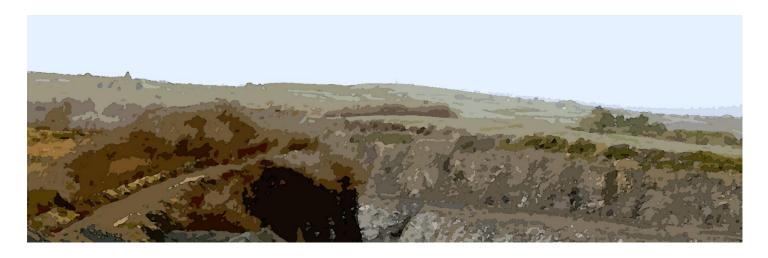
# **AUGHNACLIFFE QUARRY EXTENSION**

# Landscape and Visual Impact Assessment

P.E.C.E.N.E.D. 70/05/2023



Prepared By Mullin Design Associates Chartered Landscape Architects

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# 9 LANDSCAPE AND VISUAL IMPACT ASSESSMENT

### 9.1 Introduction

Mullin Design Associates, Chartered Landscape Architects, have conducted an assessment to evaluate the potential landscape and visual impacts/effects of a proposed extension to an existing hard rock quarry operation located in the townlands of Aghamore Upper and Derreenavoggy, Aughnacliffe, Co Longford. The development will involve the creation of permanent screen landforms, advanced woodland planting, and full restoration proposals that will integrate with an existing permitted operational area. The restoration plan will focus on habitat creation and other biodiversity benefits, including the creation of woodland, wetland, and species-rich grassland, as well as opportunities for future passive amenity such as permissive pathways.

The proposed application site is located approximately 2.26km southwest of Aughnacliffe and 8.0km northeast of Longford, accessed via the L5081 (refer to Figure 1.0 in Appendix 1 – Location and Context). The application area covers approximately 36.8 ha, with proposed extractive operations focused within a single distinct area. The proposed operations will include an establishment phase and full final site restoration.

The Landscape and Visual Assessment has been carried out by Pete Mullin, BA (Hons) CMLI, MILI, a Chartered Landscape Architect and the principal of Mullin Design Associates. With 30 years of experience in the profession, Pete is a recognised specialist within the mineral sector and has produced several hundred Landscape and Visual Impact Assessments.

This study has been structured in the following subsections:

**Methodology** – explanation of how the assessment has been undertaken, with reference to methodology, terminology, assessment criteria, and planning policy.

**Receiving Environment** - or Landscape and Visual Context – baseline description, classification and evaluation of the existing landscape character containing the application site and an assessment of visual amenity, with identification of visual receptors.

**Project Description** – description of aspects of the proposed development which have the potential to cause a landscape and/or visual effect and measures which will be incorporated to mitigate or avoid greater potential effects.

**Assessment of Impacts** – an outline of potential landscape and visual impacts with proposed mitigation measures and cumulative impacts.

# 9.2 Methodology

#### 9.2.1 Method of Assessment & Guidelines

PECENED. TOOS ROSS The landscape and visual assessment was carried out in accordance with the following best practice guidance documents:

- Guidelines for Landscape and Visual Impact Assessment (GLVIA), Third Edition, edited by The Landscape Institute and Institute of Environmental Management and Assessment (2013);
- Landscape Character Assessment Guidance (2002) Countryside Agency in conjunction with Scottish Natural Heritage;
- Landscape Character Topic papers 1 to 9 (Various Dates). Published by The Countryside Agency and Scottish Natural Heritage;
- Environmental Protection Agency (EPA) "Guidelines on the Information to be contained in Environmental Impact Assessments" May 2002
- In addition, the EPA are currently revising the Guidelines and Advice Notes, therefore the assessment also follows the Guidelines on Information to be contained in Environmental Impact Assessment Reports (EIAR) May 2022.
- Longford County Development Plan 2021-2027;
- Ordnance Survey mapping; and
- Digital sources of mapping and aerial photography.

Finally, as recommended within the Guidelines for Landscape and Visual Impact Assessment (GLVIA), Third Edition, the landscape and visual assessment incorporates both desk and fieldbased studies, and has been compiled and interpreted by an experienced landscape professional.

# 9.2.2 Assessment Sequence

			lack
2.2	Assessment Sequence		Analysis of Baseline data, maps and plans; Consultation of Policy Documentation;
nis lar	ndscape & visual Assessment wa	s undert	aken in the following stages:
•	Desk Study (Stage 1)	1	Analysis of Baseline data, maps and plans;
		2	Consultation of Policy Documentation;
		3	Zone of Visual Influence (Theoretical);
		4	Identification of Potential Visual Receptors;
•	Field Study	5	Confirmation of Visual Receptors;
		6	Photo Survey from Visual Receptors;
		7	Zone of Visual Influence (Actual/Field);
		8	Confirmation of Landscape Character;
		9	Establish Landscape Sensitivity;
•	Desk Study (Stage 2)	10	Analysis of Field Survey data;
		11	Viewpoint Analysis;
		12	Consider Mitigation and,
•	Desk Study (Stage 3)	13	Report Preparation.

# 9.2.3 Assessment Criteria

The aim of this landscape and visual impact assessment is to identify, evaluate and predict potential key effects arising from the proposed development. The assessment combines sensitivity with predicted magnitude of change, to establish the significance of residual landscape and visual effects. These are based on pre-defined criteria as set out in Tables 9.1 to 9.5 held at Appendix 9.2.

# 9.3 Receiving Environment

The Landscape is about the relationship between people and place. Understanding the character of a landscape allows us to identify its 'sense of place', and the things that distinguish it from other places. All landscape has economic, social and environmental value; landscape characterisation provides a mechanism and baseline from which landscapes can be valued and their sensitivity and capacity to accommodate various development typologies gauged. Collectively this information assists with positive decision making when considering future appearance and function. This section establishes the landscape and visual context (or baseline) of the proposed development.

#### 9.3.1 Desk Study

Desk studies generally involve analysis and interpretation of available print material relating to a site's context and the proposed development within that context. It is a way of focusing the study prior to detailed field work and landscape investigation. In this instance, variable scale Ordnance Survey maps and satellite imagery were studied along with 3D Data Terrain Models.

Although general in nature the desk study stage of the project assists in the clarification of the following considerations;

• The general topography, vegetative cover, visible water, and sites of potential historic or cultural interest.

Study of the available mapping and aerial imagery indicates that the site is located in rolling farmland interspersed with large areas of coniferous plantation.

Approx. 3.5km to the Northeast is Lough Gowra which forms a complex series of waterbodies and forms the primary water catchment for part of the site.

Several historic/archaeological sites including Raths, Holywells and Cairns are documented around the region. Their presence is noted within the LVIA due to the potential for them to be visitor attractions and therefore function as visual receptors.

• Identification of primary investigation area or Zone of Theoretical Visual Influence (ZTVI).

The ZTVI is calculated and generated using topographical data only, and it is generally accepted that such models do not necessarily reflect the actual visual catchment perceived on the ground, for example woodland and hedgerows in the immediate area will have a screening effect which will not be interpreted by the ZTVI model. It is therefore crucial that

the topographically generated ZTVI is used as a basic starting point and that it is refined and considered through detailed site survey and analysis.

The ZTVI suggests the majority of potential visibility will be within 2km of the site with further potential visibility suggested in a Northeasterly direction and from high land associated with Corn Hill to the southeast. It is also clear with such a significant plantation of forestry cover present in the vicinity of the site that the extent of potential visibility will inevitably be much less than that illustrated by the ZTVI.

# The potential relationship between the development and any residential settlements, dwellings and the surrounding transportation network.

Although not all dwellings are individually identifiable on the OS 1:50000 mapping, it is sufficiently detailed for the desk study to reveal that the site is located in an area which has a reasonably low residency, with main populations located at Aughnacliffe.

Elsewhere, the settlement pattern is noted as consisting of sporadic clusters and one off residential properties located along the surrounding minor roads network.

# • Landscape & Visual Designations, Protected and Significant viewpoints.

The site does not lie within a landscape designation.

The Longford Development Plan 2021-2027 identifies a number of vantage points which offer attractive views from hilltops and upland areas, along river valleys and the boglands — they offer either Full (uninterrupted) views or Intermittent (broken or sporadic) views. There are a number of these within 5km of the subject site.

The minor road along the Northeastern boundary of the site is part of the county network of cycle routes following numerous minor country roads.

#### 9.3.2 Field Study

Desk studies are important to establish the basic approach to landscape and visual assessment, and setting out principle issues/ areas to be investigated. However, it is only through field work that an accurate understanding of potential influence of a proposed development can be fully determined.

Most importantly field studies help to clarify the eye level visual envelope of the development. This exercise refines the computer generated ZTVI models to more accurately reflect the actual visual envelope of the development experience on the ground.

The area was visited and surveyed during the winter season (Jan 2023) with foliage cover at its lightest.

It should be noted that as foliage cover increases into the spring and summer months reducing potential visibility of the site . The influence of foliage and its seasonal variability has been factored into the findings, with a worst case scenario considered as the baseline – i.e. vegetation cover at its lightest.

In addition to the information revealed during the desktop analysis, the field study work investigates and considers a number of critical issues, which have also been factored into the assessment conclusions:

- Confirmation of the landscape character associated with the study area, the sense of place,
   quality and value of the landscape within the visual envelope;
- Localised topography variation and woodland / hedgerow cover;
- Effects of localised planting, walls, earthworks;
- Relationship of the existing permitted works and other operations / development within the area;
- Consideration of operations in low light conditions;
- Potential eye level perceptions (Local residents Frequent, Passive Tourism Occasional);
   and
- General landscape dynamic (assessing the potential pressures and evolution of surrounding landscape).

### 9.3.3 Baseline Study – Site description

The overall application site is circa 36.8ha in size and is comprised of much of the existing quarrying operations and permitted mineral extraction area. The extension area would focus on lands to the South / Southwest of the existing operation across an area of agricultural lands.

Overall the site and the existing operation is relatively elevated, with the lowest point of the existing operation (other than the quarry void itself) at the access onto the L5081 c.160mAOD.

The highest point of the operation is within the proposed extension area to the South at c.180mAOD. The application area incorporates the majority of the existing extraction and processing works including stockpiles.

Currently the lands for the proposed lateral extension are agriculturally managed, composed of approx. 10 small fields set in a combination of improved grazing pasture and unimproved pasture subdivided by fragmented native thorn hedgerows.

# 9.3.4 Baseline Study - Landscape Character

Longford County Development Plan 2021 – 2027 contains a section on Landscape Character. This broadly divides the county into 7 Landscape Character Units namely.

- Unit 1 Northern Drumlin Lakeland.
- Unit 2 Northern Upland. (SITE)
- Unit 3 Shannon Basin/Lough Ree.
- Unit 4 Central Corridor.
- Unit 5 Inny Basin.
- Unit 6 Peatlands.
- Unit 7 Open Agricultural.

Landscape Character Unit 2 -Northern Upland (Appendix 9.3) (Longford Co Dev Plan 2021 - 2027)

This unit consists of the central northern section of the County, stretching from Drumlish in the west to Moyne in the north, Esker in the south and including the towns of Granard and Abbeylara in the east, up to and including the county boundary with Cavan.

