11. LANDSCAPE AND VISUAL

11.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) addresses the potential landscape and visual impacts of the Proposed Development. A full description of the Proposed Development is provided in Chapter 4 of this EIAR.

The emphasis in this chapter is on the likely significant landscape and visual effects of the proposal. The chapter includes the Landscape and Visual Impact Assessment (LVIA) methodology, a description of the Proposed Development and the existing baseline landscape as well as landscape policy and relevant guidance. It includes a description of Galway County Council (GCC) landscape policy and other relevant policy pertaining to the landscape setting in which the Proposed Development is located.

The landscape of the site and wider area is described in terms of its existing character, which includes a description of landscape value, the susceptibility of the landscape to change and a determination of landscape sensitivity. The potential effects on both the landscape and visual amenity are then assessed, including potential cumulative effects.

This chapter comprises the following sections:

- **Introduction** – Includes a description of the Proposed Development, its location and essential aspects requiring the most consideration from an LVIA perspective.
- **Methodology and Assessment Criteria** – An outline of the methodology and guidance used to conduct the LVIA.
- **Landscape Baseline –** A review of the landscape policy context and landscape designations pertinent to the site; a description of the baseline landscape conditions and character of the Proposed Development Site and wider landscape setting; as well as identification of landscape value and landscape sensitivities.
- **Visual Baseline –** An appraisal of likely visibility of the Proposed Development from prominent visual receptors located within 2 km of the Proposed Development Site, including a description of visibility from designated scenic amenity designations. The visual baseline identifies key visual receptors and locations selected as viewpoints for impact assessments.
- **Cumulative Baseline –** Identification and description of other planned or permitted large scale developments in the surrounding area.
- **Landscape and Visual Effects** - A determination of the likely significant landscape and visual effects of the Proposed Development, including an assessment of likely cumulative landscape and visual effects. Assessment of effects is informed by a site visit. Cumulative and in-combination effects are also assessed, addressing the interactions of the various development elements under assessment in this EIAR as well as other permitted and planned developments in the wider landscape area.

11.1.1 Statement of Authority

MKO has developed extensive expertise and experience over the last 15 years in the Landscape and Visual Impact Assessment of a range of projects, including residential developments, quarries, road schemes, wind energy developments and a range of other projects. This report includes a visual impact assessment of the Proposed Development, it is based on a field survey of the site and its surrounds using photographs from representative viewpoints of the site.

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Jack is an Environmental Scientist and Landscape and Visual Impact Assessment (LVIA) specialist. Since starting at MKO, Jack's primary role at MKO has been producing the Landscape and Visual chapter of EIA reports for large scale infrastructure developments. Jack holds an MSc. in Coastal and Marine Environments and a BSc. In Psychology, he is a member of the Landscape Research Group, as well as holding a membership with the Chartered Institute of Water and Environmental Management.

11.1.2 Proposed Development Description

Newtown Farming Ltd intends to apply to Galway County Council (GCC) for planning permission to develop a quarry and all associated site works at Lomaunaghbaun, Co. Galway. A full comprehensive description of the Proposed Development is included in Chapter 4.

The Proposed Development comprises a sand extraction quarry/pit, Processing Plant and all other associated quarrying infrastructure. No extraction of rocks will occur at the site during the operational phase. Standard sand extraction and excavation methods will be employed at the site during the operational phase. The Proposed Development also includes for the following works:

- Installation of processing plant and associated components
- Stockpiling of topsoil removed during quarrying for future implementation of a restoration plan.
- Construction of a refuelling area.
- Installation of site office.
- Installation of a weighbridge and wheelwash and wastewater holding tank.
- Installation of new site entrance along with road reprofiling works.
- Associated works to include installation of groundwater well, upgrade of drainage infrastructure including new fuel/oil interceptor and surface drains on hardstanding.

As shown by Figure 11-1 below, the proposed sand extraction will occur in three Phases.

- Phase 1 will occur in the south-eastern portion of the Site;
- Phase 2 will occur in the north-eastern portion of the Site;
- Phase 3 will occur in the western portion of the Site;

Phase 1

Ancillary facilities at the site include the entrance, offices, welfare cabins and a washing plant – termed the 'Processing Area'. These facilities will be located in the south-eastern corner of the site, within the confines of the site boundary and the Phase 1 extraction area.

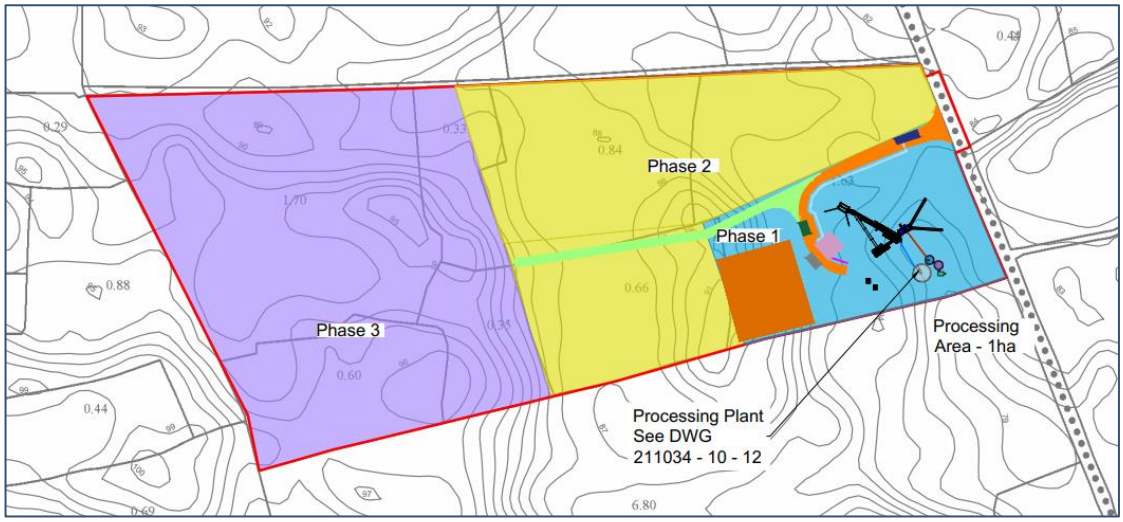

Figure 11-1 Phased Extraction Areas within the Site. Extracted from Planning Drawing 2111034-09

Phase 2 and 3

Following Phase 1, Phase 2 and 3 will occur consecutively with phased reinstatement of the landscape under a Landscape Restoration Plan.

11.1.2.1 Landscape Restoration Plan (LRP)

A Landscape Restoration Plan (LRP) is included as part of the Proposed Development, the layout of this plan is presented in Appendix 11-1 and as part of the Planning Pack in Appendix 4-1. The LRP shows the positioning of berms and where vegetation will both be lost, retained and also where it will be re-instated. The ultimate objective of the LRP is to restore the landscape of the site to harmonise with the landform and landcover of the lands surrounding EIAR Study Area after extraction has occurred. The LRP will also restore and replace any vegetation and biodiversity corridors which may be lost during the construction or operational phase. Key measures and details of the LRP are reported below, as well as included in Section 4.4.2 of Chapter 4 of this EIAR.

A Phased Approach to the LRP

The LRP will be implemented in a phased approach defined spatially by three extraction areas. The LRP has been designed to ensure gradual restoration of the landscape of the site instead of only implementing measures at the decommissioning stage when all extraction has been complete. This is a positive measure for mitigating effects on the landscape and visual amenity, as well as biodiversity.

Berms and Seedbank Storage

Topsoil extracted during initial excavation works will be stored in berms with overburden. The proposed berms will be located alongside the hedgerows which form the perimeter of the site. The berms will be approximately 1.5 metres above existing ground level and will provide dense visual screening into the site, mitigating visual effects in areas where boundary vegetation is thinner and also where visual screening from hedgerows is less effective in winter months. The topsoil within the berms will contain a natural seedbank which will be spread and rolled during restoration at a later date when extraction in that area is complete.

Re-Profiling (Batter Wall) and Spreading of Topsoil

Following extraction of each area (Phase 2 and 3), the works required in the LRP include profiling the lands around the perimeter of the extraction areas using embankments to create a batter wall that links and align the extraction areas of low elevation with the elevated topographical profile of the landscape surrounding the site. Once extraction is completed in an area (Phase 1, 2 or 3), the seedbank stored in the berms will be spread and rolled. Natural Colonisation is expected to occur from the seedbanks stored within the berms, however, seed mix may be spread should this be required.

Planting

The boundary vegetation surrounding the site will be retained (excepting a small area of vegetation which will be removed to facilitate proposed site access with local road) whilst some hedgerows and small trees within the site will be removed to facilitate the proposed extraction. The LRP includes a planting plan to offset any vegetation lost and re-establish biodiversity corridors throughout the landscape of the site. The LRP has been designed to re-create the pattern of the internal field cells currently existent within the site through planting of linear biodiversity corridors formed by hedgerows and trees. The LRP provides for bare-rooted native planting species in a double-staggered row, 1.20m height minimum in a continuous hedge, as well as standard trees planted at 10m centres along the hedgerow. All to include the following native species:

- Silver Birch - *Betula Pendula – 25%*
- Hazel - *Corlysus avellana – 30%*
- Holly - *Ilex aquifolium – 25%*
- Yew - *Taxus baccata*

The LRP includes for planting of more vegetation (approx. 327.27 linear metres) than will be removed (approx. 308.08 linear metres) and the phased approach ensures restoration and planting will occur in Phase 2 areas prior to the excavation and removal of vegetation in the Phase 3 Area.

Details of the LRP and in relation to landscape and visual effects are addressed in Section 11.6.4 of this Chapter – *Landscape Restoration (Decomissioning) Phase Effects.*

11.1.2.2 Essential Elements of the Proposed Development from an LVIA Perspective

Guidance for LVIA, the Guidelines for Landscape and Visual Impact Assessment (3rd ed., LI & IEMA, 2013) states that:

> *"it is important to make sure that the project description provides all the information needed to identify its effects on particular aspects of the environment. For LVIA it is important to understand, from the project description, the essential aspects of the scheme that will potentially give rise to its effects on the landscape and visual amenity".*

The essential aspects of the proposal from an LVIA perspective are greenfield areas of the site where new extraction is proposed. An elevation view of the plant infrastructure in the processing area is shown below in Figure 11-2 showing some infrastructure at a height of approximately 10 metres above ground level (see full set of Planning Application Drawings accompanying this EIAR).

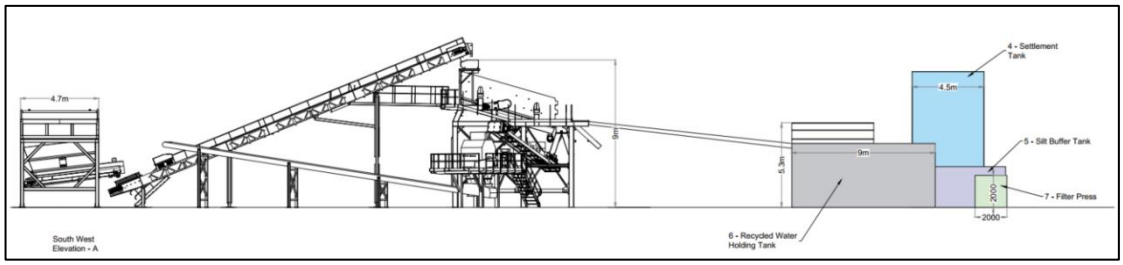

Figure 11-2 Plant Layout Elevations – Processing Area. Extracted from Planning Drawing 2111034-5

As shown in the Planning Drawings (See Section below in Figure 11-3) excavation to a depth of 6 metres will occur prior to installation of the Processing Plant during the construction phase. Therefore, most of the proposed plant infrastructure will be located below existing ground level when installed (after excavation during construction phase). The proposed settlement tank has a height of 8.5 metres, equating to a height of approximately 3 metres above existing ground level after excavation and installation. The most elevated part of the proposed conveyor belt from the feed hopper and parts of the proposed screening box infrastructure are approximately 10 metres tall and will therefore have a height of approximately 4.5 metres above existing ground level after excavation and installation. These elevated elements of the proposed Processing Plant (identified by red annotation below are therefore likely to be the most visually prominent features under assessment in this LVIA.

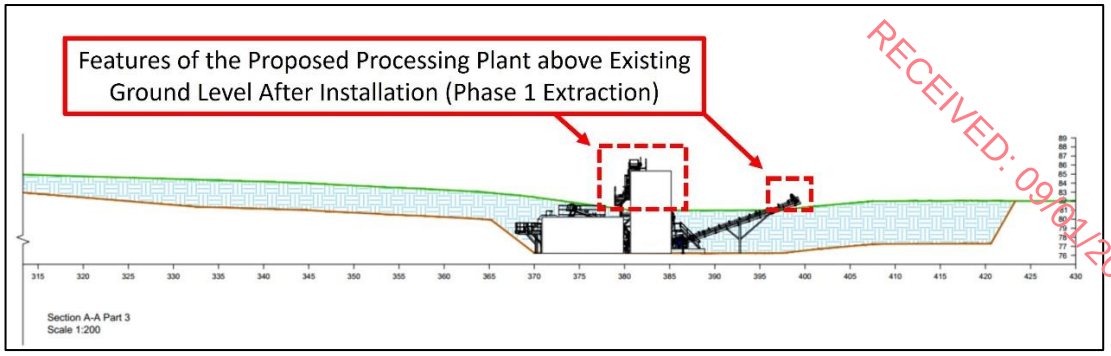

Figure 11-3 Section of Processing Plant - Extracted from Planning Drawing 2111034-14

A comprehensive description of the existing conditions and character of the landscape at the site and wider landscape setting are included in Section 11.3 of this Chapter – *Landscape Baseline.*

11.1.3 Site Location

The Proposed Development Site is located approximately 38.5 km north-east of Galway City and 9.8 km north-east of Tuam. The nearest population centre is the village of Clonbern, approximately 4.6km east of the site boundary. The site will be accessed from the L2232. A map of the location and access routes of the Proposed Development is shown below. The boundary of the Proposed Development Site is defined by the green line marked on the map as 'EIAR Study Area'. The Study area for assessment of Landscape and Visual Effects includes all areas within 2km of the site, demarked by a black dotted line as the 'LVIA Study Area'.

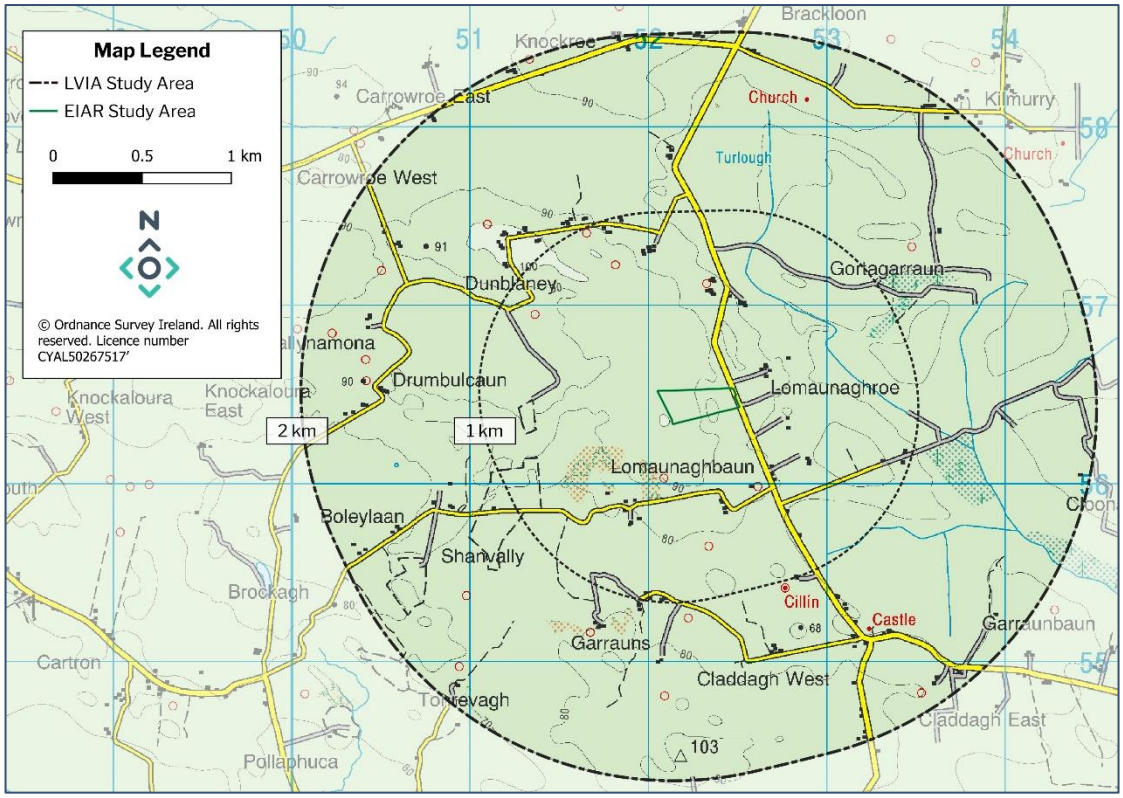

Figure 11-4 Site Location LVIA Study Area

11.2 Methodology and Assessment Criteria

This section of the LVIA broadly outlines the methodology used to undertake the Landscape and Visual Impact Assessment (LVIA) of the Proposed Development, including a description of the following:

- Guidelines and Reference material used to conduct the LVIA.
- Study Area chosen for the conduct of Baseline Landscape and Visual Investigations
- Methods for Assessing Landscape Effects
- Methods for Assessing Visual Effects

11.2.1 Guidance & Reference Documents

In 2000, the Department of the Environment and Local Government (DoELG) published *'Landscape and Landscape Assessment: Consultation Draft of Guidelines for Planning Authorities'*, which recommended that all local authorities adopt a standardised approach to landscape assessment for incorporation into development plans and consideration as part of the planning process. This document remains in Draft.

