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Introduction

Background

13.1 This chapter of the EIAR assesses the landscape and visual effects arising from the proposed continued use and extension to an existing permitted sand and gravel pit at Mounthall and Cummer townlands, Camross, Co. Laois. The planning application area, hereafter referred to as the application area or the site, is located along the L10317, the Glendine New Road, c. 3 km north of Camross village and c. 9 km northwest of Mountrath. The R440 – Regional Road, at its closest point, is located c. 3.3 km to the northeast.

13.2 The existing permitted sand and gravel pit (site ref. QY05/10) is located at the northern end of the application area. The extension area expands to the south, comprising a number of pasture fields, as well as some areas of scrub and immature woodland. It is proposed to extract the sand and gravel from the extension area, starting in the southwest, working east and from there northwest towards the existing pit. This extraction design aims at utilising the existing sloping topography of the site as a screen of the works in views from neighbouring properties to the east of the site, for as long as possible.

13.3 In order to further minimise the visibility of the site and impact on local landscape, a detailed landscape and restoration scheme has been prepared. This scheme aims at protecting all existing vegetation along the site boundaries, including a number of mature trees, as these provide substantial screening, in addition to their biodiversity benefits. To augment the existing screening vegetation the scheme proposes temporary grassed screening berms and native tree planting in a number of locations. It further comprises the restoration of the pit to agricultural grazing land, including native hedge planting to establish a field system similar to what is currently present. Further details on the proposed development, including the proposed Landscape Plan (**Figure 2-5**) and Restoration Plan (**Figure 2-6**) are contained in Chapter 2 of this EIAR.

13.4 This chapter should be read in conjunction with the following figures, which have been prepared to inform the EIAR chapter:

- **Figure 13-1:** Landscape Designations and Viewpoint Locations;
- **Figure 13-2:** Zone of Theoretical Visibility (ZTV) Map;
- **Figure 13-3:** Viewpoints A & B;
- **Figure 13-4:** Viewpoints C & D; and
- **Figure 13-5:** Viewpoints E & F.

Scope of Work / EIA Scoping

13.5 The EPA guidelines in relation to the preparation of an EIAR (May 2022) suggest the following typical headings that may be included in respect of the prescribed environmental factor 'The Landscape':

- Landscape Appearance and Character;
- Landscape Context;
- Views & Prospects; and
- Historical Landscapes.

13.6 These headings are incorporated in the subsequent assessment, as appropriate. However, in the absence of more detailed Irish guidance, the assessment contained within this chapter is based on the Third Edition of the Guidelines for Landscape and Visual Impact Assessment issued by the Landscape Institute and Institute of Environmental Management and Assessment (hereinafter referred to as 'GLVIA3'). These guidelines are widely accepted as best practice for Landscape and Visual Assessment (LVIA) in Ireland.

13.7 GLVIA3 emphasises that landscape and visual effects are related but independent issues: landscape effects are changes in the landscape, its character and quality; while visual effects relate to the appearance of these changes and the resulting effect on visual amenity.

13.8 The assessment of overall landscape and visual effects and their significance is defined in terms of the relationship between the sensitivity of the landscape/visual receptors and the magnitude of the change.

13.9 As GLVIA3 (paragraph 2.23) states, professional judgement is an important part of the LVIA process: whilst there may be some scope for objective measurement of landscape and visual changes, much of the assessment must rely on qualitative judgements. It is critical that these judgements are based upon a clear and transparent method so that the reasoning can be followed and examined by others.

13.10 GLVIA3 sets out a framework for making judgements about the level of effects that may result from change or development. It describes a step by step approach in which: judgements about the value and susceptibility of the receptor are combined into a judgement about sensitivity; judgements about the size/scale of the effect, its geographical extent and its duration and reversibility are combined into a judgement about the magnitude of the effect; and finally, the judgements about sensitivity of the receptor and the magnitude of the effect are combined to judge the level of the effect. If the assessment forms part of an EIA, a threshold may then be identified to show which effects are considered to be significant and which are not.

13.11 GLVIA3 is not prescriptive about exactly how the various judgments required in this framework should be made. This is a matter for individual practitioners to decide and explain. In this document it has been assessed that Major or Major/Moderate levels of effect are significant.

13.12 The full LVIA methodology is described in **Appendix 13-A**. Please note that much of the terminology used in assessing the landscape and visual effects is in accordance with the above-mentioned EPA Guidelines. However, the terminology used in this LVIA to describe the level of effects (= "significance of effects" in the EPA Guidelines) differs slightly from said EPA Guidelines, based on examples provided in GLVIA3.

Technical Standards

13.13 Photography and visual representations are based on the principles set out in the Landscape Institute – Technical Guidance Note 06/19 – Visual Representation of Development Proposals. There is no Irish standard/guidance, and in our experience, it is typically considered sufficient to provide two (annotated) viewpoints on one A3-sized sheet, using a range of horizontal angles of view (i.e. 75˚-105˚) to illustrate the full extent of the development within each photograph presented, as well as the context within which the site is located.

13.14 The Landscape Institute – Technical Guidance Note 02/21 – Assessing landscape value outside national designations was taken account of in the preparation of the assessment methodology, as provided in **Appendix 13-A** at the end of this chapter.

Consultations / Consultees

13.15 A pre-planning consultation meeting was held between officials of Laois County Council and representatives of SLR Consulting Ireland and Breedon Ireland on 1st May 2024. No specific points relating to landscape and visual issues were raised during this meeting.

13.16 Following a review of published development plans and the site survey, it was considered that there was no requirement for a separate formal consultation to be carried out regarding the landscape and visual effects of the proposed development.

Contributors / Author(s)

13.17 The LVIA including site work and completion of drawings was carried out by Anne Merkle, a Principal Landscape Architect with SLR Consulting Ireland. Anne graduated from the Nürtingen-Geislingen University (Germany) in Landscape Architecture (Dipl.-Ing. (FH)), in 2002. She has 20+ years' experience working for landscape consultancies in Ireland, specialising in Landscape and Visual Impact Assessments for a wide range of projects, including quarries, waste recovery facilities, wind farms, powerlines and mixed developments. In 2017, Anne completed an MSc in Biodiversity and Land Use Planning at NUI Galway. She is a full member of the Irish Landscape Institute (MILI) since 2005.

13.18 Anne further holds a Technician's Certificate in Arboriculture and is a Technician Member of the Arboricultural Association.

Sources of Information

13.19 The assessment is based upon a desk top assessment of relevant plans, guidance and landscape character assessments, as well as a thorough site assessment carried out in April 2024. The desktop study and field work were informed by:

- Laois County Development Plan 2021-2027;
- digital and paper (Ordnance Survey Ireland) mapping at different scales; and
- information available on the internet (such as satellite images and information on recreational facilities and nature conservation sites).

Study Area

13.20 A study area of approximately 3km surrounding the application area and extending up to 5km to the southeast was identified during the desktop study, based on the Zone of Theoretical Visibility Map (refer to **Figure 13-2**). While the ZTV indicates large areas of low or no visibility within this area, owing to the undulating topography, this extent of the study area is maintained for the purposes of providing landscape context.

Field Survey

13.21 A detailed field survey was carried out on 18th April 2024, in overcast conditions, but with good visibility. Photographs were taken during the field surveys, using a Nikon D610 digital SLR full frame camera, with a fixed 50mm lens, mounted on a tripod with a panoramic head. The individual photos were taken in portrait format.

13.22 In accordance with GLVIA3, the field survey and viewpoint photography concentrated on publicly accessible areas, such as the road and public footpath networks, residential and outdoor recreational areas.

Limitations / Difficulties Encountered

13.23 No difficulties were encountered during the desktop study, field survey or in the preparation of this report.

Significant Risks

13.24 There are no known significant risks to human health or environmental effects, which may occur in relation to this landscape and visual impact assessment.

Regulatory Background

13.25 The following paragraphs set out the regulatory background with regard to LVIA in Ireland and the site-specific planning background relevant to the proposed development.

Legislation

13.26 In 2002, Ireland ratified the European Landscape Convention, which promotes the protection, management and planning of landscapes. The National Landscape Strategy for Ireland 2015-2025 was published "to ensure compliance with the European Landscape Convention and establish principles for protecting and enhancing the landscape while positively managing its change".

13.27 Article 1a of the European Landscape Convention defines landscape as "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors". This definition has been included in the Planning and Development (Amendment) Act 2010, along with the requirement that objectives relating to landscape shall be included in development plans.

13.28 There is no Irish legislation specifically governing the preparation of landscape and visual impact assessments.

Planning Policy and Development Control

13.29 The Laois County Development Plan (LCDP) 2021-2027 is the statutory plan detailing the development objectives of the authority, covering the application area.

13.30 Those objectives, with relevance to this assessment, are listed below. The location/extent of relevant designations is shown on **Figure 13-1**, at the end of this chapter.

Mining and Aggregates

13.31 **Section 9.5 – Mining and Aggregates** of the current LCDP states that the *"extractive industries have the potential to cause harm to the environment, heritage and the landscape if not appropriately designed and managed. However, aggregates are a necessary resource and are of great importance to the economy and society. In addition, well managed and designed quarry sites minimise environmental effects. There is also the potential for habitat creation through the restoration of quarry sites following the cessation of operations."*

13.32 **Section 9.6 - Commercial Developments in Rural Areas** contains the following relevant policy objectives and Enterprise Development Management Standards (DMS), in respect of mining and aggregates.

13.33 **Policy Objective RL 13:** *"Have regard to Laois' Landscape Character Assessment, as well as more general Planning considerations, such as transport, environmental sensitivities,*

habitat considerations, the need for buffer zones around water bodies in its determination of planning applications related to land-based economic activities."

13.34 **Policy Objective RL 18:** *"Protect rural amenities, natural archaeological and natural heritage, visual amenities, eco-systems, conservation areas, landscape and scenic views from adverse impacts of agricultural practices and development particularly in high amenity areas and ensure that it is appropriate in nature and scale, and ensure it does not have an undue negative impact on the visual/scenic amenity of the countryside and identify mitigating measures where required. Integrate into the landscape, including the minimal use of signage."*

13.35 **DM RL 3:** *"Applications for new development for aggregate extraction, processing and associated processes, shall*

1) identify existing public rights of way and walking routes which may be impacted on or are adjacent to the development site. They shall be kept free from development as a Rights of Way/Walking Route

2) ensure the protection, conservation, preservation and safeguarding of recorded monuments and areas in their vicinity, World Heritage Sites(including Tentative Sites), NHA's, Euro Sites, Nature Reserves, scenic views and prospects archaeological sites and features, natural heritage, natural environment, features of natural beauty or interest and prescribed sites, geological sites and areas of geological/geomorphological or historic interest and areas of high scenic amenity from inappropriate development that might be detrimental to them.

3) minimise adverse effect on the environment and visual and natural amenities to the greatest possible extent must be carried out during all life cycle stages, whether in respect of new quarries or extensions to existing ones and development will be prohibited if the quality of the environment or landscape, particularly sensitive landscape, is adversely affected or there is a reduction of the visual amenity of areas of high amenity.

4) be landscaped either by the retention of existing vegetation or by screening to minimise the detraction from the visual quality of the landscape.

5) Require that development proposals on or in proximity to a quarry site should investigate the nature and extent of the risks associated with the development together with appropriate mitigation"

Trees, Woodlands and Hedgerows

13.36 **Section 11.6** of the current LCDP contains the following policy objectives and Trees, Woodlands and Hedgerows DMS, relevant to this assessment.

13.37 **Policy Objective BNH 26:** *"Protect individual trees, groups of trees and woodland in the interests of landscape conservation (including townscapes) and nature conservation as part of the development management process."*

13.38 **Policy Objective BNH 27:** *"Protect existing hedgerows, particularly of historical and archaeological importance of townland boundaries, from unnecessary removal in order to preserve the rural character of the countryside ad promote biodiversity."*

13.39 **Policy Objective BNH 28:** *"Ensure that hedgerow removal to facilitate development is kept to an absolute minimum and, where unavoidable, a requirement for mitigation planting will be required comprising a hedge of similar length and species composition to the original, established as close as is practicable to the original and where possible linking in to existing adjacent hedges. Native plants of a local provenance should be used for any such planting."*

13.40 **Policy Objective BNH 30:** *"Ensure that hedgerow and mature tree removal to facilitate development is kept to an absolute minimum and, where unavoidable, a requirement for mitigation planting will be required comprising a hedge of similar length and species composition to the original, established as close as is practicable to the original and where possible linking in to existing adjacent hedges. Native plants of a local provenance should be used for any such planting."*

13.41 **DM BNH 4 – Mature Trees:** *"Where there are trees within an application site, or on land adjacent to it that could influence or be affected by proposed development (including street trees), the planning application must include a detailed submission prepared by a suitably qualified Arboriculturist in accordance with British Standard 5837: 2012 'Trees in relation to design, demolition and construction – Recommendations'. A Tree Management Plan shall be provided to ensure that trees are adequately protected during development and incorporated into the design of new developments."*

13.42 **DM BNH 5 – Hedgerows:** *"In dealing with applications for new developments, the Planning Authority will have regard to the following:*

a. Retention of a connected network of good quality hedgerows;

b. The value of hedgerows as green infrastructure (landscape, biodiversity, shelter, supporting services to agriculture/horticulture;

c. The avoidance of the unnecessary removal of hedgerows;

d. If it is necessary to remove a hedgerow, developers should be reminded of their obligations under the Wildlife Acts not to remove or interfere with them during the bird nesting season, between March 1st and 31st August. Also, replacement or compensatory planting of hedgerows using indigenous species such as whitethorn or blackthorn only will be required; …

h. Encouragement should be given to develop a new linear feature of biodiversity value such as a hedgerow or dry stone wall, particularly if this type of habitat is found adjacent to the development site;

i. The use of native tree and shrub species similar to those found in adjacent hedgerows in new or replacement hedgerows; …"

Landscape

13.43 **Section 11.10** of the LCDP provides some detail regarding the Landscape Character Assessment of the county, which was prepared *"to identify specific areas that are characterised by sensitive landscapes."* The application area is fully located within the Mountain, Hills and Upland Areas Landscape Character Area (LCA). The Mountain Areas are judged to be of High sensitivity, while the Hills and Upland Areas are judged to be of Medium Sensitivity. As the site is located on the southern lower slopes of the Slieve Bloom Mountains, it is considered to be part of the Hills and Uplands / Medium Sensitivity Areas, rather than the Mountains Area.

13.44 The LCDP contains the following relevant policy objectives for LCAs in general.

13.45 **Policy Objective LCA 1:** "*Ensure that consideration of landscape sensitivity, as indicated in Table 11.6 of the Plan, is an important factor in determining development uses in areas of high landscape sensitivity, the design, type and the choice of location of proposed development in the landscape will also be critical considerations."*

13.46 **Policy Objective LCA 2:** *"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 and conserve valuable habitat including any European and National Designations."

13.47 **Policy Objective LCA 3:** *"Seek to ensure that local landscape features, including historic features and buildings, hedgerows, shelter belts and stone walls, are retained, protected and enhanced where appropriate, so as to preserve the local landscape and character of an area, whilst providing for future development."*

13.48 The following policy objectives, listed in the LCDP, are specific to the Hills and Uplands Areas and Mountain Areas.

13.49 **Policy Objective LCA 5:** *"Ensure that development will not have a disproportionate visual impact (due to excessive bulk, scale or inappropriate siting) and will not significantly interfere with or detract from scenic upland vistas, when viewed from areas nearby, scenic routes, viewpoints and settlements."*

13.50 **Policy Objective LCA 6:** *"Ensure that developments on steep slopes (i.e. >10%) will not be conspicuous or have a disproportionate visual impact on the surrounding environment as seen from relevant scenic routes, viewpoints and settlements."*

13.51 **Policy Objective LCA 7:** *"Facilitate, where appropriate, developments that have a functional and locational requirement to be situated on steep or elevated sites (e.g. reservoirs, telecommunication masts or wind energy structures) where residual adverse visual impacts are minimised or mitigated."*

13.52 **Policy Objective LCA 8:** *"Maintain the visual integrity of areas which have retained a largely undisturbed upland character and Respect the remote character and existing low-density development in these areas."*

13.53 **Policy Objective LCA 9:** *"Have regard to the potential for screening vegetation when evaluating proposals for development within the uplands."*

13.54 **Policy Objective LCA 11:** *"Protect the positive contribution that views across adjacent lowland areas and landmarks within the landscape make to the overall landscape character."*

Views and Prospects

13.55 **Section 11.11.1** of the current LCDP states the following: *"The Council recognises the need to protect the character of the county by protecting views and scenic routes. However, it is acknowledged that in certain circumstances, some development may be necessary."* This section further contains the following relevant policy objective.

13.56 **Policy Objective SV 1:** *"Protect views from designated scenic routes indicated in Table 11.7 and Map 11.8 (Scenic Views and Prospects in County Laois) of the Plan, by avoiding any development that could disrupt the vistas or disproportionately impact on the landscape character of the area, thereby affecting the scenic and amenity value of the views."*

13.57 Please note that none of the views listed in Table 11.7 and illustrated on Map 11.8 in the LCDP are in close proximity to and/or directed at the application area. Protected views and prospects will therefore not be considered further, as part of this assessment.