Many of the important views listed in the County Development Plan are located in this landscape unit. The majority of this unit lies above the 100m contour line to the north of the County and contains Corn Hill, Edenmore and Crott. Visible from a significant distance, given the flat nature of the surrounding Midland and Border Counties, the highest point is 278m at Corn Hill. There is high intervisibility between this area and other isolated upland areas such as Ardagh Mountain in the south of the County, the Hill of Uisneach in Westmeath and Sliabh Bán in County Roscommon.

The County Development Plan describes how sensitivity of much of this landscape can be classified as MEDIUM to HIGH. The County Development Plan also outlines the following threats and opportunities with regards to landscape:

#### **Threats**

- Potential future development of large-scale utility infrastructure in the upland areas.
- Encroachment of forestry onto important upland slopes and interference with designated scenic views.
- Potential loss of material and/or integrity of setting of archaeological features and artefacts.
- Potential loss of character of existing towns and villages.
- Further loss of population in Granard creating settlement pressure in surrounding rural area and historic landscape.
- Encroachment on protected views by dwelling units.

#### Opportunities

- Towns and villages throughout the unit are capable of accommodating substantial additional development to remove pressure from sensitive areas.
- Potential for further tourism related development, particularly in Granard.

#### 9.3.5 Baseline Study – Visual

When establishing the extent of a development's potential visibility there are a number of recognised stages:

- The first is generally conducted through desk study via utilisation of digital terrain models or
  printed mapping to generate a ZTVI analysis. This provides the assessor with a worst-case
  scenario of potential visibility, recognising that the exercise does not account for the
  potential screening influences of vegetation, manmade structures or indeed low level
  localised topographical variation.
- With the ZTVI prepared, the next stage is to consider potential visual receptors. Again, this
  can initially be carried out as a desk study to identify potential properties, road intersections,
  historic sites or OS marked viewpoints etc which may be important to the assessment.
- The next stage generally is to test and refine desk study analysis in the field. Consideration of the surrounding landscape from a high point within the proposed development site is often a logical starting point for field work. From an elevated location, the assessor (comparing with ZTVI mapping) can identify points in the wider landscape from which the site is most likely to be visible. This exercise is known as intervisibility and forms the basis of defining the actual visual envelope. The intervisibility for the site is shown on Figure 9.4.

The final stage is to consider visibility of the subject site from the surrounding landscape.
 This generally involves assessment and photography from fixed key locations as identified, along with sequential views experienced along pedestrian and vehicle routes.

It would be impractical (indeed unnecessary) to assess potential visibility from every possible angion potential viewpoint. Therefore, the recognised practice is to identify a selection of viewpoints considered representative of a range of views and viewer types, including residences, transport routes, recreational routes, visitor attractions (including historic monuments), main landscape character types and a variety of distances, aspects, elevations, extents, and sequential routes. These are known as 'key visual receptors' and provide a reliable sample of potential impressions across the study area. Based on field survey and analysis, Figure 9.3 illustrates the identified ZTVI created by the proposed development with Table 9.7 below listing, and Figure 9.5 illustrating, the location of key visual receptors identified for the study.

**Table 9.7 – Key Visual Receptors** 

<b>Grid Reference</b>	Х	Υ	Latitude	Longitude	Туре
N 24063 85734	224063	285734	53.82075	-7.63533	Intervisibility
N 24086 86388	224086	286388	53.82663	-7.63493	Local Road / Cycle Route
N 24553 85802	224553	285802	53.82134	-7.62788	Local Road / Cycle Route
N 23809 85527	223809	285527	53.8189	-7.63919	Local Road / Oblique Residential
N 24439 84268	224439	284268	53.80756	-7.62973	Local Road / Oblique Residential
N 26120 89107	226120	289107	53.85096	-7.60381	Local Road / Oblique Residential
N 25623 89414	225623	289414	53.85374	-7.61133	Local Road / Church
N 19227 84338	219227	284338	53.80841	-7.70885	Access Track Off Designated Scenic Road and high landmark
	N 24063 85734 N 24086 86388 N 24553 85802 N 23809 85527 N 24439 84268 N 26120 89107 N 25623 89414	N 24063 85734 224063 N 24086 86388 224086 N 24553 85802 224553 N 23809 85527 223809 N 24439 84268 224439 N 26120 89107 226120 N 25623 89414 225623	N 24063 85734 224063 285734 N 24086 86388 224086 286388 N 24553 85802 224553 285802 N 23809 85527 223809 285527 N 24439 84268 224439 284268 N 26120 89107 226120 289107 N 25623 89414 225623 289414	N 24063 85734       224063       285734       53.82075         N 24086 86388       224086       286388       53.82663         N 24553 85802       224553       285802       53.82134         N 23809 85527       223809       285527       53.8189         N 24439 84268       224439       284268       53.80756         N 26120 89107       226120       289107       53.85096         N 25623 89414       225623       289414       53.85374	N 24063 85734 224063 285734 53.82075 -7.63533 N 24086 86388 224086 286388 53.82663 -7.63493 N 24553 85802 224553 285802 53.82134 -7.62788 N 23809 85527 223809 285527 53.8189 -7.63919 N 24439 84268 224439 284268 53.80756 -7.62973 N 26120 89107 226120 289107 53.85096 -7.60381 N 25623 89414 225623 289414 53.85374 -7.61133

The Longford Development Plan 2021-2027 identifies a number of vantage points which offer attractive views from hilltops and upland areas, along river valleys and the boglands There are a number of these within 5km of the subject site, however as illustrated by the ZTVI (Figure 9.3) views of the application area would not be possible from the majority of these vantage points due to the existing topography.

In addition, from sections which present potential visibility, field work reveals significant screening potential from existing intervening vegetation.

It should be noted as a basic visual principle, any type of development in the landscape will become less perceptible with distance. This simply equates to a reduction of the significance of potential visual impacts as one moves further away. The following distance categories have been considered appropriate.

#### Viewpoint Distance 0-2km

It is generally accepted that a development located approximately 2km or less from a viewer would be close enough to allow identification of some detail. Any positions within this range with open uninterrupted views of a development would generally receive the greatest visual impacts.

#### Viewpoint Distance 2-5km

At this distance, visibility of a development site becomes more general, with viewers in open uninterrupted positions able to identify general form, colour/tone and textural contrast, but losing the more focused detail achievable from closer positions. Effects at this distance are generally less than those found between 0-2km.

#### *Viewpoint Distance 5-15km+*

Beyond 5km visual prominence quickly diminishes. Certain circumstances/light conditions etc. have potential to allow certain types of development and material finishes to be perceived. The development increasingly becomes part of the general background/distance views. Upwards of 15km distance and developments quickly become minor features within the landscape and considered imperceptible to the average human eye. The development in effect becomes part of the general background/distance views.

This visibility assessment concentrates primarily on the first distance category (up to 2km), focusing on publicly accessible locations such as roads, access lanes and public rights of way, along with residential properties; and sites of public interest. A number of receptors were also considered within the second category (up to 5km).

Figures 9.5 to 9.13 illustrate the key visual receptors identified, with visual assessment from each included.

# 9.4 Characteristics of the Proposed Development

The sequence, position and extent of the proposal has been designed with direct input from the project landscape architect to ensure that the operation incorporates primary mitigation measures to minimise potential landscape and visual effects.

This application therefore includes direct design input which has included:

- Design and positioning of advance screening, including height of landform berms and extent of woodland / hedgerow cover;
- Identification and agreement of extraction limit;
- · Agreement of final quarry shape and form;
- Identification and agreement of stand offs and buffers;
- Agreement of phasing proposals including direction of extraction; and
- Agreement for restoration solution.

Implementation would generally follow the phases / stages below:

#### Phase 1 Establishment

Whilst extractive operations are well established at this site – the application would see specific additional screening measures introduced as part of the establishment phase. These are not only designed to mitigate potential impacts generated by the proposed extension works, but would further mitigate impacts arising from the existing permitted works.

- Initial topsoil / overburden strip to be focused in an easterly / South-easterly direction with materials relocated to the southern boundaries to create a substantial landform /berm screen.
- Once berms reach their proposed height they will be capped with topsoil, cultivated and planting during the first available season with fast growing native woodland species of which +20% will be evergreen as specified on the restoration scheme.
- Additional hedgerow planting would be introduced along the Northern boundary to further strengthen screening to receptors to the North.
- All stripped topsoils and overburden to be kept separate.
- All lands disturbed during establishment of advance screening measures to be grass seeded as specified.

#### Phase 2 Phased Extraction

With the establishment phase complete, extractive operations would commence in an southern/ easterly direction. This will involve sequential overburden stripping campaigns, with a soils and overburden deposited to the south as illustrated in the operational plans.

#### Phase 3 Restoration

With extraction complete all processing operations at the site would cease, with plant and structures removed off site.

- It is projected that the void would gradually rebound and fill with ground and rainwater to a level of 160mAOD, creating a waterbody approx. 13Ha in area.
- The proposed final restoration concept as shown in Figure 9.14 would be implemented.
- In addition to a waterbody the restoration will see the establishment of new hedgerows,
   woodland blocks and area of species rich grassland.

# 9.5 Identification of Likely Significant Impacts

#### 9.5.1 Landscape Impacts

Landscape assessment attempts to establish the sensitivity of specific landscape resources and describe the significance of changes to that landscape as a result of a proposed development. They should also identify opportunities during the design process focused on minimising potential landscape and visual impacts (mitigation) through positive iterative design intervention. This can include exerting influence on the development layout and arrangement, determining sympathetic approaches to realising the development proposal, i.e. Suggested operational sequence /phasing, advance screening, planting etc.

Landscape and visual impacts are intrinsically linked; therefore, measures to reduce landscape impacts such as the introduction of green infrastructure will generally assist with reduction of visual impacts and vice versa.

It is understood that development of this type results in permanent change, and may fundamentally alter the physical appearance of a landscape. However, it should be emphasized that, altered appearance does not necessarily equate to permanent negative impact to landscape character. It is therefore essential that a holistic view is taken when assessing proposals of this nature, not only considering the potential quarry impact during extractive operations but importantly how they will appear when extraction has ceased and restoration proposals are fully implemented and established. Whilst there are a number of Regional and Local Landscape Character Areas within 5km of the subject site – for the purpose of this assessment effects will be considered on the landscape resource as a whole rather than separated into individual character area.

Assessment of potential landscape impacts have been considered in the following phases:-

- 1 Establishment Phase
- 2 Operational Phase (Extractive Operations)
- 3 Restoration Phase (Post Extractive Operations)

# 9.5.2 Landscape Impacts - Establishment Phase

The Assessment Criteria Tables 9.1 - 9.5 within Appendix 9.2 provide definitions of sensitivity and magnitude of change which in turn establish a mechanism to determine potential significance of landscape and visual effects/ impact.

#### <u>Landscape Sensitivity Criteria – Establishment Phase</u>

The overall sensitivity of the landscape remains the same whether considering the establishment, operational or restoration phases of the development.

With reference to Table 9.1 'Landscape Sensitivity Criteria' and the County Landscape Character Assessment it is considered that the definition of **Medium** is most suited to the landscape associated with the subject site.

<u>Medium</u> - Landscape characteristics or features with moderate capacity to absorb change without fundamentally altering their present character.

Landscape designated for its local landscape value or a regional designated landscape where the characteristics and qualities that led to the designation of the area are less apparent or are partially eroded or an undesignated landscape which may be valued locally – for example an important open space.

An example of a landscape or a set of features which is neutral or mixed character.

Landscape sensitivity is combined with the magnitude of change generated by a development to establish the overall impact / effect.