Ireland signed and ratified the European Landscape Convention (ELC) in 2002. This introduced a pan-European concept that centres on the quality of landscape protection, management and planning. The Department of Arts, Heritage and the Gaeltacht has published a National Landscape Strategy for Ireland in 2015. The strategy aims to ensure compliance with the ELC and contains six main objectives, including undertaking a National Landscape Character Assessment and developing landscape policies.

Certain sections of this EIAR have been based on the landscape character assessment guidelines presented in the DoELHG document outlined above, but the landscape and visual impact assessment was carried out with reference to the *Guidelines for Landscape and Visual Impact Assessment 3rd Edition* published in the UK by the Landscape Institute and the Institute of Environmental Management and Assessment, in 2013 (this guidance document is hereafter referred to as the GLVIA3 (LI & IEMA, 2013)). A range of other guidelines were also consulted during the preparation of this LVIA, which include:

- *'Guidelines for Landscape and Visual Impact Assessment 3rd Edition' (The Landscape Institute/Institute of Environmental Management and Assessment, UK, 2013)* – Hereafter referred to as the 'GLVIA3 (LI & IEMA, 2013)'
- *'Visual Representation of Development Proposals' (Landscape Institute Technical Guidance Note 06/19, 2019).*
- *'Guidelines on the information to be contained in Environmental Impact Assessment Reports' (Environmental Protection Agency of Ireland, 2022).*
- *Galway County Development Plan 2022-2028 (Galway County Council).*

11.2.2 Scope and Definition of the Landscape and Visual Impact Assessment (LVIA) Study Area for Baseline Landscape and Visual Investigations

The GLVIA3 (LI & IEMA, 2013) guidance refers to the identification of the area of landscape that is to be covered while assessing landscape and visual effects. The guidelines state:

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

For the purposes of this LVIA, where the 'Proposed Development Site' or 'the site' is referred to in this Chapter, this relates to the primary EIAR Study Area as defined in Chapter 1 and as is illustrated in green on Figure 11-4 (previously). The Proposed Development Site is discussed in some detail in terms of its landscape character in Section 11.3. However, the landscape and visual baseline mapping, visibility appraisals and viewpoint selection are based on a wider study area, consisting of all the area within 2 kilometres from the Proposed Development Site boundary (EIAR Study Area). This wider study area is referred to as the 'LVIA Study Area'. The LVIA Study Area is shown on the site location map shown in Figure 11-4 previously.

Considering the scope and scale of the Proposed Development and its existing landscape setting, it is considered that landscape and visual effects will not be significant beyond the 2km LVIA Study Area, therefore assessment of landscape and visual effects from locations beyond 2km are scoped out of this assessment.

Initial baseline investigations of the LVIA Study Area were conducted through desk studies, constraints mapping and site visits. The Landscape Baseline exercise (Section 11.3) identifies landscape policy pertinent to the site and LVIA Study Area such as landscape designations contained in the Galway County Development Plan. This includes policies on landscape and landscape character, designated landscapes, and protected views. The site is described in terms of landscape character types as identified in '*Landscape and Landscape Assessment: Consultation Draft of Guidelines for Planning Authorities'* (DoEHLG, 2000) as well as the surrounding landscapes within the LVIA Study Area. The landscape baseline exercise identifies key landscape values and sensitivities within the site and wider landscape setting.

The Visual Baseline exercise (Section 11.4) includes an appraisal of the likely visibility of the Proposed Development from key visual receptors within the surrounding landscape and within the immediate setting of the site itself. This includes a description of views towards the Proposed Development from a variety of perspectives which informs the visual impact assessment.

11.2.3 Assessing Landscape Effects

The potential landscape effects of the Proposed Development are informed by the nature of the proposal, a desk study, site visits and capture of photographic imagery from key viewpoints. The methodology uses qualitative methods to arrive at an assessment, which is based on the Landscape and Landscape Assessment (DoEHLG, 2000) guidelines as well as the GLVIA3 (LI and IEMA, 2013).

Landscape effects can be described as changes which affect the landscape as a resource. This includes how the Proposed Development will affect the elements that make up the landscape, the aesthetic and perceptual aspects, and its landscape character. Landscape effects also relate to changes in the structure of the landscape. Under the GLVIA3 (LI and IEMA, 2013), the assessment of likely significant effects on landscape receptors includes a judgement on both the sensitivity of the receptor as well as magnitude of the effect.

11.2.3.1 Assessing Landscape Sensitivity

Landscape Sensitivity, which is described in the GLVIA3 (LI & IEMA, 2013)as a combination of the landscape's susceptibility to change as well as the value attached to the landscape.

Susceptibility to change can be described as the ability of the landscape receptor (either the overall character, quality of the landscape or a particular landscape feature) to accommodate the Proposed Development without undue consequences for the maintenance of the baseline (existing) landscape and/or the aims of landscape planning policies and strategies. Table 11-1 below presents differing description criteria for susceptibility to change.

Table 11-1 Susceptibility to Change – Example Description Criteria

Susceptibility of landscape receptor to change	Description and example criteria
High	Landscape receptors where the overall character of the landscape receptor or the nature of the individual landscape receptor causes it to have a high susceptibility to change considering its inherent characteristics and where the landscape receptor has a low ability to accommodate the proposed change without undue consequences for the maintenance of its landscape character, and/or its quality or condition, and/or its particular aesthetic and perceptual aspects, and where such change is not in compliance with planning policies/strategies
Medium	Landscape receptors where the overall character of the landscape receptor or the nature of the individual landscape receptor causes it to have a medium susceptibility to change considering its inherent characteristics and where the landscape receptor has a moderate ability to accommodate the proposed change without undue consequences for the maintenance of its landscape character, and/or its quality or condition, and/or its particular aesthetic and perceptual aspects, with consideration given to planning policies/strategies.
Low	Landscape receptors where the overall character of the landscape receptor or the nature of the individual landscape receptor causes it to have a low susceptibility to change considering its inherent characteristics and where the landscape receptor has a strong ability to accommodate the proposed change without undue consequences for the maintenance of its landscape character, and/or its quality or condition, and/or its particular aesthetic and perceptual aspects, and where such change may be in compliance with planning policies/strategies

Landscape value is a combination of values which are assessed in the landscape baseline, combining any formal landscape designations, and, where there are no designations, judgements based on individual elements of the landscape receptor, for example particular landscape features, notable aesthetic, perceptual or experiential qualities, and combination of these contributors. In addition, it is noted that the GLVIA3 Guidance states that "*there should not be over-reliance on designations as the sole indicator of value*", and the assessments of landscape value undertaken in this Chapter include consideration of various elements that contribute to landscape value of specific receptors, using best practice standards and professional judgement. Where this occurs, landscape value will be judged based on clearly stated criteria. presents differing description criteria for landscape value. Table 11-2 below presents differing description criteria for landscape value.

Table 11-2 Landscape Value – Example Description Criteria

Value attached to Landscape elements	Description and example criteria
High	Landscape receptors forming part of designations (e.g. areas of amenity, scenic routes/views) in the development plan, or at a national or international level, or landscape receptors not designated but where the receptor is judged to be of equivalent value using clearly stated criteria including wildness, naturalness, very strong cultural heritage or natural heritage associations and/or very high recreational value.
Medium	Landscape receptors where value is not formally designated but are of value as good examples of high quality, intact landscapes or landscape features and are deemed to be of relatively high scenic quality. Landscapes or landscape receptors that contain some rare elements, include areas or features which are wild or have a sense of naturalness, strong cultural associations or which have recreational value.
Low	Landscapes that are not formally designated and considered as modified. Areas which do not have particularly scenic qualities, do not include rare elements or landscape features and do not have strongly evident cultural or heritage associations.

Section 11.3 (*Landscape Baseline*) of this Chapter describes and determines the Landscape Values of the Proposed Development Site and its wider landscape setting in order to establish the capacity of the immediate landscape in which the Proposed Development will be built, as is prescribed by best practice guidance: *"as part of the baseline description the value of the potentially affected landscape should be established"* (Page 80, GLVIA, 2013). Comprehension of landscape value and its susceptibility to change enables determination of the sensitivity of the landscape at a micro level (the Proposed Development Site) and its capacity to absorb the infrastructure of the Proposed Development.

Sensitivity is determined by combining the assessment of the landscape value of a landscape receptor with the susceptibility to change of that receptor. It is noted here that a judgement of high landscape value does not necessarily imply that this receptor has a high susceptibility to change, and it is emphasised that this relationship can be complex. The combination of these, which determines the landscape sensitivity, is undertaken using professional judgement with the rationale for judgements clearly explained in the description of the assessment of effects or in the baseline study. On this basis landscape receptors have been assigned one of the four following sensitivity ratings:

- Very High
- High
- Medium
- Low

No table is provided for the description of these different classifications of landscape sensitivity as the relationship between susceptibility to change and landscape value is inherently complex and not suitable to concise definitions. It is noted that sensitivity classifications are generally guided by local and national planning policy, particularly for Landscape Character Areas and County Policy in relation to these, as well as other relevant policy in relation to Quarry developments. However, it is noted that in cases where local variations in landscape receptors merit a smaller scale focused assessment that may differ from the policy this is undertaken using professional judgement and is clearly explained in the text of this Chapter.

11.2.3.2 Assessing Magnitude of Change in the Landscape

The magnitude of change occurring within a landscape is a combination of the visual presence - size and scale - of the change, the extent of the area to be affected, and the duration and reversibility of the effect. The magnitude of change for differing landscape receptors was assessed using the definitions outlined in Table 11-3 below.

Table 11-3 Magnitude of Landscape Change Criteria

Magnitude of Change	Description
Substantial	Where a landscape will experience the loss of key landscape features or the introduction of uncharacteristic additions over a large area. The changes to the landscape are prominent and large in scale. The level of change has an effect on the overall landscape character. The effects are likely long term and may be irreversible.
Moderate	A more limited loss of or change to landscape features over a medium extent which will result in some change to landscape features and aesthetics. Could include the addition of some new uncharacteristic features or elements that would lead to the potential for change in landscape character in a localised area or part of a landscape character area. Would include moderate effects on the overall landscape character that do not affect key characteristics. The effects could be long to medium term and/or partially reversible.
Slight	The loss of or change to landscape features of limited extent, or changes to landscape character in smaller areas. Changes would not affect key characteristics. The addition of any new features or elements to the landscape would only result in low-level changes to the overall aesthetics of the landscapes. Changes to the landscape are more evident at a local level and not over a wide geographical area. The effects could potentially be medium to short term and/or reversible.
Negligible	A change affecting smaller areas of landscape character including the loss of some landscape elements or the addition of features or elements which are either of low value or hardly noticeable. The effects could be short term and/or reversible.

11.2.3.3 Landscape Effects Assessment Matrix

The significance of landscape effect is arrived at using a combination of the matrix shown in Table 11-4 below and the significance (EPA, 2022) definitions in Table 11-5 (Below Table 11-4). The significance of landscape effect was arrived at by combining the magnitude and sensitivity classifications, using the assessment matrix in Table 11-4 below, where landscape sensitivity is shown in the left-hand first column of the table and magnitude of change is shown in the first row at the top of the table.

Table 11-4 Landscape Effects Matrix (Sensitivity X Magnitude of Change)

	Substantial	Moderate	Slight	Negligible
Very High	Major	Major/Moderate	Moderate	Moderate/Minor
High	Major/Moderate	Moderate	Moderate/Minor	Minor

	Substantial	Moderate	Slight	Negligible
Medium	Moderate	Moderate/Minor	Minor	Minor/Negligible
Low	Moderate/Minor	Minor	Minor/Negligible	Negligible

The determination of significance uses a seven-point scale, ranging from Major to Negligible. This seven-point scale is translated to the EPA Guidance (2022) impact assessment classifications of significance, as outlined in Table 11-5 below.

Table 11-5 Significance Classification and Definitions (EPA 2022).

Matrix Classification Significance	EPA Significance Classification	EPA (2022) Definition of Significance
Major	Profound	An effect which obliterates sensitive characteristics
Major/Moderate	Very significant	An effect, which by its character, magnitude, duration or intensity alters most of a sensitive aspect of the environment
Moderate	Significant	An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Moderate/Minor	Moderate	An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends
Minor	Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
Minor/Negligible	Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Negligible	Imperceptible	An effect capable of measurement but without significant consequences

11.2.3.4 Residual Landscape Effects

After determining the significance of the landscape effect using the above visual effects assessment matrix, mitigating factors (e.g. Landscape Restoration Plan) are taken into consideration to arrive at the final residual effect.

11.2.4 Assessing Visual Effects

Visual effects relate to changes in views and visual amenity of the surroundings of individuals or groups of people – termed 'visual receptors'. These may result from changes in content and character of views as a result in changes to the landscape. The assessment of visual effects is based on views shown in the Viewpoint imagery as well as actual visibility on the ground.

It should be noted that in assessing visual effects, there are different types of visual effects:

- *Visual obstruction: This occurs when there is an impact on a view which blocks the view.*

- *Visual intrusion: This occurs when there is an impact on a view, but which does not block the view.*

Considering the Proposed Development primarily comprises vertical extraction below existing ground level, it is considered that only visual intrusion is likely to occur, although potential for visual obstruction will be considered and assessed in this LVIA considering other associated infrastructure such as the processing plant.

The significance of the effect on visual amenity is a combination of the sensitivity of the receptor balanced with the magnitude of the change occurring within a view. The likely significant effects of the Proposed Development in terms of visual and landscape effects are informed by on site visibility appraisals and assessment of photographic imagery captured from Viewpoints. The Visual Baseline section presents photographic imagery showing many views towards the Proposed Development from receptors in the surrounding landscape. In this instance for this LVIA, considering the very limited visibility of the proposal, a visual impact assessment was conducted for one 'Viewpoint' as it was the only location/receptors where visual effects are likely to occur.

11.2.4.1 Visual Receptors Sensitivity

Visual sensitivity balances the sensitivity and susceptibility of the receptor (people or groups of people) as well as the amenity value of the view on offer at a particular location. Visual receptor sensitivity depends on the occupation or activity of the people, as well the extent to which the attention is focused on views and visual amenity, according to the GLVIA3 (LI & IEMA, 2013) guidelines. Visual receptor sensitivity is assessed as either being Very High, High, Medium or Low, based on the definition of descriptions and examples set out in Table 11-6 below.

