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APPENDICES

Appendix 13-A Methods used in Assessing Landscape & Visual Impact Effects



INTRODUCTION

Background

- 13.1 This EIAR Chapter assesses the landscape and visual impacts arising from soil and stone waste recovery activities on the western side of the South Quarry void at Huntstown Quarry Complex, North Road, Finglas, Dublin 11. These activities will facilitate backfilling of the quarry to original (pre-extraction) ground level and the ultimate restoration of the quarry to grassland.
- 13.2 The existing parent permission for the Huntstown Quarry Complex (Planning Ref. FW12A/0022 and An Bord Pleanála Ref. No. 06F.241693) was granted in August 2014 and provides for continuation of quarrying activity for 20 years up to 2034. That permission also includes provision for the restoration of all quarry voids within the Huntstown Quarry complex, including the South Quarry, by backfilling to former (original) ground level by placement and recovery of naturally occurring soil and stone waste generated by construction and development activity across the Greater Dublin Area.
- 13.3 In order to facilitate the transfer and re-location of soil waste recovery activities from the North Quarry (where they are currently ongoing) to the South Quarry, a waste licence review application is to be submitted to the EPA to provide for the following :
- importation of soil and stone waste to the western side of Huntstown South Quarry at a maximum rate of 750,000 tonnes per annum (as permitted by Planning Ref. FW12A/0012);
 - extension of the licensed site boundary to incorporate the proposed waste recovery area on the western side of the South Quarry and the haul roads leading to / from it;
 - an increase in the total permitted (lifetime) soil and stone waste intake to the (extended) waste facility to 18.76 million tonnes;
 - continued use of pre-existing site infrastructure to support recovery activities; and
 - re-routing of traffic flows via existing internal haul roads (i.e. within the quarry complex) to access the backfilling / recovery area at the South Quarry.
- 13.4 No new infrastructure is required to facilitate transfer and re-location of established soil waste recovery operations from Huntstown North Quarry across to the western side of the South Quarry or the extension of the waste licence boundary to include this area.
- 13.5 It is currently envisaged that backfilling of the South Quarry will commence in early 2023, at which time it is expected that the ongoing backfilling of the North Quarry to surrounding ground level will be largely complete and the importation, backfilling and recovery of soil and stone waste at that location will cease.
- 13.6 The site to which this waste licence review application relates is located entirely within the townlands of Coldwinters, Kilshane, Huntstown, Johnstown, Cappogue and Grange, Co. Dublin, approximately 2.5km north-west of the Dublin suburb of Finglas, 1km west of the interchange between the N2 Dual Carriageway and the M50 Motorway and immediately east of the Cappagh Road, refer to Figure 13-1.
- 13.7 Further details on the proposed backfilling and recovery activities at the South Quarry (site infrastructure, operations, environmental management systems, and controls etc.) are provided in Chapter 2 of this EIAR.

Scope of Work / EIA Scoping

- 13.8 The draft EPA guidelines in relation to the preparation of an EIAR¹ suggest the following typical headings that may be included in respect of the prescribed environmental factor 'The Landscape':
- Landscape Appearance and Character;
 - Landscape Context;
 - Views and Prospects; and
 - Historical Landscapes.
- 13.9 These headings are incorporated in the below assessment, as appropriate. However, in the absence of more detailed Irish guidance, the overall scope of work of this 'Landscape' Chapter is based on the information contained in the Third Edition of the *Guidelines for Landscape and Visual Impact Assessment* issued by the Landscape Institute and Institute of Environmental Management and Assessment² (hereafter referred to as GLVIA3).
- 13.10 GLVIA3 emphasises that landscape and visual effects are related but independent issues; landscape effects are changes in the landscape, its character and quality, while visual effects relate to the appearance of these changes and the resulting effect on visual amenity.
- 13.11 The scope of work covered by this assessment can be summarised as follows:
- a description of the planning context relevant to this Landscape and Visual Impact Assessment (LVIA) (i.e. the Regulatory Background);
 - a description of the landscape and the visual baseline, including the identification of relevant landscape and visual receptors (i.e. the Receiving Environment);
 - a description of the aspects of the development which are likely to cause landscape effects and those likely to cause visual effects, an assessment of landscape and visual receptor sensitivity and the magnitude of the landscape and visual effects, as well as their combined level of significance (i.e. the Impact Assessment);
 - a description of additional measures required to reduce/avoid any significant landscape and visual effects identified (i.e. the Mitigation Measures); and
 - a summary of the degree of the landscape and visual effects, following the implementation of the mitigation measures (i.e. the Residual Impact Assessment).
- 13.12 Wherever possible, identified effects are quantified, however the nature of landscape and visual impact assessment requires interpretation by professional judgement. Please refer to **Appendix 13-A** at the end of this EIAR Chapter, for the detailed methodology used in this assessment, which is illustrated by the following figures:
- **Figure 13-1:** Landscape Baseline and Viewpoint Locations;
 - **Figure 13-2:** Viewpoints A & B;
 - **Figure 13-3:** Viewpoints C & D; and
 - **Figure 13-4:** Viewpoints E & F.

¹ Environmental Protection Agency (2017). *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*. Draft dated August 2017. Environmental Protection Agency, Johnstown Castle Estate, Co. Wexford

² Landscape Institute and Institute of Environmental Management & Assessment (2013) *Guidelines for Landscape and Visual Impact Assessment*. Third Edition, Routledge.

Consultations / Consultees

- 13.13 Following a review of the proposed activities, existing consents and site mapping / surveys, it was considered that there was no requirement for formal external consultations to be carried out in respect of landscape and visual impacts for the purposes of this assessment. There was however consultation with other specialist contributors.

Contributors / Author(s)

- 13.14 The assessment including site work and completion of figures was carried out by Anne Merkle, an Associate Landscape Architect with SLR Consulting Ireland. Anne graduated from the University of Applied Sciences in Nürtingen (Germany) in Landscape Architecture (Dipl.-Ing. (FH)), in 2002. She has since gained over 18 years' experience working for landscape consultancies in Ireland, specialising in Landscape and Visual Impact Assessments for a wide range of projects, including quarries, waste licence facilities, wind farms, powerlines and mixed developments. In 2017, Anne completed a MSc in Biodiversity and Land Use Planning (at NUIG). She is a full member of the Irish Landscape Institute (MILI) since 2005.

Limitations / Difficulties Encountered

- 13.15 No difficulties were encountered during the desk based study, field survey or in the preparation of this report.

REGULATORY BACKGROUND

- 13.16 The following paragraphs set out the regulatory background with regard to LVIA in general and site-specific planning background relevant to the future backfilling and recovery activities at the South Quarry, in particular.

Legislation

- 13.17 There is no specific legislation relevant to this Chapter of the EIAR. However, the information provided within this Chapter is informed by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018³.
- 13.18 Ireland has also ratified the European Landscape Convention⁴, which promotes the protection, management and planning of landscapes. The National Landscape Strategy for Ireland 2015-2025⁵ was published *“to ensure compliance with the European Landscape Convention and establish principles for protecting and enhancing the landscape while positively managing its change”*.
- 13.19 Article 1a of the European Landscape Convention defines landscape as *“an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”*. This definition has been included in the Planning and Development (Amendment) Act 2010, along with the requirement that objectives relating to landscape shall be included in Local Authority development plans.

³ European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018: <http://www.irishstatutebook.ie/eli/2018/si/296/made/en/pdf>

⁴ European Landscape Convention: <https://www.coe.int/en/web/conventions/full-list/-/conventions/rms/0900001680080621>

⁵ National Landscape Strategy for Ireland 2015-2025: <https://www.chg.gov.ie/app/uploads/2015/07/N-Landscape-Strategy-english-Web.pdf>

Planning Policy and Development Control

- 13.20 The Fingal County Development Plan 2017-2023 (CDP) is the statutory plan detailing the development objectives / policies of the Local Authority. The plan includes objectives and policies, relevant to this assessment, i.e. with regard to land use zoning and aggregate extraction. In addition, the National Parks and Wildlife Service (NPWS) website⁶ was reviewed to identify protected nature conservation sites (if any) in close proximity to the proposed licence extension area. Refer to **Figure 13-1 – Landscape Baseline and Viewpoint Locations** for the location and extent of the relevant designations.

Land Use Zoning

- 13.21 The entire Huntstown Quarry Complex is zoned as “HI” Heavy Industry’ (CDP–Sheet 12 Blanchardstown North). The vision for this objective, as set out in Chapter 11 of the CDP, is as follows:
- “Facilitate opportunities for industrial uses, activities and processes which may give rise to land use conflict if located within other zonings. Such uses, activities and processes would be likely to produce adverse impacts, for example by way of noise, dust or visual impacts. HI areas provide suitable and accessible locations specifically for heavy industry and shall be reserved solely for such uses.”* ‘Extractive Industry / Quarrying’ is listed as permitted in principle for this Zoning Objective.
- 13.22 The proposed licence extension area and wider Huntstown Quarry Complex is surrounded by lands with Zoning Objective ‘GE’–General Employment, with the exception of an area to the north east, on the eastern side of the N2 Dual Carriageway which is zoned as ‘GB’ – Greenbelt.
- 13.23 Large areas of the Huntstown Quarry complex are also designated as a Nature Development Area, i.e. an area with potential for biodiversity enhancement (Chapter 12 – Development Management Standards). The associated Objective DMS 169 is to *“Implement planning guidelines for Nature Development Areas and corridors as outlined in the Fingal Biodiversity Action Plan.”*
- 13.24 The Fingal Biodiversity Action Plan sets out its vision for quarries within Nature Development Areas, *“that they will be managed to provide a wide range of habitats and species”*. Note that the ultimate restoration of the South Quarry at Huntstown forms part of a wider, previously approved, restoration plan for the wider overall quarry complex which includes provision for a number of designated natural wildlife habitats / areas.