In addition to the definitions outlined within the criteria tables, magnitude of change can also be influenced by the following:

- Potential for mitigation including advanced screening measures
- Development typology, its phasing and duration.
- The population numbers impacted are considered low.
- Full decommissioning and extent and effectiveness of restoration proposals.

#### <u>Landscape Magnitude Criteria – Establishment Phase</u>

The Establishment phase in advance of extraction will include stripping of topsoil and overburden materials to be relocated to form seeded and planted boundary screen earthworks.

Whilst these operations are proposed to reduce visibility and protect views, it is expected that their construction will themselves generate short term adverse effects. In the context of the site landscape character setting and reference to Table 9.3 'Landscape Magnitude Criteria', during the establishment phase the magnitude of change is predicted to be in the 'Medium' category as defined in Table 9.3 (extract of definition below):-

Noticeable change to a significant proportion of the landscape affecting some key <u>Medium</u> characteristics and the experience of the landscape; and Introduction of some uncharacteristic ED. 70/05/3 elements.

Table 9.8 - Assessment of landscape impacts (Establishment Phase)

		Sensitivity				05
		High	High - Medium	Medium	Medium – Low	Low
	Very High	Major	$\leftarrow \rightarrow$	Major	$\leftarrow \rightarrow$	Mod-major
e e	High	Major	$\leftarrow \rightarrow$	Mod-major	$\leftarrow \rightarrow$	Moderate
Magnitude	Medium	Mod-major	$\leftarrow \rightarrow$	Moderate	$\leftarrow \rightarrow$	Minor
Σ	Low	Moderate	$\leftarrow \rightarrow$	Minor	$\leftarrow \rightarrow$	Negligible
	Very Low	Minor	$\leftarrow \rightarrow$	Negligible	$\leftarrow \rightarrow$	Negligible

Therefore with Medium landscape sensitivity combined with Medium magnitude of change it is considered that the proposed development would generate a Moderate adverse impact on the landscape character conditions during the Establishment Phase.

#### 9.5.3 Landscape Impacts -Operational / Extraction Phases

The Assessment Criteria Tables 9.1 – 9.5 within Appendix 9.2 provide definitions of sensitivity and magnitude of change which in turn establish a mechanism to determine potential significance of landscape and visual effects/ impact.

# <u>Landscape Sensitivity Criteria – Operational / Extraction Phases</u>

As above the Landscape sensitivity remains the same whether considering the establishment, operational or restoration phases of the development. Table 9.1 'Landscape Sensitivity Criteria' it is considered that the definition of Medium is most suited to the landscape associated with the subject site.

- Landscape characteristics or features with moderate capacity to absorb change Medium without fundamentally altering their present character.

Landscape designated for its local landscape value or a regional designated landscape where the characteristics and qualities that led to the designation of the area are less apparent or are partially eroded or an undesignated landscape which may be valued locally – for example an important open space.

An example of a landscape or a set of features which is neutral or mixed character.

Landscape sensitivity is combined with the magnitude of change generated by a development to establish the overall impact / effect.

In addition to the definitions outlined within the criteria tables, magnitude of change can also be influenced by the following:

- Potential for mitigation including advanced screening measures
- Development typology, its phasing and duration limited.
- The population numbers impacted are considered low.
- Full decommissioning and extent and effectiveness of restoration proposals.

#### <u>Landscape Magnitude Criteria – Operational / Extraction Phases</u>

The operational phases of this development involves the sequential stripping of overburden and topsoils and extraction of mineral resource.

Whilst screening measures would be successfully implemented as part of the establishment phase, it will take a period of time (c.3 - 5 years) for planting to thicken and become fully effective in terms of screening, it is therefore considered that the category of **Low** as defined in Table 9.3 'Landscape Magnitude Criteria' is most appropriate:-

<u>Low</u> Minor change, affecting some characteristics and the experience of the landscape to an extent; and, Introduction of elements that are not uncharacteristic.

Table 9.9 - Assessment of landscape impacts (Operations / Extraction Phases)

		Sensitivity			EL.	
		High	High - Medium	Medium	Medium – Low	Løw
	Very High	Major	$\leftarrow \rightarrow$	Major	$\leftarrow \rightarrow$	Mod-major
e e	High	Major	$\leftarrow \rightarrow$	Mod-major	$\leftarrow \rightarrow$	Moderate
Magnitude	Medium	Mod-major	$\leftarrow \rightarrow$	Moderate	$\leftarrow \rightarrow$	Minor
Σ	Low	Moderate	$\leftarrow \rightarrow$	Minor	$\leftarrow \rightarrow$	Negligible
	Very Low	Minor	$\leftarrow \rightarrow$	Negligible	$\leftarrow \rightarrow$	Negligible

Therefore with **Medium** landscape sensitivity combined with **Low** magnitude of change it is considered that the proposed development would generate a **Minor** adverse impact on the landscape character area during the operational phase.

# 9.5.4 Landscape Impacts - Restoration Phase

The Assessment Criteria Tables 9.1 - 9.5 within Appendix 9.2 provide definitions of sensitivity and magnitude of change which in turn establish a mechanism to determine potential significance of landscape and visual effects/ impact.

#### Landscape Sensitivity Criteria – Restoration Phase

Landscape sensitivity remains the same whether considering the establishment, operational or restoration phases.

As above with reference to Table 9.1 'Landscape Sensitivity Criteria' it is considered that the definition of **Medium** is most suited to the landscape associated with the subject site.

<u>Medium</u> - Landscape characteristics or features with moderate capacity to absorb change without fundamentally altering their present character.

Landscape designated for its local landscape value or a regional designated landscape where the characteristics and qualities that led to the designation of the area are less apparent or are partially eroded or an undesignated landscape which may be valued locally – for example an important open space.

An example of a landscape or a set of features which is neutral or mixed character.

Landscape sensitivity is combined with the magnitude of change generated by a development to establish the overall impact / effect. In addition to the definitions outlined within the criteria tables, magnitude of change can also be influenced by the following:

- Potential for mitigation including advanced screening measures
- Development typology, its phasing and duration.
- The population numbers impacted are considered low.
- Full decommissioning and extent and effectiveness of restoration proposals.

#### <u>Landscape Magnitude Criteria – Restoration Phase</u>

With extractive operations ended the final stages of restoration can also be complete. Final restoration will offer a landscape typology focused on biodiversity, with significant screening woodland retained, and further woodland encouraged (Planted and Natural regeneration) along redundant benches and overburden area. With all operation ceased and processing plant decommissioned and removed, the void area would fill with groundwater and rainwater. This would be allowed to fill to c160m AOD. Post operations there is potential for introduction of passive amenity features such as walking routes, bird hides and nature trails.

With restoration complete the 'Landscape Magnitude of Change' diminishes significantly, falling within the Very low category as defined below:-

**Very Low** Little perceptible change.

Table 9.10 - Assessment of landscape impacts (Restoration Phase)

				Sensitivity	<u> </u>	E/L
		High	High - Medium	Medium	Medium - Low	Low Os
	Very High	Major	$\leftarrow \rightarrow$	Major	$\leftarrow \rightarrow$	Mod-major
Şe	High	Major	$\leftarrow \rightarrow$	Mod-major	$\leftarrow \rightarrow$	Moderate
Magnitude	Medium	Mod-major	$\leftarrow \rightarrow$	Moderate	$\leftarrow \rightarrow$	Minor
Σ	Low	Moderate	$\leftarrow \rightarrow$	Minor	$\leftarrow \rightarrow$	Negligible
	Very Low	Minor	$\leftarrow \rightarrow$	Negligible	$\leftarrow \rightarrow$	Negligible

Post restoration as illustrated in Table 9.10 above, the predicted magnitude of change to this landscape character area is expected to be **Very Low.** The resultant landscape impact following the full cessation of operations and establishment of the proposed restored landscape is predicted to be **Negligible.** 

None of the potential landscape effects are predicted to fall within the **Significant** range.

### 9.5.5 Visual Impacts

Assessment of potential visual impacts have been considered from several visual receptors within the ZTVI. Effects are separated into the following phases:-

- 1 Establishment Phase
- 2 Operational Phase (Extractive Operations)
- 3 Restoration Phase (Post Extractive Operations)

### 9.5.6 Visual Impacts - Establishment Phase

Aspects of the establishment phase of a quarry development are generally most visually disruptive as a site moves from its current non quarried condition into an active quarry operation. However much of the disturbance caused during this phase will occur as a result of the construction of advanced screening measures such as earthworks and screen planting. Although generally short duration these measures are considered necessary and designed to greatly reduce and mitigate potential longer duration negative visual effects arising as a result of subsequent operational / extractive phases.

Potential visual effects have been determined through assessment from specific viewpoints. Figures 9.6 to 9.11. These figures illustrate key identified visual receptors, with potential visual impacts assessed from each position. Note: Further detail is contained within individual figures. Table 9.11 below provides a summary of predicted visual impacts from each of the selected viewpoints during the Establishment Phase.

These viewpoints are representative of worst-case scenario views of the proposed development, therefore, it is important to emphasise that as viewers move away from these receptors, the magnitude of change and potential visual effects will generally diminish. Table 9.11 - Summary of Visual impacts (Establishment Phase)

Viewpoint No.	Receptor Type	Visual Sensitivity	Magnitude of Change	Effect /Impact
Viewpoint 1a & 1b	Intervisibility	N/A	N/A	N/A
Viewpoint 2	Local Road / Cycle Route	High-Medium	Low	Minor (A)
Viewpoint 3	Local Road / Cycle Route	High-Medium	Very Low	Negligible (A)
Viewpoint 4	Local Road / Oblique Residential	Medium	High	Major-Moderate (A)
Viewpoint 5	Local Road / Oblique Residential	Medium	Medium	Moderate (A)
Viewpoint 6	Local Road / Oblique Residential	Medium	Very Low	Negligible (A)
Viewpoint 7	Local Road / Church	Medium	Very Low	Negligible (A)
Viewpoint 8	Access Track Off Designated Scenic Road and high landmark	Medium	Very Low	Negligible (A)

Predicted visual effects arising from the proposals at the selected key visual receptors during the establishment phase would range from **Major/Moderate** to **Negligible**.

As per the screening matrix provided at Appendix 9.2, effects above moderate are considered to be significant. Therefore, of the key visual receptors selected, only one is predicted to experience visual impacts within the **Significant** effect range.

Whilst overburden stripping and construction of screen berms will be somewhat disruptive invisual terms, this will take place over a short duration, when the proposed advanced planting has established it will mitigate the potential impacts of the proposed extractive operation phase.

Screen earthwork and substantial areas of new boundary planting would be introduced as part of the proposed establishment works. The bund construction works would be of short duration (max 3-6 months) with grass seeding rapidly greening up and tree planting during the first available planting season. Therefore, whilst the assessment matrix suggests a Moderate/ Major impact (and therefore a significant effect)— due to the short term nature of these establishment works, the effect would be temporary - only resulting in the period of the screening berm construction, following which the impacts would revert to moderate for the remainder of the lifetime of the development, as set out in the follow section.

None of the potential visual impacts at all other receptors during this phase are predicted to fall within the **Significant** effect range.

9.5.7 Visual Impacts - Operational / Extraction Phases
Visual impacts have been illustrated by assessment from specific viewpoints. Figures 9.6 to 9.11.