Table 11-6 Visual Receptor Sensitivity Assessment Criteria

Sensitivity of Visual Receptor(s)	Description
Very High	Included in this category are viewers that are primarily focused on views from this particular location, such as visitors to popular destinations identified for their outstanding views. Receptors visiting locations specifically to appreciate and experience the landscape and views. Residents in close proximity who have primary views of a scenic quality in the direction of the Proposed Development.
High	Includes viewers at designated views or landscapes. Viewers such as residents in close proximity to the viewpoint who have primary views that will be in the direction of the development that may not necessarily be of a particularly scenic quality; viewers at well-known heritage or popular tourist or recreational areas, viewers along scenic or tourist routes.
Medium	Includes viewers who may have some susceptibility to a change in view. Viewers such as residents in medium proximity but who do not have views focused in the direction of the Proposed Development or whose views are not of a particularly scenic quality; those from views which are not designated but may have local recreational uses or those travelling along routes or at view which are considered moderately scenic.
Low	Includes viewers engaged in activities where the focus is not on the landscape or view. These including those travelling along a busy route, viewers at work or engaged in sport not related to views or experience of the landscape.

Viewpoints are specific locations which are representative of key visual receptors. Photographic imagery has been captured from these viewpoints and an assessment of visual effects has been conducted from these locations using the imagery as a guide. The viewpoint assessment below in Section 11.5 consider all receptors represented in the determination of the visual receptor sensitivity rating for each viewpoint. This determination takes a balanced approach considering the types, sensitivities, and quantities of visual receptors represented. The sensitivity rating given to each viewpoint in Section 11.5 below considers both the susceptibility of the visual receptors represented as well as the value attached to the available views at that particular location.

11.2.4.2 Magnitude of Visual Change

The magnitude of the visual change resulting at each viewpoint is a combination of scale of the change, the extent of the area to be affected and the duration and reversibility of the effect, determined by reviewing the images for each viewpoint. The magnitude of change is determined in accordance with the definitions and descriptions included in Table 11-7 below.

Table 11-7 Magnitude of Visual Change Assessment Criteria

Magnitude of Change	Description
Substantial	Substantial change, where the proposals would result in large-scale, prominent or very prominent change, leading to substantial obstruction of existing view or complete change in character and composition of the baseline though removal of key elements or addition of uncharacteristic elements which may or may not be visually discordant. This includes viewpoints where the Proposed Development is fully or almost fully visible over a wide extent, at close proximity to the viewer. This change could be long term or of a long duration.
Moderate	The change in the view may involve partial obstruction of existing view or partial change in character and composition of the baseline through the introduction of new elements or removal of existing elements. Likely to occur at locations where the development is partially visible over a moderate or medium extent, and which are not in close proximity to the development. Change may be readily noticeable but not substantially different in scale and character from the surroundings and wider setting.
Slight	The proposals would be partially visible or visible at sufficient distance to be perceptible and result in a low level of change in the view and its composition and a low degree of contrast. The character of the view may be altered but will remain similar to the baseline existing situation. This change could be short term or of a short duration.
Negligible	Any change would only be barely distinguishable from the status quo “do-nothing scenario” in the surroundings. The composition and character of the view would be substantially unaltered, approximating to little or no change.

11.2.4.3 Visual Effects Assessment Matrix

Table 11-8 below shows the significance of visual effects, arrived at by combining the visual receptor sensitivity and the magnitude of change classifications. Visual receptor sensitivity is shown in the left-hand first column and magnitude of visual change is shown in the first row at the top of the table. This table is used as an indicative tool to assist in determining the significance of visual effects. In different circumstances differing levels of mitigating factors may ultimately result in a different determination of the level of significance (see below). The significance of a visual effect is based on a balance between

the sensitivity of the receptor and the magnitude of effect. The significance of visual effect is arrived at using a combination of the matrix shown in Table 11-8 as well as Figure 11-5 shown in Section 11.2.5- *Determination of Residual Landscape and Visual Effects,* seen below.

Table 11-8 Visual effects significance assessment matrix

	Substantial	Moderate	Slight	Negligible
Very High	Major	Major/Moderate	Moderate	Moderate/Minor
High	Major/Moderate	Moderate	Moderate/Minor	Minor
Medium	Moderate	Moderate/Minor	Minor	Minor/Negligible
Low	Moderate/Minor	Minor	Minor/Negligible	Negligible

The determination of significance uses a seven-point scale, ranging from Major to Negligible. This seven-point scale is translated to the EPA impact assessment classifications of significance (EPA, 2022), as outlined in Table 11-9 below.

Table 11-9 EPA Impact Assessment Significance Classification for Landscape and Visual Effects

Matrix Classification Significance	EPA Significance Classification	EPA (2022) Definition of Significance
Major	Profound	An effect which obliterates sensitive characteristics
Major/Moderate	Very significant	An effect, which by its character, magnitude, duration or intensity alters most of a sensitive aspect of the environment
Moderate	Significant	An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Moderate/Minor	Moderate	An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends
Minor	Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
Minor/Negligible	Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Negligible	Imperceptible	An effect capable of measurement but without significant consequences

11.2.4.4 Residual Visual Effect

After determining the significance of the visual effect using the above visual effects assessment matrix and significance graph, mitigating factors are taken into consideration to arrive at the final residual effect. In some cases, mitigating factors merit a reduction in classification. Unlike mitigation measures traditionally implemented for other disciplines in an EIAR, LVIA mitigation is generally designed into the Proposed Development as part of the iterative design process. In most instances, this mitigation is part of the final design of the Proposed Development, as well as strategic site selection. When this is the case, the mitigating factor and/or design measure is clearly reported within text of the Chapter and impact assessment tables. After determining the significance of the visual effect using the above visual

effects assessment matrix, mitigating factors are taken into consideration to arrive at the final residual effect.

11.2.5 Determination of Residual Landscape and Visual Effects

The matrices and tables above are excellent tools to aid professional judgement in the determination of the significance of an effect. They are useful in that they provide a transparent, objective, structure to the process of balancing sensitivity and magnitude of change. In the context of the determination of visual effects, the formulaic process created by the use of the matrix above provides an indicative initial assessment, which can be seen clearly in the Viewpoint Assessment Table in Section 11.5.

However, over-reliance on the formulaic process, which is heavily influenced by the definitions of sensitivity and magnitude of change contained in the tables above, can lead to a failure to properly account for the full range of circumstances and factors at play in the determination of the significance of a visual effect (see section 3.35, GLVIA3, LI & IEMA, 2013). A wide range of factors, mitigating or otherwise, can factor into such a determination, and it is not possible to capture the complexity involved in balancing all considerations within the necessarily limited definitions contained in these tables. This then naturally results in circumstances whereby the process of the determination of significance using the formulaic method involved with the matrix shown in Table 11-8 can result in misrepresentations of the significance of visual effects. It is only with professional judgement, and narrative descriptions of effect, that such complexity can be integrated into the determination of significance. Therefore, the formulaic methods based upon the matrix presented above is combined with professional judgement in the determination of significance. This is illustrated in Figure 11-5 below where the professional judgment of the competent expert is used to properly determine the significance of an effect taking all considerations into account.

A focus is placed upon the narrative description of effects (see section 3.36, GLVIA3, LI & IEMA, 2013) given the naturally subjective nature of the significance determination process, particularly in relation to visual effects, ensuring that the rationale for the overall judgement is clear (see sections 3.28-3.29, GLVIA3, LI & IEMA, 2013). The narrative assessments of viewpoint imagery aims to provide a transparent and robust determination of residual visual effects utilising the graph in Figure 11-5 below in combination with a clear and logical narrative.

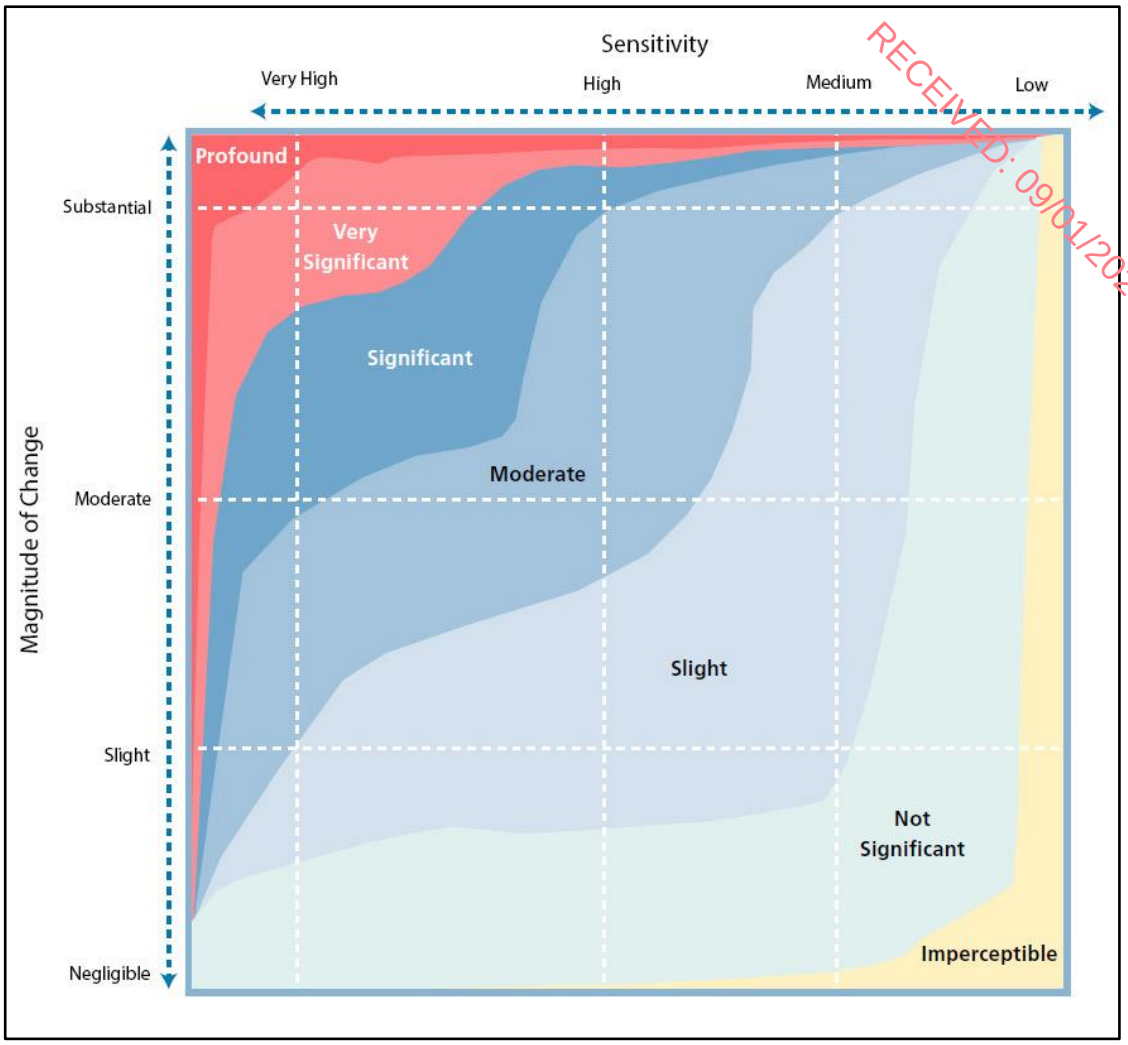

Figure 11-5 Visual Effect Significance Graph (adapted from EPA Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, 2022)

11.2.6 Assessment of Cumulative Landscape And Visual Effects

This chapter assesses the likely landscape and visual impacts of the Proposed Development, both independently, as well as in combination with all other existing developments in the LVIA Study Area. The assessments consider the Proposed Development in combination with all *'likely future receiving environments'* (EPA, 2022) which includes all existing, permitted and proposed developments in the LVIA Study Area.

The effects reported in this chapter use appropriate and logical narrative to discuss cumulative interactions between the Proposed Development and all other developments. Discussion of cumulative interactions on specific landscape and visual receptors is relative to the effects on that receptor and proportionate to the likelihood of significant landscape and visual effects occurring.

Assessment of Cumulative Landscape Effects

Assessment of cumulative landscape effects consider where two or more developments have the potential to cumulatively effect the physical fabric of the landscape and specific landscape components and receptors. Cumulative effects on landscape character arise when two or more developments introduce new features into the landscape. In this way, they can change the landscape character to such

an extent that they create a different landscape character type, in a similar way to large scale afforestation. That change need not be adverse; some derelict or degraded landscapes may be enhanced as a result of such a change in landscape character.

Assessment of Cumulative Visual Effects

The GLVIA3 (LI & IEMA, 2013) guidance also notes that cumulative visual effects can be experienced **in combination**, where two or more developments are visible from one viewpoint, either **simultaneously** or **in succession** and these are considered in the assessment of visual effects from viewpoints.

Another type of cumulative visual effect includes where two or more developments are seen **sequentially**, where a viewer moves to another viewpoint or along a transport or recreational route and sees the same or different developments. Analysis of the photographic imagery, as well as site visits and field work undertaken enables sequential visibility to be assessed and reported in this Chapter.

11.3 Landscape Baseline

This section of the report identifies and describes landscape policy designations and sensitive landscape receptors located in the LVIA Study Area (within 2 km from the Proposed Development Site boundary). The receiving landscape of the development site and surrounding areas are also described in terms of their landscape character and landscape value.

11.3.1 Landscape Policy Context: Galway County Development Plan 2022-2028

The Proposed Development Site and entirety of the LVIA Study Area is located in County Galway, therefore, the Galway County Development Plan 2022-2028 (Hereafter referred to as the 'GCDP') has been consulted to identify relevant landscape policy designations in the LVIA Study Area. This section reports the details of a desk study undertaken to identify relevant policies on landscape and landscape character, designated landscapes and views and prospects in the LVIA Study Area.

The Proposed Development Site is located within the townland of Lomaunaghbaun in north-east county Galway. The GCDP is the main policy document relevant to this LVIA, it contains policies and objectives relating to landscape, recreation and amenity and Quarry developments. These policies and objectives are reported below.

11.3.1.1 General Landscape Policy (GCDP)

The GCDP sets out an overall strategy for the proper planning and sustainable development of the administrative area of Galway County Council. It contains the following policy objectives related to landscape:

> *"**LCM1 Preservation of Landscape Character** - Preserve and enhance the character of the landscape where, and to the extent that, in the opinion of the Planning Authority, the proper planning and sustainable development of the area requires it, including the preservation and enhancement, where possible of views and prospects and the amenities of places and features of natural beauty or interest.*
>
> ***LCM 2 Landscape Sensitivity Classification** - The Planning Authority shall have regard to the landscape sensitivity classification of sites in the consideration of any significant development proposals and, where necessary, require a Landscape/Visual Impact Assessment to accompany such proposals. This shall be balanced against the need to develop key strategic infrastructure to meet the strategic aims of the plan.*
>
> ***LCM 3 Landscape Sensitivity Ratings** - Consideration of Landscape Sensitivity Ratings shall be an important factor in determining development uses in areas of the County. In areas of high landscape sensitivity, the design and the choice of location of proposed development in the landscape will also be critical considerations.*
>
> ***LCM 4 Open/Unfenced Landscape** - Preserve the status of traditionally open/unfenced landscape. The merits of each case will be considered in light of landscape sensitivity ratings and views of amenity importance."*

The LVIA in this chapter considers and addresses the policies stated above in relation to the preservation of landscape character; landscape sensitivity; views and prospects and the amenities of place and features of natural beauty or interest.

11.3.1.2 Landscape Character Assessment (GCDP)

Galway County Council have prepared a Landscape Character Assessment that is contained in *Appendix 4* of the GCDP. This Landscape Character Assessment categorises Galway County into different Landscape Character Types (LCTs). The Proposed Development is located within the North Galway Complex Landscape LCT, as seen in Figure 11-6 below. This LCT is described as:

> *"An extensive grassland plain stretching from the Suck River in the east to the watershed of the River Clare in the west. It includes elevated areas such as Slieve Dart in the north, as well as lakes, turloughs, raised bogs, wetlands and winding rivers.*
>
> *Agriculture, scattered forestry and associated field patterns are very mixed and can exhibit large and abrupt changes of character over very short distances, especially in areas around bogs. It has a dense network of smaller settlements and roads, though at a lower density than the southern plains of the county.*
>
> *Open areas around bogs produce extensive sky views and the area that are free from light pollution."*

It is further stated in the Landscape Character Assessment that within this LCT the sensitivities are noted as *"open countryside offers frequent extensive panoramic views from local highpoints."* In light of this, this LVIA has identified local high points within the LVIA Study Area that offer panoramic views, in order to fully assess the impact of the Proposed Development on this LCT.

