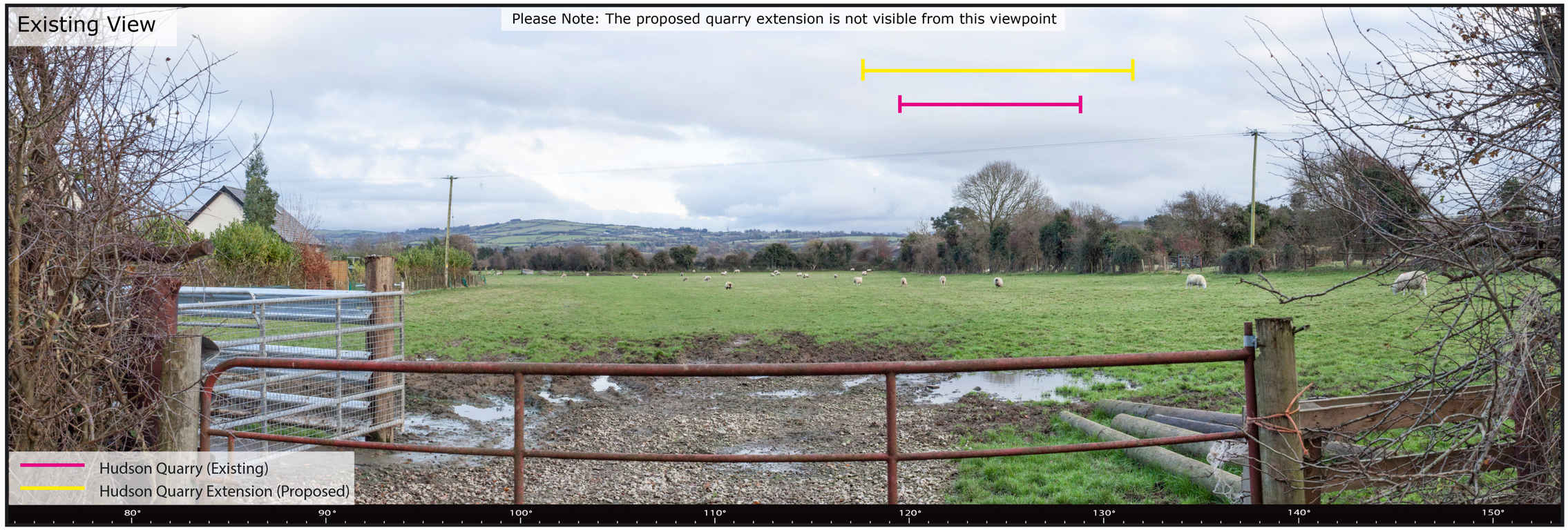
To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (ITM):	695319	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	717563	Camera:	Canon 1-D Mark II digital SLR	Time:	15:55
Direction of View 112°	E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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Imagery depicting the view towards the site (Existing)