The figures illustrate key identified visual receptors, with potential visual impacts assessed from each position. Further detail on the visual impacts from each position is provided in each of the figures. Table 9.12 below provides a summary of predicted visual impacts from each of the selected viewpoints during operational/extraction phases.

These viewpoints are representative of worst-case scenario views of the proposed development, therefore, as viewers move away from these receptors, the magnitude of change and potential visual effects will generally diminish.

**Table 9.12 - Summary of Visual impacts (Operational / Extraction Phases)** 

Viewpoint No.	Receptor Type	Visual Sensitivity	Magnitude of Change	Effect /Impact
Viewpoint 1a & 1b	Intervisibility	N/A	N/A	N/AO <sub>5</sub>
Viewpoint 2	Local Road / Cycle Route	High-Medium	Very Low	Minor (A)
Viewpoint 3	Local Road / Cycle Route	High-Medium	Very Low	Negligible (A)
Viewpoint 4	Local Road / Oblique Residential	Medium	Medium	Moderate (A)
Viewpoint 5	Local Road / Oblique Residential	Medium	Low	Minor (A)
Viewpoint 6	Local Road / Oblique Residential	Medium	Very Low	Negligible (A)
Viewpoint 7	Local Road / Church	Medium	Very Low	Negligible (A)
Viewpoint 8	Access Track Off Designated Scenic Road and high landmark	Medium	Very Low	Negligible (A)

Following the establishment phase with screening measures in place, the project moves fully into the extractive phases. Extraction is phased to remove material sequentially in a south/westward direction with stripped overburden located in an allocated area to the south.

With establishment phase screening fully implemented and associated planting maturing with each year, it is predicted that visual effects arising from the proposed operational / extraction phases at the selected key visual receptors would range from **Moderate to Negligible.** 

None of the potential visual effects during this phase are predicted to fall within the **Significant** range.

# 9.5.8 Visual Impacts - Restoration Phase

With extractive operations complete the final stages of restoration would be finalised as illustrated in the submitted restoration concept.

Table 9.13 - Summary of Visual impacts (Restoration Phase)

Viewpoint No.	Receptor Type	Visual Sensitivity	Magnitude of	Effect /Impact
			Change	
Viewpoint 1a & 1b	Intervisibility	N/A	N/A	N/A
Viewpoint 2	Local Road / Cycle Route	High-Medium	Very Low	Minor (B)
Viewpoint 3	Local Road / Cycle Route	High-Medium	Very Low	Negligible (B)
Viewpoint 4	Local Road / Oblique Residential	Medium	Low	Moderate (B)
Viewpoint 5	Local Road / Oblique Residential	Medium	Very Low	Minor (B)
Viewpoint 6	Local Road / Oblique Residential	Medium	Very Low	Negligible (B)
Viewpoint 7	Local Road / Church	Medium	Very Low	Negligible (B)
Viewpoint 8	Access Track Off Designated Scenic Road and high landmark	Medium	Very Low	Negligible (B)

Predicted visual effects arising from the proposals at the selected visual receptors following the operational phases and full restoration would range from **Minor** to **Negligible** and would in general be beneficial.

None of the potential visual effects during this phase are predicted to fall within the **Significant** range.

# 9.6 Mitigation Measures

The purpose of mitigation is to where possible avoid, reduce and offset any significant negative (adverse) effects on the environment arising from a proposed development. If good environmental planning and design principles are applied, together with a flexible approach to design, a high degree of mitigation can be built into a development proposal from the outset.

Mitigation measures may be considered under two categories:

- Primary mitigation measures These are an intrinsic part of a proposal, achieved through iterative design development (i.e. Designing out potential issues);
- Secondary mitigation measures Designed to specifically targeted to address remaining negative (adverse) effects of the final development proposal.

Focus of this assessment is to identify potential landscape and visual effects generated by the proposed extractive operations at this site and recommend mitigation to minimise those effects.

#### **Primary mitigation** measures include:

- Collaboration with project planners & design consultants regarding recommended operational sequence and phasing to minimise visual impacts;
- Collaboration with project ecologist to agree appropriate restoration solutions.
- Retention, protection and strengthening as required of existing boundaries; and
- Progressive restoration

#### **Secondary mitigation** measures include:

- Targeted screening earthwork along the adjoining boundaries when combined with screen planting will further mitigate potential views from surrounding areas to the South and East.
- Figure 9.15 provides a series of 'Line of Sight' sections which demonstrate that with the successful establishment of proposed screening earthworks and associated planting, the operational / extractive aspects of the development proposals will concealed from residential receptors to the south west.
- There is also potential for gapping up fragmented hedgerows along the North boundary.

#### 9.7 Interactions

These effects are typically interactive, i.e. arising from the combined action of a number of different environmental topic areas. For example, the removal of trees not only has potential to generate landscape and visual impact, but can also have an ecological impact.

There are a number of topic areas were interaction impacts can occur along with Landscape and Visual, with key interactive effects in this case being:

#### **Noise / Air Quality**

Potential noise & air quality impacts are generally most prevalent during operational phases. Whilst these would have no visual impacts, they can alter people's perception of the areas landscape character. Measures to minimise noise and air quality impacts will reduce perceived landscape character impacts. Through a combination of directional extraction and earthwork screening berms, potential impacts from Noise / Air have been reduced.

During the operations phase potential interactive impacts would be Negative, with likely significance considered Minor.

Post operations noise & air quality impacts would diminish and would be limited to typical traffic and day to day usage typical of this agricultural context.

Post operations, potential interactive impacts would be Neutral, with likely significance considered Negligible.

#### **Natural Heritage**

The ecological impact assessment report provides detail and recommendations, notably identifying the importance and value of hedgerows, grasslands and woodland areas.

The proposed landscape restoration scheme offers a positive opportunity to restore the ecological diversity of this site through habitat creation on final slopes around the periphery of the proposed site. The Restoration Scheme will provide opportunities for the development of species rich grasses and native woodland.

# 9.7.1 Cumulative Impacts Arising from other Developments

Cumulative effects may also arise from the impacts arising from the subject development combining with those arising from other developments in the vicinity. There are no similar works / development types within the landscape and visual catchment of this site.

The cumulative impact of the proposed development in combination with other mineral developments is therefore expected to be **Negligible / None**.

# 9.8 Residual Impacts

In addition to the consideration of the operational layout and sequence, the implementation of landscape proposals as illustrated in the submitted proposed development plans and restoration scheme will support the appropriate integration and final restoration of the site.

It is expected that a relatively small number of locations surrounding the subject site would experience residual glimpsed and partial views of the development, although with the maturing of screen planting these views will be minimised.

Overall Landscape sensitivity associated with this site is considered **Medium**.

In terms of the magnitude of change this is also expected to be **Medium** during the establishment, reducing to **Low** during the operational phases, resulting in a **Moderate** landscape impact during Establishment phase, reducing to **Minor** during Operations.

However once extractive operations are complete and final restoration fully implemented, the magnitude of change will diminish significantly with the current landscape conditions being replaced with a typology that integrates with the existing situation. It is therefore expected post restoration that the magnitude of change to the LCA would be **Very Low** and result in **a Negligible** impact in landscape character terms.

Selected visual receptors are considered representative of views of the proposed development site. As illustrated and described in Figures 9.6 - 9.11, visual sensitivity at selected receptors varies from **High-Medium** through to **Medium**.

Visual effects generated by the development are set out in Tables 9.11-9.13. with effects ranging from Major / Moderate to Negligible.

It should be noted as viewers move away from these key receptors, visual sensitivity and magnitude of change diminish, resulting in visual impacts over the majority of the ZTVI being in the **Minor** to **Negligible** range.

#### 9.8.1 Limitations and Assumptions

There were no limitations encountered or assumptions made during the compilation of this assessment.

### 9.9 Conclusion

The purpose of this Landscape and Visual Impact Assessment (LVIA) is to identify, evaluate and predict potential key effects resulting from the proposed development. The assessment will combine sensitivity with the predicted magnitude of change to determine the significance of residual landscape and visual effects.

To inform the LVIA, a desk study was conducted, including the identification of the Zone of Theoretical Visibility (ZTVI). The assessment area was also visited and surveyed during the winter season (January 2023) when foliage cover was at its lightest. Representative viewpoints were selected for consideration and assessed against accepted landscape and visual assessment criteria.

Through a combination of advanced screening, phased stripping, and directional extraction, the overall landscape and visual impacts at this site can be minimized. Typically, the impacts will be greatest during the initial establishment phase, relating mainly to machine mobilization, overburden stripping, creation of proposed screening measures (such as berms), seeding, and woodland planting.

One of the selected visual receptors (viewpoint 4) may experience impacts falling within the significant effect range during the establishment phase. However, these screening works will be short-lived (approximately 3-6 months to complete) and designed to fully mitigate subsequent operations. Therefore, while the assessment matrix suggests a Moderate/Major impact, the effect would be temporary, only resulting in the period of the screening berm construction. After that, the impacts would revert to moderate for the remainder of the development's lifetime.

All other visual receptors and the landscape character area would experience impacts that fall below the threshold considered to be 'significant'.

# Appendix 9.1

# **List of Figures**

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# Appendix 9.2 Assessment Criteria

Table 9.1 - Landscape Sensitivity Criteria

Table 9.1 - Landscape Sensitivity Criteria  Class Criteria  High Landscape characteristics or features with little or no capacity to all fundamentally altering their present character.	osorb change without
High Landscape characteristics or features with little or no capacity to ak	7.5
	osorb change without
fundamentally altering their present character	
rundamentally aftering their present character.	
Landscape designated for its international or national landscape value.	
Outstanding example in the area of well cared for landscape or set of fe	eatures.
High- Landscape characteristics or features with a low capacity to abs	sorb change without
Medium fundamentally altering their present character.	
Landscape designated for regional or county-wide landscape value who	ere the characteristics
or qualities that provided the basis for their designation are apparent.	Good example in the
area of reasonably well cared for landscape with notable landscape fea	tures.
Medium Landscape characteristics or features with moderate capacity to ab	sorb change without
fundamentally altering their present character.	
Landscape designated for its local landscape value or a regional design	ated landscape where
the characteristics and qualities that led to the designation of the area	a are less apparent or
are partially eroded or an undesignated landscape which may be valued	d locally – for example
an important open space.	
An example of a landscape or a set of features which is neutral or mixed	d character.
Medium- Landscape characteristics or features which are reasonably tolerar	t of change without
Low detriment to their present character.	
No landscape designation present or of medium to low local value	, or an example of a
common or un-stimulating landscape or set of features and conditions.	
Low Landscape characteristics or features which are tolerant of change with	out detriment to their
present character.	
No designation present or of low local value. An example of monotonou	is unattractive visually
conflicting or degraded landscape or set of features.	

**Table 9.2 - Visual Sensitivity Criteria** 

Class	Criteria					
High	Users of outdoor recreational facilities, on recognised national cycling or walking routes or in national designated landscapes.  Dwellings with views orientated towards the proposed development.					
High- Medium	Users of outdoor recreational facilities, in locally designated landscapes or on local recreational routes that are well publicised in guide books.  Road and rail users in nationally designated landscapes or on recognised scenic routes, likely to be travelling to enjoy the view.					
Medium	Users of primary transport road network, orientated towards the Development, likely to be travelling for other purposes than just the view.  Dwellings with oblique views of the proposed development.					
Medium- Low	People engaged in active outdoor sports or recreation and less likely to focus on the view.  Primary transport road network and rail users likely to be travelling to work with oblique views of the Development or users of minor road network.					
Low	People engaged in work activities indoors, with limited opportunity for views of the Development.  Road users on minor access roads travelling for other purposes than just the view.					