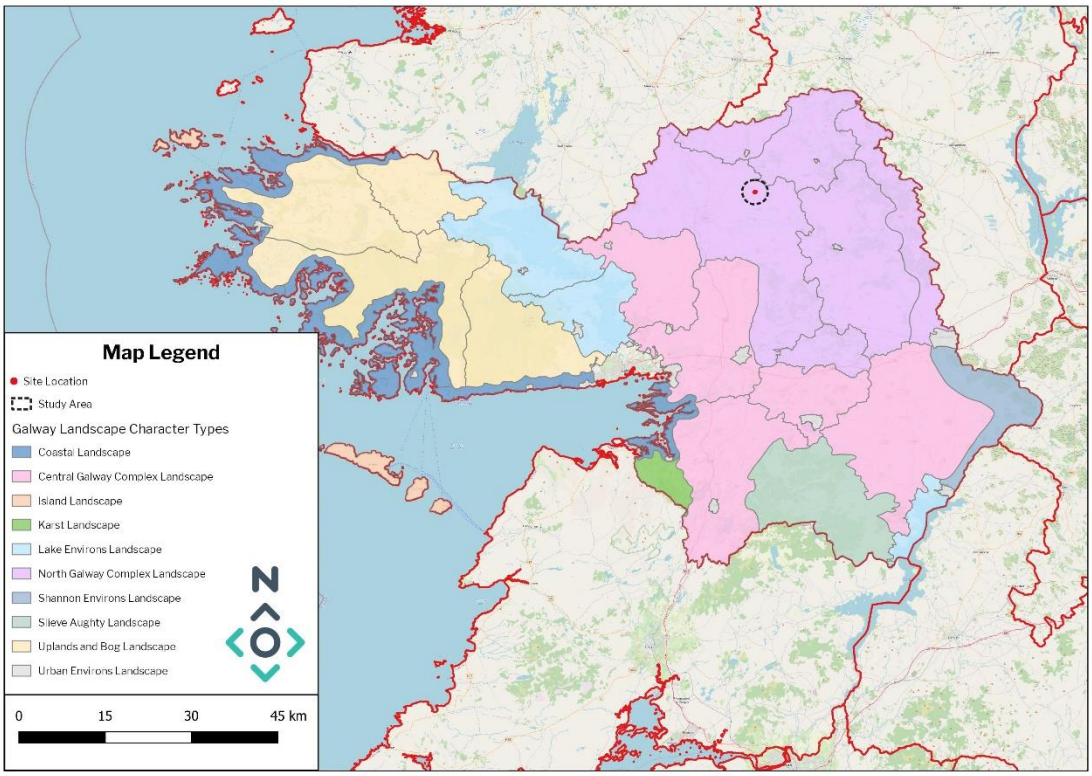

Figure 11-6 Location of the Proposed Development and the Landscape Character Types Map Extract from the Galway County Development Plan 2022-2028

This LCT is further categorised into Landscape Character Units (LCUs), which can be seen on *Map 04: North Galway Complex & Shannon Environs Landscape Units* of the Landscape Character Assessment for the GCDP. The Proposed Development is located within the *LCU 5e – Northern River Clare Basin,* which is described as an *"Extensive, largely level plain with low enclosure. A long-settled working*

landscape of large regular stone-walled fields. Extensive areas of bog in east. Transition zone from bog areas to east."

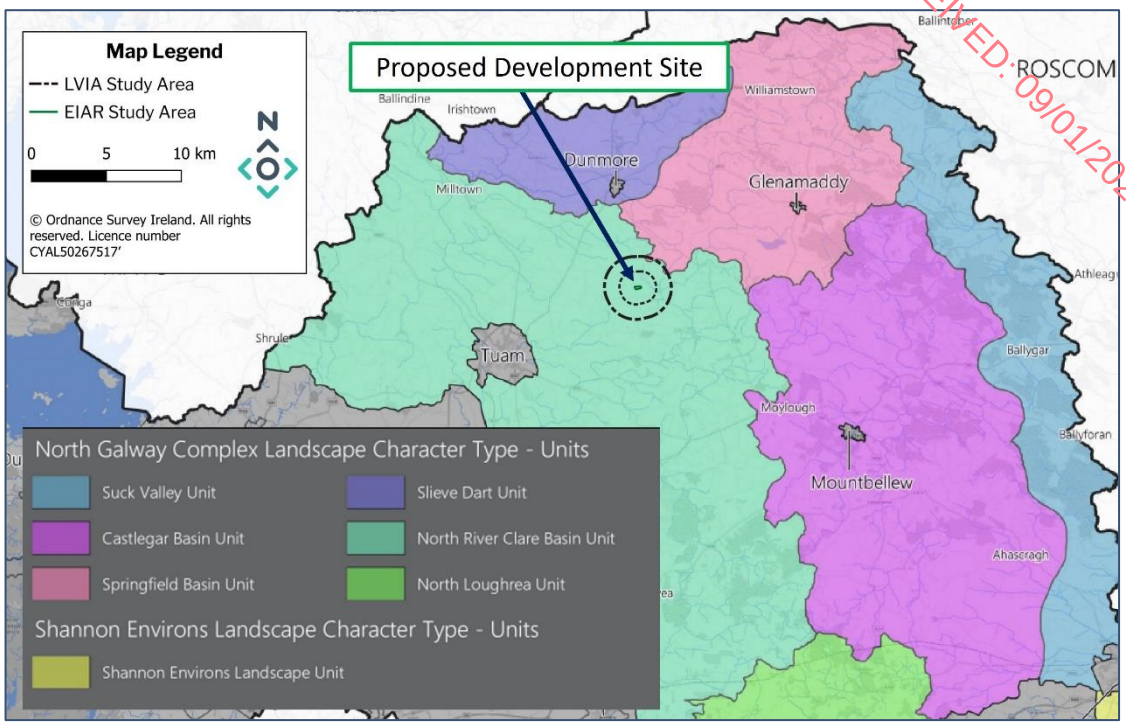

Figure 11-7 Landscape Character Units Map Extract from the Galway County Development Plan 2022-2028

11.3.1.3 Landscape Sensitivity Rating (GCDP)

Section 8.13.2 of the GCDP states that a *"landscape's capacity to absorb new development, without exhibiting a significant alteration of character or change of appearance is referred to as it's 'sensitivity'. This depends on factors such as elevation, slope, as well as the types of land-cover and soil."* The Landscape Character Assessment contained in *Appendix 4* of the GCDP defines classifies the LCUs according to the following classifications:

- Iconic: Unique Landscape with high sensitivity to change
- Special: High sensitivity to change
- High: Elevated sensitivity to change
- Low: Unlikely to be adversely affected by change

As seen in Figure 11-8 below, the Proposed Development is located in a LCU classified as Low sensitivity, which is defined as *"unlikely to be adversely affected by change"* in the GCDP.

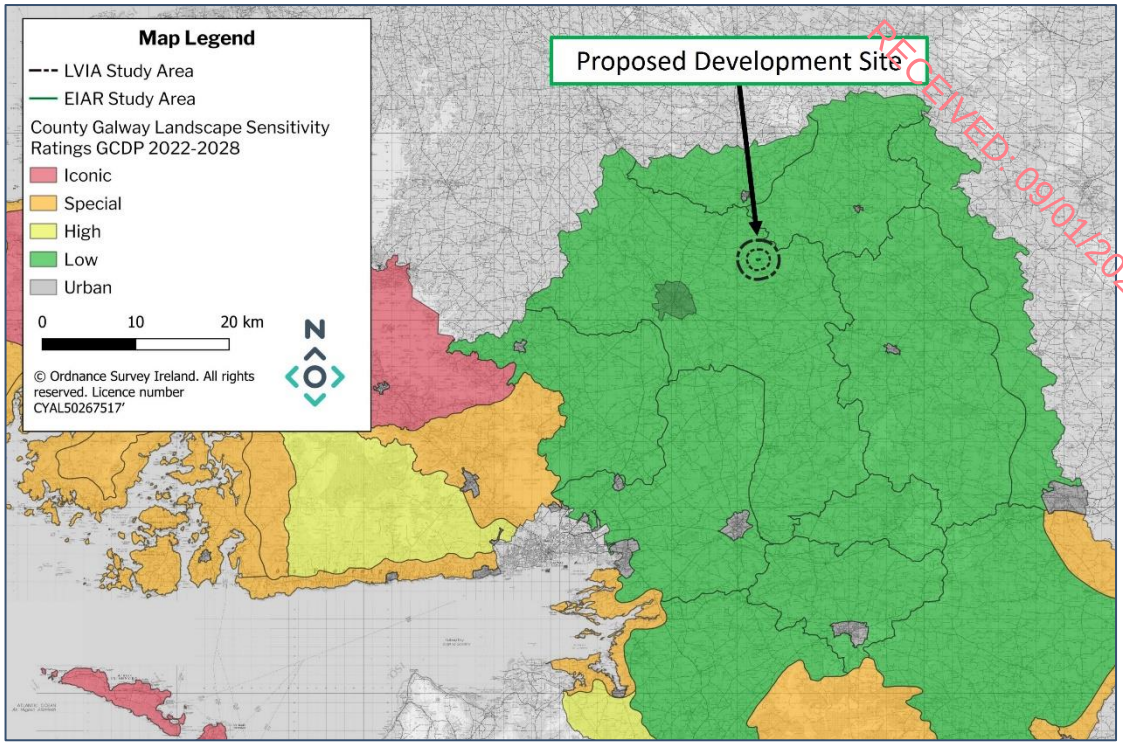

Figure 11-8 Landscape Sensitivity Map - Galway County Development Plan 2022-2028

11.3.1.4 Protected Views and Scenic Routes (GCDP)

The Landscape Character Assessment for County Galway identifies protected views and scenic routes *"of great natural beauty located across the county."* The GCDP states that these protected views and scenic routes *"have a very important amenity, tourism, economic and cultural value for the county and its people."*

There are no protected views or scenic routes designated in the GCDP within the LVIA Study Area. The closest protected view is located 8.1 km south-west of the Proposed Development and is directed away from the Proposed Development Site. The closest scenic route is located 39.4 km south-west of the Proposed Development at its closest point. There will be no visibility of the Proposed Development from this scenic route or any other scenic route or protected view within the GCDP. The Proposed Development will therefore have no impact on any designated scenic amenity in the GCDP, and these designations are not considered further in this Chapter.

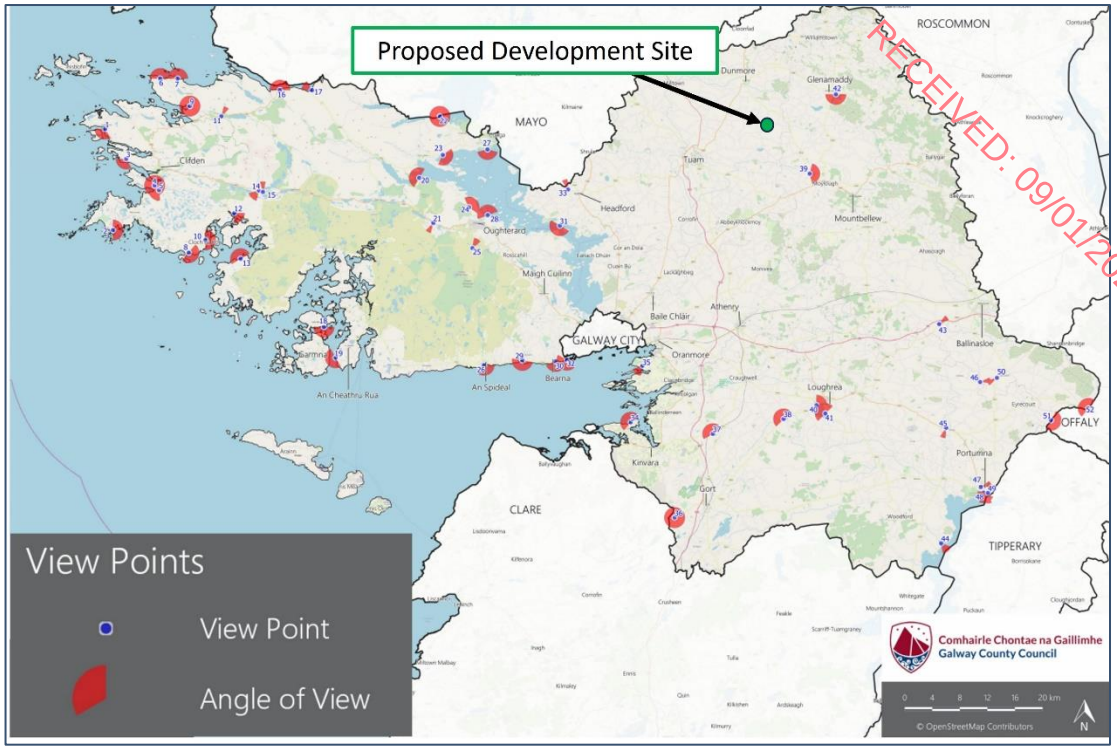

Figure 11-9 Protected Views Map Extract from the Galway County Development Plan 2022-2028

11.3.1.5 Landscape Policies Pertaining to Quarry Development (GCDP)

The GCDP has set out the following Development Management Standards in relation to 'Extractive Development:

> *"DM Standard 19: Extractive Development*
>
> *The following details shall be considered central to the determination of any application for planning permission for extractive development:"*
>
> *"f) Mitigation*
>
> *Methods to reduce environmental impact. Details to be submitted to include an assessment of potential impacts on water resources, residential and visual amenity (including noise, dust and vibration impacts), biodiversity and any other relevant considerations together with appropriate proposals for their mitigation."*
>
> *"k) Landscaping and Screening*
>
> *Landscaping and screening proposals. Details to be submitted to include an indication of existing trees or other screening to the retained or removed and any proposed screening, grassing or planting of trees or shrubs and proposals for their maintenance."*

To comply with these standards, the potential visual impacts of the Proposed Development from landscape and visual receptors has been considered throughout this LVIA and has guided the implementation of a Landscape Restoration Plan which includes measures such as berms and screen planting to mitigate effects, as well as restoration of proposed extraction areas in a phased approach.

11.3.2 Landscape Character of the Proposed Development Site

The Proposed Development Site is a greenfield site comprising lands currently used for agriculture. Figure 11-10 below shows an aerial image of the site, it shows a complex of seven small irregular shaped field cells. The Site Boundary (Red Line Boundary on the Map) is defined by a network of straight, linear hedgerows and a small local road along the eastern extent. As shown by the aerial image below the site is surrounded by agricultural grasslands as well as an existing quarry to the east.

Figure 11-10 Aerial Image of the Proposed Development Site:

Landcover and Land Use

As shown by the images below, the site currently comprises several undulating fields of grassland and scattered boulders. The small field cells within the site are delineated by mature hedgerows, trees and shrubs, as well as some dry stone walls.

Plate 11-1 View west from the site entrance adjacent to the local road at the east of the site

Plate 11-2 View to the east at approximate 120m west of the entrance

Plate 11-3 Typical Land Cover on Site - Undulating fields of grassland delineated by hedgerows and shrubs

The land on the site is intermittently used as grazing pasture for livestock and a network of vehicular access tracks connect the various fields. Some of the smaller fields to the west of the site are located on more elevated lands enclosed by dense hedgerows and shrubs, they comprise scrub, grassland and occasional mounds of exposed rocky boulders (see Plate 11-4).

Plate 11-4 A smaller field to the west of the site enclosed by dense hedgerows and shrubs

Plate 11-5 Exposed mound of boulders to the west of the site.

A comprehensive description of the existing flora and fauna existent on the Proposed Development Site is included in Chapter 6 – *Biodiversity.*

Landform and topography

As shown by the photos above and map below, the landform of the site is irregular and undulating. Figure 11-11 below shows the topographic gradients existent on the site, approximately 15 metres difference in elevation from the low points to the highest vantage points. In general, the site slopes down gently from the west to east, with the most elevated areas located at the western extent of the site (approx. 98m AOD) and lowest areas are at the south-eastern extent of the site adjacent to the local road (approx. 85 AOD).