Receiving Environment

Landscape Baseline

Existing Relevant Landscape Character Assessment

13.58 As described above a Landscape Character Assessment for County Laois is contained in the current LCDP. It divides County Laois into 6 Landscape Character Types/Areas, with the application area fully located within the Mountain, Hills and Upland Areas LC. The nearest other LCA is the Lowland Agricultural Areas LCA, c. 4km to the south, at its closest point.

13.59 The Mountain Areas are judged to be of high sensitivity, while the Hills and Upland Areas are judged to be of medium sensitivity. As the site is located on the southern lower slopes of the Slieve Bloom Mountains, it is considered to be part of the Hills and Uplands / Medium Sensitivity Areas, rather than the Mountains Area.

13.60 Medium Sensitivity Areas are described as: "Areas with the capacity to accommodate a range of uses without significant adverse effects on the appearance or character of the landscape having regards to localised sensitivity factors.

13.61 The description of the Mountain, Hills and Upland Areas in Appendix 6 of the LCDP includes the following passages of relevance to this assessment.

13.62 *"Although lacking in terms of dramatic peaks, hills and uplands are a prominent feature of the county, particularly in the north west and south-east. From the tops of these hills panoramic views of the lowland landscapes of Laois and adjacent counties are gained. The hills also act as orientating features. … There is extensive mono-type afforestation and marginal agriculture in these areas. Field systems and the enclosures associated with them are generally absent in this landscape. New dwellings are comparatively few with much of the older stock abandoned and derelict.*

13.63 *The Sliabh Bloom Mountains are the only mountain range in the county, covering an area of approx. 25,000 hectares with the remaining 12,000 hectares in County Offaly. In addition to the multiple nature designations including extensive NHA's, SAC's, and SPA, tourist infrastructure in the form of picnic areas, mountain bike trail, walking trails, archaeological artifacts, the mountains offer a sense of remoteness and a range of spectacular views over the rest of County Laois and many adjoining counties. They also contain the largest unbroken area of upland blanket peat in Ireland. As a result, the Sliabh Blooms are particularly sensitive to many forms of development including large agricultural structures, sporadic housing, transmission lines, masts and windfarm developments. There is increasing concern about the visual impact of widespread coniferous tree plantations on the mountains as well. …"*

Landscape of the Site and its Context

13.64 GLVIA3 recommends that a landscape character assessment should be carried out as part of the baseline study (paragraph 5.4). This should consider:

- The elements that make up the landscape (e.g., physical, land cover and the influence of human activity);
- Aesthetic and perceptual aspects (e.g., scale, complexity, openness, tranquillity or wildness); and
- The overall character of the area.

Landscape Elements

13.65 The application area is located along the L10317, the Glendine New Road, c. 3 km north of Camross village and c. 9 km northwest of Mountrath. The site comprises the existing sand and gravel pit at its northern end and five pasture fields, as well as some areas of scrub and immature woodland to the south. The main components of the existing pit are a small extraction area, with mostly exposed sand and gravel, and a hard surfaced access road with the entrance to the north-east, along the L10317. The extraction area is adjoined by agricultural land at the top of the existing pit face to the west and a woodland area, which also adjoins the access road to the east. The fields, which make up the extension area, are enclosed by a mix of tightly cut hedgerows with no / few tall trees, lines of mature trees, (immature) woodland areas and areas of scrub.

13.66 The topography of the site is undulating with several high and low points throughout. Ultimately it is sloping from 215 m ordnance datum (OD) along the north-western boundary to 175 m OD along the southern boundary. However, a ridge with elevations of 205-210 m OD at the approximate centre of the site (in a north-east / south-west direction) interrupts this slope, resulting in steep gradients in parts of the site. The steepest sections are typically covered in gorse scrub, most prominently along the southern, most elevated, part of the aforementioned ridgeline. The lowest level within the existing pit is at 199 m OD, with levels along the access road falling slightly to 194 m at the site entrance.

13.67 Because of the location of the site in the south-eastern foothills of the Slieve Bloom Mountains, the topography within the study area is generally steeply sloping to the north-west of the site, becoming gently undulating to the south-east. Levels rise steeply from an average of 200 m OD within the site to 527 m OD (Arderin) and 496 m OD (at the location of Clear Lake) in just over 3 km, to the west and north respectively. Within 5km to the south and east levels gently undulate, but ultimately fall from the 175 m OD along the southern site boundary to 110 m OD. The only exception is a broad ridge between 3-6 km to the southeast with a highpoint of just over 200 m OD (Clonin Hill).

13.68 The steeper land to the north and west of the site is dominated by coniferous forestry plantations and blanket bog. The plantations typically do not reach above the 450 m OD contour, with the blanket bog covering the highest elevations and reaching down the slopes in some locations. The south-eastern half of the study area is dominated by pastureland, interspersed with small conifer plantations and small areas of deciduous woodland, the latter often in the vicinity of streams and rivers. Field sizes are mostly small to medium and they are bound by a mix of tightly cut hedgerows with no / few trees and hedgerows with many mature trees.

13.69 There are no regional or national roads within the study area, the R440 being the closest such road, c. 3.3 km to the northeast. There is however a dense network of local roads in the south-eastern half of the study area. Fewer roads lead into the Slieve Bloom Mountains to the north and west of the site, typically along the river valleys leading into the mountains.

13.70 There is no large settlement within the study area. The small village of Camross, c. 3 km to the south, being the only formal settlement. There is frequent one-off housing and ribbon development along the local roads in the south-eastern half of the study area, while there is little / no residential development within the Slieve Bloom Mountains.

13.71 As indicated within the Landscape Character Assessment, the Slieve Bloom Mountains are a prominent feature within the study area, although lacking prominent peaks and with mono-type forestry plantations detraction from the scenic quality.

13.72 Human activity has strongly influenced the land use within the study area, in the form of agriculture and forestry plantations. This is emphasised by the many straight hedgerows

marking field boundaries and straight edges of the forestry plantations. On a smaller scale, human influences are visible in the form of roads, buildings and wooden electricity poles. On the whole, while this is an attractive rural landscape, with occasional views of the Slieve Bloom Mountains, there are few locations from where no man-made structures are visible (i.e. mostly roads, buildings or wooden poles). This includes the more remote sections of the Slieve Bloom Mountains, where coniferous forestry plantations are ever present.

Aesthetic and Perceptual Aspects

13.73 The scale of the landscape is mostly small in the south-eastern half of the study area, due to the enclosure from (tree-lined) hedgerows, as well as the undulating topography. It increases considerably in locally elevated locations, where views through gaps in or over low hedgerows are available. Within the north-western half of the study area the scale varies from small in the river valleys and in the vicinity of conifer plantations, to large in the more elevated locations and where there are no plantations.

13.74 The mix of pasture fields, bound by hedgerows, conifer plantations and small deciduous woodlands throughout the study area results in colours and textures that are generally simple and repetitive, but with no regular pattern. The colour palette is dominated by multiple shades of green, with the north-western half of the study area predominantly covered in darker shades, due to the large areas of conifer plantations.

13.75 While the study area has an overall natural appearance, there is little sense of wildness or remoteness, in particular in the south-eastern half and including the site, due to the many signs of human activity, such as improved grassland, electricity poles, roads and residential properties. As the local roads are not very frequently used, there are periods of tranquillity in this area. The north-western half of the study area feels more remote, due to the lack of residential development and subsequently has an increased sense of tranquillity. However, the presences of roads and conifer plantations with their regular pattern of planted trees diminishes the sense of wildness.

Overall Character

13.76 The site assessment supports the inclusion of the site and its immediate context in Mountain, Hills and Upland Areas LCA, as set out in the Landscape Character Assessment for Co. Laois.

Protected Nature Conservation Sites

13.77 The National Parks and Wildlife Service (NPWS) website was reviewed for protected nature conservation sites in proximity to the application area, as these provide an indication of the natural heritage value placed on the local landscape. The following Special Protection Areas (SPA), Special Areas of Conservation (SAC) and proposed Natural Heritage Areas (pNHA) are located within the study area (refer to **Figure 13-1** for the location and extent of these sites):

- Slieve Bloom Mountains SPA (Site code 004160) – 0 m to the north (bounds existing pit);
- Slieve Bloom Mountains SAC (Site code 000412) – 1.5 km to the north;
- River Barrow & River Nore SAC (Site code 002162) – 2 km to the east;
- Slieve Bloom Mountains pNHA (Site code 000412) – 1.5 km to the north; and
- Delour river near Lacca Manor pNHA (Site code 000864) – 2 km to the east.

Visual Baseline

Zone of Theoretical Visibility (ZTV)

13.78 The visibility of the application area was initially assessed by a desktop study of OSI Discovery Maps (1:50,000) and available aerial photography. This was followed by 3D computer modelling and calculation of the zone of theoretical visibility (ZTV), using LSS (McCarthy Taylor) software, in accordance with the methodology provided in **Appendix 13-B** at the end of this chapter.

13.79 The ZTV, which illustrates the subtended vertical angle of visibility, was calculated for the proposed extraction area. It should be noted that the ZTV mapping is based on a bare terrain; that is, the computer model does not include built structures or vegetation. As a result, the extent of visibility, which is illustrated, is regarded as a worst-case scenario, and would be greatly reduced if buildings and vegetation, such as the existing tree-lined hedgerows and woodland/forestry areas in the surrounding landscape, were included in the model.

13.80 In SLR's experience, views from within areas with a visibility of a subtended vertical angle of up to 0.4 degrees tend to be screened by hedgerows and other vegetation (if present) and/or built structures in an urban environment. These areas are coloured in shades of grey on the ZTV mapping, in order to differentiate them from the areas with a higher probability of visibility, which are marked in shades of yellow, orange and red.

13.81 The resulting ZTV is depicted on **Figure 13-2**. It indicates that a higher probability of visibility of the proposed development would be from locations within 1 km surrounding the application area and partially extending up to 3 km to the north, 2 km to the north-east and 5km to the south-east (i.e. the areas of theoretical visibility in yellow, orange and red).

13.82 While there are many other patches of theoretical visibility within a 5 km radius of the site, these have a low probability of actual visibility, as indicated by the shades of grey. As mentioned above, views from within these areas are very likely screened by existing intervening vegetation. This is particularly the case for the areas of visibility indicated to the north and west of the site, due to the many existing forestry plantations on the slopes of the Slieve Bloom Mountains.

13.83 Also, it should be noted that much of the theoretical visibility areas cover agricultural land or upland areas, which are not publicly accessible or in the case of the Slieve Bloom uplands difficult to access, due to the presence of blanket bog. While parts of the site may be visible from this land, only few and infrequent visual receptors are present in those areas (e.g. the owners of the land) and these are therefore not assessed in detail.

13.84 The ZTV further illustrates that the undulating topography surrounding the application area creates many pockets of very little or no visibility, even if there was no vegetation present in the local landscape.

Outdoor Recreational Facilities within the Study Area

13.85 The study area was searched for available outdoor recreational facilities, as these provide an indication of the recreational value placed on the local landscape, as well as potential visual receptors present within the area. Refer to **Figure 13-1** for an illustration of the location of those located within or in the vicinity of the study area.

13.86 There are several walking, cycling and scenic driving routes criss-crossing the Slieve Bloom Mountains. Those in close proximity to the site and/or with potential visibility of the proposed works are:-

- the Mountrath to Kinitty (via Glendine) cycling route, which follows the Glendine New Road to the east of the application area and passing the site entrance;
- the Slieve Bloom Scenic Glendine Driving Route, which also follows the Glendine New Road; and
- less likely, the Slieve Bloom Way walking trail, which passes c. 1 km to the north-west, at its closest point. The ZTV mapping, **Figure 13-2**, indicates very little visibility from this route and those sections with predicted visibility are routed through conifer plantations within the study area and therefore actual visibility of the site from this trail is unlikely unless relevant sections of the plantations are recently harvested.

13.87 All other outdoor recreational facilities are at too great a distance from the site and/or visually separated from it by topography and vegetation to be impacted by the proposed development.

Actual Visibility

13.88 The actual visibility of the application area was assessed during the field survey, concentrating on publicly accessible locations, including the outdoor recreational facilities identified, as appropriate. This survey confirmed that existing roadside and intervening vegetation blocks views towards the site from most locations within the study area, which are indicated as having theoretical visibility, on the ZTV mapping. This is particularly the case for the areas indicated in grey, but also for large parts of those marked in yellow, orange and red.

13.89 It was established that the actual visibility of (parts of) the application area is restricted to:

- two short sections of the Glendine New Road, near the southern end of the road, in the vicinity of the eastern boundary of the application area, and at the site entrance (glimpsed views from the road, open from adjoining residential properties);
- a c. 1,000m long stretch of the local road within 1 km to the north of the site, in the townland of Johnsborough (intermittent/glimpsed along the road and from adjoining residential properties; note: most of these views are only available due to the recent harvesting of a conifer plantation);
- a short section of the local road in the townland of Johnsborough, east of Cardtown Bridge;
- a c. 250m long stretch of the local road within 500m south-west of the application area, in the townland of Cappanarrow (including adjoining residential properties); and
- an area between 3.5-5.5 km to the south-east of the site, along the ridge adjoining Clonin Hill (dispersed distant views from the local roads and residential properties within this area).

13.90 Viewpoint photography was taken during the field survey from several locations throughout the study area. Six of these were selected to represent the range of available views.

13.91 The location of the six viewpoints listed as A to F, are illustrated on **Figures 13-1 & 13-2**. For each of the viewpoints, annotated panoramic images showing the existing view are provided (refer to **Viewpoints A-F** on **Figures 13-3 to 13-5**). The panoramas are made up from 4-6 individual photographic frames, which were merged together using Adobe Photoshop software. It should be noted that photography is a tool to assist in the visualisation process and cannot be expected to replicate the actual view that would be attained on the ground.

13.92 **Viewpoint A** represents a small number of views from the local road in the vicinity of the site entrance (i.e. the L10317 / Glendine New Road; note: no residential properties present in this area). Views of a small section of the existing pit can be glimpsed through the gate at the site entrance. However, the majority of the existing pit and all of the proposed extension area are screened, due to roadside vegetation as well as topography. Views of the existing pit and/or extension area are generally screened from this road, including all parts within the Slieve Bloom Mountains. The only other area with visibility is a short section at its southern end (refer to Viewpoint B below).

13.93 **Viewpoint B** represents views from a short section of the local road to the east of the site (i.e. the L10317 / Glendine New Road), near the southern end of the road, as well as views from two adjoining residential properties. In these views, the sloping eastern section of the application area is visible behind a property adjoining the road to the west. As these viewpoints are located at a low elevation and in close proximity to the site, the ridge within the site forms the skyline, screening the higher ground, i.e. the Slieve Bloom Mountains, further west and north of the site.

13.94 **Viewpoint C** represents intermittent views from a section of the cul de sac road within 1 km north of the site, as well as from c. 5 properties in the vicinity of this road. Views from the more elevated section of this road are only available since an adjoining forestry plantation was recently harvested. This opened up panoramic long-distance views in a southern direction over Co. Laois and towards Co. Kilkenny. In the foreground of these views the undulating foothills of the Slieve Bloom Mountains are visible beyond which the topography flattens out. Views from the lower section of this road become more restricted by roadside vegetation and intervening topography. The application area is located beyond the nearest ridgeline visible in these views. The ground within the site is substantially screened by tree-lined hedgerows and wooded areas along the site boundaries. Only the most elevated sections of the site, including some vegetation within the site, can be glimpsed through gaps in the boundary vegetation. While parts of the L10317 / Glendine New Road, i.e. the road passing the site entrance, are visible in the valley to the front of the ridgeline, the site entrance itself is screened by vegetation.

13.95 **Viewpoint D** represents views from a short section of the local road within 300m to the east of the site (i.e. east of Cardtown Bridge). These views are similar to those represented by Viewpoint B insofar that the sloping eastern section of the application area is visible, however, at a slightly greater distance and less openly. Also, due to the increased distance the upland area surrounding Arderin mountain is visible beyond the site, which therefore does not form the skyline. Residential properties adjoining this section of road do not experience similar views, due to vegetation on their property boundaries.

13.96 **Viewpoint E** represents views from a section of the local road within 300m south-west of the application area, in the townland of Cappanarrow, as well as c. 3 residential properties in the vicinity of this road. Some gently sloping agricultural fields are visible in the foreground of these views with some areas of mixed woodland visible in the background, along the skyline. The most elevated section at the centre of the site, the scrub covered local ridge, can be glimpsed through a gap in the woodland vegetation. However, the majority of the application area is fully screened.