Land Reclamation and Aggregate Extraction

- 13.25 Objective RF92 (Chapter 5 – Rural Fingal) of the CDP requires the Council to
- “Ensure that proposals for extraction avoid significant adverse impacts on the environment and amenity of the area through environmental assessment, mitigation and appropriate provision for the restoration of the landscape”*.
- It should be noted that the proposed waste activity facilitates the restoration of a large extraction void and that quarry backfilling and soil waste recovery activities have previously been approved at the South Quarry (under Fingal Planning Ref. No FW12A/0022 and An Bord Pleanála Ref. No. 06F.241693) at a maximum rate of 750,000 tonnes per annum.

⁶ National Parks and Wildlife Service: <https://www.npws.ie/>

Views and Prospects

13.26 Objective NH40 (Chapter 9 – Natural Heritage) of the CDP requires the Council to:

“Protect views and prospects that contribute to the character of the landscape, particularly those identified in the Development Plan, from inappropriate development”.

No views requiring protection are identified in the vicinity of Huntstown Quarry on Green Infrastructure Map 1 (Sheet No.14) of the CDP.

Protected Nature Conservation Sites

13.27 There are no sites of Nature Conservation Importance in the vicinity of the intended recovery area at the South Quarry.

Protected Structures

13.28 An assessment of the impact of future backfilling and recovery activities on protected structures around the intended recovery area at the South Quarry is presented in Chapter 12 (Cultural Heritage) of this EIAR. The study identified no protected structures in the vicinity of the recovery area.

Guidelines

13.29 This landscape and visual impact assessment was undertaken based on the Landscape Institute and Institute of Environmental Management and Assessment **Guidelines for Landscape and Visual Impact Assessment (Third Edition, 2013)**, published by Routledge (hereafter referred to as GLVIA3).

13.30 The report format and some of the descriptions of effects are based on the **Guidelines on the Information to be contained in Environmental Impact Assessment Reports** (Draft), published by the Environmental Protection Agency (EPA) in August 2017.

Technical Standards

13.31 Photography and visual representations are based on the Landscape Institute – Technical Guidance Note 06/19 – ‘Visual Representation of Development Proposals’. However, since there is no Irish standard / guidance and in our experience a less stringent approach to visual representations is acceptable in Ireland, it is considered sufficient to provide annotated viewpoint photography only (i.e. Type 1 in said guidance), despite this LVIA forming part of an EIAR. It is further considered sufficient to illustrate two viewpoints on one A3 sized sheet.

13.32 No other specific technical standards were referred to as part of this landscape and visual impact assessment.

Significant Risks

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

RECEIVING ENVIRONMENT

Study Area

13.34 Following the desk-based study, taking any designations, land use zoning and built-up environment into consideration, the study area was defined as an area extending up to 2km surrounding the proposed waste licence extension area.

- 13.35 It should however be noted that the visual envelope, i.e. the area from where the South Quarry recovery area is actually visible, is much smaller than the study area, due to intervening structures, vegetation and topography.

Baseline Study Methodology

- 13.36 Refer to **Appendix 13-A** at the end of this EIAR Chapter for information on the identification and selection of landscape and visual receptors.

Viewpoints

- 13.37 Refer to **Figure 13-2**, **Figure 13-3** and **Figure 13-4** for the six selected representative and illustrative viewpoints (VP A-F). All photographs were taken in March 2021, using a Nikon D610 digital SLR camera, with a fixed 50mm lens and a tripod with a panoramic head. The individual photos were taken in a portrait format. Five to eight individual photo frames were merged together, using 'Adobe Photoshop' software, to cover a wide view in a landscape format. It should be noted that photography is a tool to assist in the visualisation process and cannot be expected to replicate the actual view that would be attained on the ground.

Sources of Information

- 13.38 The desk-based study and field work were supported by, *inter alia*:
- the Fingal County Development Plan 2017-2023;
 - digital as well as paper (Ordnance Survey Ireland) mapping at different scales; and
 - information available on the internet (such as information on recreational facilities and nature conservation sites).

Field Survey

- 13.39 A detailed site survey was carried out on 5th March 2021 in overcast conditions, but with good visibility. The assessment concentrated on publicly accessible areas such as the road and public footpath networks, residential and outdoor recreational areas around the existing licenced site and the proposed licence extension area.

Landscape Baseline

Existing Relevant Landscape Character Assessments

- 13.40 The CDP includes a landscape character assessment (Chapter 9 – Natural Heritage). This divides Fingal into 6 Landscape Character Types (LCT) and each LCT is given a value (exceptional to low) and a rating for its sensitivity to change (high to low).
- 13.41 As shown in Figure 13-1, the Huntstown Quarry Complex is entirely located within the Low-Lying Agriculture LCT. This LCT is described as
- “an area characterised by a mix of pasture and arable farming on low lying land with few protected views or prospects. The area has an open character combined with large field patterns, few tree belts and low roadside hedges.”*
- 13.42 The Low-Lying Character Type is ‘categorised as having a modest value’ and low sensitivity. It is stated that low sensitivity LCTs
- “can absorb a certain amount of development once the scale and forms are kept simple and surrounded by adequate screen boundaries and appropriate landscaping to reduce impact on the rural character of the surrounding roads.”*

13.43 The listed 'Principles for Development' include:

- *"The skyline should be protected";*
- *"Existing tree belts should be retained and managed and older stands of trees restocked. Roadside hedging should be retained and managed. Proposals necessitating the removal of extensive field and roadside hedgerows or trees should not be permitted. Strong planting schemes using native species, to integrate development into these open landscapes, will be required.";* and
- *"Sites with natural boundaries should be chosen, rather than open parts of larger fields."*

13.44 None of the Highly Sensitive Landscapes or Preserved Views identified as part of the Landscape Character Assessment are located in the immediate vicinity of the backfilling and recovery activities at Huntstown South Quarry.

Outdoor Recreational Facilities within the Study Area

13.45 There are no outdoor recreational facilities, such as waymarked walking trails, in the vicinity of the waste licence extension area.

Landscape Character of the Site and Study Area

13.46 The Huntstown Quarry complex covers a large portion of the area bound by the M50, R135 Regional Road, Kilshane Road and Cappagh Road, north west of Finglas. The complex is made up from four separate quarry areas (identified as North, West, Central and South Quarry), a large processing area, storage areas, some wildlife areas and office buildings.

13.47 The backfilling of the West Quarry is complete and the land has been restored to grassland. The backfilling of the North Quarry is ongoing and nearing completion. The Huntstown Power Station and Bioenergy Plant, which are operated by Energia (formerly Viridian) are also located within the Huntstown Complex.

13.48 The proposed waste licence extension area comprises the western side of the existing South Quarry, as well as the internal haul routes leading to and from it. The entire South Quarry is enclosed by a mixture of grass covered overburden berms, hedgerows and tree shelter belts, which were planted to provide substantial screening of the extraction works. Dense boundary and internal hedgerows provide screening of the internal haul road and other areas associated with future quarry backfilling and soil waste recovery activities.

13.49 The landscape surrounding the licence extension area comprises a mix of several industrial estates and business parks, as well as a number of small to medium sized agricultural fields bound by mature hedgerows. There are a number of isolated private properties along local roads surrounding the planned waste recovery area on the western side of the South Quarry. Any larger residential areas are however located a minimum distance of 1km away, principally to the south east, across the M50 Motorway (in Finglas West) and to the south west, at Corduff.

13.50 The generally flat landscape surrounding Huntstown (where ground levels range from c.70-80m AOD) does not contain any unique or highly scenic features.

Visual Baseline

General Visibility

13.51 The visibility of the licence extension area was initially assessed by a desk-based study of OSI Discovery Maps (1:50,000) and available aerial photography, in order to identify the areas of potential visibility and select draft viewpoint locations. This preliminary assessment was verified during the site survey.

- 13.52 Due to the flat topography of the general area in combination with many mature hedgerows, as well as the large buildings within the neighbouring industrial estates / business parks, views within the study area are generally restricted to the nearest obstacle. The only slightly elevated vantage points within the study area are a number of road flyovers, e.g. the flyover over the N2 National Primary Road along Kilshane Road.
- 13.53 However, as is illustrated by **Viewpoints A & C** (refer to **Figure 13-2** and **Figure 13-3**), the existing quarry voids within the Huntstown Quarry complex cannot be seen, even from these more elevated viewpoints.
- 13.54 The whole of the existing South Quarry at Huntstown, as well as the remainder of the quarry areas and internal roads are fully screened in views from the surrounding public road network, due to the mature vegetation along all site boundaries, as well as screening berms in some areas. The only elements of the Huntstown Quarry complex, visible in a small number of views, are the top parts of some of the larger processing plant and storage mounds (not subject to this waste licence review application), refer to **Viewpoints A-F** (on **Figure 13-2**, **Figure 13-3** and **Figure 13-4**).

Sensitive Receptors

Landscape Receptors

- 13.55 The components of the landscape that are likely to be affected by the future backfilling and recovery activities at the South Quarry (at an intensified rate), i.e. the landscape receptors, are:
- The 'Low Lying Character Type', as set out in the Fingal Landscape Character Assessment.
- 13.56 As the licence extension area site is located entirely within the existing quarry complex, no individual landscape elements, such as agricultural fields or hedgerows, will be affected.

Visual Receptors

- 13.57 No part of the intended waste recovery area at the South Quarry nor any of the internal roads leading to it are visible from the publicly accessible areas in the surrounding landscape or from any private residential properties. Beyond the Roadstone landholding, only the initial section of the existing access road is visible, and only from locations in the vicinity of the entrance to the overall quarry complex.
- 13.58 As the views of the existing access road will not change and it is not anticipated that any other elements associated with future backfilling and recovery activities at the South Quarry will become visible, there are no visual receptors which will be affected by them.

IMPACT ASSESSMENT

Evaluation Methodology

- 13.59 Refer to **Appendix 13-A** at the back of this EIAR Chapter for information on the assessment of landscape and visual sensitivity, the assessment of the magnitude of change in the landscape and on views, as well as the assessment of landscape and visual effects and their significance.

Operational Stage Landscape Effects

- 13.60 The operational stage for the purpose of this assessment, is considered to include the entirety of the proposed restoration backfilling and recovery activities, i.e. up to 12.5 years from 2023.