Third class road at Baysland townland VP8



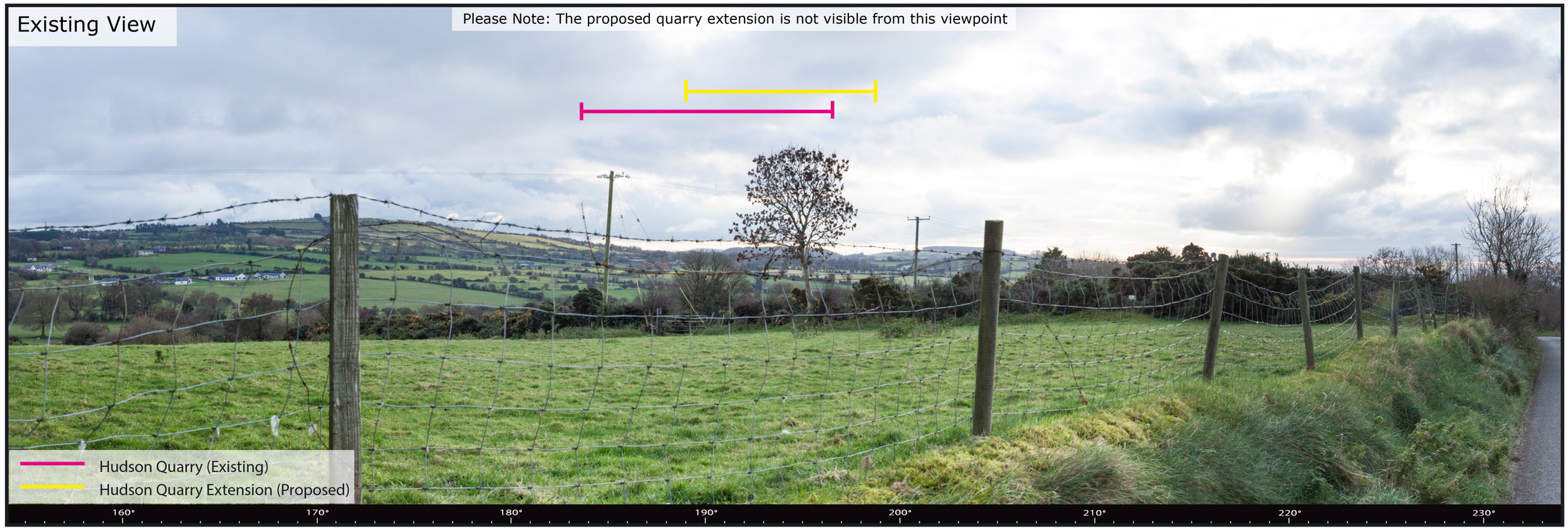
These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

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

Easting (ITM):	693246	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	719111	Camera:	Canon 1-D Mark II digital SLR	Time:	16:06
Direction of View 114°	E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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County Kildare scenic route, near Kilteel village VP9



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

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

Easting (ITM):	697817	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	720890	Camera:	Canon 1-D Mark II digital SLR	Time:	16:18
Direction of View	166° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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Imagery depicting the view towards the site (Existing)

Dead-end third class road east/north-east of site VP10



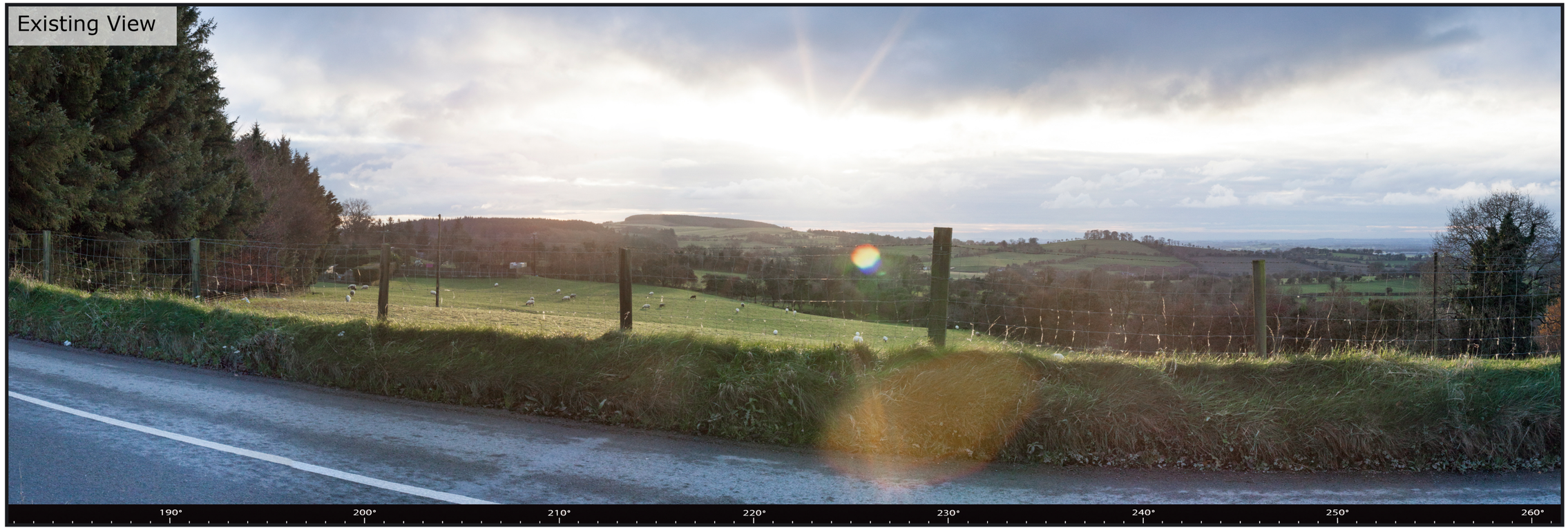
These are 100° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 60°.