13.97 **Viewpoint F** represents views from the lowland area to the south of the Slieve Bloom Mountains towards this upland area. Gently sloping / undulating agricultural landscape is visible in the foreground, with the mountains covered in a mix of conifer plantations and blanket bog in the background. In a number of views from a slightly elevated area between 3.5-5.5 km to the south-east, such as Viewpoint F, parts of the site are distantly visible, albeit hard to discern in these vast panoramic views. Several residential properties within this area are likely to experience similar views.

Sensitive Receptors

Landscape Receptors

13.98 The landscape receptors potentially affected by the proposed development and therefore considered as part of the assessment of landscape effects, are:

- Individual elements:
  - Part of application site (pasture fields) and associated internal hedgerows; and
  - Areas of scrub and immature woodland and 3 mature beech trees within the site.
- Overall Character:
  - Mountain, Hills and Upland Areas LCA.

13.99 No distinctive or highly sensitive aesthetic / perceptual aspects were identified in the immediate vicinity of the application area, such as remoteness, wildness or tranquillity. While there is an increased sense of remoteness and tranquillity in the north-western half of the study area, this is unlikely to be affected by the proposed development, considering the visual separation and distance to the most remote parts of the study area. Also, while the proposed development will result in a localised contrast to the colours/textures typically present within the study area, the effects are unlikely to be significant, when considering the visual enclosure of the site and short timeframe of the development. For these reasons no aesthetic and perceptual aspects were identified as sensitive landscape receptors to be brought forward to the assessment of landscape effects

Visual Receptors

13.100 The visual receptors, potentially affected by the proposed development and therefore considered as part of the assessment of visual effects, are:

- Residents:
  - Two residential properties near the southern end of the L10317 / Glendine New Road (represented by **Viewpoint B** on **Figure 13-3**);
  - Circa five residential properties along the local road within 1 km to the north of the site (represented by **Viewpoint C** on **Figures 13-4**); and
  - Circa three residential properties in the vicinity of the local road within 500 m south-west (represented by **Viewpoint E** on **Figures 13-5**).
- Recreational users:
  - Cyclists along the Mountrath to Kinitty cycling route and tourists following the Slieve Bloom Scenic Glendine Driving Route within 500 m north-east and east of the site (represented by **Viewpoints A, B & D** on **Figure 13-3 & 13-4**).
- Vehicle users:
  - Road users along two short section of the of the L10317 / Glendine New Road (represented by **Viewpoint A & B** on **Figure 13-3**) at the site entrance and near the southern end of the road;
  - Road users along a short section of the local road, east of Cardtown Bridge (represented by **Viewpoint D** on **Figures 13-4**); and
  - Road users along a c. 250m long stretch of the local road within 500m south-west of the application area (represented by **Viewpoint E** on **Figures 13-5**).

13.101 As previously mentioned, views from the Slieve Bloom Way walking route of the site are highly unlikely, as indicated by ZTV mapping (**Figure 13-2**) and since this is routed through conifer plantations within the study area. Even if the relevant sections of conifer plantation were harvested, it is unlikely that open views towards the application area open up, due to other intervening vegetation (in particular along the site boundaries). Significant impacts on views from this walking route are therefore highly unlikely and the users of the Slieve Bloom Way were subsequently not identified as sensitive visual receptors.

13.102 The local road within 1km to the north of the site is a cul de sac and therefore likely to only be used by the local residents, which were identified as sensitive receptors. The users along this road were therefore not identified separately as sensitive visual receptors.

13.103 While there are dispersed views towards the Slieve Bloom Mountains from the locally elevated ground between 3.5-5.5 km to the south-east, including from residential properties, the site is difficult to discern in these views. Any movement / changes within the site, due to the proposed development are unlikely to result in significant impacts on these views. Residential properties and road users within this area were therefore not identified as sensitive visual receptors.

Impact Assessment

13.104 This section sets out the effects that the proposed development would have on both landscape and visual receptors (as identified in the previous section), during the operational stage of the sand and gravel pit, including the restoration activities, as well as during the post-operational stage, when all extraction / restoration works are completed. It is based on the detailed project description and layout drawings contained in Chapter 2 of this EIAR, in particular the proposed Landscape Plan and the Restoration Plan (**Figures 2-5** & **2-6**).

Aspects of the Development which Have the Potential to Cause Landscape and Visual Effects

Operational Stage

13.105 The operational stage of the proposed development, for the purpose of this assessment, is considered to include the extraction and final restoration works, i.e. an 11-year period. The following elements of the proposed development, during the operational stage, are those which are most likely to result in landscape & visual effects:

- Progressive stripping of soil and overburden from the proposed extension area and associated construction of screening berms along parts of the northern and the eastern boundary of the extension area;
- Progressive removal of c. 310 m of internal hedgerows and c. 22,000 m^2 of scrub and immature woodland, as well as three mature beech trees;
- Early planting of a total of c. 1,700 m^2 of a diverse native tree mix in several blocks and 315 m of native hedge along the boundaries of the proposed extraction area, to augment the existing screening vegetation (refer to the **Figures 2-5 - Proposed Landscape Plan**, in Chapter 2 of this EIAR).
- Changes to the landform within the c. 8 ha extraction area, including the removal of the existing ridge at the centre of the site and lowering of the ground levels throughout the extraction area, resulting in a smoothly sloping pit floor with steeper pit slopes of varying heights around its edges.

- Restoration of the site to an agricultural land use, including the planting of c. 370 m of native hedge, on completion of all extraction works. The overburden material stripped from the extension area and temporarily stored in screening berms and on the pit floor, will be used to lower the pit slopes to gradients conducive to an agricultural use. Similarly, the topsoil stripped from the site will be used to cover the ground in preparation for grass seeding (refer to the **Figures 2-6** - Proposed Restoration Plan, in Chapter 2 of this EIAR).

13.106 Lighting will be provided at the site as necessary. This will include fixed downlights outside the office / welfare facilities and processing plant; and mobile lighting on the machinery used within the pit void. All lighting would only be in use for wintertime operations, when darkness has fallen, within the proposed site operating hours of 07.00 hours until 18.00 hours Monday to Friday and until 14.00 hours on Saturdays. There will therefore be a period where such lighting will be required for up to 1 hour in the morning and up to 2.5 hours in the evening, during periods in winter. Any night-time light pollution caused by the proposed development will therefore be of brief duration during winter months and is not considered significant in landscape / visual terms.

Post-Operational Stage

13.107 The post-operational stage of the proposed development, for the purpose of this assessment, is considered to be the period when all extraction and restoration works are completed.

13.108 The following elements of the proposed development, at the post-operational stage, are those which are most likely to result in landscape & visual effects:

- The final landform, which will have a more regular appearance, compared with the irregular undulations in the surrounding landscape. It will take some time for the agricultural land and proposed hedgerows to become established, and some years for the hedgerows to mature along with some areas of scrub to naturally develop on the steepest sections of the site. Ultimately, this will help soften the appearance and enhance the integration of the extraction area into the surrounding landscape.

Operational Stage Landscape Effects

Landscape Sensitivity

13.109 In accordance with GLVIA3, the sensitivity of landscape receptors is determined by combining their value with their susceptibility to the type of development proposed.

13.110 In determining the value of landscapes, GLVIA3 recommends that the starting point should be to consider landscape-related designations. In this context it is important to note that no part of the application area or its immediate context is included within a statutory landscape designation.

13.111 GLVIA3 states that the value of undesignated sites should also be considered. Table 1 of Landscape Institute Technical Guidance Note 2/21 supersedes Box 5.1 of GLVIA3 and provides a helpful guide for assessing these sites. A full assessment against a list of factors set out in the Technical Guidance Note is included in **Table 13-1**, below.

Table 13-1: Evaluation of the Value of the Site and its Immediate Context

Factor	Assessment	Notes
Natural Heritage	COMMUNITY	The site itself is not designated for ecological reasons but contains and is surrounded by a mix of hedgerows, (immature) woodland and scrub areas which are of some local habitat value. There are several nature conservation areas within the study area, including an SPA immediately adjoining the site to the north.
Cultural Heritage	LOW	No designated heritage assets are located within the site. The closest such asset, listed in the Sites and Monuments Record (SMR), is a barrow (site code: LA011-008----) in the townland of Cummer, across the road, east of the application area.
Landscape condition	COMMUNITY	The agricultural fields within and immediately surrounding the application area are in a good condition with well-tended grassland and hedgerows. This is with the exception of some areas (in particular steep slopes), which have been allowed to become overgrown with scrub. Since there are also areas of scrub in the wider landscape, these are however no detracting / incongruous features.
Associations	LOW	No known associations with art, literature or events.
Distinctiveness	LOW	The application area and surrounding land comprises a common Irish undulating agricultural landscape, with no distinctive features conferring a strong sense of place.
Recreational	COMMUNITY	The site is not publicly accessible. The Mountrath to Kinitty cycling route and the Slieve Bloom Scenic Glendine Driving Route pass the eastern boundary of the application area providing some glimpsed views of the site.
Perceptual (Scenic)	LOW	The site / local landscape does not have strong aesthetic qualities and there are no memorable or distinctive views which include parts of the site.
Perceptual (Wilderness and tranquillity)	LOW	The site and immediate surrounding area have no strong perceptual value, such as remoteness, wildness or tranquillity, due to the presence of residential and farm buildings, roads and other human influences (e.g. the farmed land).
Functional	COMMUNITY	The hedgerows and scrub/woodland areas within and surrounding the site, including some mature trees, have a function as part of the local green infrastructure network and as a carbon sink (on a local scale).

13.112 Using the factors set out in **Table 13-1**, it has been concluded that the site and its immediate context has some value at the community level, in particular regarding the natural heritage / biodiversity and recreational contributions of the landscape. However, there are no aspects that would support the elevation of the value of the local landscape above the community level.

13.113 The susceptibility of each of the sensitive landscape receptors is assessed in **Table 13-2**. This is combined with the previously assessed value and a judgement of the overall sensitivity provided.

Table 13-2: Sensitivity of Landscape Receptors

Landscape Receptors	Value	Susceptibility	Overall Sensitivity
Individual Elements			

Landscape Receptors	Value	Susceptibility	Overall Sensitivity
Pasture fields with associated hedgerows	COMMUNITY	HIGH The susceptibility of the affected sections of the pasture fields and associated hedgerows to the proposed works is high, as they would be removed.	**MEDIUM**
Areas of scrub / immature woodland and three mature beech trees	COMMUNITY	HIGH The susceptibility of the affected areas of scrub / immature woodland and the beech trees to the proposed works is high, as they would be removed.	**MEDIUM**
Overall Character			
Mountain, Hills and Upland Areas LCA	LOCAL AUTHORITY (due to the presence of several nature conservation designations and recreational facilities in the wider study area)	MEDIUM The Laois Landscape Character Assessment states that the Hills and Upland Areas have the *"capacity to accommodate a range of uses without significant adverse effects on the appearance or character of the landscape having regards to localised sensitivity factors"*.	**MEDIUM**

Magnitude of Landscape Change

13.114 **Table 13-3** describes the size & scale, geographical extent and duration/reversibility of the landscape effects for each landscape receptor, all of which contribute to the assessment of the magnitude of these effects.

Table 13-3: Magnitude of Landscape Change

Visual Receptors	Factors	Magnitude of Change
Individual Elements		
Pasture fields with associated hedgerows	Size & Scale: **SMALL** Geographical Extent: **SMALL** Duration / Reversibility: **MEDIUM -TERM – REVERSIBLE** **Notes**: The proposed development would result in the loss of part of a number of pasture fields and associated internal hedgerows, which are tightly cut with some small trees. While the loss of pastureland will be large within the site, this is a small proportion, considering the large areas of such land in the vicinity of the site. The loss of hedgerows comprises a small proportion of those to be retained along the boundaries of the application area, most of which contain larger / more mature trees. Overall, the composition/balance of the local landscape will not change. The change would influence the landscape at a local level, i.e. would be focused on the site. The extraction area will be restored to an agricultural use at the end of the operational period. Also, native hedges will be planted across the pit floor, as part of the	**SLIGHT**

Visual Receptors	Factors	Magnitude of Change
	restoration works, to break up the large area and reinstate some of the former field boundaries.	
Areas of scrub / immature woodland and three mature beech trees	Size & Scale: **SMALL** Geographical Extent: **MEDIUM** Duration / Reversibility: **MEDIUM -TERM – REVERSIBLE** **Notes**: The proposed development would result in the loss of a substantial area of scrub and immature woodland, as well as 3 beech trees, which form part of a line of beech trees in the eastern part of the site (note: seven further beeches, closer to the site boundaries will be retained, by routing the extraction area around the root protection areas of these trees). Compared with the areas of scrub / woodland / mature trees retained along the site boundaries the works will result in a moderate loss of these landscape elements. Overall, the composition/balance of the local landscape will not change. The change would influence the landscape at a local level, i.e. would be focused on the site. Blocks of native trees will be planted along parts of the site boundaries on commencement of the proposed development. The proposed mix is more species rich than the existing areas of scrub and immature woodland and will therefore be able to compensate the loss of the existing vegetation to some extent.	**SLIGHT / MEDIUM**
Overall Character		
Mountain, Hills and Upland Areas LCA	Size & Scale: **SMALL** Geographical Extent: **SMALL** Duration / Reversibility: **MEDIUM-TERM – REVERSIBLE** **Notes**: Due to the presence of the existing sand and gravel pit, the proposed development would not result in the introduction of completely new element into the landscape, although the proposed extraction area will cover a larger area. However, considering the vast extend of the LCA, the overall composition / balance of the landscape and therefore its key characteristics would not be changed. The change would influence the landscape at a local level, i.e. would be focused on the site. The restoration of the application area to agricultural land with associated hedgerows, at the end of the operational period, will result in a partial reversal of the effects.	**SLIGHT**

Assessment of Landscape Effects and Significance

13.115 An assessment of the landscape effects during the operational phase, based on the sensitivity of each of the landscape receptors combined with the magnitude of change experienced by each of them, is provided in **Table 13-4** below. The assessment also includes a judgment of the nature of the effect (i.e. negative/positive/neutral).

Table 13-4: Assessment of Landscape Effects

Landscape Receptor	Sensitivity	Magnitude	Landscape Effects	Nature of Effect
Individual Elements				
Pasture fields with associated hedgerows	MEDIUM	SLIGHT	**MINOR**	Negative
Areas of scrub / immature woodland and three mature beech trees	MEDIUM	SLIGHT / MEDIUM	**MODERATE / MINOR**	Negative
Overall Character				
Mountain, Hills and Upland Areas LCA	MEDIUM	SLIGHT	**MINOR**	Negative

13.116 None of these landscape effects are assessed to be significant.

Post – Operational Stage Landscape Effects

13.117 At the post-operational stage, the proposed extraction area will have been fully restored to agricultural land, including native hedgerows across the former pit floor, which will take a little time to establish and mature. Further to that it is likely that some scrub will naturally establish on the steeper slopes within the site. Over time the landscape elements within the site will more and more merge with and become assimilated into the local landscape character. As a result, the effects on all landscape receptors would reduce to **MINOR / NEGLIGIBLE** and would become neutral.

Operational Stage Visual Effects

Visual Receptor Sensitivity

13.118 The value placed on each of the types of visual receptors identified above is described in **Table 13-5** below. Also, the susceptibility to change of each of the receptor types (as per the LVIA Methodology in **Appendix 13-A**) is described and a judgement of the overall sensitivity made.

Table 13-5: Sensitivity of Visual Receptors

Visual Receptors	Value	Susceptibility	Overall Sensitivity
Residents			
All residential receptors identified.	LOW (No specific designated or locally promoted views)	HIGH (Susceptible to changes in views, particularly from gardens and living rooms)	**MEDIUM**
Recreational Users			
All recreational users identified (i.e. cyclists and users of scenic driving routes).	LOW (No specific designated or locally promoted views)	HIGH	**MEDIUM**
Vehicle Users			

Visual Receptors	Value	Susceptibility	Overall Sensitivity
All vehicle users identified.	LOW (No specific designated or locally promoted views)	LOW (Unlikely to be focused on views)	**LOW**

Magnitude of Visual Change

13.119 **Table 13-6** describes the size & scale, geographical extent and duration/reversibility of the visual effects for each visual receptor, all of which contribute to the assessment of the magnitude of these effects.