13.61 All works and pre-existing site infrastructure required to facilitate the future backfilling and waste recovery activities at the South Quarry are already permitted under the parent planning permission for quarry development at Huntstown (Fingal Planning Ref. No FW12A/0022 and An Bord Pleanála Ref. No. 06F.241693).

Landscape Sensitivity

13.62 **Table 13-1** below describes the value attached to each of the identified landscape receptors, as well as their susceptibility to the changes caused by the quarry backfilling and recovery activities.

Table 13-1
Sensitivity of Landscape Receptor

Landscape Receptor	Value	Susceptibility	Overall Sensitivity
Fingal 'Low Lying Character Type'	<p>Generally, this Landscape Type is categorised as having a 'modest value' in the Fingal Landscape Character Assessment.</p> <p>Specifically, the licence extension area is covered by a 'Heavy Industry' land use zoning and the site and surrounding area are strongly influenced by existing industrial estates, business parks, high voltage powerlines, as well as the existing quarry complex.</p> <p>No landscape designation present in the vicinity of the site.</p> <p style="text-align: center;">LOW</p>	<p>The Landscape Type is described as able to "absorb a certain amount of development".</p> <p>Since the licence extension area is located within the Huntstown Quarry Complex, it is considered to be of low susceptibility to the backfilling and recovery activities.</p> <p style="text-align: center;">LOW</p>	LOW

Magnitude of Landscape Change

13.63 **Table 13-2** below describes the size and scale, geographical extent and duration / reversibility of the landscape change, all of which contribute to the assessment of the magnitude of this change.

Table 13-2
Factors of Magnitude of Landscape Change

Factor	Description	Level of Effect
Size & Scale	<p>The waste licence extension area covers approximately 22.5ha. There is no new development required to facilitate future backfilling and recovery activities which will result in potential landscape effects.</p> <p>Considering the location within the existing Huntstown Quarry Complex and the presence of multiple other plant and structures in the local area, the proposed activities and any associated fixed or mobile plant / vehicles will be only small elements in the local landscape and will not cause any change to the local landscape character.</p> <p>The soil intake at the South Quarry will not have an any effect on the landscape . This was previously assessed at not significant (under Fingal County Council Ref. No FW12A/0022, An Bord Pleanála Ref. No. 06F.241693).</p> <p>The soil intake and recovery activities will facilitate backfilling of the South Quarry to original ground level (which existed prior to any extraction works taking place). These works and any subsequent restoration to agricultural grassland use will reverse the existing landscape effects associated with current quarry development.</p>	NEGLIGIBLE
Geographical Extent	The landscape effects associated with site activities will be experienced at a site level only and will not be visible from locations beyond the Huntstown Quarry Complex.	NEGLIGIBLE
Duration/ Reversibility	The operational stage (backfilling + final restoration) will last for up to 12.5 years and the future works will ultimately result in reversal of the landscape effects associated with quarry development and therefore ultimately having a positive / beneficial effect.	MEDIUM-TERM REVERSIBLE

13.64 The magnitude of landscape change associated with the quarry backfilling activities is judged to be **NEGLIGIBLE**, as the negligible scale and negligible geographical extent are deemed to offset the medium-term duration of the effects. Due regard is also had to the fact that the nature of the landscape change will ultimately be positive.

Assessment of Landscape Effects and Significance

13.65 The sensitivity of the ‘Low Lying Character Type’ was assessed as LOW. The magnitude of landscape change was assessed as **NEGLIGIBLE**. In combination the landscape effect is judged to be **NEGLIGIBLE** and ultimately positive. This is not considered to be a significant landscape effect.

Post – Operational Stage Landscape Effects

13.66 The post-operational stage for the purpose of this assessment, is considered to be the period following the completion of the restoration works at the South Quarry, leaving the site restored to its original landform and land use, i.e. agricultural grassland. As a result, the level of landscape impact will be reduced further to **NONE**, at the post-operational stage.

Operational Stage Visual Effects

- 13.67 The quarry backfilling and recovery activities will not be visible from any locations along the surrounding public road network, nor from any residential properties. The associated site infrastructure is also screened in views from all these locations, due to intervening vegetation and topography, as well as pre-existing structures.
- 13.68 While HGV's tied to the soil import and backfilling activities will be visible in the vicinity of the existing site entrance and as they travel along the R135 Regional Road (known locally as the North Road), they will be less visible or noticeable than at the present time given that the ongoing backfilling and recovery activities at the North Quarry have a maximum permitted intake rate of 1,500,000 tonnes per annum, double that which will apply for future activities at the South Quarry.
- 13.69 In other words, there will be a minor change / improvement to established visual effects, previously approved in respect of the backfilling activities at the North Quarry (under Fingal Planning Ref. No FW16A/0120).
- 13.70 For the reasons above, there will be **MINOR POSITIVE operational stage visual effects**.

Post – Operational Stage Visual Effects

- 13.71 On completion of restoration by backfilling with imported soil and stone waste, the South Quarry will be restored to its original landform and land use, i.e. agricultural grassland. The licence extension area will continue to be screened by intervening vegetation and topography and there will be **NO visual effects at the Post-Operational stage**.

Direct/Indirect Effects

- 13.72 All landscape and visual effects described above are direct effects. The proposed quarry backfilling activity is not considered to have indirect effects in landscape and visual terms, i.e. the activity is unlikely to cause consequential changes to the surrounding landscape character areas or to existing views of the landscape surrounding the proposed recovery area at the South Quarry.

Compliance with Planning Policies / Impact on Landscape Designations

Land Use Zoning

- 13.73 The quarry backfilling and recovery activities at the South Quarry forms part of the approved quarry development and long-term restoration scheme at the Huntstown Quarry Complex. This activity is one of the development types listed as 'permitted in principle' within the zoning objective which covers the licence extension area and wider quarry complex (i.e. Zoning Objective "HI"). The activity is therefore in compliance with the existing land-use / zoning objective. Notwithstanding this however, the activity is also covered by the existing parent planning permission (Fingal County Council Ref. No FW12A/0022, An Bord Pleanála Ref. No. 06F.241693).

Land Restoration and Aggregate Extraction

- 13.74 This assessment demonstrates that the landscape and visual quality and amenity of the license extension area at Huntstown South Quarry and the surrounding lands, will not be affected by future quarry backfilling and soil intake / recovery activities. Further to that, the permitted restoration (i.e. quarry backfilling and recovery) activities in this area also comply with Objective RF92 of the CDP.

Unplanned Events (i.e. Accidents)

13.75 It is highly unlikely that any unplanned events within the intended recovery area at the South Quarry would result in noticeable landscape or visual impact.

Cumulative / Synergistic Impacts

13.76 Due to the generally urban / industrial nature of the landscape surrounding Huntstown Quarry, it is not considered that cumulative landscape or visual impacts are unlikely to arise with any other developments in the area.

Transboundary Impacts

13.77 The licence extension area at the South Quarry is not located in the vicinity of a national boundary. Therefore, transboundary landscape or visual impacts will not arise.

Interaction with Other Impacts

13.78 There are no known interactions with other impacts.

‘Do-nothing Scenario’

13.79 If the proposed development was not granted, the South Quarry would still be backfilled and restored to an agricultural land use, under the existing planning permission, albeit by way of a separate regulatory regime, most likely using non-waste soil, classified as a by-product material.

13.80 Although the end result would effectively be the same as what is provided for in this licence review application, it could ultimately take longer to complete the quarry backfilling given the limited number of decisions made by the Agency confirming by-product status for soil and stone to date.

MITIGATION MEASURES

Operational Stage

13.81 The licence extension area is located within an existing quarry site, which is already very well screened by vegetation and topography and subject to an existing agreed restoration scheme. Considering this, as well as the assessed low landscape and no visual impacts, additional mitigation measures are not considered necessary.

13.82 In summary, the existing restoration scheme includes provision for the following:

- Infilling of the quarry voids to previous ground levels with inert soil and stone material. This avoids the creation of a large water body which would attract birds and have a potentially negative effect on nearby Dublin Airport;
- Restoration of backfilled quarry voids to a beneficial agricultural grassland after-use, as well as biodiversity rich calcareous grassland in some areas; and
- Planting of hedges, made up from native species, to re-create the hedgerow pattern, as it was present in this area prior to any quarrying activity.

Post – Operational Stage

13.83 Once the approved restoration scheme has been implemented (at post operational stage), the South Quarry will merge with the neighbouring agricultural fields and associated hedgerows. No further mitigation measures are necessary.

RESIDUAL IMPACT ASSESSMENT

Operational Stage

13.84 As no additional mitigation measures are proposed during the operational stage, the residual levels of landscape and visual impact will be as per the assessment above. In summary, the assessment has found that the future quarry backfilling activities at the South Quarry will have negligible landscape impacts and no visual impact on any views from the surrounding area.

Post – Operational Stage

13.85 As no additional mitigation measures are proposed during the post-operational stage, the residual levels of landscape and visual impact will be as per the assessment above. In summary, there will continue to be no visual impacts.

13.86 The proposed restoration of the wider quarry complex at Huntstown (including the licence extension area) to a beneficial agricultural grassland after-use will reduce the landscape impact to none. The approved restoration plan further provides for the retention and creation of some biodiversity rich wildlife areas, all of which will help mitigate the overall landscape impacts of the surrounding quarry development.