Easting (ITM):	697469	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	717007	Camera:	Canon 1-D Mark II digital SLR	Time:	16:37
Direction of View	102° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	100°				

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County Kildare scenic route, at Greenmount townland VP11





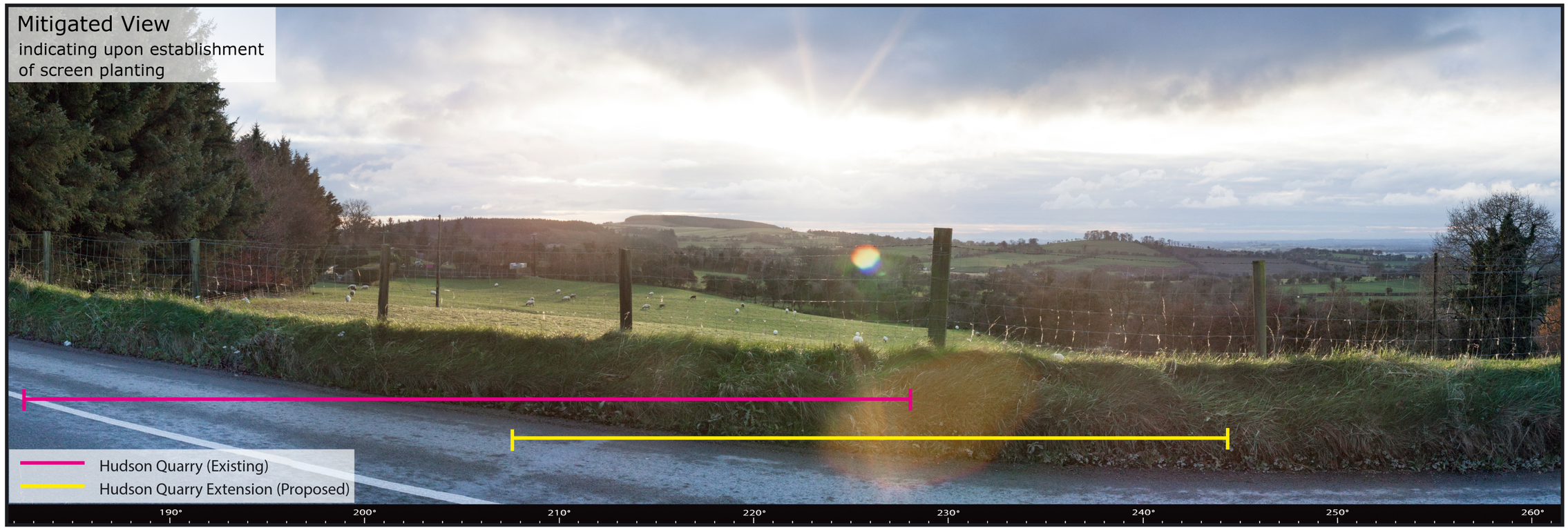
These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

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

Easting (ITM):	697667	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	717658	Camera:	Canon 1-D Mark II digital SLR	Time:	16:30
Direction of View	138° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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County Kildare scenic route, at Greenmount townland VP11