Table 13-6: Magnitude of Visual Change

Visual Receptors	Factors	Magnitude of Change
Residents		
2 properties along L10317 (**Viewpoint B**)	Size & Scale: **MEDIUM** Geographical Extent: **SMALL** Duration / Reversibility: **MEDIUM -TERM – REVERSIBLE** **Notes:** No changes will be visible during the early stages of the development, as all works will take place beyond the ridge visible at the back of the available view. Also, a temporary noise barrier will provide substantial screening for the two properties, but will result in visual effects in itself, as it will partially block the existing views. Parts of the works will eventually become visible (above the noise barrier if installed), as the left half of ridge will be lowered, with the slope to the front providing a screen for much of the works. As the extraction works near the eastern boundary and lowest section of the site, parts of the north-western pit face and parts the screening plant will be revealed, as well as views of the elevated parts of the Slieve Bloom Mountains, which are currently screened by the ridge. Therefore, while the existing skyline will be lowered, a new skyline, which will not be affected by proposed development, will be revealed. Towards the final stage of the extraction works, some more of the ridge will be lowered in the right half of the picture, resulting in the removal of 3 mature beech visible in these views and the visibility of parts of the northern pit slopes. The development will be visible in a wide band in the background of the available views, causing clearly noticeable changes in the view, altering the composition of the view to a moderate degree. The views would be experienced by the residents of a very limited number of properties. The changes will be experienced for less than the 11 year operational period, due to the delayed start. While the changes to the landform will remain, the site will be restored to an agricultural use, by the end of the operational period.	**SLIGHT / MEDIUM**

Visual Receptors	Factors	Magnitude of Change
5 properties along local road within 1 km to the north (**Viewpoint C**)	Size & Scale: **NEGLIGIBLE** Geographical Extent: **SMALL** Duration / Reversibility: **MEDIUM -TERM – REVERSIBLE** **Notes:** The proposed development will be largely screened in views from these properties, due to topography (i.e. the extraction area is largely located to the back of a ridgeline) and existing vegetation along the site boundaries. The only changes visible will be the removal of some vegetation and the lowering of small sections of elevated ground, currently visible through gaps in the existing boundary vegetation and other vegetation to the back of this ground being revealed. Due to the retention of all of the boundary vegetation, plus the addition of native tree planting in gaps along its northern boundary, as well as the backdrop of further vegetation, the changes within the site will be barely noticeable. This is further supported by the small portion of the overall panoramic view occupied by the proposed development. The HGVs associated with the proposed development traveling along the L10317 / Glendine New Road are unlikely to result in a visual intrusion, as they will be seen in the valley, against a backdrop of sloping ground and will not block views into the wider landscape. The views would be experienced by the residents of a very limited number of properties (the views of some of which have only recently opened up, as an adjoining forestry plantation was harvested). The changes will be experienced intermittently during the 11 year operational period. The loss of the currently visible elevated ground could theoretically be reversed, however this is not necessary, as no parts of the development will be visible, once the levels are lowered within this area and the existing vegetation in the background revealed.	**SLIGHT**
3 properties along local road within 500 m south-west (**Viewpoint E**)	Size & Scale: **SMALL** Geographical Extent: **SMALL** Duration / Reversibility: **MEDIUM -TERM – REVERSIBLE** **Notes:** The proposed development will be largely screened in views from these properties, due to the existing vegetation along the southern site boundary. The only changes visible will be the removal of some vegetation and the lowering of an area of elevated ground, currently visible through gaps in the existing boundary vegetation. It is acknowledged that slightly larger sections of the site may be visible from these properties compared with what is indicated on Viewpoint E, due to their slightly elevated positions. However, at the same time they are likely to experience views of the Slieve Bloom Mountains in the background, which would mean that the changes are not seen against the skyline and would therefore be more difficult to discern. Overall, the changes will take up a small portion of the available views, and while perceptible, the composition of the views will only partially be altered. The views would be experienced by the residents of a very limited number of properties.	**SLIGHT**

Visual Receptors	Factors	Magnitude of Change
	The changes will be experienced intermittently during the 11 year operational period. While the changes to the landform will remain, the site will be restored to an agricultural use, by the end of the operational period.	
Recreational users		
Cyclists and drivers along local roads within 500m east (**Viewpoints A, B & D**)	Size & Scale: **MEDIUM** Geographical Extent: **SMALL** Duration / Reversibility: **MEDIUM -TERM – REVERSIBLE** **Notes:** There will be views from three short sections of this cycling / driving route, which will be similar to what is described for the residential and vehicular receptors along the L10317 / Glendine New Road and east of Cardtown bridge above and below. The size/scale of the visual changes are judged to be no larger than the largest effects described for the individual views, i.e. Viewpoint B. Views will be glimpsed from three very short sections of the overall cycling / driving routes along which views are typically focused on the Slieve Bloom Mountains and over the adjoining lowland. The views will be experienced for the duration of the operational period.	**SLIGHT / MEDIUM**
Road users		
Two short sections of the of the L10317 (**Viewpoints A & B**)	Size & Scale: **MEDIUM** Geographical Extent: **SMALL** Duration / Reversibility: **MEDIUM -TERM – REVERSIBLE** **Notes:** The changes to the views at the southern end of this road will be the same as those described for the adjoining residential receptors above (refer to Viewpoint B). In addition to this road users will experience some small changes at the site entrance, where some vegetation and possibly parts of an existing berms will need to be removed to achieve the required site lines (refer to Viewpoint A). However, as there is a backdrop of dense woodland vegetation the changes will be barely discernible once completed. Some of the site facilities, e.g. the weighbridge, will become visible at the back of the access road. This will, however, be barely noticeable when driving past the entrance. The remainder of the application area, in particular the proposed extraction area will be fully screened in views from the site entrance. The overall size/scale of the visual changes are judged to be no larger than those described for the residential receptors at the southern end of the road, which is the more open view of the two, i.e. Viewpoint B. Views will be glimpsed along two very short sections of the local road, which is not frequently used, due to its remote nature. The views will be experienced for the duration of the operational period.	**SLIGHT / MEDIUM**

Visual Receptors	Factors	Magnitude of Change
Short section of the road, east of Cardtown Bridge (**Viewpoint D**)	Size & Scale: **SMALL** Geographical Extent: **SMALL** Duration / Reversibility: **MEDIUM -TERM – REVERSIBLE** **Notes:** The changes to the views from this section of road will be similar to those described for the residential receptors at the southern end of the L10317 (refer to Viewpoint B). Albeit at a slightly greater distance, which means that the application area takes up a smaller portion of the overall view and the Slieve Bloom Mountains are visible to the back of the site, so that there will be no changes to the existing skyline. Views would be experienced along a short section of this local road, which is not frequently used. The changes will be experienced for less than the 11 year operational period, due to the delayed start. While the changes to the landform will remain, the site will be restored to an agricultural use, by the end of the operational period.	**SLIGHT**
250 m section of the road within 500 m south-west (**Viewpoint E**)	Size & Scale: **SMALL** Geographical Extent: **SMALL** Duration / Reversibility: **MEDIUM -TERM – REVERSIBLE** **Notes:** The changes to the views from this section of road will be similar to those described for the residential receptors adjoining it (refer to Viewpoint E). Views would be experienced along a short section of this local road, which is not frequently used. The changes will be experienced intermittently during the 11 year operational period. While the changes to the landform will remain, the site will be restored to an agricultural use, by the end of the operational period.	**SLIGHT**

Assessment of Visual Effects and Significance

13.120 An assessment of the visual effects during the operational phase, based on the sensitivity of each of the visual receptors combined with the magnitude of change experienced by each of them, are provided in **Table 13-3** below. The assessment also includes a judgment of the nature of the effect (i.e. negative/positive/neutral).

Table 13-7: Assessment of Visual Effects

Visual Receptor	Sensitivity	Magnitude	Visual Effects	Nature of Effect
Residents				
2 properties along L10317 (**Viewpoint B**)	MEDIUM	SLIGHT / MEDIUM	**MODERATE/ MINOR**	Negative
5 properties along local road within 1 km to the north (**Viewpoint C**)	MEDIUM	SLIGHT	**MINOR**	Negative
3 properties along local road within 500 m south-west (**Viewpoint E**)	MEDIUM	SLIGHT	**MINOR**	Negative

Visual Receptor	Sensitivity	Magnitude	Visual Effects	Nature of Effect
Recreational Users				
Cyclists and drivers along local roads within 500m east (**Viewpoint A, B & D**)	MEDIUM	SLIGHT / MEDIUM	**MODERATE/ MINOR**	Negative
Vehicle Users				
Two short sections of the of the L10317 (**Viewpoints A& B**)	LOW	SLIGHT / MEDIUM	**MINOR**	Negative
Short section of the road, east of Cardtown Bridge (**Viewpoint D**)	LOW	SLIGHT	**MINOR / NEGLIGIBLE**	Negative
250 m section of the road within 500 m south-west (**Viewpoint E**)	LOW	SLIGHT	**MINOR / NEGLIGIBLE**	Negative

13.121 None of these visual effects are assessed to be significant.

Post – Operational Stage Visual Effects

13.122 At the post-operational stage, the proposed extraction area will have been fully restored to agricultural land, including native hedgerows across the former pit floor, which will take a little time to establish and mature. Further to that it is likely that some scrub will naturally establish on the steeper slopes within the site. While the changed landform will remain visible, all of the above will help to soften its appearance and more and more visually integrate it with the surrounding land / vegetation. As a result, the effects on all visual receptors will reduce to **MINOR/NEGLIGIBLE** and would eventually become neutral.

Direct/Indirect Effects

13.123 All landscape and visual effects described above are direct effects. The proposed development is not considered to have indirect effects in landscape and visual terms, i.e. the proposed development is unlikely to cause consequential changes to the surrounding landscape character areas or to existing views of the landscape surrounding the application area.

Compliance with relevant Planning Policies

Mining and Aggregates

13.124 The above LVIA was carried out with regard to the Laois Landscape Character Assessment and has shown that the landscape and visual effects due to the proposed development will be moderate / minor or less for all sensitive landscape and visual receptors and therefore do not result in undue negative impact. No protected scenic views or walking routes will be affected by the proposed development. All existing boundary vegetation surrounding the application area will be retained and a detailed landscape and restoration programme is provided. This provides for diverse native tree and hedge planting, to augment the existing boundary vegetation, compensate the loss of vegetation within the site and help the site, which will be restored to an agricultural landuse, to integrate into the surrounding landscape and available views.

13.125 In view of the above, the development is considered to be in compliance with **Policy Objectives RL 13 & RL 18**, as well as **DM RL 3** of the current LCDP.

Trees, Woodlands and Hedgerows

13.126 The proposed development, by its nature, will result in the loss of any vegetation located within the extraction area. In order to minimise this loss, in particular that of large trees, the outline of the extraction area was adjusted in a number of areas. The root protection areas of those trees in close proximity to the extraction area will be protected with barrier fencing, in line with BS5837:2012, refer to **Figure 2-8 Tree Removal Plan** in Chapter 2 of this EIAR.

13.127 Approximately, 310 m of species poor tightly cut hedgerows will have to be removed, none of which form a townland boundary. In mitigation, 315m of a more diverse native hedge will be planted on commencement of the development, along part of the extraction outline and a further 370 m across the restored pit floor in the approximate location of the hedgerows to be removed.

13.128 An area of immature woodland and some larger patches of gorse dominated scrub will also have to be removed. These will be mitigated by the planting of blocks of a more diverse native tree mix, along the site boundaries, on commencement of the development.

13.129 Overall, the loss of vegetation was minimised as far as it possible, considering the type of development proposed, and the development is considered to be in compliance with **Policy Objectives BNH 26, BNH 27, BNH 28 & BNH 30**, as well as **DM BNH 4 & 5** of the current LCDP.

Landscape

13.130 As mentioned above, this LVIA was carried out with regard to the Laois Landscape Character Assessment, including due consideration of the landscape sensitivities described within it. The assessment has shown that despite its location on sloping ground, the landscape and visual effects due to the proposed development will be moderate / minor or less for all sensitive landscape and visual receptors. The undulating topography surrounding the site, as well as existing screening vegetation, which will be retained, ensure that the visibility of the development is minimised and that it will not be conspicuous in the wider landscape.

13.131 In view of the above, the development is considered to be in compliance with **Policy Objectives LCA 1, LCA 2, LCA 3, LCA 5, LCA 6, LCA 7, LCA 8, LCA 9 & LCA 11** of the current LCDP.

Unplanned Events (i.e. Accidents)

13.132 It is highly unlikely that any unplanned events within the application area would result in significant landscape or visual impact.

Cumulative / Synergistic Impacts

13.133 There are a number of existing disused sand pits in the vicinity of the application area. Their visible pit faces have been colonised with grass and scrub and have therefore been integrated into the existing landscape / views. At the same time, their noticeably steeper slopes, compared with the surrounding topography have given the local landscape a sense of place. Also considering that the sand and gravel pit, subject to this application, is long-established and the proposed development will form an extension to this existing development, which will have little landscape or visual effect compared with what is already

permitted, it is considered that the cumulative landscape and visual impact of the proposed development in combination with the nearby third party disused sand pits is minimal.

13.134 Considering the low predicted landscape and visual effects, including the limited areas from where the proposed development will be visible, the likelihood for significant cumulative impacts with other development is low. No existing / permitted developments or developments currently in the planning process were identified, that would have the potential for such cumulative landscape or visual impacts.

Transboundary Impacts

13.135 The proposed application area is not located in the vicinity of a national boundary. Therefore, transboundary landscape or visual impacts would not arise.

Interaction with Other Impacts

13.136 Some of the local residential receptors may experience a slightly elevated level of impact, due to an interaction of the visibility of extraction activities within the site and the noise and dust associated with these works.

'Do-nothing Scenario'

13.137 If the proposed development is not carried out, the current agricultural land use is likely to continue within the application area for the foreseeable future, resulting in no landscape or visual effects and the mineral resource remaining in-situ.

Mitigation Measures

Operational Stage

13.138 The proposed development will be largely screened in views from the surrounding area, by existing vegetation and topography. The proposed gradual extraction and ultimate restoration of the site to an agricultural use, including diverse native tree and hedge planting, will contribute to the screening of the site and its integration into the local landscape. These elements comprise the main mitigating features integrated into the development design, ensuring that the landscape and visual effects are kept to a minimum. Considering no significant landscape or visual impacts were identified, no further mitigation measures are considered necessary during the operational stage of the proposed development.

Post – Operational Stage

13.139 While the landform will remain altered, the restored site will integrate into the surrounding landscape, in particular as the hedgerows within the site mature and scrub vegetation spreads over the steepest slopes within the site. No further mitigation measures are considered necessary for the post-operational stage of the proposed development.

Residual Impact Assessment

Operational Stage

13.140 As no additional mitigation measures are proposed during the operational stage, the residual levels of landscape and visual impact would be as per the assessment above. In

summary, the assessment has found that the proposed development would have moderate/minor or minor landscape effects on the landscape receptors identified (i.e. levels of impact not considered to be significant), during the operational stage.

13.141 The visual effects on views would range from none for the majority of the study area, to moderate/minor or minor for a small number of residential and recreational receptors, as well as road users within 1km to the north and 500 m to the southwest and east of the site (i.e. all impacts not regarded as significant).

Post – Operational Stage

13.142 As no additional mitigation measures are proposed during the post-operational stage, the residual levels of landscape and visual impact would be as per the assessment above. In summary, following the completion of all extraction and restoration works the predicted landscape and visual effects would reduce to minor/negligible for all receptors identified.

Monitoring

13.143 Apart from the proposed 2-year aftercare period, as part of the Landscape and the Restoration Proposals (refer to **EIAR Figures 2-5** & **2-6**), to ensure the successful establishment of the native tree and hedge planting, there are no monitoring requirements, arising from this landscape and visual assessment.

References

Environmental Protection Agency (May 2022) Guidelines on the Information to be contained in Environmental Impact Assessment Reports, EPA Ireland

The Landscape Institute with the Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, Third Edition, Routledge

The Landscape Institute (2019) Technical Guidance Note 06/19: Visual Representation of Development Proposals, Landscape Institute

The Landscape Institute (2021) Technical Guidance Note 02/21: Assessing landscape value outside national designations, Landscape Institute

Figures

Notes:

1. Extract from 1:50,000 OS Discovery Map no. 54

Legend:

- Landowner Boundary (c.32.1 Hectares) *Third party landowner's land interest*
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares) *under lease agreement from landowner*
- Viewpoint locations
- Approximate Distance from Application Area

Designations & Outdoor recreational facilities

- Protected Viewpoints *(Laois CDP 2021-2027)*
- Walking Trails *(Laois CDP 2021-2027)*
- Cycling Routes *(Laois CDP 2021-2027)*
- Driving Routes *(www.slievebloom.ie)*
- Special Protection Area (SPA) *(www.npws.ie)*
- Special Area of Conservation (SAC) *(www.npws.ie)*
- Proposed National Heritage Area (pNHA) *(www.npws.ie)*

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Client: Breedon Ireland

Project: Sand and Gravel Pit Extension Development, Mounthall, Camross, Co. Laois

Figure Title: Landscape Designations & Viewpoint Locations

Scale	SLR Project No.
1:25,000 @ A3	501.00584.065036

Designed	Drawn	Checked	Authorised
SH	SH	AM	AM
Date: 04/2024	Date: 04/2024	Date: 09/2024	Date: 09/2024

Figure Number: **Figure 13-1** Rev.