MONITORING

13.87 There are no monitoring requirements, arising from this landscape and visual assessment.

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REFERENCES

Environmental Protection Agency (August 2017) Guidelines on the Information to be contained in Environmental Impact Assessment Reports - Draft, EPA Ireland

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

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

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FIGURES

Figure 13-1
Landscape Baseline and Viewpoint Locations

Figure 13-2
Viewpoints A & B

Figure 13-3
Viewpoints C & D

Figure 13-4
Viewpoints E & F

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00180.00313.Huntstown S Quarry.Fig 13-1_2_3_4_WLR.LVIA.dwg



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- LEGEND
- ROADSTONE LIMITED LAND INTEREST
 - AMENDED WASTE LICENCE AREA (COMPRISING EXISTING LICENCE AREA AND PROPOSED EXTENSION) (C. 77.5 HA)
 - PROPOSED EXTENSION TO CURRENT WASTE LICENCE AREA
 - VIEWPOINT LOCATIONS
 - APPROXIMATE DISTANCE FROM PROPOSED LICENCE EXTENSION AREA

- LANDSCAPE CHARACTER TYPES (LCTs):
 (FINGAL DEVELOPMENT PLAN 2017-2023)
- LOW LYING AGRICULTURAL LCT
 - RIVER VALLEYS/CANAL LCT



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**LANDSCAPE BASELINE &
 VIEWPOINT LOCATIONS**

FIGURE 13-1
 Scale: 1:25,000 @ A3
 Date: NOVEMBER 2021

The 'South Quarry' is fully screened by intervening vegetation and topography

The level of HGVs along North Road will remain the same



VIEWPOINT A: Northern end of Pedestrian Overpass over the N2 - National Road

Grid Reference (ITM): **712184:740815** Approximate Elevation: **85m AOD** Distance from extension to current waste licence area: **1,140m** Direction of View: **North west**

Description: This viewpoint illustrates that even in views from elevated locations to the east / south east the existing Huntstown Quarry complex is substantially screened by a mixture of vegetation and topography, as well as structures (in this case the Finglas 220kV Station). None of the elements associated with the proposed development will be visible. While HGVs travelling along North Road will be visible in views from this area, the rate of traffic will fall as part of the proposed development, compared with what is already established along this road for the current filling of the North Quarry. There will reduced impact on visual amenity along this road, due to lower levels of HGV traffic.

The 'South Quarry' is fully screened by intervening vegetation and topography
 Apart from this section of the access road, the remainder of the internal haul road will be fully screened from North Road






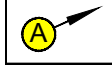

VIEWPOINT B: Eastern entrance to Huntstown Quarry along North Road

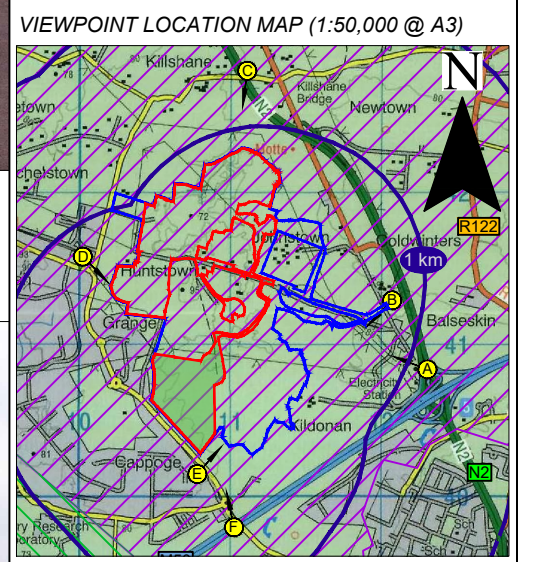
Grid Reference (ITM): **711927:741262** Approximate Elevation: **80m AOD** Distance from extension to current waste licence area: **790m** Direction of View: **South west**

Description: This viewpoint illustrates that, apart from a short section of the access road into the Huntstown Quarry Complex and HGV traffic, all elements associated with the proposed development will be screened in views from North Road. The rate of traffic along North Road will fall as part of the proposed development, compared with what is already established along this road for current filling of the North Quarry. There will be reduced impact on visual amenity along this road, due to lower levels of HGV traffic.

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-  APPROXIMATE LOCATION OF VIEWPOINT A
-  APPROXIMATE DISTANCE FROM PROPOSED LICENCE EXTENSION AREA



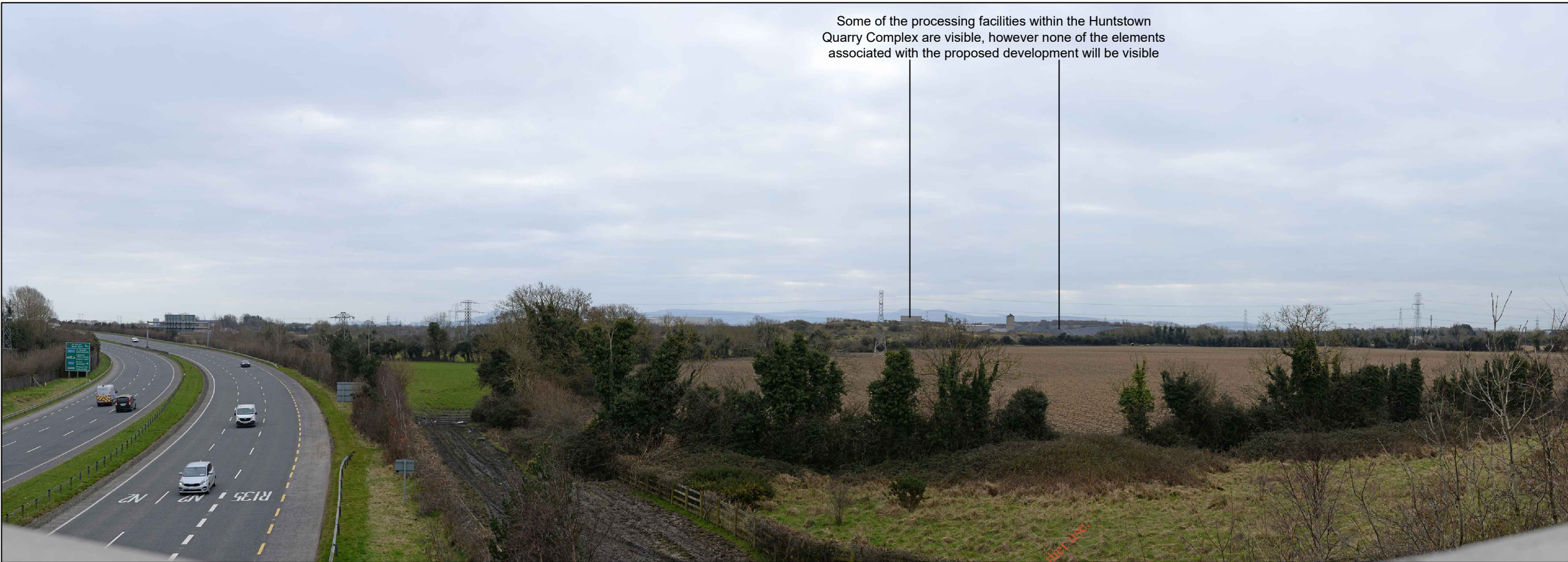

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VIEWPOINT A & B
FIGURE 13-2

Scale: N/A Date: NOVEMBER 2021

00180_00313_Huntstown S Quarry.Fig 13-1_2_3_4_WLR.LVIA.dwg

00180.00313.Huntstown S Quarry.Fig 13-1_2_3_4_WLR.LVIA.dwg



Some of the processing facilities within the Huntstown Quarry Complex are visible, however none of the elements associated with the proposed development will be visible



VIEWPOINT C: Kilshane Road - Flyover over the N2

Grid Reference (ITM): **710986:742777** Approximate Elevation: **85m AOD** Distance from extension to current waste licence area: **1,375m** Direction of View: **South**

Description: This view south was taken from an elevated position on the flyover over the N2 along Kilshane Road. It illustrates that the majority of the processing plant and all of the extraction areas within the Huntstown Quarry complex, including the planning application area, are screened by topography and intervening vegetation in views from locations to the north of the site, even more so, when taking the elevated position of this viewpoint into account. None of the elements associated with the proposed development will be visible in views from locations to the north, north west and north east of the Huntstown Quarry Complex.






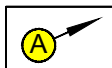

The South Quarry and associated planning application area are fully screened by tree shelterbelts and other intervening vegetation, as well as topography

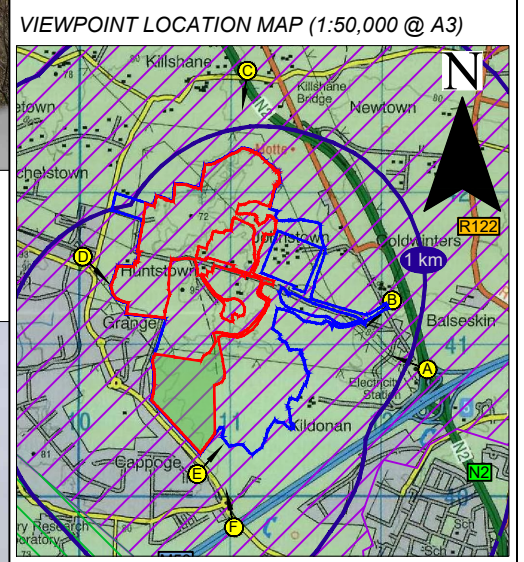


Tree shelterbelts also screen views along Cappagh Road

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-  VIEWPOINT LOCATIONS
-  APPROXIMATE DISTANCE FROM PROPOSED LICENCE EXTENSION AREA