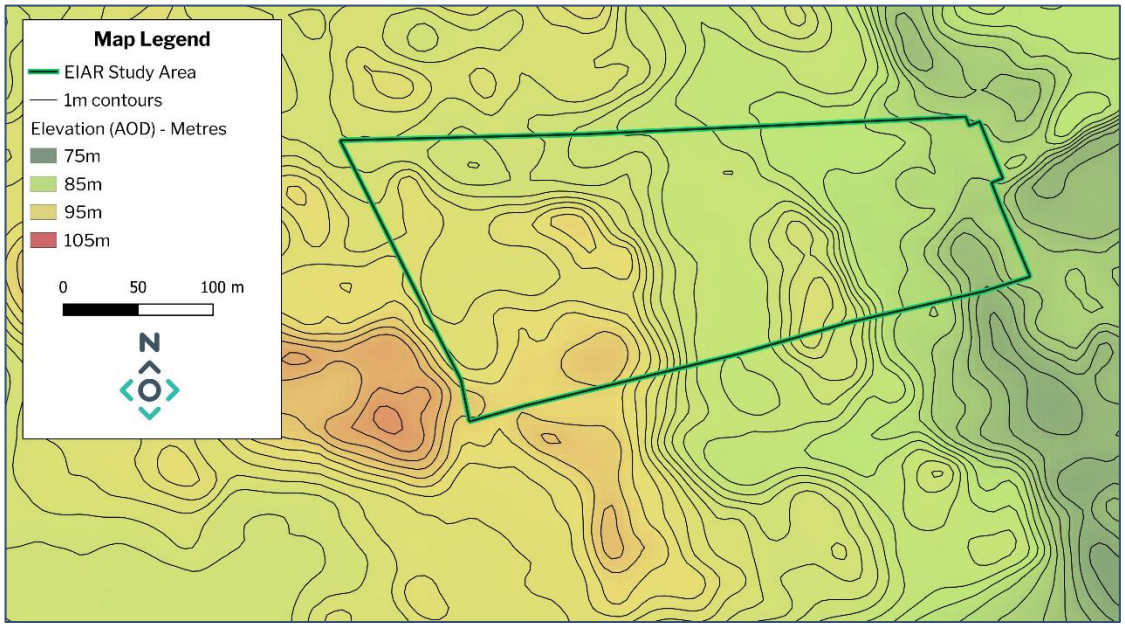

Figure 11-11 Landform of the Proposed Development Site

As shown by the contours, there are some slightly flatter areas in the eastern and central field cells, however, the terrain is generally uneven and characterised by hummocky ridges, mounds and depressions.

No watercourses or waterbodies exist on the site, although the lands appear well drained. Considering the pattern of topography, the site drains west to east towards the Dunblaney river, approximately 600

metres to the east of the site boundary. A comprehensive description of the existing drainage regimes on the site and the likely effects of the Proposed Development are included in Chapter 8 - *Hydrology and Hydrogeology*.

Cultural Heritage & Recreation

There are no cultural associations relating to the Proposed Development Site itself. There are no recorded monuments within the EIAR Study Area and No National monuments located within the LVIA Study Area (distance to 2km). Two recorded monuments are located within 500m EIAR Study Area. Effects on Cultural Heritage receptors are addressed in Chapter 12 of this EIAR. As reported in Chapter 12, several ring forts, enclosures and recorded monuments exist in the wider landscape and are of local cultural heritage value. These monuments are generally commonplace in the rural landscape of Ireland, they are not considered of county, regional or national value and are not recreational destinations with safe public access and high visitor numbers. These receptors are therefore not considered high sensitivity in the context of LVIA. The site comprises private lands and is not currently used for any recreational purposes.

Views from within the Site

Photos were captured from elevated vantage points within the site where open landscape views are available. These are presented below.

Plate 11-6 View towards the southern border of the Proposed Development.

Plate 11-7 View towards the eastern border of the Proposed Development.

As shown by the images above and below, longer ranging views are largely restricted by the undulating nature of the landscape and vegetated field boundaries. Plate 11-7 above shows an open and expansive flat peatland landscape is visible to the east of the site.

Plate 11-8 View towards the northern border of the Proposed Development.

Plate 11-9 Livestock in an adjacent field at the south-western boundary – Long ranging views to the south and south-east from this elevated vantage point.

Views within the site are generally well contained by the irregular topography. Where open views are available of the wider landscape setting from within the site (see image above), it is evident that it is a relatively remote location surrounded by a limited number of visual receptors.

11.3.2.2 Wider Landscape Setting

The Proposed Development Site is located in County Galway towards the eastern border of the North Galway Complex Landscape LCT. This LCT is generally considered to be an extensive grassland plain stretching from the Suck River in the east to the River Clare in the west. The Proposed Development Sote is located in the townland of Lomaunaghbaun with the town of Tuam located approximately 8.61km to the south-west and the town of Dunmore located approximately 6.98km to the north-west. The landscape of the LVIA Study Area is sparsely settled, with one off housing and farm steads organised along a network of three main local roads. There are no main villages or population centres and there are no prominent transport routes regional or national roads.

The area surrounding the Proposed Development is a sparsely populated, rural landscape. It is generally characterised as a modified working landscape where land use is typically dominated by agriculture (livestock), forestry, and other extractive quarrying activities. As shown on the aerial map below, the immediate setting of the site comprises fields of agricultural grassland which are mostly used as grazing pasture. These fields are generally undulating, and like the site itself are characterised by irregular hummocks and ridges. The aerial map also shows a relatively large areas of dense native woodland and scrub beyond the fields to the south-west of the site.

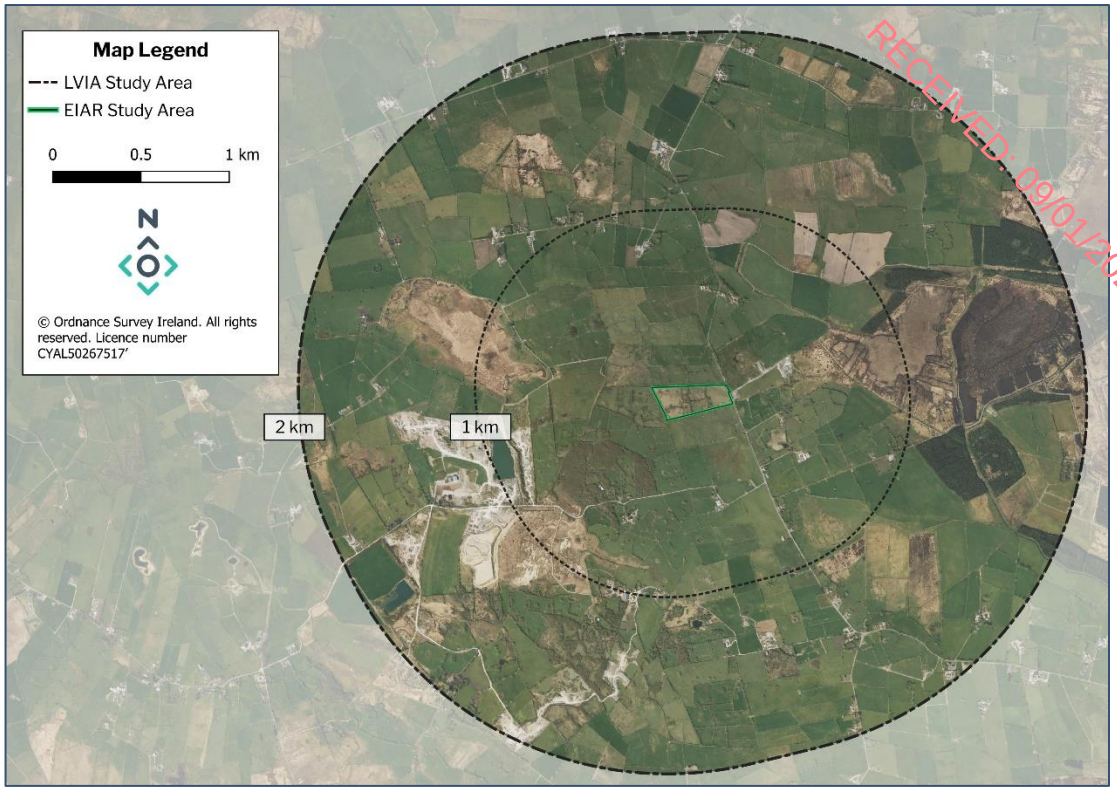

Figure 11-12 Aerial – Wider Landscape Setting of the LVIA Study Area

In a general sense, and at a macro scale, the LVIA Study Area (area within 2km) is relatively flat, with only approximately 40 metres difference in elevation between the highest and lowest points. However, as highlighted in the landform map below, localised topographical variation does occur throughout the LVIA Study Area. This localised variation in topography does provide a sense of visual containment in the landscape, which was very evident when conducting the visibility appraisals reported in the following section of this Chapter – *Visual Baseline.* As shown on the landform map below, the Proposed Development Site is located on the eastern side of a slightly elevated landform which encloses it to the north, west and south. In mind of the Proposed Development as a vertical extraction, these topographical characteristics largely restrict any potential visibility of proposed extraction activity from the north, west and south; most visibility is likely to occur from the low peatlands to the east.

Figure 11-13 above shows the number of residential settlements located in the LVIA Study Area and their positioning relative to the Proposed Development. The wider landscape surrounding the site is considered to be an area of relatively low population density and there is substantial set back distance and physical landscape buffers between the Proposed Development Site and residential receptors.

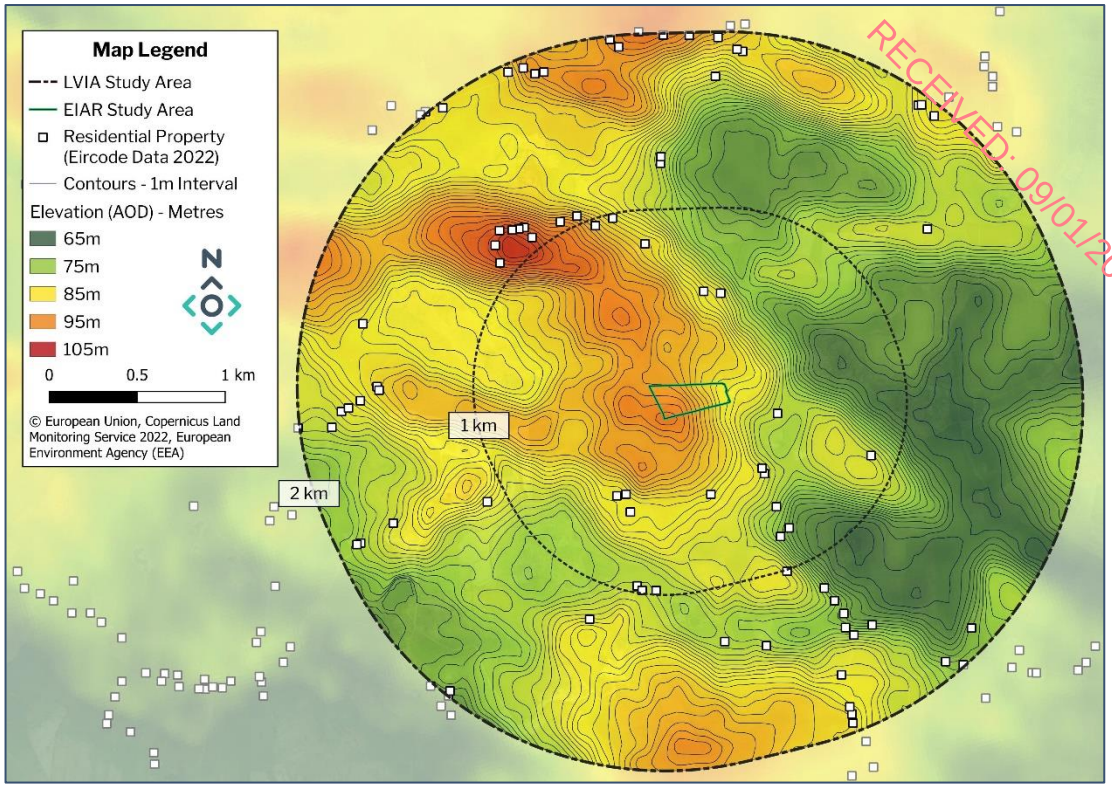

Figure 11-13 Landform and Settlement distribution in the LVIA Study Area

Several large peatlands are located throughout the LVIA Study Area (east and west of the site), as are typically found in flat low lying rural landscapes in Ireland. The peatlands to the east have been degraded and modified by historic drainage and peat cutting activities.

As shown by the aerial map, the landscape of the LVIA Study Area has been influenced by historic and on-going quarrying activities. These quarries and other land uses have been considered and are assessed in combination with the Proposed Development in Section 11.6.5 - *Cumulative Landscape and Visual Effects*.

11.3.3 Landscape Value and Sensitivity of the Proposed Development Site

Landscape Values were assessed in order to determine the landscape sensitivity of the Proposed Development Site as well as the wider landscape setting and establish the capacity of the immediate landscape in which the Proposed Development will be built, as it is prescribed by best practise guidance "*as part of the baseline description the value of the potentially affected landscape should be established*" (Page 80, GLVIA3, 2013). Comprehension of the landscape value and its susceptibility to change enables determination of the sensitivity of the landscape at a micro level (the development site) and its capacity to absorb the Proposed Development.

Determination of landscape value takes into consideration scenic amenity designations, the sensitivity and value designations found in the local landscape policy as well as other indications of landscape value attached to undesignated landscapes. Table 11 10 below describes various factors that aid in identifying landscape value. These factors and indicators were appraised collectively to determine a landscape value for the Proposed Development Site. The Landscape value and susceptibility to change were then considered in forming a landscape sensitivity classification of either Low, Moderate, High or Very High for the Proposed Development Site.

Table 11-10 Indications of Landscape Value

Indicator	Description
Landscape Designations	There are no protected scenic or landscape designations pertaining to the Proposed Development Site itself. The landscape sensitivity of the site and its wider setting is designated as '*Low: Unlikely to be adversely affected by change*', in the GCDP (See Section 11.3.1.3 previously).
Landscape Elements Quality/Condition	This refers to the physical state of the landscape and the condition of individual elements. The landscape of the site and wider setting is a working landscape, subjected to a large degree of modification from agriculture, forestry, turbary and other extraction activity. Grassland and boundary vegetation in the site itself is of good condition and have some biodiversity value and quality.
Scenic or Aesthetic Qualities	The undulating rural landscape of the site and surrounding landscape has some aesthetic quality, however they are not particularly unique to this area of County Galway.
Rarity or Conservation Interests	There are no rarity or conservation interests on the site, although grassland and boundary vegetation in the form of hedgerows and linear pockets of woodland on the site have value as biodiversity corridors. A comprehensive assessment of the Ecology on site is included in Chapter 6 - *Biodiversity*
Wildness/Naturalness	The rural and sparsely populated nature of the site and wider landscape setting give the site a sense of wildness and naturalness.
Recreational Value	The Proposed Development Site comprises privately owned land and is not used for any public recreational activities.
Cultural Meaning / Associations	There are no cultural associations relating to the Proposed Development Site itself. There are no recorded monuments within the EIAR Study Area and No National monuments located within the LVIA Study Area (distance to 2km). Two recorded monuments are located within 500m EIAR Study Area. Effects on Cultural Heritage receptors are addressed in Chapter 12 of this EIAR.

In terms of landscape value of the Proposed Development Site and the wider landscape, there are no rare landscape features on site or cultural or heritage associations on site and the site is not the subject of any landscape or visual protections in local planning policy. The site is considered modified due to the use of the site for agricultural activities and the wider setting is a modified working landscape, however it does have some aesthetic and biodiversity qualities arising from its character as a rural greenfield site. The landscape character in which the proposed site is located is not considered highly sensitive, given that it is assigned the lowest class of landscape value and sensitivity in the GCDP. Therefore, the landscape value is considered Low.

As stated in Section 11.2.3 above, landscape sensitivity is described in the GLVIA3 (2013) Guidance as a combination of the landscape's susceptibility to change as well as the value attached to the landscape. On the ground of the aforementioned points the landscape sensitivity of the Proposed Development Site is considered Low.