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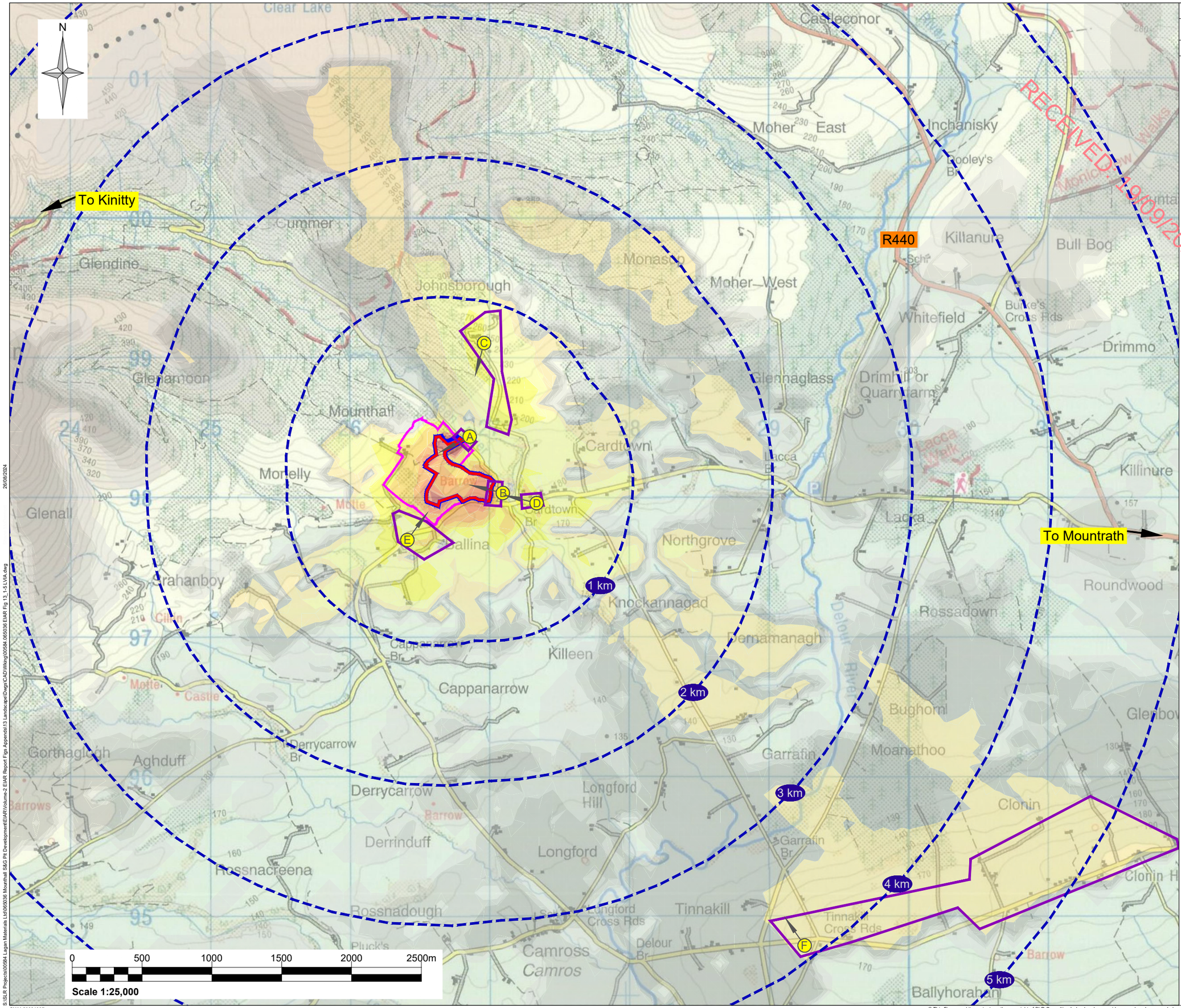

Notes:

1. Extract from 1:50,000 OS Discovery Map no. 54

Legend:

- Landowner Boundary (c.32.1 Hectares) *Third party landowner's land interest*
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares) *under lease agreement from landowner*
- Viewpoint locations
- Areas / sections of road with similar (intermittent) views of the proposed development to that of the sample viewpoint contained within the area

Vertical subtended angles visible
(of the proposed extraction area):

- Subtended vertical angle greater than **25.6** degrees
- Subtended vertical angle **12.8** to **25.6** degrees
- Subtended vertical angle **6.4** to **12.8** degrees
- Subtended vertical angle **3.2** to **6.4** degrees
- Subtended vertical angle **1.6** to **3.2** degrees
- Subtended vertical angle **0.8** to **1.6** degrees
- Subtended vertical angle **0.4** to **0.8** degrees
- Subtended vertical angle **0.2** to **0.4** degrees
- Subtended vertical angle **0.1** to **0.2** degrees
- Subtended vertical angle less than **0.1** degrees
- No theoretical visibility

Note: Vegetation cover and built structures were not taken into account, as part of the calculation of this ZTV, which therefore represents the worst-case-scenario. In SLR's experience, views from areas in grey (i.e. less than 0.4 degrees) tend to be screened by hedgerows and other intervening vegetation, if locally present.
Please refer to Appendix 13-B of the EIAR for the ZTV methodology.

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Project: Sand and Gravel Pit Extension Development, Mounthall, Camross, Co. Laois

Figure Title: Zone of Theoretical Visibility (ZTV)

Scale	SLR Project No.
1:25,000 @ A3	501.00584.065036

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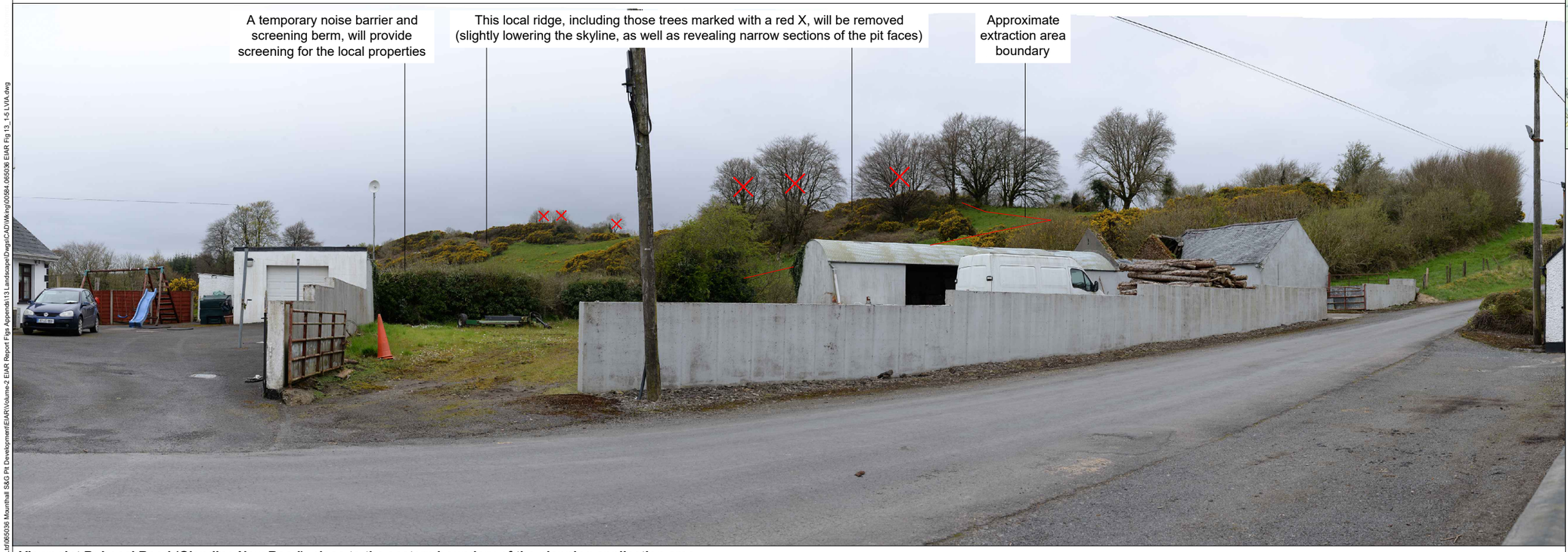
SH	SH	AM	AM
Date: 04/2024	Date: 04/2024	Date: 09/2024	Date: 09/2024

Figure Number: **Figure 13-2** Rev.

Viewpoint A: Local Road (Glendine New Road), at the location of the proposed site entrance

Grid Coordinates (ITM): **626760:698442** Approximate Elevation: **200m AOD** Distance from planning application boundary: **10m** Direction of View: **South-West** Date/time of photograph: **18/04/2024 @ 13:20**

Description: The existing site entrance will be utilised for the proposed development. Some of the existing berms and scrub vegetation will have to be removed to facilitate the sightlines at the site entrance. Also, some of the facilities near the site entrance will be visible at the end of the access road. Road users will experience these changes in the immediate vicinity of the site entrance only. There are no residential properties nearby with similar views.



Viewpoint B: Local Road (Glendine New Road), close to the eastern boundary of the planning application area

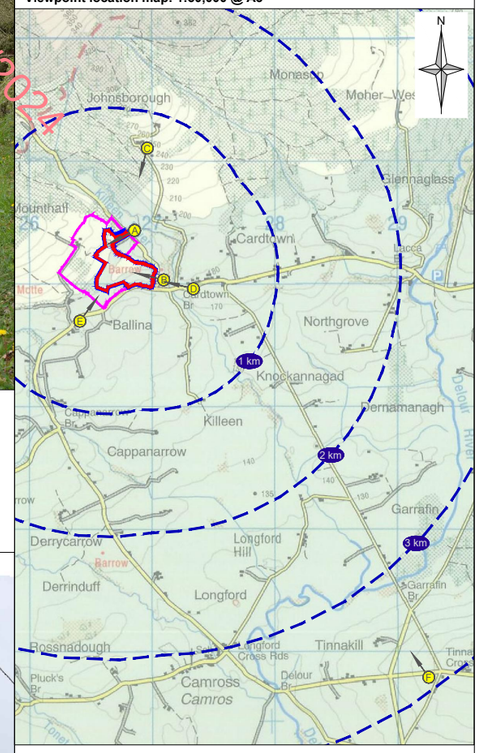
Grid Coordinates (ITM): **626995:698071** Approximate Elevation: **170m AOD** Distance from planning application boundary: **40m** Direction of View: **North-West** Date/time of photograph: **18/04/2024 @ 13:40**

Description: This viewpoint represents views from the southern end of the Glendine New Road and two adjoining residential properties. The eastern section of the application area is visible in these views, due to its sloping topography. The first phase of the extraction works will be fully screened as located entirely behind the visible ridgeline. As part of the second phase, the extraction area will be pushed towards this viewpoint. The top of the ridgeline will be slowly lowered with the slope facing the viewpoint acting as a screen until it is fully removed. As a result the skyline will be lowered and eventually parts of the pit slopes revealed. A temporary noise barrier along the boundary to the back of the property visible in the foreground will provide screening of the works at the lower elevations within the site. In addition, it is proposed to install a screening berm, to be grass seeded, along the eastern boundary of the extraction area,for the duration of the development. This will provide additional screening, in particular of the more elevated section of the extraction area in the right half of the view.

Legend:

- Landowner Boundary (c.32.1 Hectares) *Third party landowner's land interest*
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares) *under lease agreement from landowner*
- Viewpoint locations
- Approximate Distance from Application Area

Viewpoint location map: 1:50,000 @ A3



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Project: Sand and Gravel Pit Extension Development, Mounthall, Camross, Co. Laois

Figure Title: Viewpoints A & B

Scale	SLR Project No.
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SH	SH	AM	AM
Date 04/2024	Date 04/2024	Date 09/2024	Date 09/2024

Figure Number: **Figure 13-3** Rev.:

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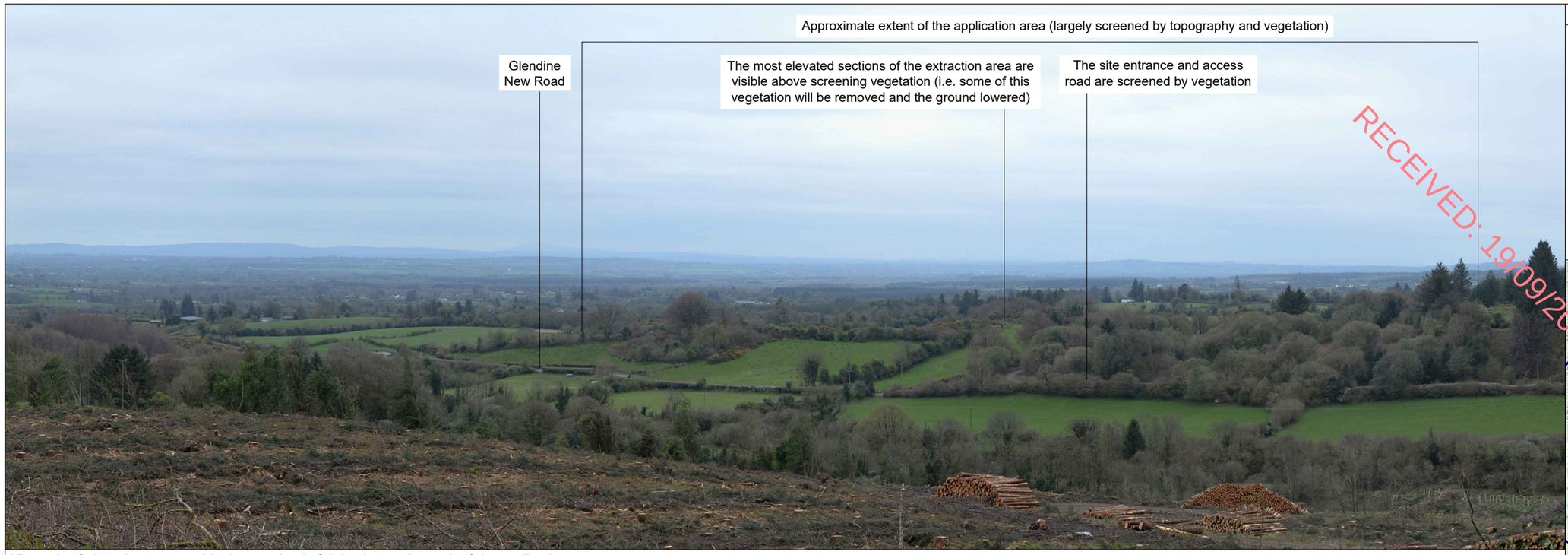
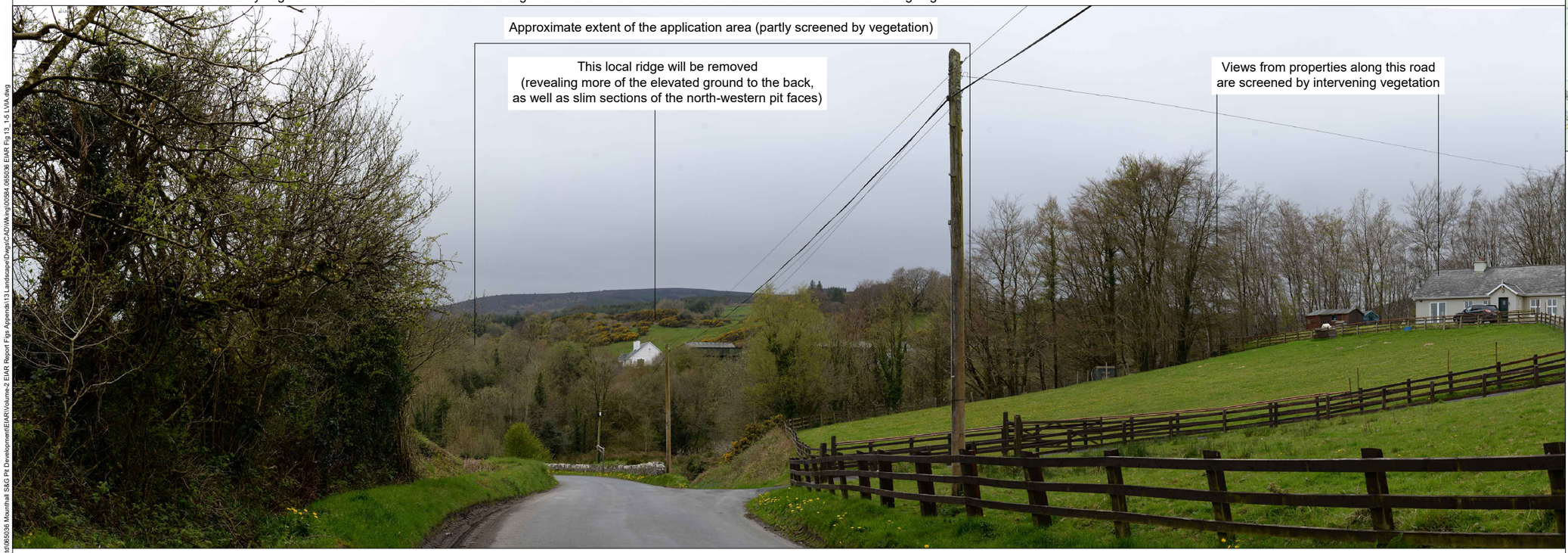


Viewpoint C: Local access road in the townland of Johnsborough, north of the application area

Grid Coordinates (ITM): **626893:699091** Approximate Elevation: **245m AOD** Distance from planning application boundary: **650m** Direction of View: **South** Date/time of photograph: **18/04/2024 @ 13:50**

Description: This viewpoint represents views from ca. 5 residential properties along this cul de sac road, which is therefore not experiencing regular road traffic. Views from the upper section of this road have opened up in recent years, when the adjoining forestry plantation was harvested (as visible in the foreground). Views are likely to remain open for the duration of the development, as any newly planted trees will take some years to provide screening. Small sections of the application area can be glimpsed through the generally dense boundary vegetation, while the majority is screened by this vegetation, as well as topography. The extraction works at the northern end of the site will be intermittently visible and will result in some of the vegetation at the centre of the view being removed. However, considering the vast panoramic view and abundant vegetation surrounding the site, these changes will affect a small portion of the view only. Any HGVs accessing the site will be visible along the local road (Glendine New Road) in the mid ground of the view. The site entrance is screened by vegetation. Views from lower elevations along this road are much more restricted due to roadside and intervening vegetation.