**Table 9.3 - Landscape Magnitude Criteria** 

Class	Criteria					
Very High	Very extensive, highly noticeable change, affecting most key characteristics and dominat					
	the experience of the landscape; and,					
	Introduction of highly incongruous development.					
High	Extensive, noticeable change, affecting many key characteristics and the experience of the					
	landscape; and,					
	Introduction of many incongruous elements.					
Medium	Noticeable change to a significant proportion of the landscape, affecting some key					
	characteristics and the experience of the landscape; and Introduction of some uncharacteristic					
	elements.					
Low	Minor change, affecting some characteristics and the experience of the landscape to an					
	extent; and,					
	Introduction of elements that are not uncharacteristic.					
Very Low	Little perceptible change.					

**Table 9.4 - Visual Magnitude Criteria** 

Class	Criteria
Very High	The development would dominate the existing view.
High	The development would cause a considerable change to the existing view over a wide area or an intensive change over a limited area.
Medium	The development would cause moderate changes to the existing view over a wide area or noticeable change over a limited area.
Low	The development would cause minor changes to the existing view over a wide area or moderate changes over a limited area.
Very Low	No real change to perception of the view. Weak, not legible, and/ or indiscernible.

 $\label{lem:conditional} \textbf{Table 9.5 - Categories of Landscape and Visual Significance of Effect} \\$ 

Degree of	Description of Landscape Effect	Description of Visual Effect				
significance		J. 700				
Major	Substantial alteration to	Major/substantial alteration to				
	elements/features of the baseline (pre-	elements/features of the baseline (pre-				
	development) conditions.	development) conditions.				
	Notably affect an area of recognised	Where the proposed development would				
	national landscape quality.	cause a very noticeable alteration in the				
	Substantial alteration to the character,	existing view.				
	scale or pattern of the landscape.	This would typically occur where the proposed				
		development closes an existing view of a				
		landscape of regional or national importance				
		and the proposed development would				
		dominate the future view.				
Moderate-	This category is a combination of descriptions of Major listed above and Moderate below.					
Major	These combinations are discussed within	the assessment of each landscape or visual				
	receptor when they occur.					
Moderate	Alteration to elements/features of the	Alteration to one or more elements/features of				
	baseline conditions.	the baseline conditions such that post				
	Affects an area of recognised regional	development character/attributes of the				
	landscape quality.	baseline will be materially changed.				
	Alteration to the character, scale or	This would typically occur where the proposed				
	pattern of the local landscape.	development closes an existing view of a local				
		landscape and the proposed development				
		would be prominent in the future view.				
Moderate-	This category is a combination of description	ons of Moderate listed above and Minor below.				
Minor	These combinations are discussed within	the assessment of each landscape or visual				
	receptor when they occur.					
Minor	A minor shift away from baseline	A minor shift away from baseline conditions.				
	conditions.	This occurs where change arising from the				
		alteration would be discernible but the				

	The Development partially changes the	underlying character / composition / attributes				
	character of the site without	of the baseline condition will be similar to the				
	compromising the overall existing	pre-development.				
	landscape character area.	It would also occur where the proposed				
		development newly appears in the view but				
	not as a point of principal focus or where					
		proposed development is closely located to the				
		viewpoint but seen at an acute angle and at the				
		extremity of the overall view.				
Negligible	No or very little change from baseline	Where there is no discernible improvement or				
	conditions.	deterioration in the existing Landscape				
	Change not material, barely	Character Area or the view.				
	distinguishable or indistinguishable.					
No Effect	The Development would not affect the	The Development would not affect the view.				
	landscape receptor.					

The significance of identified landscape and visual effects is established through a simple matrix, which measures the magnitude of change against landscape or visual sensitivity. The resulting impacts are classed Major, Moderate-Major, Moderate, Minor, Negligible/None.

Therefore, as the sensitivity of a landscape increases from Low to High, and the Magnitude of Change increases from Very Low to Very High the predicted impacts also increase.

The example matrix table below is used to summarise the findings from the criteria tables. By combining sensitively (along the top) with predicted magnitude of change (along the side) a predicted impact/ effect is reached. This format is applicable to both landscape impacts and visual impacts.

**Table 9.6 Matrix Example** 

	•					
Example Matrix (Professional judgement applied at every stage of assessment and matrix only used to check consistency.)		Sensitivity				
		High	High / Medium	Medium	Medium - Low	70/05/20w
Magnitude	Very High	Major	$\leftarrow \rightarrow$	Major	$\leftarrow \rightarrow$	Mod-major
	High	Major	$\leftarrow \rightarrow$	Mod-major	$\leftarrow \rightarrow$	Moderate
	Medium	Mod-major	$\leftarrow \rightarrow$	Moderate	$\leftarrow \rightarrow$	Minor
	Low	Moderate	$\leftarrow \rightarrow$	Minor	$\leftarrow \rightarrow$	Negligible
	Very Low	Minor	←→	Negligible	←→	Negligible / None

Intermediate sensitivity ratings (as per the criteria) would lead to a series of effects that lie between those stated above if a matrix was applied to the assessment. Professional judgement is then used to determine the degree of effect. e.g. high-medium sensitivity combined with medium magnitude would equate to a Moderate+ effect and a decision needs to be made to determine if this effect is Moderate or Moderate-Major. Intermediate magnitude ratings can also be arrived at during the assessment and a similar method is also applied here.

Effects above Moderate are considered Significant (presented in dark grey in the example matrix).

Where intermediate effects are arrived at, particular care should be taken at the upper and lower limits of the significance threshold i.e. between Moderate and Moderate-Major (presented in lighter grey in the example matrix). These effects may require additional explanation as to why the decision was made to judge the effect as either significant or not significant.

In addition to the impacts which sensitivity combined with the magnitude of change generate, there are a number of other factors which are taken into account when preparing the landscape and visual assessment.

Development is often viewed as permanent and/or perceived to have a negative impact, it is therefore important to emphasise that change created by development can result in beneficial outcomes, and may also be temporary, short-term or indeed reversible.

This assessment also considers and identifies both the 'Type' and 'Duration' of the potential impacts.

The following terminology has been used were appropriate.

# Type of Visual Impacts

- Beneficial: A positive impact which will improve or enhance the landscape character or viewpoint.
- Neutral: A neutral impact which will neither enhance nor detract from the landscape character or viewpoint.
- Adverse: A negative impact which will have an adverse effect on the existing landscape character or viewpoint.

# **Duration of Impacts**

- Temporary: Impacts lasting one year or less.
- **Short–term**: Impacts lasting one to seven years.
- **Medium-term**: Impacts lasting seven to twenty years.
- Long-term: Impacts lasting twenty to fifty years.
- Permanent: Impacts lasting over fifty years.

# Appendix 9.3

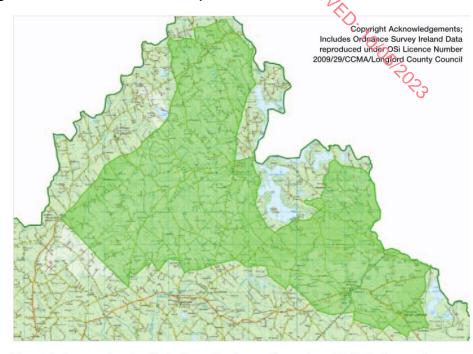
Landscape Character Assessment Extracts

(Longford Co Dev Plan 2021 - 2027)

# Landscape Unit 2 -Northern Upland

## **Location and Physical Characteristics**

This unit consists of the central northern section of the County, stretching from Drumlish in the west to Moyne in the north, Esker in the south and including the towns of Granard and Abbeylara in the east, up to and including the county boundary with Cavan.



Many of the important views listed in the County Development Plan are located in this landscape unit.

## Landcover

Forestry is well established in the area with large coniferous and mixed forestry tracts at Corn Hill, Edenmore and Crott, with smaller pockets scattered throughout the area.

Boggy areas predominate to the western boundary in the lower reaches of the river valleys where drainage becomes sluggish and a transition zone is formed between Landscape units 1 and 2.



## Topography

The majority of this unit lies above the 100m contour line to the north of the County and contains Corn Hill, Edenmore and Crott.

Visible from a significant distance, given the flat nature of the surrounding Midland and Border Counties, the highest point is 278m at Corn Hill. There is high intervisbility between this area and other isolated upland areas such as Ardagh Mountain in the south of the County, the Hill of Uisneach in Westmeath and Sliabh Bán in County Roscommon.

## Geology and Soils

Predominantly poorly drained Gley Soils, much of which is in typical drumlin formation.



### Drainage patterns

Drainage in the northern section of the unit is dominated by the Lough Gowna Lake complex, which falls under the catchment of the River Erne. The southern portion is drained towards the Shannon via the Camlin and Inny Rivers and their tributaries.

## Human Influence

## Settlement pattern

The main settlements within this unit are Granard, supported by the villages of Abbeylara, Moyne,

Legga, Bunlahy and Aughnacliffe.

While there has been significant activity in terms of planning applications in Granard and environs recently, few of these have been translated into actual development. This is reflected in the census figures for 2002, which show a population decrease of almost 14% over the intercensal period from 1996 and a further decrease of 9% up to 2006.

This can be contrasted with the surrounding Granard rural DED, which experienced a decline of 2% over the 1996-02 period, but an increase of 21% between 2002 and 2006. This may give an indication of the desire to move away from the town in favour of more rural locations. However, recent changes have witnessed the commencement of many developments within the town of Granard and perhaps will support the rejuvenation of the town.

Abbeylara, a short distance to the southeast of Granard has also seen significant growth over the last census period, going from a decline of 12.5% between 1996 and 2002 to an increase of 26% over the last census period.

The village of Aughnacliffe (overleaf) and its environs enjoys views over Lough Leebeen and Lough Gowna, a possible factor in the number of development proposals in the area - over 100 dwellings have been granted in the village over the last 5 years, some of which have been developed. Many of these new developments are highly visible due to the steeply undulating nature of the

topography of the village, which provides enclosure to and otherwise linear and ribbon-like settlement pattern.



Moyne and Legga are located to the north of the County near the Cavan border off the R198 regional route, while Bunlahy is located to the south of the area in the vicinity of Ballinalee. These settlements were designated due to their existing level of service provision and/or facilities, such as church, school, and crèche, playing pitches etc., which provide natural congregation areas. Development has yet to become established to any significant degree in these settlements.

Rural housing in the area follows the dense pattern of extensive agriculture and the complex road network, tending to be highly dispersed with some local concentrations.

#### **Transport and Communications**

The area is served by an extensive county road network, which is heavily influenced by the elevated topography and associated drainage patterns. Many of these roads are little more than laneways through the hills and valleys and are substandard in width and alignment.

Dyke running from Dring to Lough Kinale, the Abbey at Abbeylara and the old town at Granardkille are substantial landscape features with important national heritage and mythological associations.

Holy wells are important cultural landscape features and are scattered throughout the eastern section of the unit.

# Recreation and Amenity

Mainly confined to sports grounds and GAA pitches. A playground has recently been constructed in Granard.

# Landscape Sensitivity

The sensitivity of much of this landscape can be classified as **MEDIUM** to **HIGH**.