11.4 Visual Baseline

This section of the LVIA establishes the likely visibility of the Proposed Development from landscape and visual receptors located in the LVIA Study Area (area within 2 km of the Proposed Development boundary). This includes a description of views towards the Proposed Development from a variety of perspectives. Certain areas were screened out from assessment where it is very unlikely that any visibility will occur due to factors such as screening from vegetation, localised topography and built form.

11.4.1 Nature of the Proposed Development and its Visibility from receptors within the Landscape

The Proposed Development predominantly comprises a vertical (downward) extraction. Therefore, visibility of this extraction and associated extraction activities will be quite limited from within the surrounding landscape as it is generally occurring below existing ground level. Although it is accepted that there is potential for extraction to be visible from very elevated vantage points in the wider area. Although the landscape of the LVIA Study Area comprises irregular landforms of hummocks and ridges, in a general sense at a macro scale, the landscape is quite flat and long ranging views are generally quite limited excepting from occasional mounds which form slightly elevated vantage points. In this regard, and as demonstrated by the images in this section of the LVIA, visibility of the proposed extraction areas is highly localised to receptors in very close proximity to the site. Also, considering the linear form of the site and its positioning at the easterly extent of a slightly elevated landform, visibility is very limited from the north, west and south where the existing landform will obscure visibility of the extraction areas.

The proposed plant equipment and tanks in the Processing Area (Phase 1 area – See Figure 11-1 and Figure 11-2 previously) are the only tall structures of the Proposed Development, consequently they have potential to be the most be visually prominent features. However, the Processing Area has been strategically sited at the lowest elevation of the site at the south-eastern corner where the elevated landforms to the north, south and west will provide visual containment of these above ground elements and obscure visibility from most of the LVIA Study Area in these directions. The plant equipment will also be installed on site following initial extraction of the Phase 1 Area (to a depth of 6 metres below existing ground level). Therefore, as illustrated in Figure 11-3 in Section 11.1.2.2 only a very small portion of the plant infrastructure will actually be visible above existing ground level. The proposed berms and retention of vegetation around the perimeter of the site are included as part of the Landscape Restoration Plan, these interventions will serve to reduce visibility of the plant infrastructure from receptors in close proximity to the site where any open views occur.

Both visibility of the extraction areas and the plant infrastructure in the Processing Area will be discussed in relation to annotated photos presented in the following section showing views towards the site.

11.4.2 Visibility of the Proposed Development - Views Towards the Site

This section of the LVIA establishes the likely visibility of the Proposed Development from landscape and visual receptors located in the LVIA Study Area (area within 2 km of the Proposed Development boundary). This includes a description of views towards the Proposed Development from a variety of perspectives.

There is a very limited number of visual receptors in the LVIA Study Area. No designated scenic amenity, no population centres and no public recreational amenities were identified in the LVIA Study

Area. Therefore, the visibility appraisals focussed on views from the local road network and public areas that represent residential receptors in the landscape. The visibility appraisals reported below are informed by a site visit conducted in August 2022 and November 2023. All the roads in the immediate vicinity of the site were analysed. During the site visit, it became apparent that visibility could be excluded from the vast majority of the wider study area due to the nature of the Proposed Development and its positioning relative to landform characteristics, as well as the presence of hedgerows, tree lines and buildings, both immediately adjacent to roads and in the intervening landscape.

11.4.2.1 Views from the North

Figure 11-14 below shows locations where photos were captured from the road network to the north of the site, which have informed the visibility appraisals reported in this section.

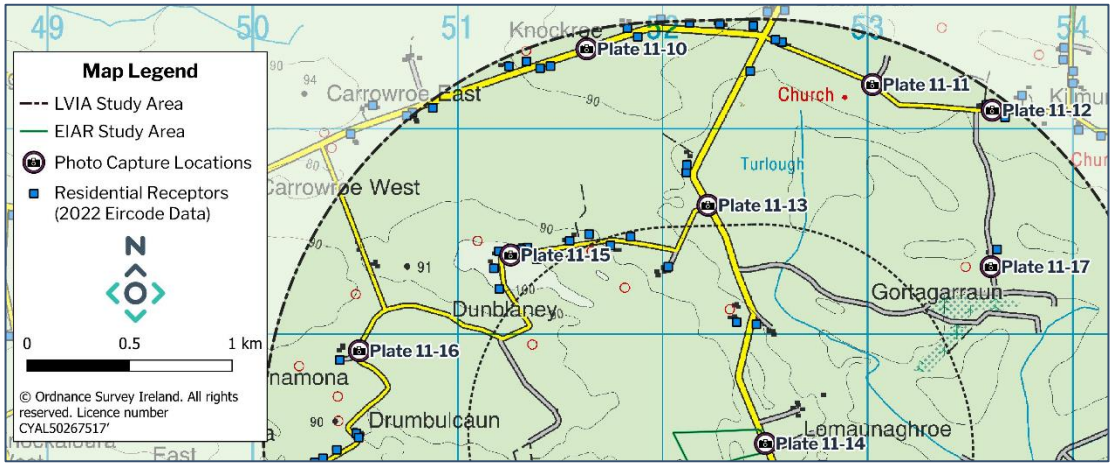

Figure 11-14 Visibility Appraisal from the North - Photo Locations

L2217 Local Road

The three images below show different views towards the Proposed Development from locations on the L2217 Local Road. No visibility will occur from receptors in proximity to Plate 11-10 considering the set back distance (1.9km) and localised landforms in the landscape.

Plate 11-10 View south-south-east toward the Proposed Development from the L2217 Local Road in the townland of Knockroe approximately 1.9km from the site boundary. No visibility will occur from this location.

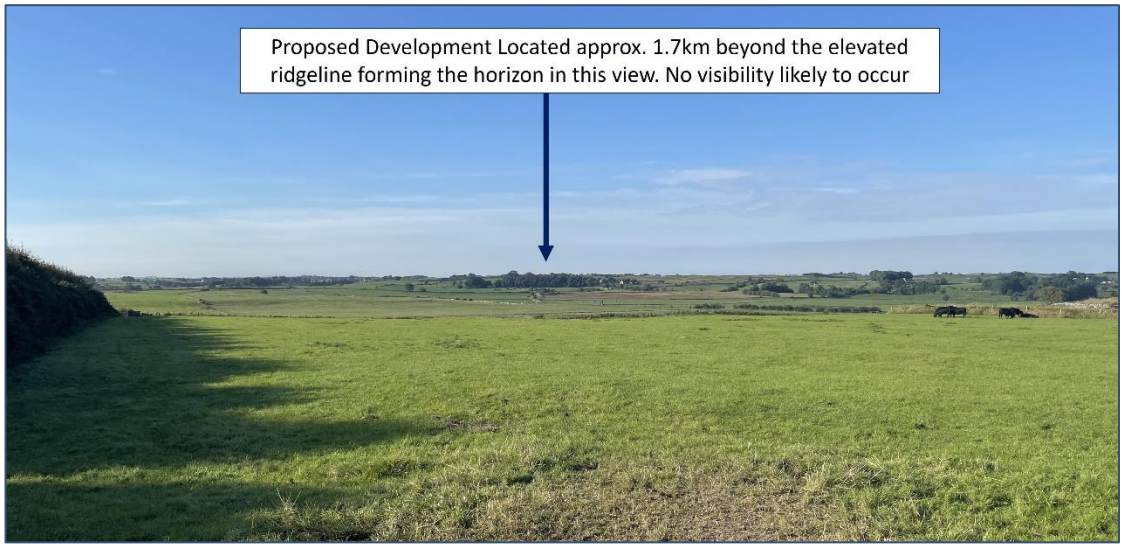

Plate 11-11 View south-west towards the Proposed Development from an elevated vantage point to the north-east of the LVIA Study Area on the L2217 Local Road in the townland of Brackloon, approximately 1.7km from the site boundary

Plate 11-11 (above) and Plate 11-12 (below) show long ranging views towards the Proposed Development from the north-east of the LVIA Study Area. Both views show open vistas across a small rural valley comprising agricultural fields, a turlough and pockets of woodland in the townlands of Brackloon and Gortagarraun. The Proposed Development Site is located beyond the distant ridgeline in these views and will be mostly obscured from view.

No visibility is anticipated in the view above in Plate 11-11. The most elevated ridges of land on the Proposed Development Site are just discernible in Plate 11-12. Extraction of these areas would be difficult to discern and identify in the landscape at this distance. The most elevated features of the proposed plant equipment and tanks in the Processing Area would be difficult to identify at this distance. The magnitude of change would be negligible, therefore no significant visual effects are likely to occur from this location.

Plate 11-12 View south-west towards the Proposed Development from an elevated vantage point to the north-east of the LVIA Study Area on the L2217 Local Road in the townland of Brackloon, approximately 1.9km from the site boundary

L2107 Local Road from the North

The L2107 Local Road travels south towards the Proposed Development. The images below were captured from this route at varying distances form the Proposed Development Site.

Plate 11-13 View south towards the Proposed Development from the L2107 Local Road where it intersects with the L2222 Local Road in the townland of Dunblaney, approximately 1.1km from the site boundary

No visibility is likely to occur from the L2107 where it intersects with the L2222 Local Road in the townland of Dunblaney. As shown in Plate 11-13 above, due to the distance to the site 1.1km and the landform undulations in the intervening landscape no visibility of extraction activity is likely to occur. The most elevated features of the proposed plant equipment and tanks in the Processing Area may be just discernible above the horizon. Several residential receptors in the townland of Lomaunaghroe are located approximately 600 metres south of this junction and due to their location relative to elevated

lands to their south, they will not have any visibility of the Proposed Development. South from this junction and these residential receptors, the road follows the townland boundary of Lomaunaghroe and Lomaunaghbaun. Views in the direction of the Proposed Development from southbound road users is very restricted due to the enclosed and undulating nature of the landform either side of the road as well as dense hedgerows. The Proposed Development is only likely to be clearly visible from the L2107 as the road comes into the immediate vicinity of the site as is illustrated by the annotations on the photo below. Plate 11-14 shows that the eastern perimeter of the site is bound by mature hedgerows which will be retained as part of the Proposed Development.

Plate 11-14 View north along the L2107 Local road from the proposed site entrance.

Views from the North-West (Dunblaney and Ballynamona)

The likely visibility of the Proposed Development was analysed from elevated vantage points in proximity to clusters of residential receptors to the north-west of the site in the townlands of Dunblaney and Ballynamona. The images below (Plate 11-15 and Plate 11-16) show views towards the site from the locations. Due to the setback distances and screening from vegetation, hummocks and ridgelines of the landforms in the intervening landscape, it is unlikely that the proposed extraction activities will be discernible in the landscape within the views presented. The site visit determined that the visual amenity in the direction of the Proposed Development from residential receptors in these areas is inhibited by screening from mature vegetation which enclose most of the properties.

Plate 11-15 View to the south-east from residential receptors in the townland of Dunblaney.

Plate 11-16 View to the east-south-east from residential receptors in the townland of Ballynamona.

View from the North East (Gortagarraun)

Plate 11-17 (below) was captured from an elevated vantage point on an isolated local road in the townland of Gortagarraun and is representative of a residential property located to the north of this view. As shown in the image, views towards the Proposed Development are partially obscured by a tract of conifer plantation. However, some relatively distant visibility of extraction activity may occur from this residence where there are more open views and vegetation loss may be noticed within the landscape. The magnitude of change to the landscape view will be negligible and visual effects will not be significant.

Plate 11-17 View south-west towards the Proposed Development Site from an elevated vantage point in the townland of the east

11.4.2.2 Views from the South

Figure 11-15 below shows locations where photos were captured from the road network to the south of the site, which have informed the visibility appraisals reported in this section.

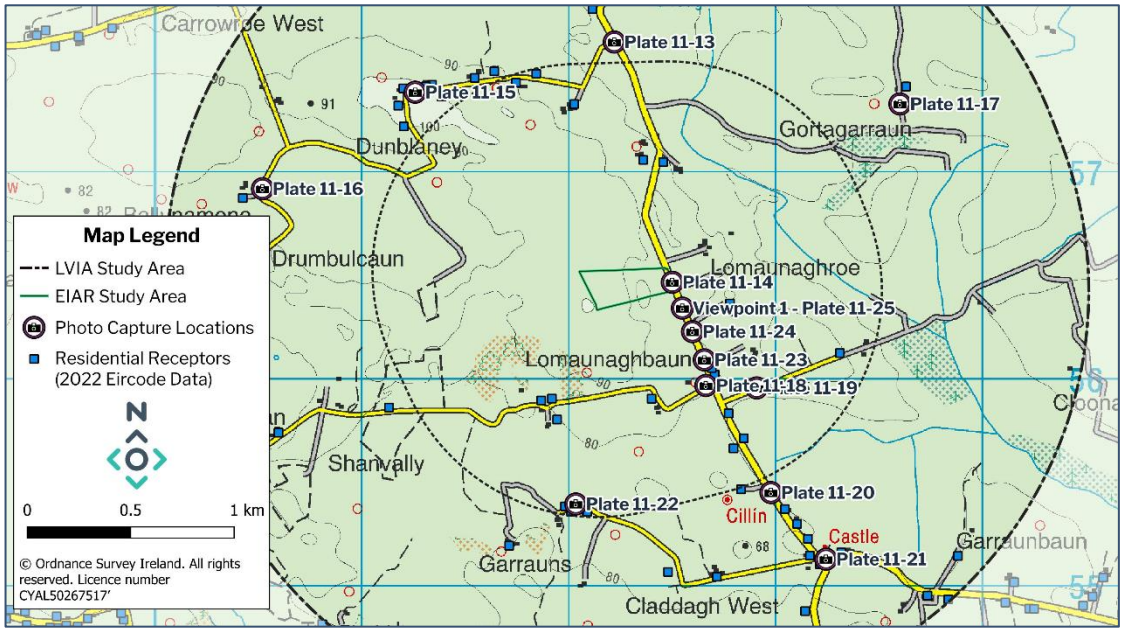

Figure 11-15 Visibility Appraisal from the South - Photo Locations

L2107 Local Road (Lomaunaghbaun; Lomaunaghroe; Claddagh West; Claddagh East)

The Proposed Development will be visible from the rural local road (L2107) immediately south of the Proposed Development. Visibility from this road decreases substantially with distance, particularly beyond 150 metres where the undulating terrain of the intervening field will obscure views of the site.

As shown in the map above there are two residential properties adjoining the local road approximately 410 meters south of the Proposed Development Site Boundary. Views north towards the Proposed Development are shown from two locations in close proximity to these residential receptors in Plate 11-18 and Plate 11-19.

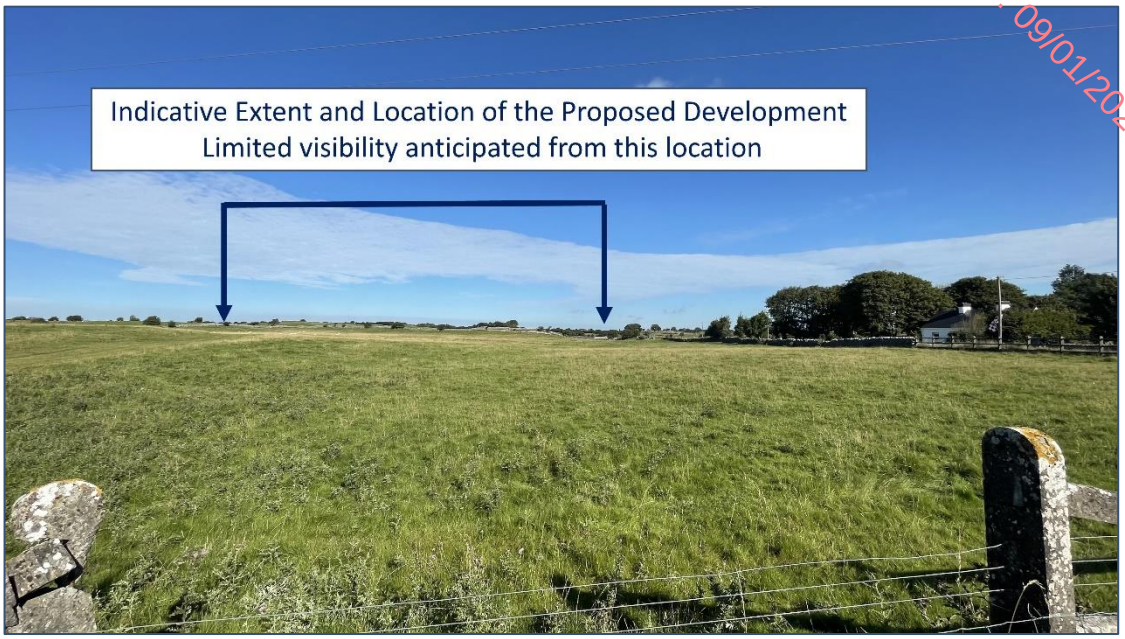

Plate 11-18 View north towards the Proposed Development from a local road in the townland of Lomaunaghbaun adjacent to two residential properties (seen to the right) which are located in close proximity (410 metres) to the Proposed Development

Plate 11-19 View north-west towards the Proposed Development from a local road in the townland of Lomaunaghroe adjacent to two residential properties (seen to the right) which are located in close proximity (410 metres) to the Proposed Development

The site visit and images above determined that visibility from the residential receptors and local roads to the south is likely to be very limited due to the screening from the undulating landform and intervening treelines, including residential receptors (farms) enclosed by woodland to the south west of Lomaunaghbaun townland (located west of Plate 11-18). There may be minor visibility of the tallest structure of the proposed plant equipment and tanks in the Processing Area just above the horizon in Plate 11-18, if seen they will likely comprise a very small portion of the view and will amount to a 'negligible' change to the landscape view and not significant effects will arise.