Viewpoint D: Local access road in the townland of Johnsborough, east of Cardtown Bridge

Grid Coordinates (ITM): **627237:698000** Approximate Elevation: **175m AOD** Distance from planning application boundary: **290m** Direction of View: **North-West** Date/time of photograph: **18/04/2024 @ 14:10**

Description: This viewpoint represents views from a short elevated section of this local road, east of Cardtown Bridge. The eastern section of the application area is visible in these views, due to its sloping topography. The first phase of the extraction works will be fully screened as located entirely behind the visible ridgeline. As part of the second phase, the extraction area will be pushed towards this viewpoint. The top of the ridgeline will be slowly lowered with the slope facing the viewpoint acting as a screen until it is fully removed. As a result the parts of the north-western pit face will be revealed. The skyline will not be affected. A temporary screening berm along the eastern boundary of the extraction areas, will provide some screening screening, Views from residential properties along this road are screened by mature vegetation on the property boundaries, as can be seen in the right half of this view.

Legend:

- Landowner Boundary (c.32.1 Hectares) *Third party landowner's land interest*
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares) *under lease agreement from landowner*
- Viewpoint locations
- Approximate Distance from Application Area

Viewpoint location map: 1:50,000 @ A3

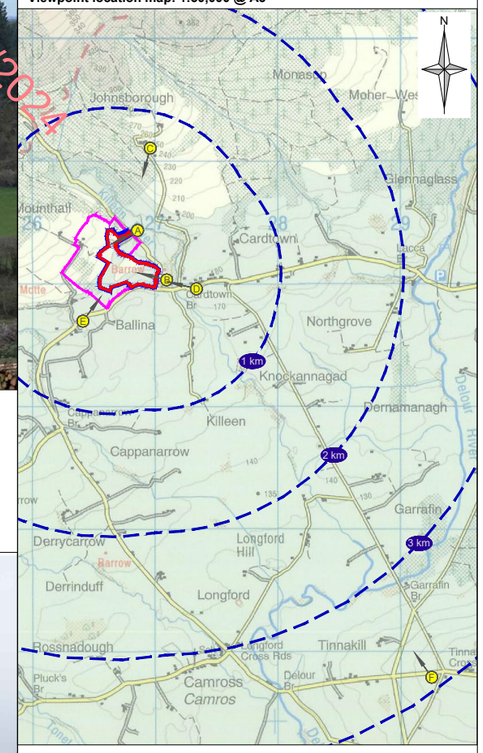


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Figure Title: Viewpoints C & D

Scale	SLR Project No.
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Date 04/2024	Date 04/2024	Date 09/2024	Date 09/2024

Figure Number: **Figure 13-4** Rev.

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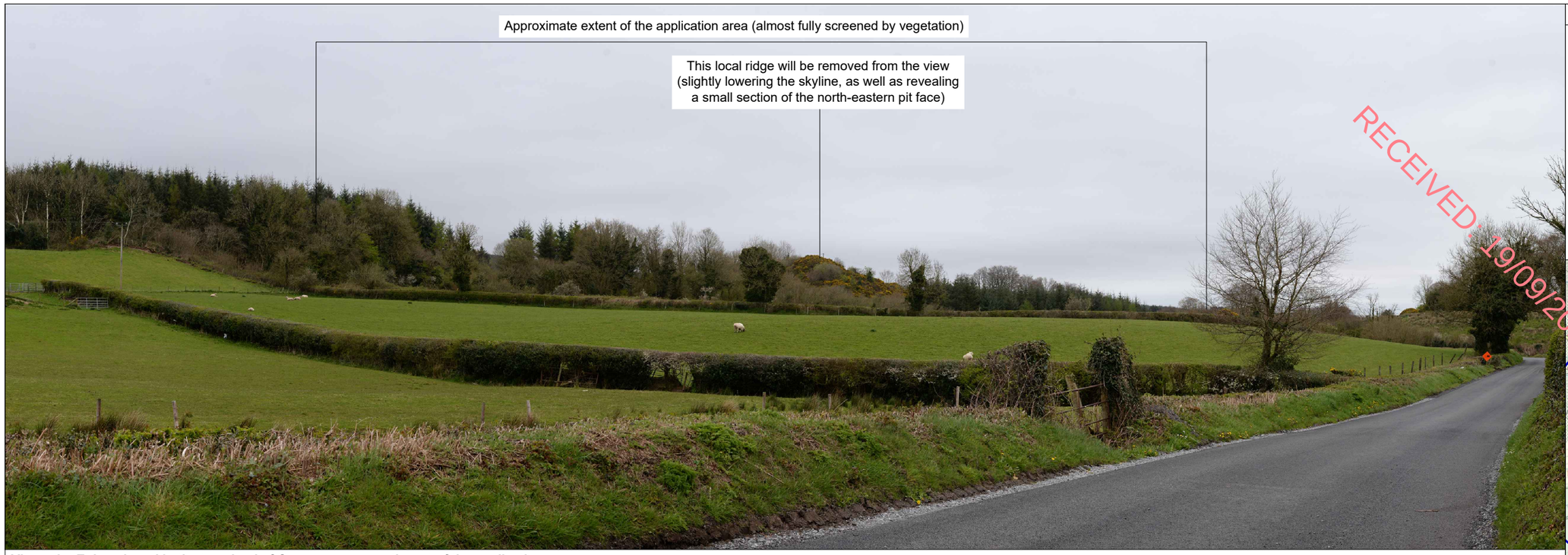

Viewpoint E: Local road in the townland of Cappanarrow, southwest of the application area

Grid Coordinates (ITM): **626370:697771** Approximate Elevation: **185m AOD** Distance from planning application boundary: **260m** Direction of View: **Northeast** Date/time of photograph: **18/04/2024 @ 14:25**

Description: This viewpoint represents views from a ca. 250m long section of this local road and 3 residential properties, in the vicinity of the viewpoint. The local ridge at the centre of the application area is partially visible through gaps in the boundary vegetation. The first phase of the extraction works will be fully screened in most views, by this vegetation (note: some of the properties may experience partial visibility, due to their more elevated location). As part of the second phase, the local ridge will be removed from the views. As a result a small section of the skyline will be lowered and parts of the north-eastern pit face revealed. All changes will take place in a small section of the existing views and will become imperceptible on completion of the restoration of the site to agricultural land, and associated hedge planting.

Viewpoint F: Local road in the townland of Tinnakill, west of Tinnakill Cross Roads

Grid Coordinates (ITM): **629175:694862** Approximate Elevation: **165m AOD** Distance from planning application boundary: **3,860m** Direction of View: **Northwest** Date/time of photograph: **18/04/2024 @ 15:20**

Description: This viewpoint represents views from the area between 3-5km southeast of the site, which is indicated as experiencing potential views on the ZTV mapping (refer to Figure 13-2). It should be noted that much of that area covers not publicly accessible agricultural land and many views within the area are actually restricted by intervening vegetation. Where views in a north-western direction open up, the application area is distantly visible on the lower southern slopes of the Slieve Bloom Mountains. Any movement and changes within the site will be difficult to discern in these views and will take place in a minute section of the overall panoramic views.

Legend:

- Landowner Boundary (c.32.1 Hectares) *Third party landowner's land interest*
- Planning Application Area (c.12.2 Hectares)
- Applicants Land Interest Area (c.12.4 Hectares) *under lease agreement from landowner*
- Viewpoint locations
- Approximate Distance from Application Area

Viewpoint location map: 1:50,000 @ A3

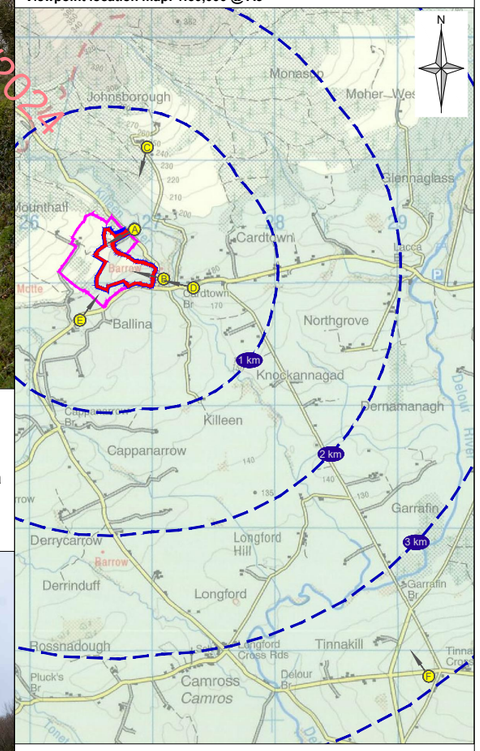

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Figure Title: Viewpoints E & F

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Appendices

Appendix 13-A Criteria and Definitions used in Assessing Landscape and Visual Effects

Introduction

Landscape and Visual Impact Assessment (LVIA) is a tool used to identify the effects of development on *"landscape as an environmental resource in its own right and on people's views and visual amenity"* (GLVIA3, paragraph 1.1). GLVIA3[1] (paragraph 2.22) states that these two elements, although inter-related, should be assessed separately. GLVIA3 is the main source of guidance on LVIA.

Landscape is a definable set of characteristics resulting from the interaction of natural, physical and human factors: it is a resource in its own right. Its assessment is distinct from visual assessment, which considers effects on the views and visual amenity of different groups of people at particular locations. Clear separation of these two topics is recommended in GLVIA3.

As GLVIA3 (paragraph 2.23) states, professional judgement is an important part of the LVIA process: whilst there is scope for objective measurement of landscape and visual changes, much of the assessment must rely on qualitative judgements. It is critical that these judgements are based upon a clear and transparent method so that the reasoning can be followed and examined by others.

Impacts can be defined as the action being taken, whereas effects are the changes result from that action. This method of assessment assesses landscape and visual effects.

Landscape and visual effects can be positive, negative or neutral in nature. Positive effects are those which enhance and/or reinforce the characteristics which are valued. Negative effects are those which remove and/or undermine the characteristics which are valued. Neutral effects are changes which are consistent with the characteristics of the landscape or view.

Landscape and visual effects can result directly from the development itself (direct effects), or may be indirect changes (which are not a direct result of the development but occur as a result of a more complex pathway, such as changes to drainage patterns or perceptual changes further from the proposed development). Landscape and visual effects can also be cumulative, which are the additional changes caused by a proposed development in conjunction with other developments, particularly those which are recently consented or which have been applied for.

In LVIAs which form part of an EIA, it is necessary for identify significant and non-significant effects. In non-EIA LVIAs, also known as appraisals, the same principles and process as LVIA may be applied but, in so doing, it is not required to establish whether the effects arising are or are not significant given that the exercise is not being undertaken for EIA purposes (see GLVIA3 statement of clarification 1/13 10-06-13, Landscape Institute).

Landscape Effects

Landscape, as defined in the European Landscape Convention, is defined as "*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human*

[1] Landscape Institute and Institute of Environmental Management and Assessment 'Guidelines for Landscape and Visual Impact Assessment' (Third Edition, April 2013)

factors", (Council of Europe, 2000). Landscape does not apply only to special or designated places, nor is it limited to countryside.

GLVIA3 (paragraph 5.34) recommends that the effect of the development on landscape receptors is assessed. Landscape receptors are the components of the landscape that are likely to be affected by the proposed development and can include individual elements (such as hedges or buildings), aesthetic and perceptual characteristics (for example sense of naturalness, tranquillity or openness), or, at a larger scale, the character of a defined character area or landscape type. Designated areas (such as National Parks or Areas of Outstanding Natural Beauty (AONBs)) are also landscape receptors.

This assessment is being undertaken because the proposed development has the potential to remove or add elements to the landscape, to alter aesthetic or perceptual aspects, and to add or remove characteristics and thus potentially change overall character.

Judging landscape effects requires a methodical assessment of the sensitivity of the landscape receptors to the proposed development and the magnitude of effect which would be experienced by each receptor.

Landscape Sensitivity

Sensitivity of landscape receptors is assessed by combining an assessment of the susceptibility of landscape receptors to the type of change which is proposed with the value attached to the landscape. (GLVIA3, paragraph 5.39).

Value Attached to Landscape Receptors

Landscape receptors may be valued at community, local, national or international level. Existing landscape designations provide the starting point for this assessment, as set out in **Table 13A-1** below.

The table sets out the interpretation of landscape designations in terms of the value attached to different landscape receptors. As GLVIA3 (paragraph 5.24) notes, at the local scale of an LVIA study area it may be found that the landscape value of a specific area may be different to that suggested by the formal designation.

Table 13A-1: Interpretation of Landscape Designations

Designation	Description	Value
World Heritage Sites, candidate World Heritage Site	Unique sites, features or areas identified as being of international importance according to UNESCO criteria. Consideration should be given to their settings especially where these contribute to the attributes of outstanding universal value for which such an area of landscape is valued.	International
National Parks	Areas of landscape identified as being of national importance for their natural beauty and the opportunities they offer for outdoor recreation. Consideration should be given to their settings especially where these contribute to the special qualities for which the landscape is valued.	National
Local Landscape Designations (such as Areas of Outstanding Natural Beauty or Areas of High	Areas of landscape identified as having importance at the local authority level.	Local Authority

Amenity) included in local planning documents.		
Undesignated landscapes of community value	Landscapes which do not have any formal designation but which are assessed as having value to local communities, perhaps on the basis of demonstrable physical attributes which elevate it above ordinary countryside.	Local Authority / Community
Landscapes of low value	Landscapes in poor condition or fundamentally altered by presence of intrusive man-made structures. Landscapes with no demonstrable physical attributes which elevate it above ordinary countryside.	Low

Where landscapes are not designated and where no other local authority guidance on value is available, an assessment is made by reference to criteria in the **Table 13A-2** below. This is based on Table 1 of Landscape Institute Technical Guidance Note 2/21. These factors are not fixed and should be reviewed on a case-by-case basis. When assessing landscape value of a site it is important to consider not only the site itself but also its context.

Landscapes may be judged to be of local authority or community value on the basis of one or more of these factors. There may also be occasional circumstances where an undesignated landscape may be judged to be of national value, for example where it has a clear connection with a nationally designated landscape, or is otherwise considered to be of equivalent value to a national designation. Similarly, on occasions there may be areas within designated landscapes that do not meet the designation criteria, or demonstrate the key characteristics/special qualities in a way that is consistent with the rest of the designated area.

An overall assessment is made for each landscape receptor, based on an overview of the above criteria, to determine its value - whether for example it is comparable to a local authority landscape designation or similar, or whether it is of value to local people and communities. For example, an intact landscape in good condition, where scenic quality, tranquillity, and/or conservation interests make a particular contribution to the landscape, or where there are important cultural or historical associations, might be of equivalent value to a local landscape designation. Conversely, a degraded landscape in poor condition, with no particular scenic qualities or natural or cultural heritage interest is likely to be considered of limited landscape value.

Table 13A-2: Factors Considered in Assessing the Value of Non-Designated Landscapes

Factor	Criteria
Natural Heritage	Landscape with clear evidence of ecological, geological, geomorphological or physiographic interest. Presence of wildlife and habitats that contribute to the sense of place. Landscape which contains valued natural capital assets that contribute to ecosystem services.
Cultural Heritage	Landscape with clear evidence of archaeological, historical or cultural interest. Landscape which contributes to the significance of heritage assets. Landscape which offers a dimension of time depth.
Landscape Condition	Landscape which is in a good physical state both with regard to individual elements and overall landscape structure. Absence of detracting/incongruous features.
Associations	Landscape which is connected with notable people, events and the arts.