### Threats

- Potential future development of large-scale utility infrastructure in the upland areas.
- Encroachment of forestry onto important upland slopes and interference with designated scenic views.
- Potential loss of material and/or integrity of setting of archaeological features and artefacts.
- Potential loss of character of existing towns and villages.

16% of the applications since 1997 for antennae support structures and similar large-scale infrastructure have been made in this section of the county, however, only two of these applications have been granted permission to date.

The height of Corn Hill in relation to the surrounding Midland topography has made it an attractive site for the establishment of communications masts, which remain a substantial landscape feature.

The only application for a windfarm development in the County has been granted at Edenmore, an elevated area in the centre of the County. Although this development is not yet complete a commencement notice has been received recently.

A portion of the now disused Cavan railway lies to the east of Abbeylara.

#### Agriculture

Agriculture in this area tends to be extensive, given the poor soil, drainage and access characteristics, and results in a similar but somewhat less enclosed field pattern than Landscape Unit 1. This more open feeling in the landscape may also be attributed to the elevated nature of the topography.



- Further loss of population in Granard creating settlement pressure in surrounding rural area and historic landscape.
- Encroachment on protected views by dwelling units.

### Opportunities

- Towns and villages throughout the unit are capable of accommodating substantial additional development to remove pressure from sensitive areas.
- Potential for further tourism related development, particularly in Granard.

## **Policy Responses**

- The development of coherent countywide framework for large-scale utility infrastructure including identification and designation of permitted and restricted areas.
- The concentration of heritage artefacts and features in the eastern section of this unit may warrant the designation of a specific historic landscape to ensure heightened public awareness and their continued protection.
- Facilitate co-ordination between Coillte/Department of Communications, Energy and Natural Resources forestry strategies and Development Plan Policy.

### **Industry and Services**

Industrial development in the area is limited, with the exception of the Granard area, where the Keirnan Feed factor dominates the landscape for a substantial distance on the approach from Ballinalee. Other industrial developments, including Pat the Baker, are predominantly located within the town where their scale is contained and their landscape influence is minimal.

The Roadstone Quarry at Moyne (below) exerts a considerable landscape influence over Lough Naback, however, this serves to lessen the influence of the pylons and associated 110kv overhead wiring traversing the unit from east to west at this point.