A residential property is located approximately 270 metres to the south-east of the Proposed Development, set back off the public road. There may be some minor visibility of the plant equipment from this receptor, although there are a number of undulating fields and treelines in the intervening landscape which will restrict views in the direction of the Proposed Development and it is unlikely proposed quarrying activities will be visible. No Significant effects are likely to occur from this residential receptor.

There is a rise in elevation at the south-east of the LVIA Study Area and a cluster of settlements in the townlands of Claddagh West and Claddagh East. The L2107 tracks north towards the Proposed Development from these townlands and there are slightly longer ranging views from vantage points on the north side of the hill. The Images below were captured from locations on this local road where open views in the direction the Proposed Development are permitted. On site appraisals determined that very limited visibility of the Proposed Development will occur from receptors on the local road and local residences due to distance and screening factors.

Plate 11-20 View north-north east along the L2107 Local Road towards the Proposed Development in the townland of Claddagh West

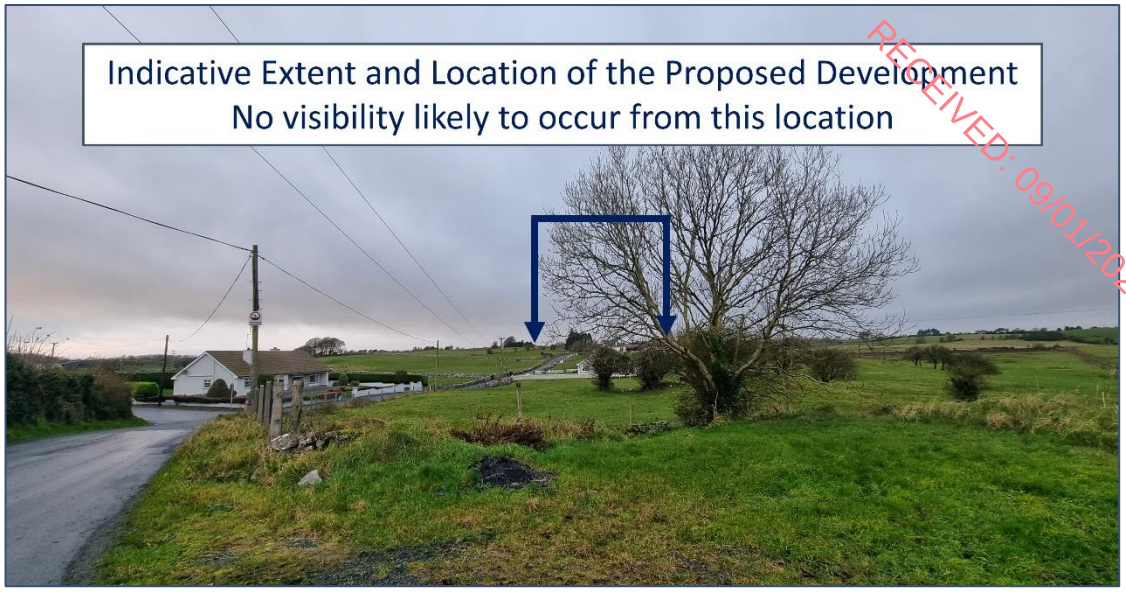

Plate 11-21 View north-north-east along the L2107 Local Road towards the Proposed Development from an elevated vantage point at a crossroad between the townlands of Claddagh West and Claddagh East

Garrauns Townland

The image below represents a view in the direction of the Proposed Development from residential receptors in the townland of Garruans. The Proposed Development will not be visible from this location due to distance (approx. 940 metres) and the many fields and features in the intervening landscape which restrict long range views.

Plate 11-22 View north-north-west towards the Proposed Development from residential receptors in the townland of Garraun – No visibility likely to occur from this location.

Most Visibility - Views from the Local Road Immediately South of the Proposed Development, within 150 meters

The greatest visibility into the landscape of the Proposed Development Site is from the L2102 Local road immediately south of the site. The image below shows a view from the local road immediately

north of the two residential receptors in closest proximity to the EIAR Study Area. Very limited visibility of extraction activity is expected from this location. Some vegetation loss may be evident within the distant landscape and works on the local road network will also be visible from this perspective. The most elevated features of the proposed plant infrastructure in the Processing Area may be just discernible above the distant boundary vegetation which will be retained along the southern perimeter of the site.

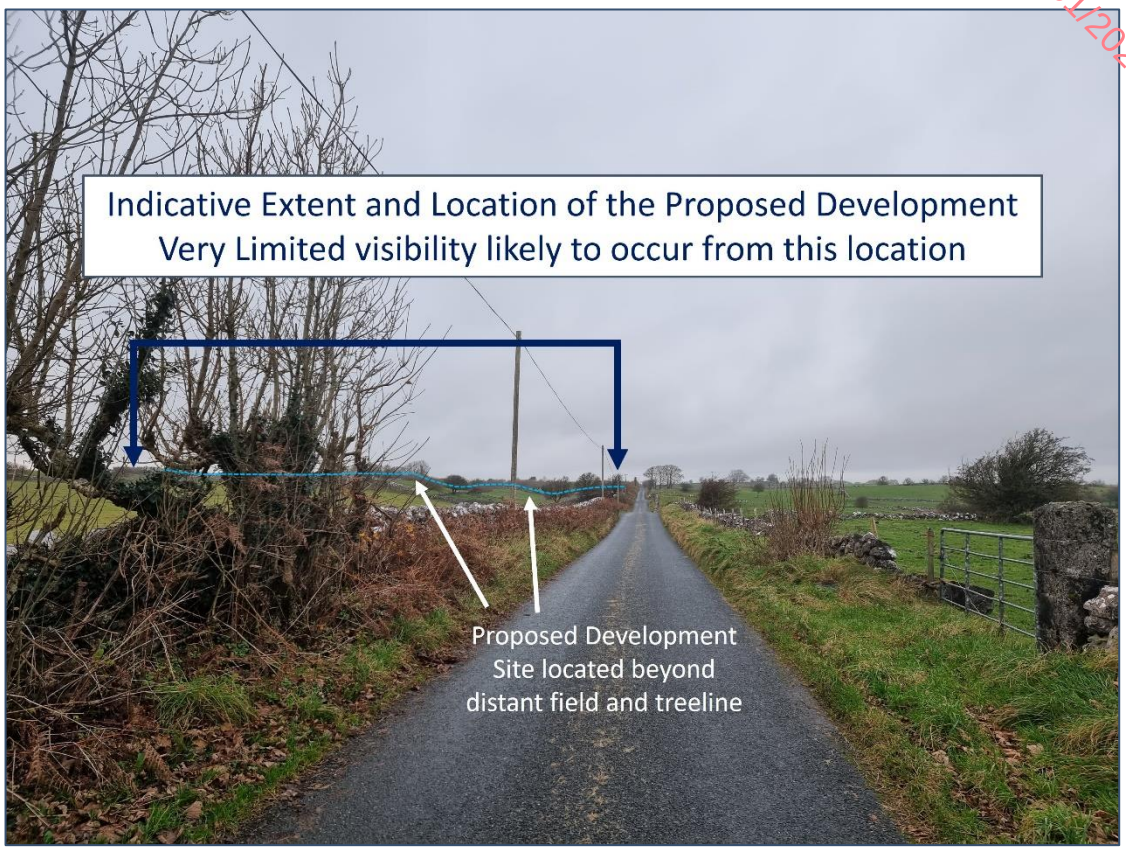

Plate 11-23 view north along the L2102 from a location 360 metres south of the site, to the north of the closest residential receptors.

The road dips down to low elevation as north bound receptors travel along the local road from the location shown above. The image below shows a view from a location approximately 215 metres south of the site boundary. The undulating topography and vegetation of the field in the foreground restricts visibility of the site and therefore any visual impact.

Plate 11-24 view north along the L2102 from a location 215 metres south of the site boundary.

The greatest visual impact of the Proposed Development will occur beyond the elevated section of road seen in the foreground in the image above. This visual impact will only occur for a small stretch of road, starting from a location approximately 150 metres south of the site. An image was captured to be used as a Viewpoint for impact assessment from the most open view along this stretch of road, approximately 90 metres south of the EIAR Study Area (site boundary). A visual impact assessment of this view is assessed in the following section.

11.4.2.3 Visibility Summary – Visibility Appraisal

Visibility appraisals conducted during site visits determined that visibility of the Proposed Development is likely to be very limited from visual receptors in the surrounding landscape which only include the local road network and occasional one of houses. Views of the site and visual effects of the proposed quarrying activities (vertical extraction) will be very localised to the landscape and road network in the immediate vicinity of the site (within 150 metres) where no sensitive receptors were identified. The proposed plant equipment and tanks in the Processing Area may have a slightly greater visual exposure from receptors to the south and east (generally within 300m), however, visibility will be limited to very small portion of the most elevated features of this infrastructure above the distant horizon and will amount to a very small degree of change in the landscape.

The visibility appraisals identified locations where there is potential for longer ranging views in the direction of the Proposed Development from elevated vantage points in the LVIA Study Area. However, these locations are generally well set back from the Proposed Development where it is unlikely that the proposed vertical extraction activities will be discernible. Visibility and visual effects of the plant infrastructure will be inhibited by screening factors in the landscape such as mature vegetation (hedgerows and treelines), localised topography undulations and also the berms which are proposed as part of the Proposed Development.

In a general sense and at a macro scale, the landscape of the LVIA Study Area is relatively flat, excepting for the localised undulations in the landform which are prevalent throughout. No open views of the site were identified from any receptors of very high sensitivity and the topographic characteristics and orientation of the site and its immediate setting exclude visibility and consequently landscape and visual effects from a vast proportion of the LVIA Study Area.

Considering the lack of open visibility of the Proposed Development from any visual receptors, excepting the local road immediately east and south-east of the site (not a receptor of high sensitivity), the site visit determined that no verified photomontages are required to facilitate this LVIA. The landscape and visual effects reported in the landscape and section are therefore informed by the site investigation, visibility appraisals and photographic imagery reported previously. However, a visual impact assessment is reported from a viewpoint immediately south-east of the site, shown below.

11.5 Viewpoint – Visual Impact Assessment

The viewpoint below is assessed using the visual impact assessment methodology detailed in Section 11.2.4 in the Methodology Section – *Assessing Visual Effects.*

Plate 11-25 Viewpoint 1 – Existing View. (90 metres south of site on Local Road)

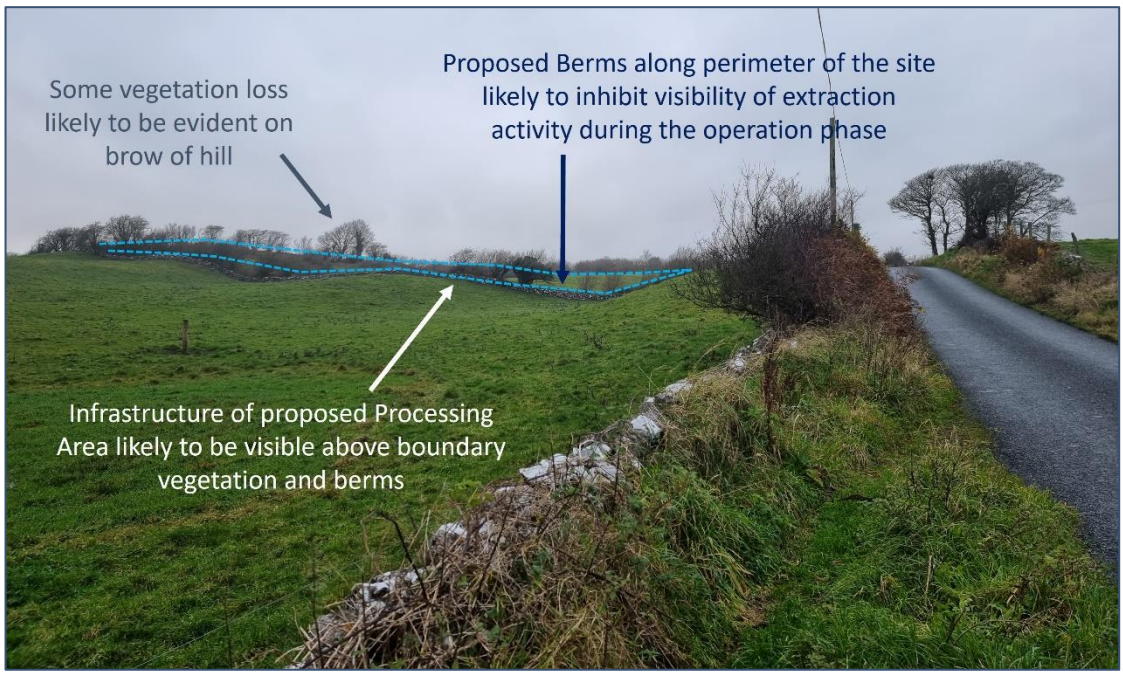

Plate 11-26 Viewpoint 1 – Proposed View. (90 metres south of site on Local Road)

Table 11-11 Visual Impact Assessment – Viewpoint 1

Viewpoint 1 – Lomaunaghbaun			
Viewpoint Description and Details	› View from Local road in the townland of Lomaunaghbaun › Located approximately 90 metres south of the Site (EIAR Study Area) › Grid Reference: E: 552,512, N: 756,362		
LCA and Sensitivity	North Galway Complex Landscape LCT8 - **Low**	**Visual Receptor(s) and Sensitivity**	Traffic on Local Road: **Low**
Description of 'Existing View'	Short range view of undulating fields of grassland delineated by deciduous boundary vegetation and stone walls.		
Proposed View: Construction Phase	Initial extraction activity will be visible during the construction phase, this will be visible just beyond the dry stone wall and hedgerows in the centre of the view. Berms will be constructed and will block most visibility into the greenfield areas of the site from this perspective, although construction activities required to construct the berms will be seen for a short period of time. The Processing Plant will be installed after initial extraction. The most elevated part of the proposed conveyor belt from the feed hopper and parts of the proposed screening box and the settlement tank will be visible approximately 3 metres above existing ground level. This infrastructure will be partially screened from view by the vegetation and berms.		
Proposed View: Operational/Extraction Phase	Any visible infrastructure of the Processing Plant will be visible throughout the Operational/Extraction Phase. Vegetation at the top of the ridgeline will be removed during this phase, although will amount to a small degree of change in this view. Extraction machinery and transport vehicles are likely to be partially visible. As the extraction is vertical and will extend below existing ground level, there will be very limited visual change to the landscape in the view.		
Proposed View: Landscape Restoration Phase	Works required for the landscape restoration phase will be visible for a short period of time. Once works are complete and vegetation establishes, the view will return to comprise a scenario similar to what is visible in the baseline view – a landscape comprising fields of grassland delineated by boundary vegetation, albeit at a lower elevation.		
Cumulative Effects	No other existing, permitted or proposed developments are visible in this view or in the vicinity of the area and no cumulative effects occur.		
Sensitivity of Visual Receptor(s) (See Definitions in Section 11.2.4)	**Low** – This viewpoint represents users of the local road, a low trafficked road deemed to be of low sensitivity.		
Magnitude of Change (See Definitions in Section 11.2.4)	**Slight** – '*The proposals would be partially visible or visible at sufficient distance to be perceptible and result in a low level of change in the view and its composition and a low degree of contrast. The character of the view may be altered but will remain similar to the baseline existing situation. This change could be short term or of a short duration.*'		

Significance of Effect	**Low × Slight = Minor/Negligible = Not Significant (EPA, 2022)** *"An effect which causes noticeable changes in the character of the environment but without significant consequences"*
Mitigating Factors	› Visual effects will only occur momentarily for a small number of receptors as they drive along this small stretch of local road. › Most visual effects will only occur when construction or extraction works temporarily occur on the most elevated locations on the site. › Visual effects will be neutral after implementation of the landscape restoration plan when planting has matured.
Residual Effect (Incl. mitigating factors)	**Not Significant (EPA, 2022)** *"An effect which causes noticeable changes in the character of the environment but without significant consequences"*

11.6 Likely Significant Landscape and Visual Effects

The assessment of likely significant landscape and visual effects in this section follows the methodology detailed previously in Section 11.2.3 - Assessing Landscape Effects and Section 11.2.4 – Assessing Visual Effects.