Distinctiveness	Landscape that has a strong sense of identity or place. Presence of distinctive features that are characteristic of a place, or presence of rare/unusual features that confer a strong sense of place. Includes landscape that makes an important contribution to the character or identity of a settlement.
Recreational	Landscape offering recreational opportunities where experience of landscape is important. Includes open access areas, common land and rights of way where appreciation of the landscape is an important element of the experience. Landscape that forms part of a view that that is important to the enjoyment of a recreational activity.
Perceptual (Scenic)	Landscape that appeals to the senses, primarily the visual sense. Distinctive features, or distinctive combinations of features. Strong aesthetic qualities. Visual diversity or contrasts. Memorable/distinctive views or landmarks, or landscape that contributes to these.
Perceptual (Wildness and Tranquillity)	Landscape with a strong perceptual value notably remoteness, wildness, tranquillity and/or dark skies.
Functional	Landscape which performs a clearly identifiable and valuable function, particularly in the healthy functioning of the landscape. Natural hydrological systems, important parts of the green infrastructure network, pollinator rich habitats. Landscapes that have strong physical or functional links with an adjacent national landscape designation or are important to the appreciation of the designated landscape and its special qualities.

Susceptibility of Landscape Receptors to Change

As set out in GLVIA3, susceptibility refers to the ability of the landscape receptor to "accommodate the proposed development without undue adverse consequences for the baseline situation and/or the achievement of landscape planning policies and strategies". Judgement of susceptibility is particular to the specific characteristics of the proposed development and the ability of a particular landscape or feature to accommodate the type of change proposed, and makes reference to the criteria set out in **Table 13A-3** below. Aspects of the character of the landscape that may be affected by a particular type of development include landform, skylines, land cover, enclosure, human influences including settlement pattern and aesthetic and perceptual aspects such as the scale of the landscape, its form, line, texture, pattern and grain, complexity, and its sense of movement, remoteness, wildness or tranquillity.

For example, an urban landscape which contains a number of industrial buildings may have a low susceptibility to buildings of a similar scale and character. Conversely a rural landscape containing only remote farmsteads is likely to have a high susceptibility to large scale built development.

Table 13A-3: Landscape Receptor Susceptibility to Change

Susceptibility	Criteria
High	The landscape receptor is highly susceptible to the proposed development because the key characteristics of the landscape have no or very limited ability to accommodate it without transformational adverse effects, taking account of the existing character and quality of the landscape.
Medium	The landscape receptor is moderately susceptible to the proposed development because the relevant characteristics of the landscape have some ability to accommodate it without

	transformational adverse effects, taking account of the existing character and quality of the landscape.
Low	The landscape receptor has low susceptibility to the proposed development because the relevant characteristics of the landscape are generally able to accommodate it without transformational adverse effects, taking account of the existing character and quality of the landscape.

Defining Sensitivity

As has been noted above, the sensitivity of landscape receptors is defined in terms of the relationship between value and susceptibility to change as indicated in Figure 13A-1 below. This summarises the general nature of the relationship but it is not formulaic and only indicates general categories of sensitivity. Professional judgement is applied on a case by case basis in determining sensitivity of individual receptors with the diagram only serving as a guide.

Table 13A-4 below summarises the nature of the relationship but it is not formulaic and only indicates general categories of sensitivity. Judgements are made about each landscape receptor, with the table serving as a guide.

Where, taking into account the component judgements about the value and susceptibility of the landscape receptor, sensitivity is judged to lie between levels, an intermediate assessment of high/medium or medium/low is adopted. In a few limited cases a category of less than low (very low) may be used where the landscape is of low value and susceptibility is particularly low.

Figure 13A-1: Example Levels of Sensitivity defined by Value and Susceptibility of Landscape Receptors

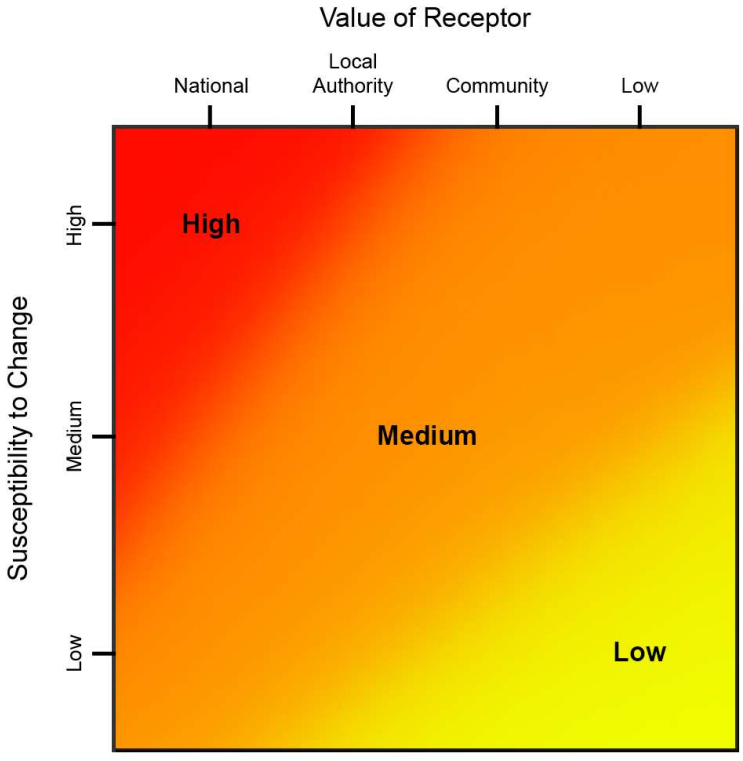


Table 13A-4: Example Levels of Sensitivity defined by Value and Susceptibility of Landscape Receptors

Susceptibility	Criteria
High	The landscape receptor is of international or national value and is considered to have high susceptibility to the effects of the proposed development. OR The landscape receptor is of national value and is considered to have medium susceptibility to the effects of the proposed development.
Medium	The landscape receptor is of international or national value and is considered to have low susceptibility to the effects of the proposed development. OR The landscape receptor is of local authority value and is considered to have high susceptibility to the effects of the proposed development. OR The landscape receptor is of local authority value and is considered to have medium susceptibility to the effects of the proposed development. OR The landscape receptor is of community value and is considered to have high susceptibility to the effects of the proposed development.
Low	The landscape receptor is of local authority value and is considered to have low susceptibility to the effects of the proposed development. OR The landscape receptor is of community value and is considered to have medium susceptibility to the effects of the proposed development. OR The landscape receptor is of community value and is considered to have low susceptibility to the effects of the proposed development.

Magnitude of Landscape Change

The magnitude of landscape change is established by assessing the size or scale of change, the geographical extent of the area influenced and the duration and potential reversibility of the change.

Size and Scale of Change

The size and/or scale of change in the landscape takes into consideration the following factors:

- the extent/proportion of landscape elements lost or added; and/or
- the degree to which aesthetic/perceptual aspects are altered; and
- whether this is likely to change the key characteristics of the landscape.

The criteria used to assess the size and scale of landscape change are based upon the amount of change that will occur as a result of the proposed development, as described in **Table 13A-5** below.

Table 13A-5: Magnitude of Landscape Change: Size/Scale of Change

Category	Description
Large level of landscape change	There would be a large level of change in landscape character, and especially to the key characteristics if, for example, the proposed development: • becomes a dominant feature in the landscape, changing the balance of landscape characteristics; and/or • would dominate important visual connections with other landscape types, where this is a key characteristic of the area.
Medium level of landscape change	There would be a medium level of change in landscape character, and especially to the key characteristics if, for example: • the proposed development would be more prominent but would not change the overall balance or composition of the landscape; and/or • key visual connections to other landscape types may be interrupted intermittently by the proposed development, but these connections would not be dominated by them.
Small level of landscape change	There would be a small level of change in landscape character, and especially to the key characteristics if, for example: • there would be no introduction of new elements into the landscape and the proposed development would not significantly change the composition/balance of the landscape.
Negligible level of landscape change/ No change	There would be a negligible or no level of change in landscape character, and especially to the key characteristics if, for example, the proposed development would be a small element and/or would be a considerable distance from the receptor.

Geographical Extent of Change

The geographical extent of landscape change is assessed by determining the area over which the changes will influence the landscape, as set out in **Table 13A-6**. For example, this could be at the site level, in the immediate setting of the site, or over some or all of the landscape character types or areas affected.

Table 13A-6: Magnitude of Landscape Change: Geographical Extent

Category	Description
Large extent of landscape change	Affects a wider area, far from the site itself.
Medium extent of landscape change	Landscape change extends beyond the site boundaries.
Small extent of landscape change	Change affecting a localised area, often focused on the site itself.
Negligible extent of landscape change	The change will affect only a negligible extent of the landscape receptor under consideration.

Duration and Reversibility of Change

The duration of the landscape change is categorised in **Table 13A-7** below, which considers whether the change will be permanent and irreversible or temporary and reversible. The levels of duration are based on the EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports (2022).

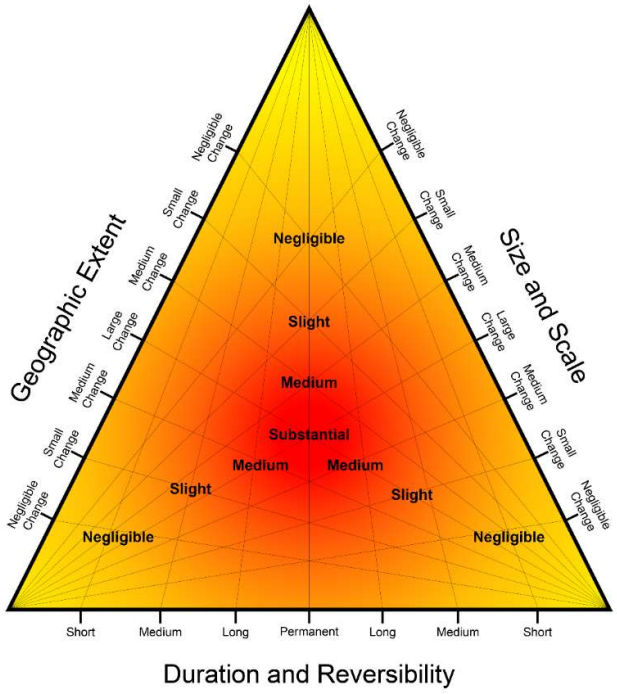
Table 13A-7: Magnitude of Landscape Change: Duration and Reversibility

Category	Description
Permanent/ Irreversible	Effects that will last for over 60 years and is deemed irreversible.
Long-term reversible	Effects that will last between 15 and 60 years and are theoretically reversible.
Medium-term reversible	Effects that will last between 7 and 15 years and are wholly or partially reversible.
Temporary/ Short-term reversible	Effects that will last from 0 to 7 years and is reversible - includes construction effects.

Deciding on Overall Magnitude of Landscape Change

The relationships between the three factors that contribute to assessment of the magnitude of landscape effects are illustrated graphically, as a guide, in **Figure 13A-2** below. Various combinations are possible and the overall magnitude of each effect is determined using professional judgement rather than by formulaic application of the relationships in the diagram.

Figure 13A-2: Determining the Magnitude of Landscape Change

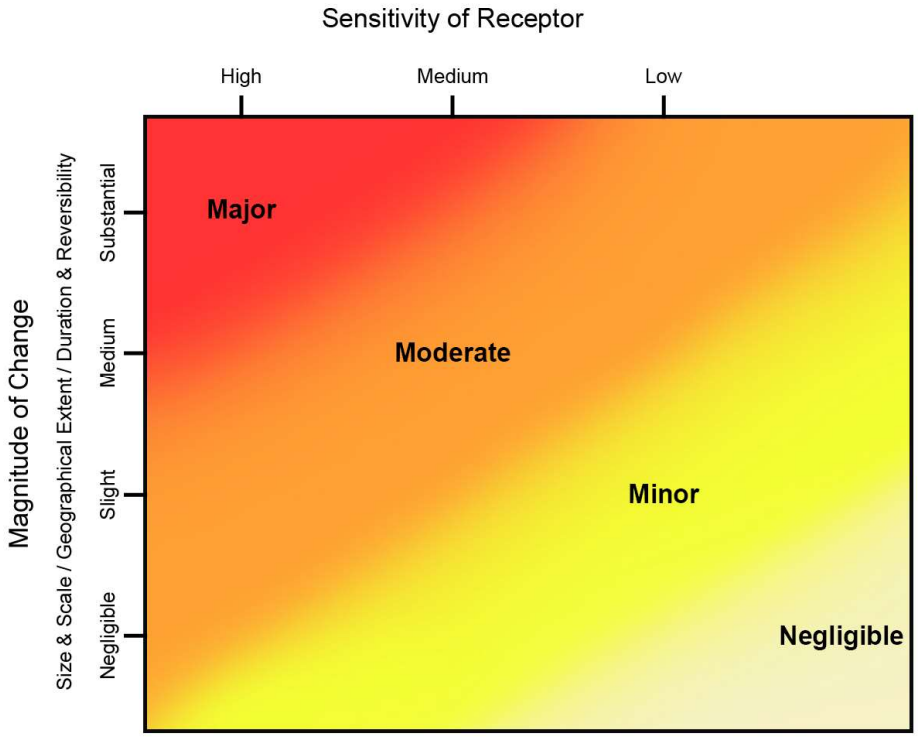


Assessment of Landscape Effects

The assessment of overall landscape effects is defined in terms of the relationship between the sensitivity of the landscape receptors and the magnitude of the change. The diagram below (**Figure 13A-3**) summarises the nature of the relationship but it is not formulaic. Judgements are made about each landscape effect using this diagram as a guide.

Major and Major/Moderate effects are regarded as important planning considerations in landscape and visual appraisals (or significant effects in landscape and visual impact assessments). Moderate effects are not generally considered to be important planning considerations/significant effects, although the assessor may conclude that some moderate effects could constitute significant effects in certain circumstances: for example, there may be a concentration of several moderate effects in one location, or a moderate effect may occur for a particularly sensitive receptor or be of a particularly high magnitude.

Figure 13A-3: Assessment of Landscape Effects



Visual Effects

Visual effects are the effects of change and development on the views available to people and their visual amenity. Visual receptors are the people whose views may be affected by the proposed development. They generally include users of walking trails or other recreational facilities or attractions; travellers who may pass through the study area because they are visiting, living or working there; residents living in the study area, either as individuals or, more often, as a community; and people at their place of work:

- Communities within settlements (i.e. towns and villages);
- Residents of individual properties and clusters of properties;

- People using nationally designated or regionally promoted footpaths and cycle routes;
- Visitors at publicly accessible sites including, for example, gardens and designed landscapes, historic sites, and other visitor attractions or outdoor recreational facilities where the landscape or seascape is an important part of the experience;
- Users of outdoor sport and recreation facilities;
- Visitors staying at caravan parks or camp sites;
- Road users on recognised scenic or promoted tourist routes;
- Users of other roads;
- Rail passengers;
- People at their place of work.

Judging visual effects requires a methodical assessment of the sensitivity of the visual receptors to the proposed development and the magnitude of effect which would be experienced by each receptor.

Viewpoints are chosen (in discussion with the competent authority and other stakeholders and interested parties) for a variety of reasons but most commonly because they represent views experienced by relevant groups of people although they may also include specific promoted or otherwise important viewpoints.

Visual Sensitivity

Sensitivity of visual receptors is assessed by combining an assessment of the susceptibility of visual receptors to the type of change which is proposed with the value attached to the views. (GLVIA3, paragraph 6.30).

Value Attached to Views

Different levels of value are attached to the views experienced by particular groups of people at particular viewpoints. Assessment of value takes account of a number of factors, including:

- Recognition of the view through some form of planning designation or by its association with particular heritage assets; and
- The popularity of the viewpoint, in part denoted by its appearance in guidebooks, literature or art, or on tourist maps, by information from stakeholders and by the evidence of use including facilities provided for its enjoyment (seating, signage, parking places, etc.); and
- Other evidence of the value attached to views by people including consultation with local planning authorities, some of whom have carried out assessments of valued views, and professional assessment of the quality of views.

The assessment of the value of views is summarised in **Table 13A-8** below. These criteria are provided for guidance only.

Table 13A-8: Examples of Factors Considered in assessing the Value Attached to Views

Value	Description
High	Views from nationally (and in some cases internationally) known viewpoints, which: • have some form of planning designation; or

	• are associated with internationally or nationally designated landscapes or important heritage assets; or • are promoted in sources such as maps and tourist literature; or • are linked with important and popular visitor attractions where the view forms a recognised part of the visitor experience; or • have important cultural associations. Also, may include views judged by assessors to be of high value.
Medium	Views from viewpoints of some importance at regional or local levels, which: • have some form of local planning designation associated with locally designated landscapes or areas of equivalent landscape quality; or • are promoted in local sources; or • are linked with locally important and popular visitor attractions where the view forms a recognised part of the visitor experience; or • have important local cultural associations. Also, may include views judged by the assessors to be of medium value.
Low	Views from viewpoints which, although they may have value to local people: • have no formal planning status; or • are not associated with designated or otherwise high-quality landscapes; or • are not linked with popular visitor attractions; or • have no known cultural associations. Also, may include views judged by the assessors to be of low value.

Susceptibility of Visual Receptors to Change

The susceptibility of different types of people to changes in views is mainly a function of:

- The occupation or activity of the viewer at a given viewpoint; and
- The extent to which the viewer's attention or interest be focussed on a particular view and the visual amenity experienced at a given view.