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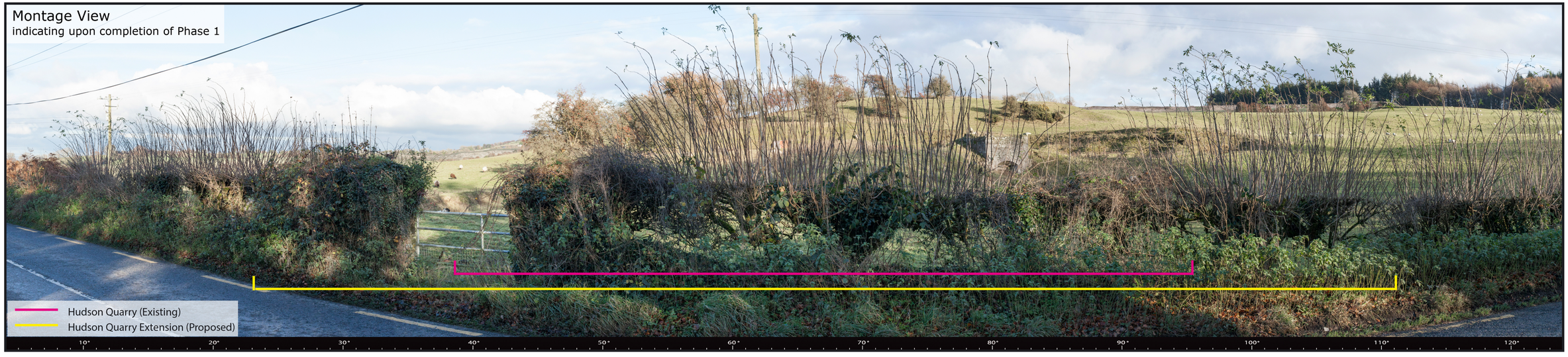
Easting (ITM):	697667	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	717658	Camera:	Canon 1-D Mark II digital SLR	Time:	16:30
Direction of View	138° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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

Residences along the R410, southwest of site VP12





These are 120° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

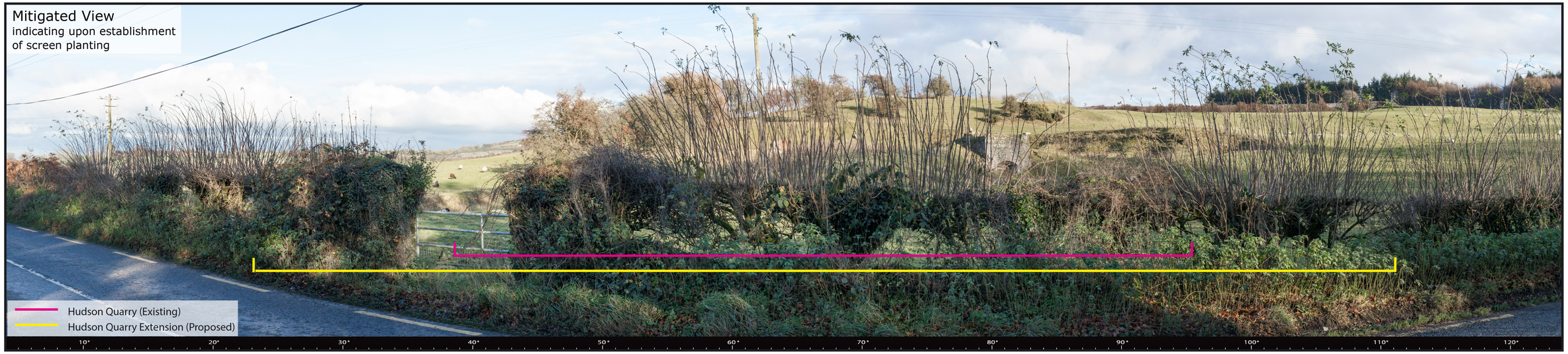
To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 80°.

Easting (ITM):	696310	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	716285	Camera:	Canon 1-D Mark II digital SLR	Time:	15:26
Direction of View	58° E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	120°				

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Imagery depicting the view towards the site (Mitigated Montage)

Residences along the R410, southwest of site VP12



These are 120° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 80°.

Easting (ITM):	696310	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	716285	Camera:	Canon 1-D Mark II digital SLR	Time:	15:26
Direction of View	58° E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	120°				

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

Residences along short cul de sac at Wolfestone townland VP13





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

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

Easting (ITM):	696347	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	716976	Camera:	Canon 1-D Mark II digital SLR	Time:	15:43
Direction of View	67° E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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Imagery depicting the view towards the site (Mitigated Montage)

Residences along short cul de sac at Wolfestone townland VP13



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

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Easting (ITM):	696347	Lens:	50mm / Full Frame Sensor	Date:	29/11/2023
Northing (ITM):	716976	Camera:	Canon 1-D Mark II digital SLR	Time:	15:43
Direction of View	67° E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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