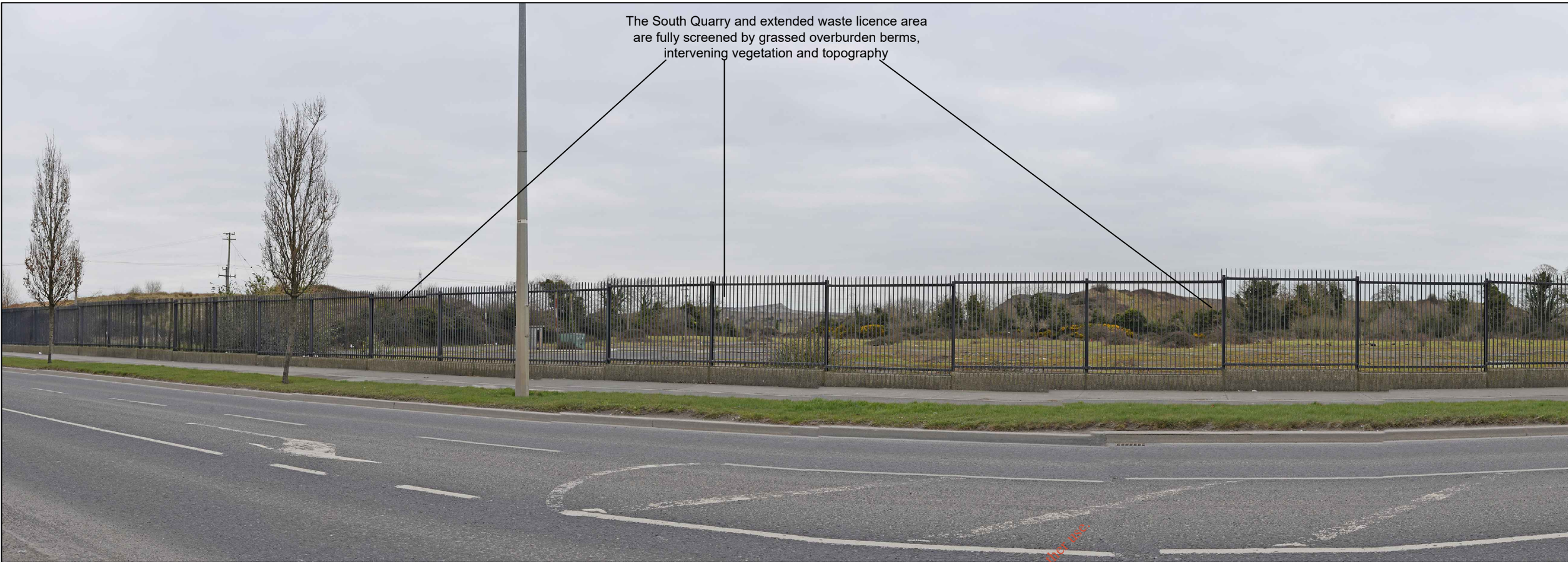


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VIEWPOINT C & D
FIGURE 13-3

Scale: N/A Date: NOVEMBER 2021

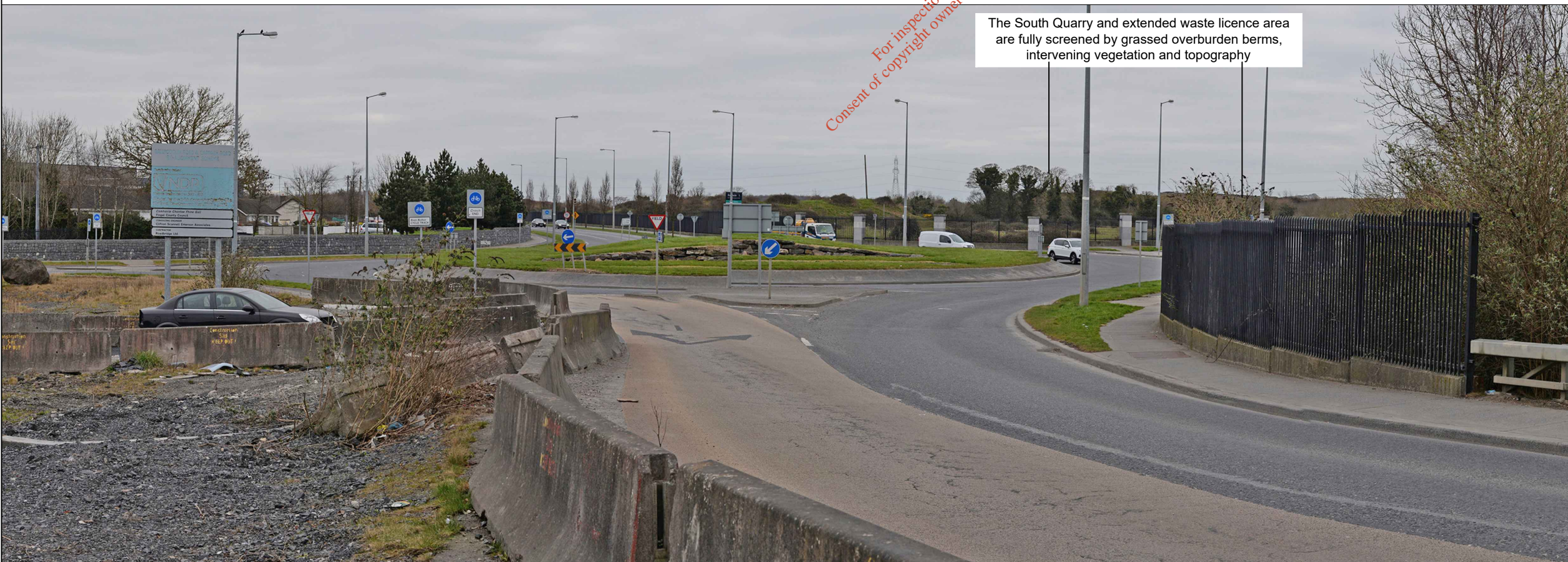
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VIEWPOINT E: Cappagh Road - Approximately 250m north of junction with Ballycoolin Road

Grid Reference (ITM): **710725:740227** Approximate Elevation: **80m AOD** Distance from extension to current waste licence area: **140m** Direction of View: **North east**

Description: This viewpoint illustrates that the existing South Quarry and licence extension area are fully screened in views from Cappagh Road, in the vicinity of this viewpoint, by vegetation, grassed screening berms and topography. None of the elements associated with the proposed development will be visible in views from this section of Cappagh Road and views from locations to the west in general.






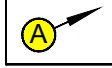

VIEWPOINT F: Cappagh Road - Just south of junction with Ballycoolin Road

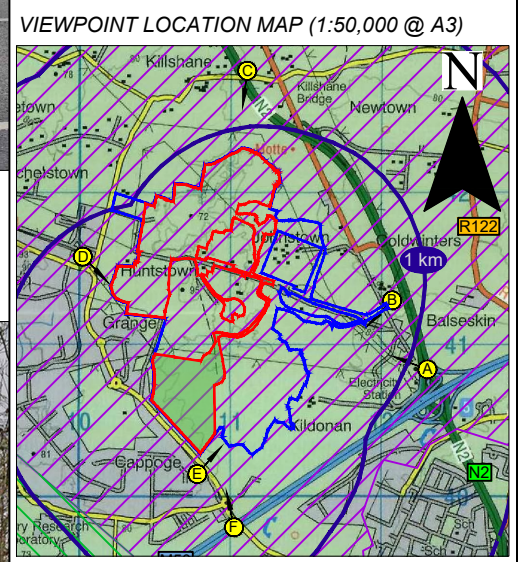
Grid Reference (ITM): **710925:739897** Approximate Elevation: **80m AOD** Distance from extension to current waste licence area: **540m** Direction of View: **North**

Description: As with Viewpoint E, this viewpoint illustrates that the existing South Quarry and extended waste licence area are fully screened in views from Cappagh Road, in the vicinity of this viewpoint, by vegetation, grassed screening berms and topography. None of the elements associated with the proposed development will be visible in views from this section of Cappagh Road and views from locations to the south west and south in general.

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VIEWPOINT E & F
FIGURE 13-4

Scale: N/A Date: NOVEMBER 2021

APPENDIX 13-A

Methods used in Assessing Landscape and Visual Impact Effects

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Methods used in Assessing Landscape and Visual Impact Effects

Introduction

Landscape and Visual Impact Assessment (LVIA) is a tool used to identify and assess the significance of the effects of development on “*landscape as an environmental resource in its own right and on people’s views and visual amenity*” (GLVIA3⁷, paragraph 1.1). Although it refers to landscape, GLVIA3 (paragraphs 2.6 - 2.8) also makes clear that the same principles apply to townscapes and seascapes. GLVIA3 is the main source of guidance in Ireland on the principles and processes of LVIA. Having signed and ratified the European Landscape Convention, the Irish government has obligations to deal with such matters. The guidance also takes into account the formal requirement for Environmental Impact Assessment in response to European Union Directives.

Landscape is a definable set of characteristics resulting from the interaction of natural, physical and human factors: it is a resource in its own right. Its assessment is distinct from visual assessment, which deals specifically with effects on the views and visual amenity of different groups of people at particular locations. GLVIA3 (paragraph 2.22) makes clear that these two elements, although inter-related, should be assessed separately and that the assessment should clearly demonstrate the difference between them.

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

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

GLVIA3 is not prescriptive about exactly how the various judgments required in this framework should be made. This is a matter for individual practitioners to decide and explain. This document therefore sets out the criteria and definitions used by SLR, in both EIA and non-EIA landscape and visual assessments, to make judgements about levels of effects and their importance or significance.

⁷ Landscape Institute and Institute of Environmental Management and Assessment (2013) ‘Guidelines for Landscape and Visual Impact Assessment’ (Third Edition,)

Landscape Effects

Landscape, as defined in the European Landscape Convention, is “*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*”, (Council of Europe, 2000). Landscape does not apply only to special or designated places, nor is it limited to countryside.

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

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

Judging landscape effects requires a methodical assessment of the sensitivity of the landscape receptors to the proposed development and the magnitude of effect which would be experienced by each receptor. The criteria and definitions used in making these judgements are set out below.

Landscape Sensitivity

The sensitivity of landscape receptors is assessed by combining assessments of the value attached to each receptor and the susceptibility of each receptor to the type of change which is proposed (GLVIA3, paragraph 5.39).

Value Attached to Landscape Receptors

Landscape value is generally assessed as part of the baseline and is not influenced by the nature of the project, whereas susceptibility and overall landscape sensitivity form part of the detailed assessment of the effects and are specific to the particular project and its landscape context.