The susceptibility of different groups of viewers is assessed with reference to the guidance in **Table 13A-9** below. However, as noted in GLVIA3 “this division is not black and white and, in reality, there will be a gradation in susceptibility to change”. Therefore, the susceptibility of each group of people affected is considered for each project and assessments are included in the relevant text in the report.

Table 13A-9: Visual Receptor Susceptibility to Change

Susceptibility	Description
High	Residents; People engaged in outdoor recreation where their attention is likely to be focused on the landscape and on particular views; Visitors to heritage assets or other attractions where views of the surroundings are an important part of the experience;

	Communities where views contribute to the landscape setting enjoyed by the residents.
Medium	Travellers on scenic routes where the attention of drivers and passengers is likely to be focused on the landscape and on particular views. People engaged in outdoor sport or recreation, which may involve appreciation of views e.g. users of golf courses.
Low	People engaged in outdoor sport or recreation, which does not involve appreciation of views; People at their place of work whose attention is focused on their work; where the setting is not important to quality of working life; Travellers, where the view is incidental to the journey.

Defining Sensitivity

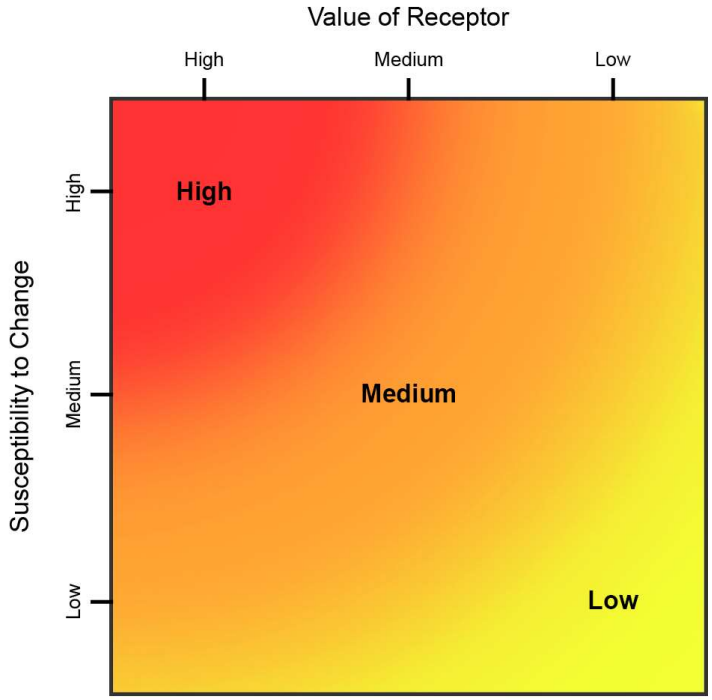
The sensitivity of visual receptors is defined in terms of the relationship between the value of views and the susceptibility of the different receptors to the proposed change. **Figure 13A-4** below summarises the nature of the relationship; it is not formulaic and only indicates general categories of sensitivity. Judgements are made on merit about each visual receptor, with the table below only serving as a guide. **Table 13A-10** sets down the main categories that may occur but again it is not comprehensive and other combinations may occur.

Table 13A-10: Example Levels of Sensitivity defined by Value and Susceptibility of Visual Receptors

Sensitivity	Criteria
High	The visual receptor group is highly susceptible to changes in views and visual amenity and relevant views are of high value. OR The visual receptor group has a medium level of susceptibility to changes in views and visual amenity and relevant views are of high value. OR The visual receptor group is highly susceptible to changes in views and visual amenity and relevant views are of value at the medium level.
Medium	The visual receptor group is highly susceptible to changes in views and visual amenity and relevant views are of value at the low level. OR The visual receptor group has a medium level of susceptibility to changes in views and visual amenity and relevant views are of value at the medium level. OR The visual receptor group has a low level of susceptibility to changes in views and visual amenity and relevant views are of value at the high level.
Low	The visual receptor group has a medium level of susceptibility to changes in views and visual amenity and relevant views are of value at the low level. OR

	The visual receptor group has a low level of susceptibility to changes in views and visual amenity and relevant views are of value at the medium level. OR The visual receptor group has a low level of susceptibility to changes in views and visual amenity and relevant views are of value at the low level.

Figure 13A-4: Levels of Sensitivity Defined by Value and Susceptibility of Visual Receptor Groups



Magnitude of Visual Change

The magnitude of visual change is established by assessing the size or scale of change, the geographical extent of the area influenced and the duration and potential reversibility of the change.

Size and Scale of Change

The criteria used to assess the size/scale of visual change are as follows:

- the scale of the change in the view with respect to the loss or addition of features in the view, changes in its composition, including the proportion of the view occupied by the proposed development and distance of view;
- the degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of factors such as form, scale and mass, line, height, colour and texture; and

- the nature of the view of the proposed development, for example whether views will be full, partial or glimpses or sequential views while passing through the landscape.

The above criteria are summarised in the **Table 13A-11** below:

Table 13A-11: Magnitude of Visual Change: Size/Scale of Change

Sensitivity	Criteria
Large visual change	The proposed development will cause a complete or large change in the view, resulting from the loss of important features in or the addition of important new ones, to the extent that this will substantially alter the composition of the view and the visual amenity it offers.
Medium visual change	The proposed development will cause a clearly noticeable change in the view, resulting from the loss of features or the addition of new ones, to the extent that this will alter to a moderate degree the composition of the view and the visual amenity it offers. Views may be partial/intermittent.
Small visual change	The proposed development will cause a perceptible change in the view, resulting from the loss of features or the addition of new ones, to the extent that this will partially alter the composition of the view and the visual amenity it offers. Views may be partial only.
Negligible visual change	The proposed development will cause a barely perceptible change in the view, resulting from the loss of features or the addition of new ones, to the extent that this will barely alter the composition of the view and the visual amenity it offers. Views may be glimpsed only.
No change	The proposed development will cause no change to the view.

Geographical Extent of Change

The geographical extent of the visual change identified at representative viewpoints is assessed by reference to a combination of the Zone of Theoretical Visibility (ZTV), where this has been prepared, and field work, and consideration of the criteria in **Table 13A-12** below. Representative viewpoints are used as 'sample' points to assess the typical change experienced by different groups of visual receptors at different distances and directions from the proposed development. The geographical extent of the visual change is judged for each group of receptors: for example, people using a particular route or public amenity, drawing on the viewpoint assessments, plus information about the distribution of that particular group of people in the Study Area.

The following factors are considered for each representative viewpoint:

- the angle of view in relation to the main activity of the receptor;
- the distance of the viewpoint from the proposed development; and
- the extent of the area over which changes would be visible.

Thus, low levels of change identified at representative viewpoints may be extensive or limited in terms of the geographical area they are apparent from: for example, a view of the proposed development from elevated Access Land may be widely visible from much or all of the accessible area, or may be confined to a small proportion of the area. Similarly, a view from a public footpath may be visible from a single isolated viewpoint, or over a prolonged stretch of the route. Community views may be experienced from a small number of dwellings, or affect numerous residential properties.

Table 13A-12: Magnitude of Visual Change: Geographical Extent of Change

Category	Description
Large extent of visual change	The proposed development is seen by the group of receptors in many locations across the Study Area or from the majority of a linear route and/or by large numbers of viewers; or the effect on the specific view(s) is extensive.
Medium extent of visual change	The proposed development is seen by the group of receptors from a medium number of locations across the Study Area or from a medium part of a linear route and/or by a medium number of viewers; or the effect on the specific view is moderately extensive.
Small extent of visual change	The proposed development is seen by the group of receptors at a small number of locations across the Study Area or from only limited sections of a linear route and/or by a small number of viewers; or the effect on a specific view is small.
Negligible extent of visual change	The proposed development is either not visible in the Study Area or is seen by the receptor group at only one or two locations or from a very limited section of a linear route and/or by a very small number of viewers; or the effect on the specific view is barely discernible.

Duration and Reversibility

The duration of the visual change at viewpoints is categorised in **Table 13A-13** below, which considers whether views will be permanent and irreversible or temporary and reversible. The levels of duration are based on the EPA Guidelines on the information to be contained in EIA Reports (2022).

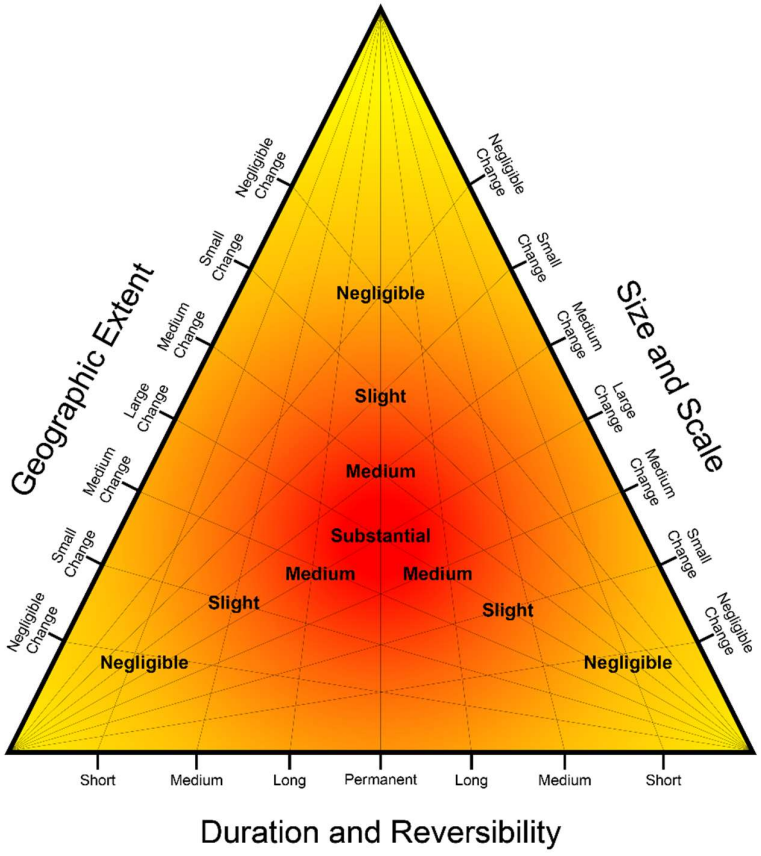
Table 13A-13: Magnitude of Visual Change: Duration and Reversibility

Category	Description
Permanent/ Irreversible	Effects that will last for over 60 years and is deemed irreversible.
Long-term reversible	Effects that will last between 15 and 60 years and are theoretically reversible.
Medium-term reversible	Effects that will last between 7 and 15 years and are wholly or partially reversible.
Temporary / Short-term reversible	Effects that will last from 0 to 7 years and is reversible - includes construction effects.

Deciding on Overall Magnitude of Visual Change

The relationships between the three factors that contribute to assessment of the magnitude of visual effects are illustrated graphically, as a guide, in **Figure 13A-5** below. Various combinations are possible and the overall magnitude of each effect is made using professional judgement rather than by formulaic application of the relationships in the diagram.

Figure 13A-5: Determining the Magnitude of Visual Change

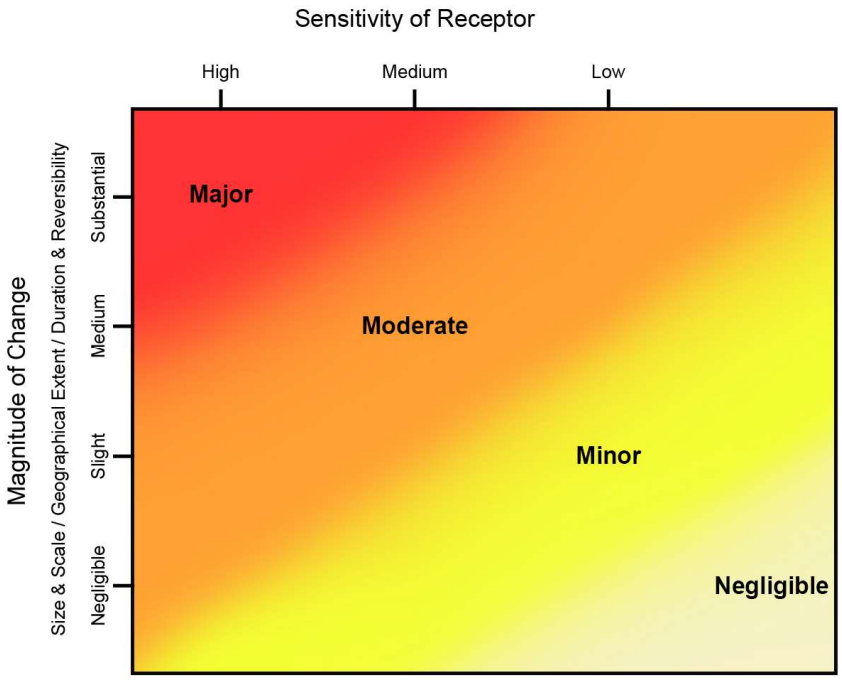


Assessment of Visual Effects and Significance

The assessment of visual effects is defined in terms of the relationship between the sensitivity of the visual receptors (value and susceptibility) and the magnitude of the change. The diagram below (**Figure 13A-6**) summarises the nature of the relationship but it is not formulaic and only indicates broad levels of effect. Judgements are made about each visual effect using this diagram as a guide.

Major and Major/Moderate effects are regarded as important planning considerations in landscape and visual appraisals (or significant effects in landscape and visual impact assessments). Moderate effects are not generally considered to be important planning considerations/significant effects, although the assessor may conclude that some moderate effects could constitute significant effects in certain circumstances: for example, there may be a concentration of several moderate effects in one location, or a moderate effect may occur for a particularly sensitive receptor or be of a particularly high magnitude.

Figure 13A-6: Assessment of Visual Effects and Overall Significance

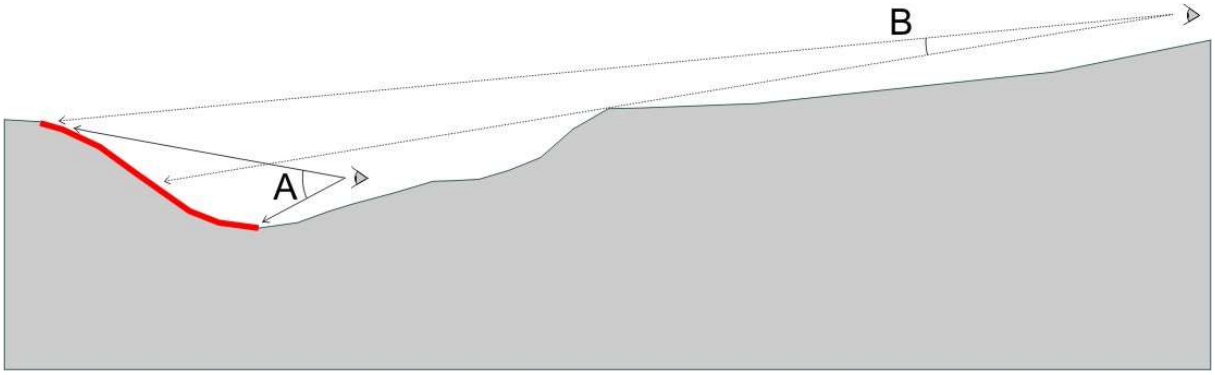


Appendix 13-B – Zone of Theoretical Visibility (ZTV) Methodology

A Zone of Theoretical Visibility (ZTV) Study was conducted for the proposed development (i.e. the proposed extraction area) to help identify areas sensitive to visual impacts. This study used the measurement of the vertical subtended angle for its methodology. This method is explained below and illustrated by Figure A, below.

When a Target Area (red) is observed from a Viewpoint (A or B) its apparent height can be measured in the form of degrees, to give a Subtended Vertical Angle.

Figure A:



The use of the Subtended Vertical Angle in formulating a ZTV has the benefit of automatically reducing values to reflect the distance from the Target Area, and partial screening by intervening landforms. Generally, the further the viewpoint is from the Target Area the smaller the Subtended Vertical Angle, reflecting the effect of distance on visual impacts.

Thus, in the example section above Viewpoint A experiences a higher subtended angle due to proximity to the red target area. Viewpoint B has a lower subtended angle due to greater distance from the target area and partial screening by intervening landform.

If the Subtended Vertical Angle is measured from a series of grid points for a particular Target Area, the resultant data can then be used to generate contours. Each contour level representing a certain vertical angle, and thus potential level of visibility.

The subtended vertical angle method of calculating ZTVs using LSS digital terrain modelling software has been proven by field investigation on numerous sites to be an accurate method of predicting areas of potential visibility for on-site investigation.

However, the computer generated ZTV study is undertaken using a bare earth landform to give the worst case scenario. In reality any built structures (settlements, walls etc) or areas of vegetation (woodlands, scrub and hedgerows) will reduce the actual visibility of the target area. Therefore, it is necessary to carry out fieldwork to validate the results of the ZTV.