11.6.1 'Do-Nothing' Scenario

If the Proposed Development were not to proceed, there would be no change to the existing environment. The landscape of the site would remain largely unaltered as fields of undulating grasslands. Should this occur the landscape and visual impact would be neutral in the context of this EIAR.

11.6.2 Construction Phase Effects

A Construction Phase is required to enable the proposed excavation activities. A comprehensive description of the construction phase activities of the Proposed Development are detailed in Section 4.4 of Chapter 4.4 of this EIAR. These will include the following construction activities to facilitate access and installation of processing plant infrastructure at the south-east of the Site (Phase 1 Area):

- Excavation to bedrock (6 metres below existing levels) and construction of concrete pads/foundations;
- Construction of berms adjacent to perimeter hedgerows from topsoil and overburden;
- Construction and installation of the processing plant and associated components;
- Access road reprofiling works and construction of site entrance;

These works will occur across a time period of approximately 1-3 months and therefore all construction phase works will be Temporary, although, once constructed, the new proposed infrastructure will be permanent and will cause long-term landscape and visual effects.

11.6.2.1 Landscape Effects – Construction Phase

The construction works listed above will have a direct effect on the landscape where the landform and landcover of the site is materially altered. The construction activities are likely to cause temporary impacts on the landscape such as the construction of temporary structures, as well as dust and noise. The construction activities are likely to cause temporary change to the character of the landscape areas

where they occur. The construction of the new permanent infrastructure will cause a long term direct effect on the landscape. All of these landscape effects will be highly localised to locations within the EIAR Site Boundary. As determined previously in Section 11.3.3 - *Landscape Value and Sensitivity of the Proposed Development Site*, the site is deemed to be a landscape of 'Low' Sensitivity.

In terms of a magnitude of effect, the construction works are considered a 'Substantial' change to the landscape of the site which is 'Low' Sensitivity. Therefore, the construction phase amounts to a combination of both Temporary and Long-term Negative Landscape effects of 'Moderate' Significance. Any long term landscape effects are highly localised to a small portion of the site itself.

11.6.2.2 Visual Effects – Construction Phase

Visual effects arising from construction activities will mostly be surface level and will be highly localised within the site itself and in its immediate vicinity when working on access roads and creating perimeter berms. Once the berms have been constructed along the eastern boundary of the site, this will generally restrict visibility into the site from the local road excepting where road users pass by the proposed site entrance. Existing hedgerows on the north and southern perimeter of the site will be retained and will restrict visibility in to the site from south-east and north-easterly perspectives.

Once excavation to the bedrock is complete and concrete foundation pads are constructed, the proposed Processing Plant infrastructure will be built. Excavation to the bedrock will lower the existing ground level by approximately 6 metres and the concrete foundation will be approximately 0.5 metres above the bedrock. As shown in the Planning Drawings the proposed infrastructure of the Processing Plant comprises various above ground features. Most of the these features have a height less than 5.5 metres above the concrete pads and therefore, most of the proposed plant infrastructure will be located below existing ground level when installed (after excavation) and will have no visual impact upon any receptors outside of the site, particularly as boundary vegetation is to be retained where possible and perimeter berms (approx. 1.5 metres tall) will also be constructed.

The proposed settlement tank has a height of 8.5 metres, equating to a height of 3 metres above existing ground level after excavation and installation. The most elevated part of the proposed conveyor belt from the feed hopper and part so the proposed screening box infrastructure are approximately 10 metres tall and will therefore have a height of approximately 4.5 metres above existing ground level after excavation and installation. Installation of these features are the only elements of the Proposed Development likely to cause visual effects during the construction phase. Considering screening provided by the existing hedgerows, proposed berms these features are not likely to have a large visual exposure. Visual receptors on the local road passing by the site (within 150 metres) are the only receptors likely to experience a 'Slight' Magnitude of Change in their view as the conveyor belt and settlement tank is visible approximately 2 metres above the existing hedgerows and berms. Visual receptors on the local road are deemed to be of 'Low' sensitivity. Visual effects are therefore 'Not Significant'.

As demonstrated by the visibility appraisals reported in Section 11.4 of this Chapter, there is no visibility into the site from most visual receptors in the wider landscape (beyond distances of 175 metres) due to the screening by local topography and vegetation. The elevated components of the Processing Plant may be just discernible from some distant receptors but will amount to very little change to scenic amenity. Therefore, the construction phase works and the proposed Processing Plant infrastructure will have no Significant Effects on receptors within the wider LVIA Study Area.

11.6.3 Operational Phase Effects

Sand extraction will occur during the Operational Phase and landscape and visual effects will arise as the ground cover of the greenfield site is removed and the ground level of the site changes (deepens) as material is extracted. Boundary vegetation around the site will be retained, however several hedgerows and treelines will be removed to facilitate extraction activities. As per the phased Landscape

Restoration Plan (See Planning Drawings, Section 4.4.2 of Chapter 4 of this EIAR and Section 11.1.2.1), planting will occur to replace vegetation and biodiversity corridors lost in previous extraction phases. Details of extraction depths across the site and multiple phases are described in Chapter 4 and are illustrated in the Planning Drawings.

The extraction activities will require the use of machinery, and also transport of the extracted material will require large haulage vehicles. The extraction machinery and haulage vehicles are all considered in the assessment of likely significant Landscape and Visual Effects in the Operational Phase. The Impact Assessments in this section are determined using the Methodology reported in Section 11.2 of this Chapter.

11.6.3.1 Operational Phase – Landscape Effects

The Proposed Development Site

Direct landscape effects will occur as topsoil and vegetation is cleared and material is excavated, causing the physical fabric of the Proposed Development Site to be substantially altered. The character of the site will undergo a 'Substantial' change as it is materially altered from a greenfield site comprising agricultural fields to that of a working quarry. As determined previously in Section 11.3.3, the landscape sensitivity of the Proposed Development Site, and the wider landscape area, to the Proposed Development is considered Low. Therefore, Long term Negative Landscape Effects of 'Moderate' Significance' will occur. These effects will be highly localised to the site itself.

Landscape Effects on the site will be mitigated by the Landscape Restoration Plan which are included as an Appendix to this Chapter and in the Planning Drawings. The Landscape Restoration Plan includes for phased quarrying activities as well as replacement of vegetation lost through re-planting of existing biodiversity corridors. More information about the Landscape Restoration Plan is reported in the Section 11.6.4 – *Decommissioning and Landscape Restoration Phase Effects.*

Landscape Effects – Other Landscape Receptors

As reported in Section 11.4, visibility appraisals determined that the landscape of the Proposed Development Site is only clearly visible from locations in very close proximity (within 175 metres) to the site itself. Some change in the landscape may occur from occasional distant vantage points where the most elevated treelines and landforms of the site will be removed from the landscape. These changes in landscape character will be barely perceptible and will amount to a 'Negligible' degree of change when viewed from afar. In this regard, there will be no fundamental change to the character of the landscape of the wider landscape of the LVIA Study Area or the North Galway Complex Landscape LCT and 'No Significant' landscape effects on the wider landscape setting.

11.6.3.2 Operational Phase – Visual Effects

As determined in the construction phase effects, the most elevated features of the proposed Processing Plant will be visible from visual receptors in close proximity to the site, mostly the L2107 Local Road which passes by the eastern perimeter of the EIAR Study Area. Receptors on this local road are deemed to be of 'Low' Sensitivity (See Table 11-6 in Section 11.2.4.1) and the visible elements of the Processing Plant are deemed to bring about a 'Slight' degree of change on the these receptors in the Operational Phase, resulting in a 'Not Significant' visual effect.

The proposed extraction activities will also be visible from the L2107 Local Road. The proposed extraction activities will cause visual change through the loss of treelines and transition to a brownfield site. Extraction machinery and haulage vehicles will also bring about a change to visual amenity. Most visibility will occur when receptors pass by the proposed site entrance where there will be open views into the site. Views into the site from other areas on the L2107 Local Road (in close proximity to the

site – 175 metres) will be partially restricted by the existing hedgerows which will be retained along the eastern, southern and northern perimeter of the site, as well as the proposed berms. The most noticeable visual effects will occur when extraction occurs at the most elevated parts of the site, where visual exposure is likely to be greatest, although this will be highly localised to locations in close proximity (<175m) to the site. Greatest visual effects will occur when elevated treelines are removed, elevated landforms are extracted and extraction machinery is most visible, causing a 'Substantial' degree of change and a Visual Effect of 'Moderate' significance to the Low sensitivity receptors on the local road adjacent to the site. These moderate visual effects will be highly localised and will ultimately be temporary in nature, as once the ground level of the site is reduced further by extraction activities, visual effects will be reduced as the extraction activity is occurring at a lower base elevation relative to receptors and visibility will be reduced by screening from hedgerows and berms.

Haulage vehicles and views of extraction machinery upon elevated locations on the site will cause intermittent and temporary visual effects of 'Slight' Significance from receptors in the surrounding area.

As reported in the Visual Baseline Exercise in Section 11.4 there are no protected scenic views or scenic routes located in the LVIA Study Area. Only local one-off residential properties in the sparsely settled rural landscape were identified as receptors having sensitivity. The visibility appraisals determined that there will be very limited visibility of the proposed extraction activities from these residential receptors. As mentioned above, visual change may occur when the most elevated parts of the sire are removed and extracted. Considering the set-back distances of residential receptors and other screening factors in the intervening landscapes (vegetation and undulating topography), removal of these distant landforms and vegetation will amount to a negligible and barely discernible change to scenic amenity and No long-term Significant visual effects will likely occur on any residential scenic amenity.

11.6.4 Landscape Restoration (Decommissioning) Phase Effects

The Landscape Restoration Plan (LRP) is a key part of the Decommissioning of the site and an integral measure designed to mitigate landscape and visual effects of the Proposed Development. The LRP will be implemented in phases, as detailed in Section 11.1.2.1 and Chapter 4, and as illustrated in the planning drawings. The ultimate objective of the LRP is to restore the landscape of the site to harmonise with the landform and landcover of the lands surrounding EIAR Study Area after extraction has occurred. The LRP will also restore and replace any vegetation and biodiversity corridors which may be lost during the construction or operational phase. Key measures and details of the LRP are reported previously in Section 11.1.2 – *Proposed Development Description,* the relevant landscape and visual effects arising from these measures are reported below.

11.6.4.1 Landscape and Visual Effects – Restoration Phase

The construction activities required to implement the LRP will cause highly localised Temporary 'Slight', Negative, landscape and visual effects.

After completion of the restoration works and implementation of the LRP, vegetation will establish and mature. At this point the landscape of the site will become of similar character to the existing site and the surrounding agricultural landscape except that the landform will be much flatter and of lower elevation.

The character of the site will undergo a 'Substantial' magnitude of change as the landscape is altered from an active quarry to a restored natural landscape. For the reasons reported in Section 11.3.3 the landscape sensitivity of the site is deemed to be 'Low'. Upon completion of all works and full restoration of the site, 'Moderate' Neutral long term landscape effects are deemed to occur at the Proposed Development Site.

11.6.5 Cumulative Landscape and Visual Effects

A number of other existing quarries are located in the landscape of the LVIA Study Area, particularly to the south-west in the townlands of Drumbulcaun, Shanvally Boleylaan and Garrauns. These quarries and the Proposed Development contribute direct cumulative effects on the landscape of this area of east Galway. However, considering the very localised visibility of these other existing quarries and the very limited and localised visibility of the Proposed Development itself, the separation distances and the lack of any visual connectivity, there are no significant cumulative effects on landscape character and there are also no significant cumulative visual effects.

A well-developed wind energy development proposal (The Proposed Clonbern Wind Farm - not yet lodged into planning) is proposed to the east of the LVIA Study Area. In a future baseline scenario this proposed development would cause relatively substantial change to the landscape and visual amenity of the area and would inevitably contribute cumulative landscape and visual effects with the Proposed Development.

As is comprehensively reported in this Chapter (particularly Section 11.4 – *Visual Baseline*) the Proposed Development will have very limited visual exposure in the receiving landscape and will be mostly indiscernible from any sensitive landscape and visual receptors. In this regards its potential contribution to any cumulative landscape and visual effects will not be significant.

11.7 Conclusion

The Proposed Development will cause landscape and visual effects highly localised to the landscape of the site itself. Proposed excavation activities will occur at surface level or sub-surface level and will be enclosed by both the existing topography of the site and proposed berms to be created along the northern, southern and western boundaries of the site. The proposed Processing Plant will be installed following preliminary excavation activity, consequently only a very small proportion of this infrastructure will protrude above existing ground level, limiting the visual exposure of this infrastructure within the landscape.

The area surrounding the Proposed Development is a sparsely populated, rural landscape. It is generally characterised as a modified working landscape where land use is typically dominated by agriculture (livestock), forestry, and other extractive quarrying activities. An LVIA Study Area was established to 2km from the EIAR Study Area. The landscape of the site and LVIA Study Area has an absence of designated sensitive landscape and visual receptors in the Galway County Development Plan 2022-2028. An assessment of the local landscape character did not identify any features of the site or wider setting of any particularly high or unique landscape value. Considering the modified nature of the landscape and absence of any sensitive policy designations in the LVIA Study Area, the susceptibility of this landscape to change was deemed to be low. On balance the landscape of the site is deemed to be of Low sensitivity. The magnitude of change will be greatest on the site where the landscape will directly change as a result of the Proposed Development. Long term effects on the landscape of the site will be mitigated by the phased landscape restoration plan. Due to the limited visibility of the Proposed Development beyond the immediate proximity of the site itself, change to the character of the wider landscape and its visual aesthetic are anticipated to be Not Significant. In mind of all mitigating factors, no significant landscape effects are likely to occur as a result of the Proposed Development.

In a general sense, and at a macro scale, the LVIA Study Area (area within 2km) is relatively flat, with only approximately 40 metres difference in elevation between the highest and lowest points. However, at a local scale it comprises hummocky ridges and undulations, this localised variation in topography does provide a sense of visual containment in the landscape, which was very evident when conducting the visibility appraisals reported in the Chapter. Visibility appraisals conducted on site determined that in reality the Proposed Development Site will only be visible from locations in very close proximity as

screening elements such as localised topography undulations and vegetated field boundaries will restrict long-ranging views towards the Proposed Development Site. Local residents and the local road network were the only sensitive receptors identified with any potential visibility of the Proposed Development. The wider landscape surrounding the site is considered to be an area of relatively low population density and there is substantial set back distance and physical landscape buffers between the Proposed Development Site and residential properties. Visibility of the development from these residential receptors is expected to be very minor amounting to a negligible degree of change and no significant visual effects are likely to occur.

After care proposals following the completion of extraction activities include dedicated site and landscape restoration plans which will mitigate any of the highly localised landscape and visual effects that will occur during the operational phase. These measures ensure long-term landscape and visual effects are deemed to be Not Significant.