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

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

Table 13A-1: Interpretation of Landscape Designations

Designation	Description	Value
World Heritage Sites, candidate World Heritage Site	Unique sites, features or areas identified as being of international importance according to UNESCO criteria. Consideration should be given to their settings especially where these contribute to the attributes of outstanding universal value for which such an area of landscape is valued.	International
National Parks	Areas of landscape identified as being of national importance. Consideration should be given to their settings especially where these contribute to the special qualities for which the landscape is valued.	National
Local Landscape Designations (such as Areas of Outstanding Natural Beauty or Areas of High Amenity) included in local planning documents; or other landscapes of identified value.	Areas of landscape identified as having value, which are either recognised at the local authority level by a local designation or other equivalent recognition of value OR are landscapes considered to have elevated value, having regard to the criteria in Table 13A-2 below and/or by virtue of demonstrable physical attributes.	Local Authority
Undesignated landscapes	Landscapes which do not have any formal designation and which are not considered to have demonstrable physical attributes that elevate their value but which may be valued by local communities.	Community
Undesignated landscapes with negative attributes	Landscapes with no designations or demonstrable physical attributes that elevate their value, which are in poor condition or are degraded or fundamentally altered by the presence of man-made structures judged to be intrusive.	Low

Where landscapes are not designated and where no other local authority guidance on value is available (for example, a Landscape Character Assessment that may be referred to in planning policies) an assessment is made by reference to criteria in the **Table 13A-2** below. This is based on Box 5.1 in GLVIA3. In such cases landscapes may be judged to be of local authority, community or low value on the basis of one or more of these factors.

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

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

Factor	Criteria
Landscape Quality	Intactness of the landscape demonstrated by, for example: presence of characteristic natural and man-made elements, which are generally in good condition; absence of significant incongruous elements (or elements having only localised or temporary effects).
Scenic Quality	General appeal of the landscape to the senses through, for example, combinations of some of the following: a clear and recognisable sense of place; striking landform or patterns of land cover; strong aesthetic qualities such as scale, form, colour and texture; simplicity or diversity; presence of ephemeral or seasonal interest.
Rarity	Presence of landscape character areas, types or features that are relatively rare in the local area.
Representativeness	Presence of locally important examples representing particular landscape character areas or types or particular characteristics/features/elements.
Conservation Interests	Presence of some of the following where they contribute positively to the experience of the landscape : natural heritage features, including geological or geomorphological features, wildlife, and habitats, including those that are designated as (proposed) Natural Heritage Areas and features such as veteran trees; cultural heritage features, including buildings, especially listed buildings, settlements including conservation areas, gardens, parkland and other designed landscapes, and historic landscape types which demonstrate the time depth of the landscape.
Recreation Value	The extent to which experience of the landscape makes an important contribution to recreational use and enjoyment of an area.
Perceptual Aspects including tranquillity	Presence of ephemeral or seasonal interest and/or notable sensory stimuli such as sounds and smells, qualities of light, or weather patterns. Opportunities to experience a sense of relative wildness and/or relative tranquillity in comparison with other local landscapes in the vicinity, demonstrated by degree of influence of overt man-made structures, level of visual and audible intrusions, and degree of perceived naturalness.
Associations	Evidence that the landscape is associated with locally important written descriptions of the landscape, or artistic representation of it in any media, or events in history, or notable people or important cultural traditions or beliefs.

Susceptibility of Landscape Receptors to Change

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

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

Table 13A-3: Landscape Receptor Susceptibility to Change

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

Defining Sensitivity

As noted above, the sensitivity of landscape receptors is defined in terms of the relationship between value and susceptibility to the proposed change, as indicated in **Figure 13A-1** and **Table 13A-4**. These summarise the general nature of the relationship but the combination of the two factors is not formulaic. **Table 13A-4** provides examples of common combinations but is not comprehensive and other combinations may be judged appropriate. Professional judgement is applied on a case-by-case basis in determining the sensitivity of individual receptors with the diagram and table only serving as a guide.

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

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

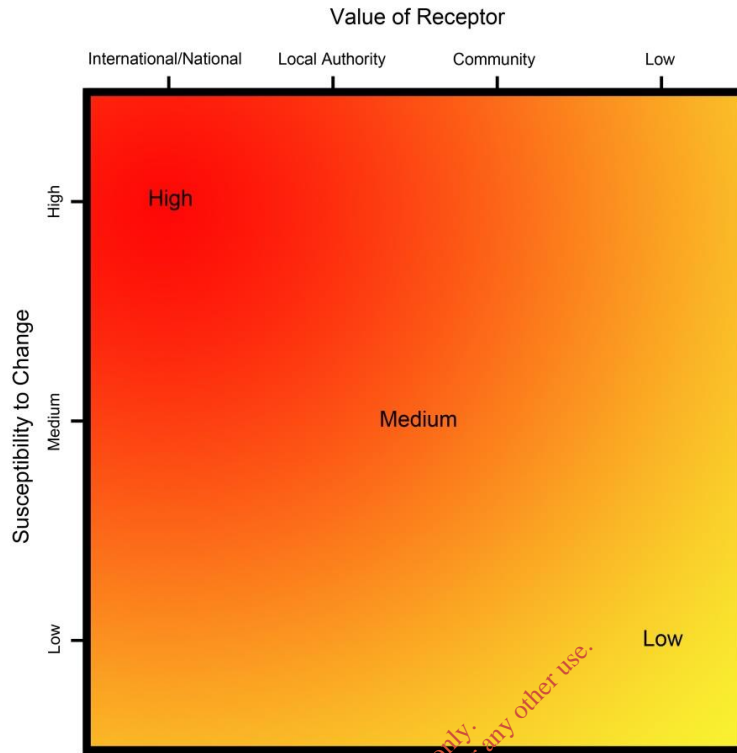


Table 13A-4: Example Levels of Sensitivity defined by Value and Susceptibility of Landscape Receptors

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

Sensitivity	Criteria
Low	<p>The landscape receptor is of local authority value and is considered to have low susceptibility to the effects of the proposed development</p> <p>OR</p> <p>The landscape receptor is of community value and is considered to have medium susceptibility to the effects of the proposed development</p> <p>OR</p> <p>The landscape receptor is of community value and is considered to have low susceptibility to the effects of the proposed development</p>

Magnitude of Landscape Change

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

Size and Scale of Change

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

- *the loss or addition of landscape elements; and/or*
- *the degree to which aesthetic/perceptual aspects are altered; and*
- *whether this is likely to change the key characteristics of the landscape.*

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

Table 13A-5: Size/Scale of Change

Category	Description
Large level of landscape change	<p>There would be a large level of change in landscape character, and especially to the key characteristics if, for example, the proposed development:</p> <ul style="list-style-type: none"> • <i>becomes a dominant feature in the landscape, changing the balance of landscape characteristics; and/or</i> • <i>would dominate important visual connections with other landscape types, where this is a key characteristic of the area.</i>
Medium level of landscape change	<p>There would be a medium level of change in landscape character, and especially to the key characteristics if, for example:</p> <ul style="list-style-type: none"> • <i>the proposed development would be more prominent but would not change the overall balance or composition of the landscape; and/or</i> • <i>key visual connections to other landscape types may be interrupted intermittently by the proposed development, but these connections would not be dominated by them.</i>
Small level of landscape change	<p>There would be a small level of change in landscape character, and especially to the key characteristics if, for example:</p> <ul style="list-style-type: none"> • <i>there would be no introduction of new elements into the landscape and the proposed development would not significantly change the composition/balance of the landscape.</i>

Category	Description
Negligible level of landscape change/ No change	There would be a negligible level of change in landscape character, and especially to the key characteristics if, for example, <ul style="list-style-type: none"> the proposed development would be a small element and/or would be a considerable distance from the landscape receptor/ the proposed development will cause no change to the landscape.

Geographical Extent of Change

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

Table 13A-6: Geographical Extent

Category	Description
Large extent of landscape change	The change will affect all or the majority of the landscape receptor under consideration.
Medium extent of landscape change	The change will affect approximately half of the landscape receptor under consideration.
Small extent of landscape change	The change will affect a small extent of the landscape receptor under consideration.
Negligible extent of landscape change	The change will affect only a limited or negligible extent of the landscape receptor under consideration.

Duration and Reversibility of Change

The duration of the landscape change is categorised in **Table 13A-7** below, which considers whether the change will be permanent and irreversible or temporary and reversible. The levels of duration are based on the EPA Draft Guidelines on the information to be contained in Environmental Impact Assessment Reports (2017).