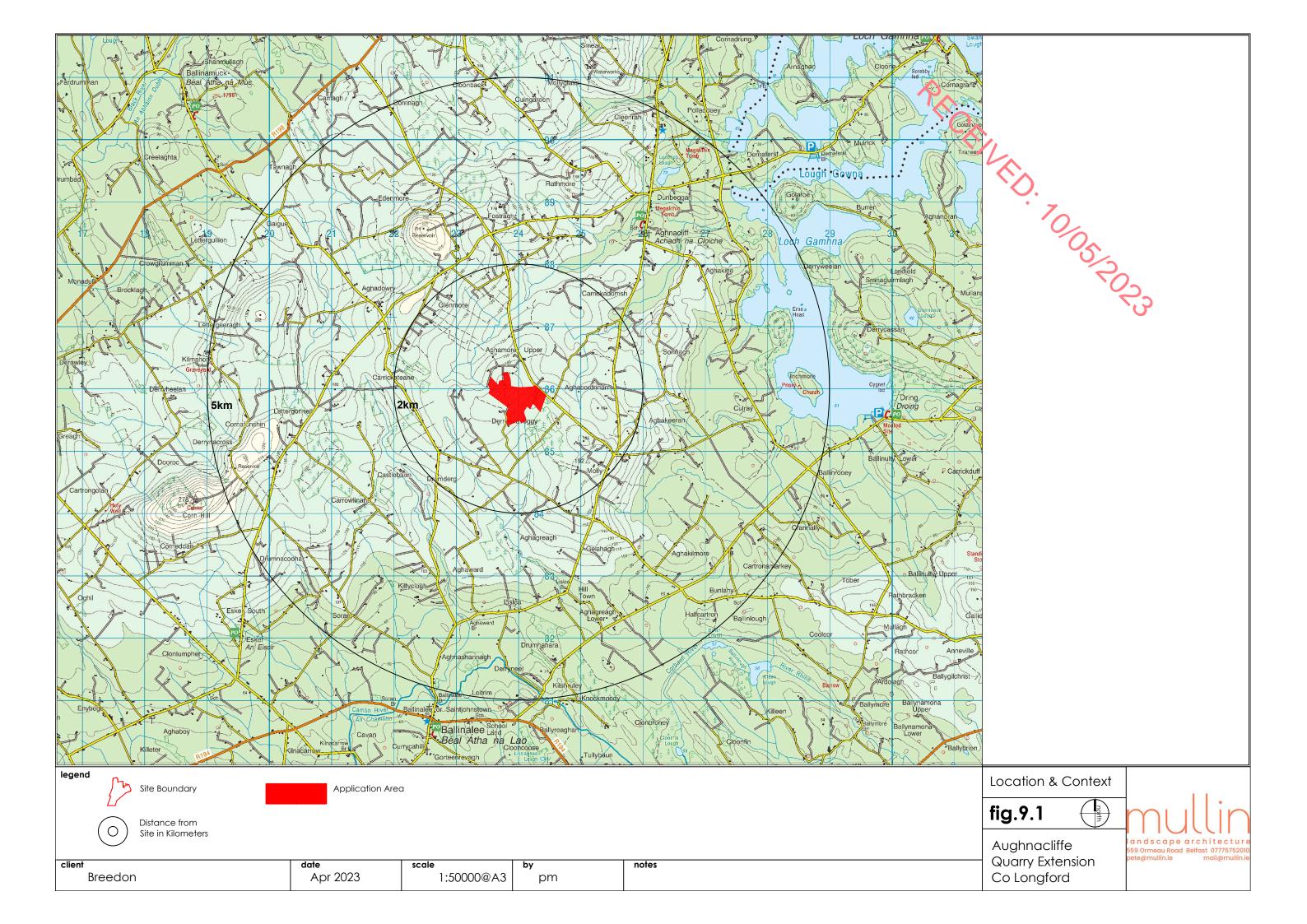


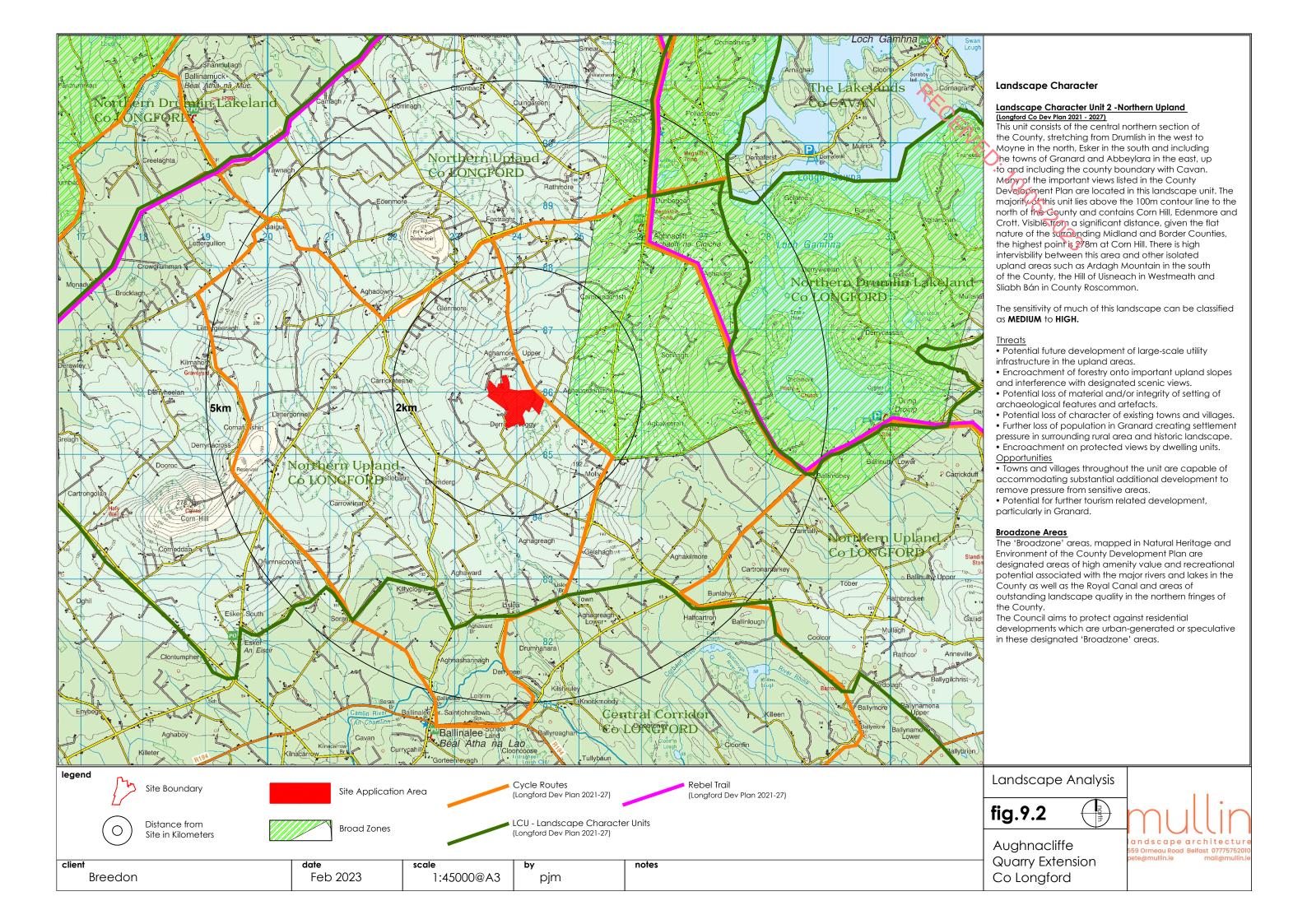
### History, Archaeology and Culture

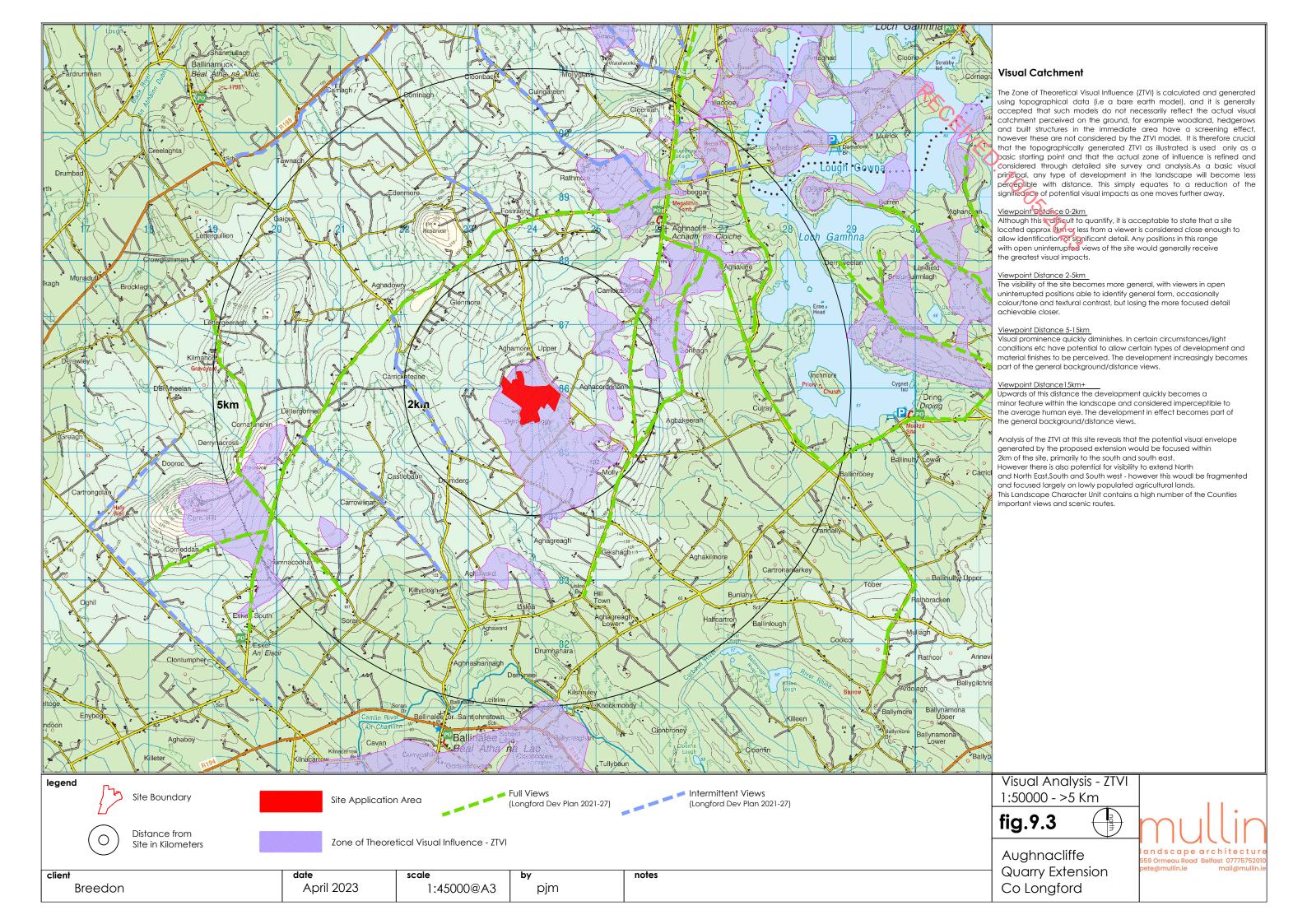
This landscape area has a particularly high concentration of archaeological heritage, most notably to the eastern side of the unit where the megalithic tombs at Aughnacliffe, the Black Pig's

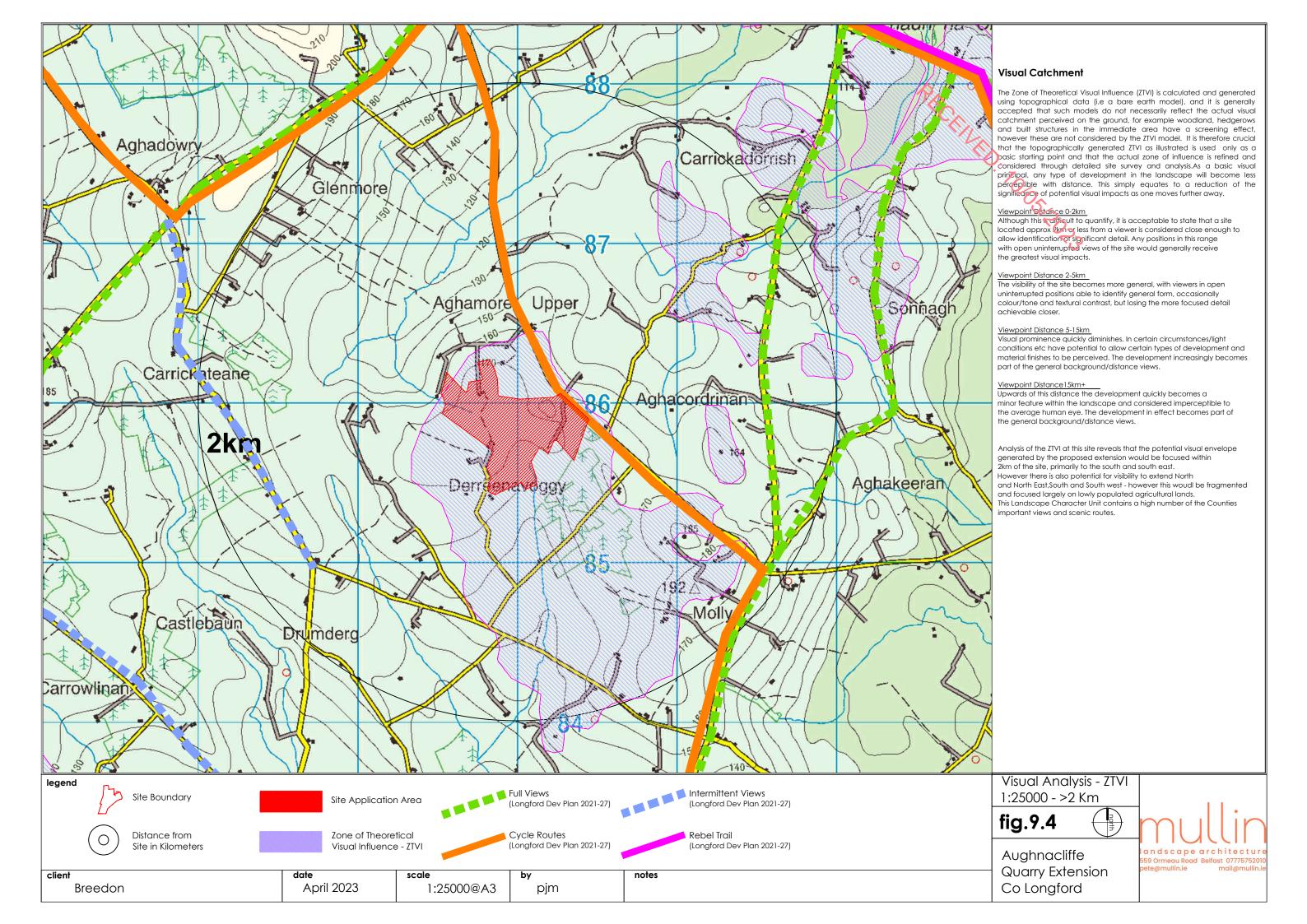
- Develop identity and character in new developments in towns and villages through the application of area specific design criteria laid out in design guide.
- Protect views and prospects.

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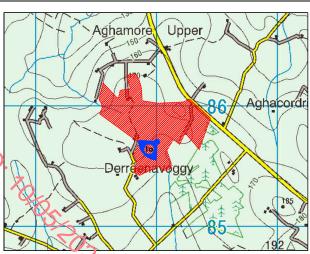
Viewpoint 1a Southwest from a high point within the application area. (Intervisibility Image)

This image was taken in a southwesterly direction from an eye-level position within the proposed application area. The purpose of this image is to illustrate what is visible from the within the site, conversely this illustrates all points within the surrounding landscape where the site may be visible. This is known as intervisibility and forms the basis of the site's visual envelope. Figures 9.3 & 9.4 illustrate the theoretical visual envelope.



Viewpoint 1b North from a high point within the application area. (Intervisibility Image)

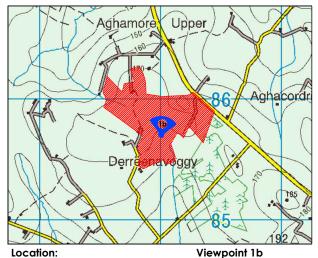
This image was taken in a Northerly direction from an eye-level position within the application area. As above, the purpose of this image is to illustrate what is visible from a high point on the site, conversely this illustrates all points within the surrounding landscape where the site may be seen. This is known as intervisibility and forms the basis of the site's visual envelope. Figures 9.3 & 9.4 illustrate the theoretical visual envelope.



Location:
Distance to Site Boundary:
Horizontal Angle of View:

Viewpoint 1a N/A 90 Degrees





Distance to Site Boundary: Horizontal Angle of View:

N/A 90 Degrees



images to illustrate approximate extent of visual envelope (Refer to Figure 9.4 Visual Analysis for ZTVI)

images for illustrative purposes

images for illustrative purposes

client Breedon date

Feb 2023

**ру** pjm

## notes

Lines of Intervisibilit

Intervisibility lines (IV) exist where a terrain feature, such as a ridgeline or hill interrupts the line of sight along the ground and prevents observation of the lands beyond.

An observer positioned on a ridgeline of an intervisibility line (Point C) can see in both directions. However, although observers positioned at either Point A or B can see Point C they will not be able to see each other.

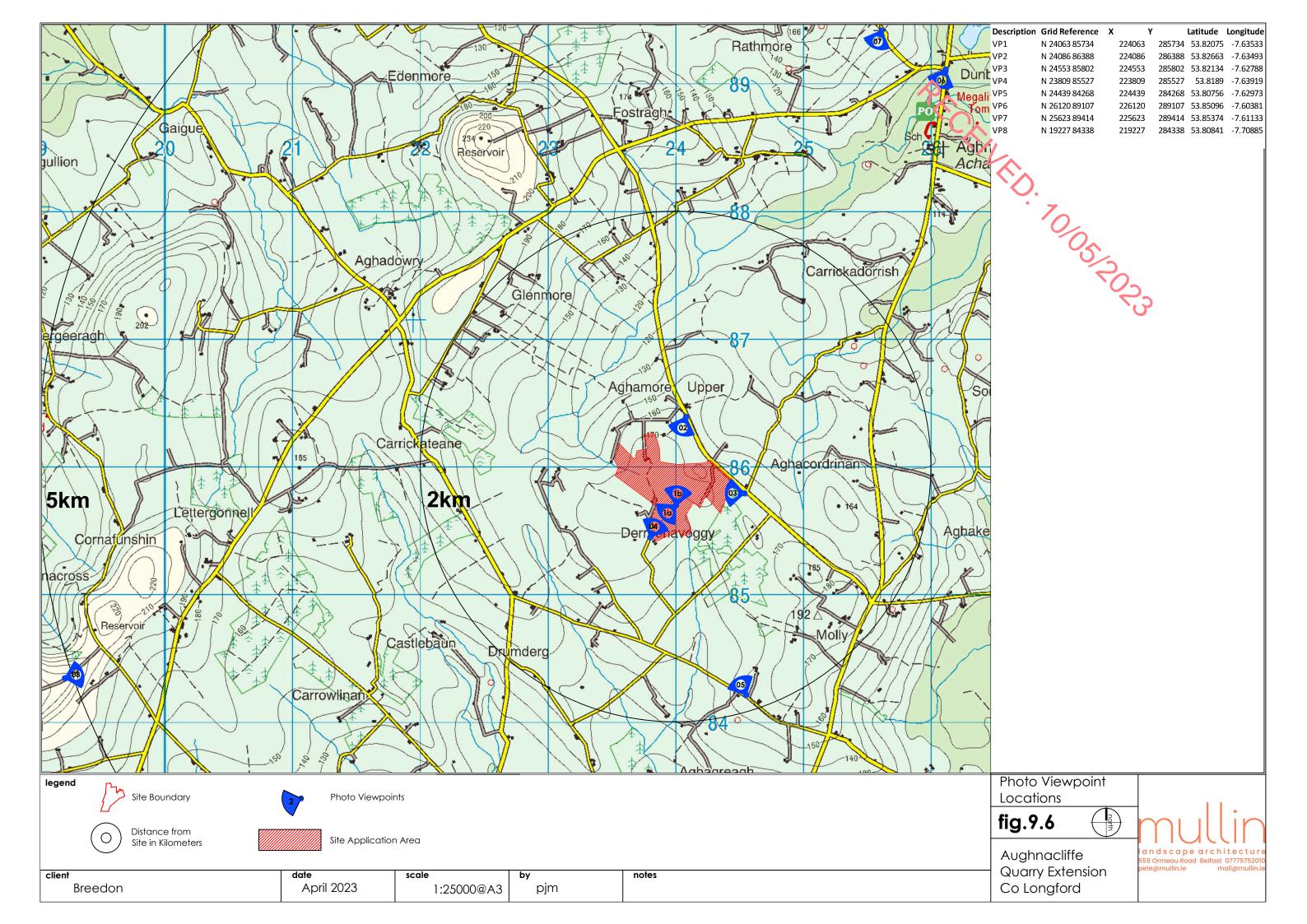
a b

Illustrative Intervisibility Images

fig.9.5

9.5









Viewpoint 2 377m 90 Degrees Minor Road/Cycle Route





South on L5081. Photo viewpoint in a Southerly direction from the L5081. This receptor is adjacent to an existing residential property with oblique views towards the site. From this location the existing permitted stockpiles located on the southern side of the operation are visible along with the site office building adjacent to the road. This minor road is part of a cycle route designated within the County Development

Plan. Whilst stockpiles are visible, the existing extraction area (and proposed extension) are not be visible from this point. A beefed up hedgerow along the North boundary would assist with visual containment.