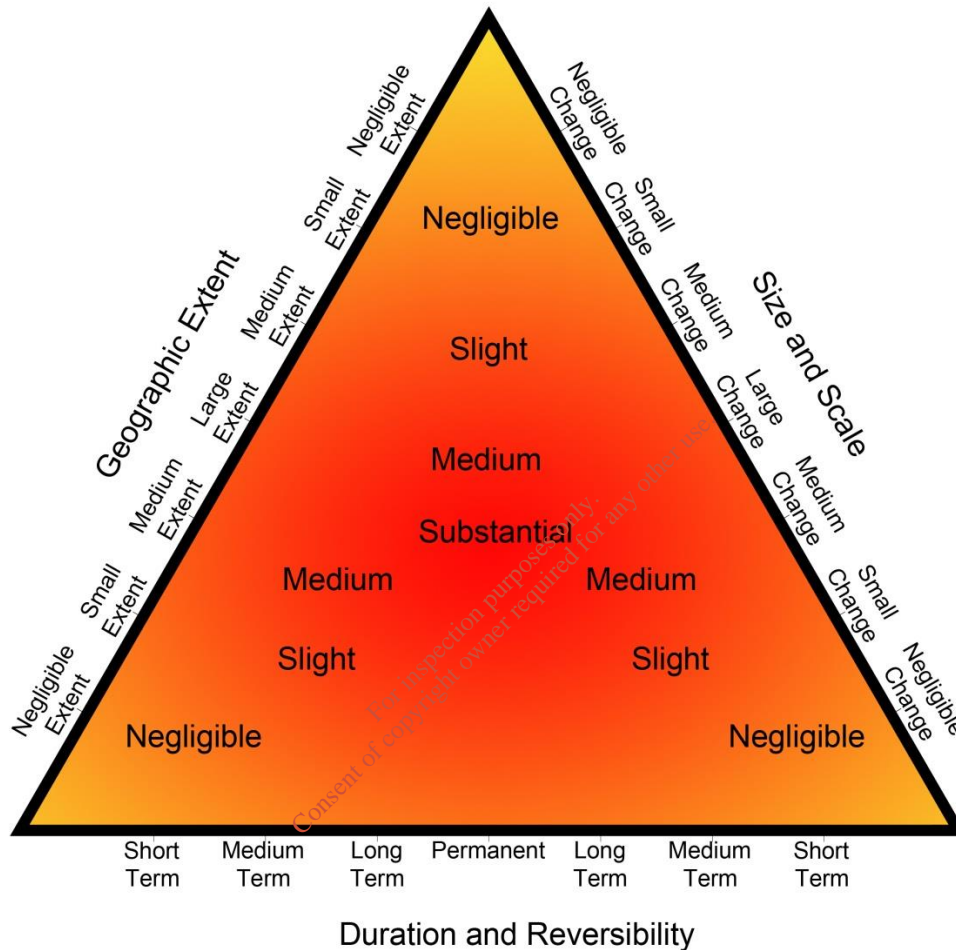
Table 13A-7: Duration and Reversibility

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

Deciding on Overall Magnitude of Landscape Change

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

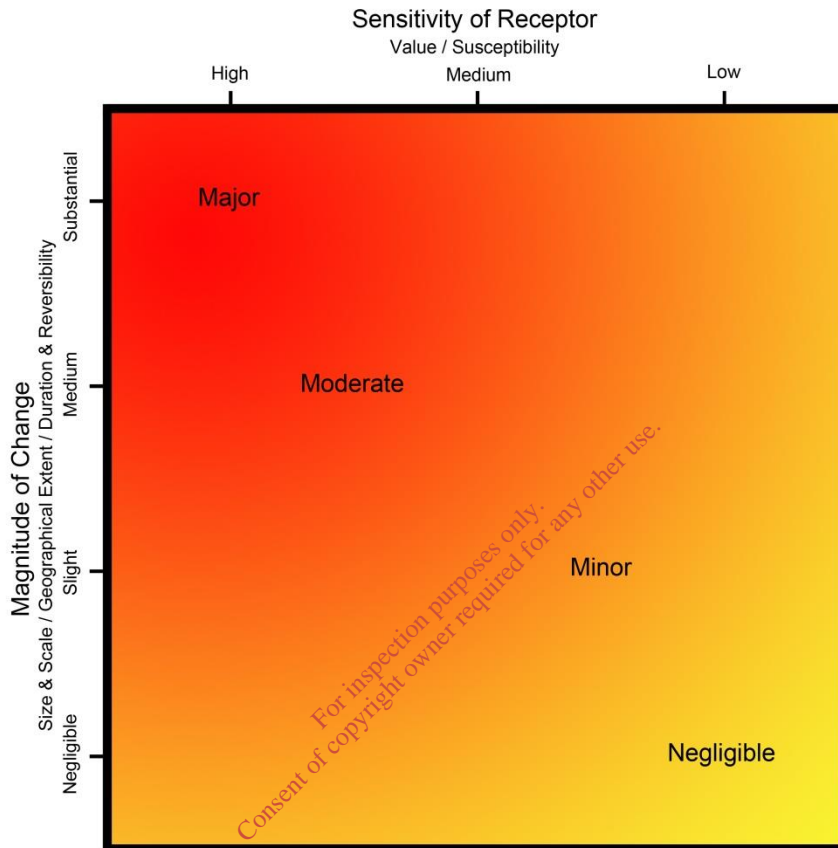
Figure 13A-2: Determining the Magnitude of Landscape Change



Assessment of Landscape Effects and Significance

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

Figure 13A-3: Assessment of Landscape Effects and Overall Significance



Effects that fall in the red (darker) section of the diagram, that is those which are considered to have major and major/moderate effects by virtue of the more sensitive receptors and the greater magnitude of effects, are generally considered to be the **significant landscape effects**. Those effects falling outside the major or major/moderate categories are generally considered to be not significant. However, it should be noted that GLVIA3 states ‘there are no hard and fast rules about what effects should be deemed significant’ and in some cases professional judgement may determine that a moderate effect is significant. Moderate effects are considered individually on a case-by-case basis, to determine whether each effect is considered to be significant or not significant. In determining whether moderate effects are, or are not, significant, particular attention is given to the constituent judgements leading to the assessment of a moderate effect and particularly to value, susceptibility and size/scale of effect, and in addition whether the effect is found across a number of receptors or in a pattern that intensifies the overall impact.

Visual Effects

Visual effects are the effects of change and development on the views available to people and their visual amenity. Visual receptors are the people whose views may be affected by the proposed development. They may include:

- *Communities within settlements (i.e. towns and villages);*
- *Residents of individual properties and clusters of properties outside settlements;*
- *People using nationally designated or regionally promoted footpaths and cycle routes;*
- *Visitors at publicly accessible sites including, for example, gardens and designed landscapes, historic sites, and other visitor attractions or outdoor recreational facilities where the landscape or seascape is an important part of the experience;*
- *Users of outdoor sport and recreation facilities;*
- *Visitors staying at caravan parks or camp sites;*
- *Road users on recognised scenic or promoted tourist routes;*
- *Travellers using other roads who may pass through the study area because they are visiting, living or working there;*
- *Rail passengers; and*
- *People at their place of work.*

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

Viewpoints are chosen for a variety of reasons but most commonly because they represent views experienced by relevant groups of people although they may also include specific promoted or otherwise important viewpoints.

Visual Sensitivity

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

Value Attached to Views

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

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

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

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

Value	Criteria
High	<p>Views from nationally (and in some cases internationally) known viewpoints, which:</p> <ul style="list-style-type: none"> • <i>have some form of planning designation; or</i> • <i>are associated with internationally or nationally designated landscapes or important heritage assets; or</i> • <i>are promoted in sources such as maps and tourist literature; or</i> • <i>are linked with important and popular visitor attractions where the view forms a recognised part of the visitor experience; or</i> • <i>have important cultural associations.</i> <p><i>Also, may include views judged by assessors to be of high value.</i></p>
Medium	<p>Views from viewpoints of some importance at regional or local levels, which:</p> <ul style="list-style-type: none"> • <i>have some form of local planning designation associated with locally designated landscapes or areas of equivalent landscape quality; or</i> • <i>are promoted in local sources; or</i> • <i>are linked with locally important and popular visitor attractions where the view forms a recognised part of the visitor experience; or</i> • <i>have important local cultural associations.</i> <p><i>Also, may include views judged by the assessors to be of medium value.</i></p>
Low	<p>Views from viewpoints which, although they may have value to local people:</p> <ul style="list-style-type: none"> • <i>have no formal planning status; or</i> • <i>are not associated with designated or otherwise high-quality landscapes; or</i> • <i>are not linked with popular visitor attractions; or</i> • <i>have no known cultural associations.</i> <p><i>Also, may include views judged by the assessors to be of low value.</i></p>

Where judgements are made about the value attached to views experienced by residential receptors, the following considerations also apply:

- *Views in a rural or designed context (e.g. an avenue of trees or designed view from a parkland), especially if associated with landscapes of national or local authority value, where residential receptors are positioned to take advantage of the views, will generally be considered to be of high value;*
- *Views in a semi-rural or general townscape context, and/or where locations of residential receptors are not positioned to take full advantage of views, will generally be considered of medium value; and*
- *Views in an urban/industrial context, and/or where locations of residential receptors are not positioned to take advantage of views, will generally be considered of low value.*

Susceptibility of Visual Receptors to Change

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

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

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

Table 13A-9: Visual Receptor Susceptibility to Change

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

Defining Sensitivity

As noted above, the sensitivity of visual receptors is defined in terms of the relationship between the value of views and susceptibility of the different receptors to the proposed change, as indicated in **Figure 13A-4** and **Table 13A-10**. These summarise the general nature of the relationship but the combination of the two factors is not formulaic. **Table 13A-10** provides examples of common combinations but is not comprehensive and other combinations may be judged appropriate. Professional judgement is applied on a case-by-case basis in determining the sensitivity of individual receptors with the diagram and table only serving as a guide.

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

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

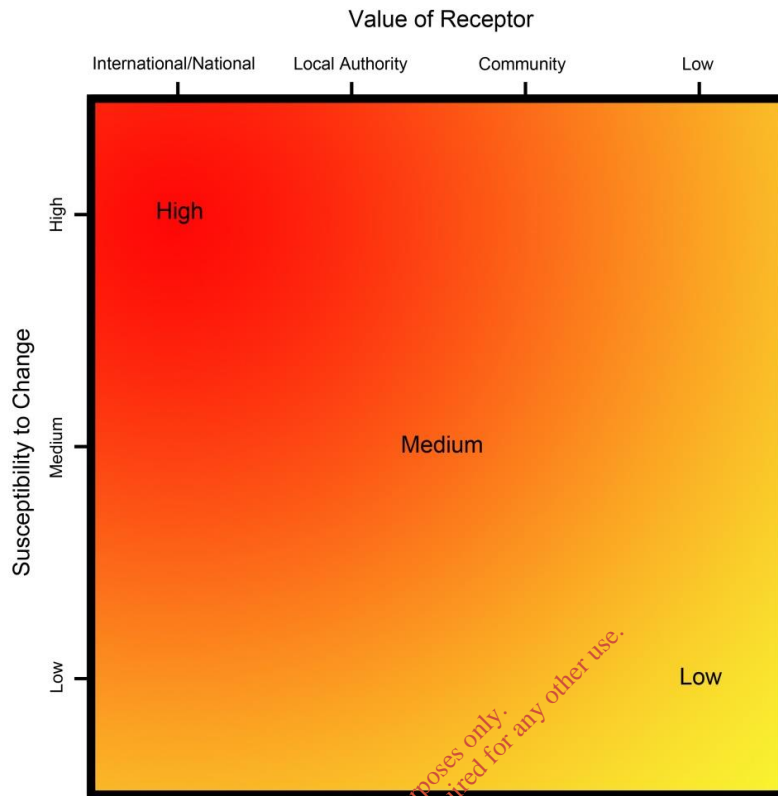


Table 13A-10: Example Levels of Sensitivity defined by Value and Susceptibility of Visual Receptors

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

Sensitivity	Criteria
Low	<p>The visual receptor group has a medium level of susceptibility to changes in views and visual amenity and relevant views are of value at the low level</p> <p>OR</p> <p>The visual receptor group has a low level of susceptibility to changes in views and visual amenity and relevant views are of value at the medium level</p> <p>OR</p> <p>The visual receptor group has a low level of susceptibility to changes in views and visual amenity and relevant views are of value at the low level.</p>

Magnitude of Visual Change

The magnitude of visual change is established by assessing the size or scale of change, the geographical extent of the area influenced and the duration and potential reversibility of the change. Representative viewpoints are used as 'sample' points to assess the typical change experienced by different groups of visual receptors at different distances and directions from the proposed development.