Local Landscape & Visual Effect from this View Mitigation Magnitude Magnitude **Predicted Effect** Magnitude **Predicted Effect** Predicted Effect Whilst space is limited, hedgerow establishment along the Northern boundary would assist with screening of both the existing & proposed Viewpoint Landscape & Visual Sensitivity Establishment Stage) (Establishment Stage) Operational Stage) (Operational Stage) (Restoration Stage) (Restoration Stage) Medium (Landscape) Medium Moderate (A) Minor (A) Very Low Negligible (B) High-Medium(Visual) Low Minor (A) Minor (A) Very Low Minor (B) client by

NTS@A3

pjm

April 2023

Breedon

Top image represents an actual eyelevel impression of the view printed at A3 & read at approx arms length.
(A) = Adverse (B) = Beneficial (N) = Neutral Photo Viewpoint 2

fig.9.7

Aughnacliffe

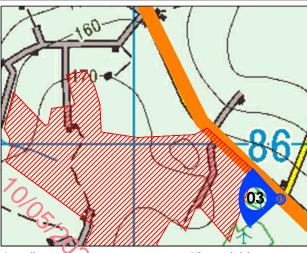
Co Longford



Quarry Extension







Viewpoint 3 150m 90 Degrees Minor Road/Cycle Route





West on L5081. Photo viewpoint in a Westerly direction from the junction of the L5081 and L5087. Whilst the ZTVI (Zone of Theoretical Visibility) indicates potential for visibility from this location, field assessment confirms the presence of significant intervening woodland plantation completely screening the existing and proposed works. As with Viewpoint 2 this minor road forms part of a cycle route designated within the County Development Plan.

Local Landscape & Visual Effect from this View

Magnitude Magnitude **Predicted Effect** Magnitude **Predicted Effect** Predicted Effect From this location no additional visual mitigation is requited. Viewpoint Landscape & Visual Sensitivity (Establishment Stage) (Establishment Stage) Operational Stage) (Operational Stage) (Restoration Stage) (Restoration Stage) Minor (A) Negligible (B) Medium (Landscape) Medium Moderate (A) Very Low Negligible (B) High-Medium(Visual) Very Low Negligible (A) Negligible (A) Very Low client date Top image represents an actual eyelevel impression of the view printed at A3 & read at approx arms length.
(A) = Adverse (B) = Beneficial (N) = Neutral April 2023 NTS@A3 Breedon pjm

Photo Viewpoint 3

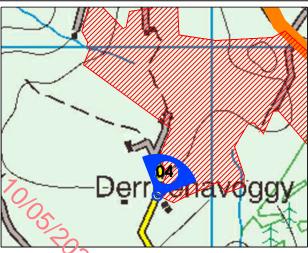
fig.9.8

Mitigation









Viewpoint 4 10m 90 Degrees

Minor Road / Oblique Residential Views





Viewpoint 4 North on L50901. Photo viewpoint in a Northerly direction from the L50901 at Derreenavoggy. This receptor is adjacent to a number of existing residential properties with oblique views of the subject site. From this location the existing permitted stockpiles are currently visible, however extraction areas are not visible. The proposals include relocation of stripped overburden which would be planted with woodland species for habitat benefit. Whilst visually disruptive during establishment stage, once complete this would offer significant screening and separation from all extractive operations.

Local Landscape & Visual Effect from this View

Magnitude Predicted Effect

Viewpoint L	andscape & Visual Sensitivity	Magnitude (Establishment Stage)	Predicted Effect (Establishment Stage		Predicted Effect e) (Operational Stage)	Magnitude (Restoration Stage)	(Restoration Stage)	■ Relocation of stripped overburden to the south of the application
4	Medium (Landscape) Medium(Visual)	Medium High	Moderate (A) Major-Moderate (A	Low ) Medium	Minor (A) Moderate (A)	Very Low Low	Negligible (B) Minor (B)	substantial screening.
client Breedon			date A	pril 2023	scale NTS@A3	by	pjm	notes  Top image represents an actual eyelevel impression of the view printed at A3 & read at approx arms length.  (A) = Adverse (B) = Beneficial (N) = Neutral

Magnitude Predicted Effect

Predicted Effect

Magnitude

Photo Viewpoint 4

fig.9.9

Mitigation









Viewpoint 5 1400m 90 Degrees Minor Road / Oblique Residential Views





North on L1047. Photo viewpoint in a Northerly direction from the L1047 at Aghagreagh. This receptor is adjacent to a number of existing residential properties with elevated oblique views of the subject site. Whilst the ZTVI suggests potential visibility from this location, due to intervening vegetation (notably large areas of coniferous plantation) the existing permitted stockpiles and extraction area are not visible from this location. The proposals include relocation of stripped overburden partially visible from this location which would be planted with woodland species for habitat benefit.

Local Landscape & Visual Effect from this View

**Predicted Effect** 

Magnitude

Predicted Effect

Magnitude

Magnitude

Viewpoint

Landscape & Visual Sensitivity

**Predicted Effect** 

(Establishment Stage) (Establishment Stage) Operational Stage) (Operational Stage) (Restoration Stage) (Restoration Stage) area with woodland planting will result in establishment of a substantial screening. Medium (Landscape) Medium Minor (A) Very Low Negligible (B) Moderate (A) Medium(Visual) Medium Moderate (A) Minor (A) Very Low Negligible (B) client by Top image represents an actual eyelevel impression of the view printed at A3 & read at approx arms length.
(A) = Adverse (B) = Beneficial (N) = Neutral Breedon April 2023 NTS@A3 pjm

Photo Viewpoint 5

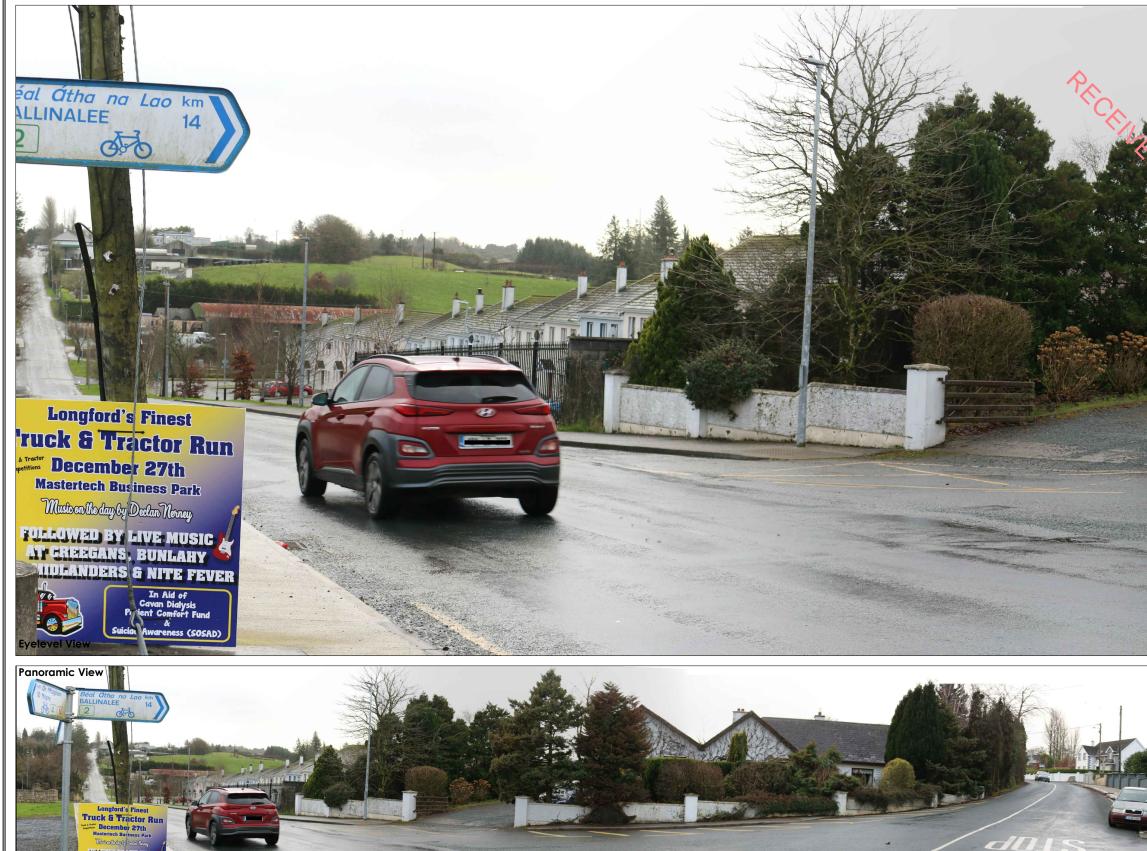
fig.9.10

Mitigation

Relocation of stripped overburden to the south of the application







Viewpoint 6 3500m 90 Degrees Minor Road / Cycleway Residential Area



Southwest on L1044. Photo viewpoint in a Southerly direction from the L1044 at Aughnacliffe. Whilst the ZTVI suggests potential visibility from this location, due to intervening vegetation, building and boundaries, the proposal will not be visible.

Magnitude

Local Landscape & Visual Effect from this View

Landscape & Visual Sensitivity

Viewpoint

Magnitude

**Predicted Effect** 

(Establishment Stage) Operational Stage) (Operational Stage) (Restoration Stage) (Restoration Stage) Medium (Landscape) Medium Moderate (A) Minor (A) Very Low Negligible (B) Medium(Visual) Negligible (B) Very Low Negligible (A) Negligible (A) Very Low client Top image represents an actual eyelevel impression of the view printed at A3 & read at approx arms length.
(A) = Adverse (B) = Beneficial (N) = Neutral Breedon April 2023 NTS@A3 pjm

**Predicted Effect** 

Magnitude

Predicted Effect

Photo Viewpoint 6

fig.9.11

Mitigation

from this location no additional visual mitigation is requited.