Size and Scale of Change

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

- *the scale of the change in the view with respect to the loss or addition of features in the view, changes in its composition, including the proportion of the view occupied by the proposed development and distance of view;*
- *the degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of factors such as form, scale and mass, line, height, colour and texture; and*
- *the nature of the view of the proposed development, for example whether views will be full, partial or glimpses or sequential views while passing through the landscape.*

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

Table 13A-11: Size/Scale of Change

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

Geographical Extent of Change

The geographical extent of the visual change identified at representative viewpoints is assessed by reference to a combination of the Zone of Theoretical Visibility (ZTV), where this has been prepared, and field work. The way that geographical extent is assessed varies with circumstances.

Most commonly a number of representative viewpoints are used as 'sample' points to assess the typical change experienced by a particular group of visual receptors in locations at different distances and directions from the proposed development. In such cases the geographical extent of the visual change is judged for each group of receptors (for example, people using a particular route or public amenity) drawing on the relevant viewpoint assessments, plus information about the approximate number and distribution of that particular group of people in the Study Area. For example the geographical extent would be small if the change is experienced at only one or two locations and/or by a smaller number of viewers. Community views may, for example, be experienced from a small number of dwellings, or affect numerous properties in the community, or several different communities. Similarly, changes to a view from a public footpath may be visible from a single isolated viewpoint (small geographical extent), or over a prolonged stretch of the route (large geographical extent).

In the case of individual (rather than representative) viewpoints in a specific location, the following factors (as noted in GLVIA3), are considered in judging geographical extent:

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

For example, from an elevated area of Open Access Land the proposed development may be widely visible from much or all of the accessible area, be close to it and so occupy a wide angle of the view, suggesting large geographical extent. Alternatively, the proposed development may be visible from only a small proportion of the area, be quite distant from it and so occupy a small proportion of the view, suggesting small geographical extent.

Table 13A-12 describes the most common categories of geographical extent based on these two approaches.

Table 13A-12: Geographical Extent of Change

Category	Description
Large extent of visual change	Either: The proposed development is seen by the group of receptors in many locations across the Study Area or from the majority, or a large proportion, of a linear route and/or by large numbers of viewers; Or: The proposed development is visible from much or all of a specific site, is close to it and so occupies a wide angle of the view.
Medium extent of visual change	Either: The proposed development is seen by the group of receptors in several locations across the Study Area or from a moderate proportion of a linear route and/or by moderate numbers of viewers; Or: The proposed development is visible from a moderate part of a specific site, is at a moderate distance from it and so occupies a moderate angle of the view.
Small extent of visual change	Either: The proposed development is seen by the group of receptors at a small number of locations across the Study Area or from limited sections of a linear route and/or by a small numbers of viewers; Or: The proposed development is visible from a small part of a specific site, is at some distance from it and so occupies a small angle of the view.
Negligible extent of visual change	Either: The proposed development is not visible in the Study Area or is seen by the group of receptors at only one or two locations or from a very short length of a linear route and/or by a very small number of viewers; OR: The proposed development is visible from only a very small part of a site, is at a considerable distance from it and so occupies a very small angle of the view.

Duration and Reversibility of Change

The duration of the visual change at viewpoints is categorised in **Table 13A-13** below, which considers whether views will be permanent and irreversible or temporary and reversible. The levels of duration are based on the EPA Draft Guidelines on the information to be contained in EIA Reports (2017).

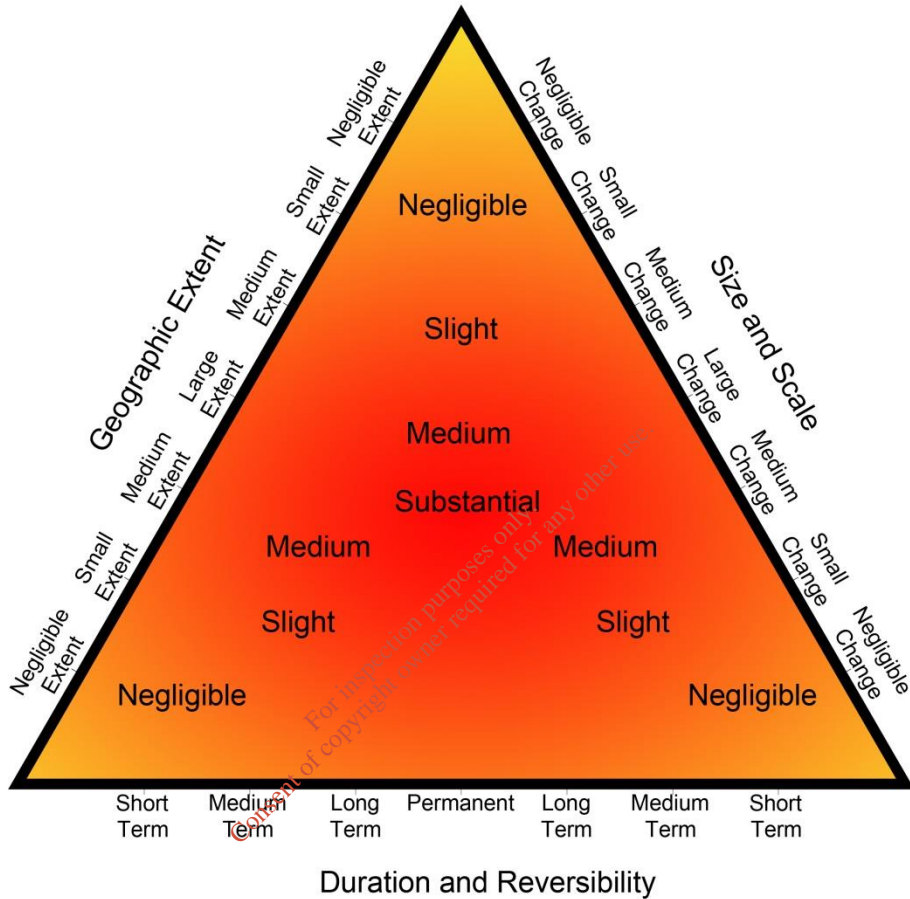
Table 13A-13: Duration and Reversibility

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

Deciding on Overall Magnitude of Visual Change

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

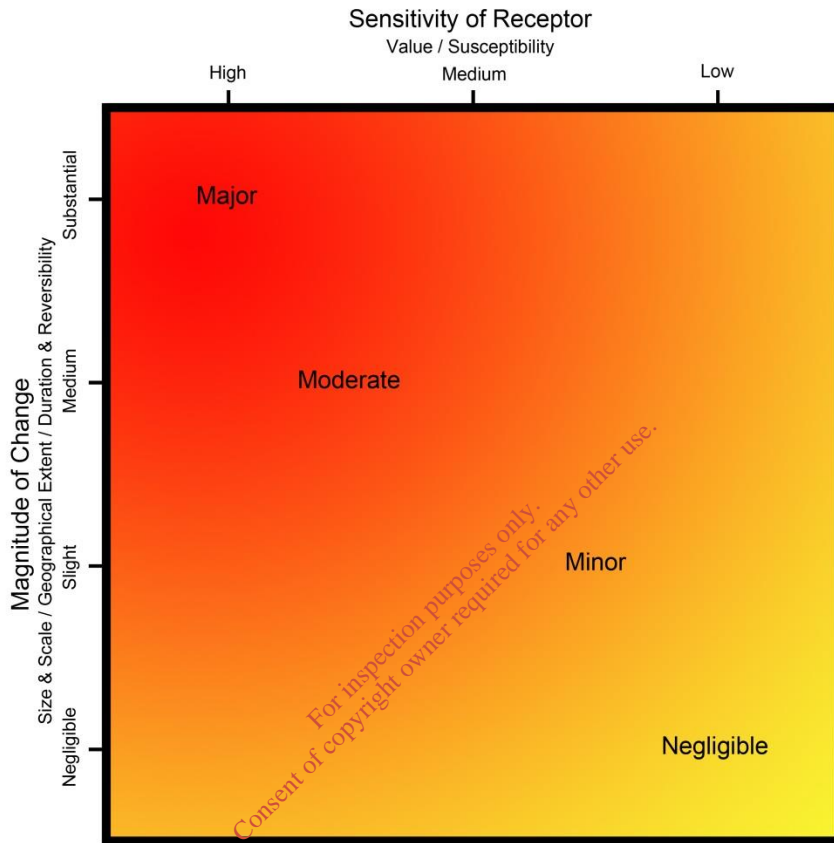
Figure 13A-5: Determining the Magnitude of Visual Change



Assessment of Visual Effects and Significance

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

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



Effects that fall in the red (darker) section of the diagram, that is those which are considered to be major or major/moderate effects by virtue of the more sensitive receptors and the greater magnitude of effects, are generally considered to be the **significant visual effects**. Those effects falling outside the major or major/moderate categories are generally considered to be not significant. However, it should be noted that GLVIA3 states ‘there are no hard and fast rules about what effects should be deemed significant’ and in some cases professional judgement may determine that a moderate effect is significant. Moderate effects are considered individually on a case-by-case basis, to determine whether each effect is considered to be significant or not significant. In determining whether moderate effects are or are not significant, particular attention is given to the constituent judgements leading to the assessment of a moderate effect and particularly to value, susceptibility and size/scale of effect, and in addition whether the effect is found across a number of receptors or in a pattern that intensifies the overall impact.