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INTRODUCTION

Background

13.1 This Chapter of the EIAR assesses the landscape and visual effects associated with the proposed increase in the overall soil intake at the existing permitted Halverstown Soil Recovery Facility (SRF) (Kildare County Council Planning Ref. 18/453). The planning application area, hereafter referred to as the 'application area' or 'the site', is located along the R448 Regional Road (the former N9 National Primary Road), approximately 2km north-east of the village of Calverstown and 3.5km south of Kilcullen. The M9 motorway passes the site approximately 700m to the east.

13.2 The existing soil backfilling / recovery facility at Halverstown comprises a former sand and gravel extraction area (in the western part of the site) and lands previously only ever used for agricultural use, principally grassland (in the north-eastern part of the application area). Both areas are currently in the process of being backfilled with imported inert soil and stone material, in the case of the former extraction area, ground levels are being raised to that of former / surrounding ground.

13.3 The two backfill areas are separated by an internal access road, which crosses the site from the site entrance along the R448 in a north-western direction. The existing site office, weighbridge and wheelwash are centrally located along this access road. Also associated with the existing SRF and included in the application area are parts of the existing concrete block plant at the northwestern end of the site, i.e. part of the concrete block curing shed, which is used for waste inspection / quarantine.

13.4 The proposed increase of the overall soil intake will be achieve increasing the overall height of filling by 1m on the western side of the access road and steepening the side slopes to 1v:6h. Further intake capacity is required to create a 3m high, 20m wide screening berm along the eastern side of the access road and steepening the backfill side slopes to 1v:4h. The latter will result in better screening of the internal access road in views from locations to the north of the site, including a number of residential properties. The proposed increase in soil intake capacity will extend the duration of ongoing backfilling / restoration and the life of the existing facility by 3 years (from the permitted end date in December 2026 to December 2029). Projected maximum soil importation rates will remain unchanged at 300,00 tonnes per annum.

13.5 The proposed restoration works have been modified to allow for the changes in the shape of the fill areas and increase the woodland cover in the north-eastern part of the application area for additional screening. The basic principles for restoration remain the same in the southern part of the site, i.e. restoration of the fill areas to grassland, surrounded by substantial belts of native woodland planting. Further details on the proposed development, including the Restoration Plan (EIAR Figure 2-5) are presented in Chapter 2 of this EIAR.

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

- **Figure 13-1:** Landscape Baseline and Viewpoint Locations
- **Figure 13-2:** Viewpoint/Photomontage A
- **Figure 13-3:** Viewpoint/Photomontage B
- **Figure 13-4:** Viewpoint/Photomontage C
- **Figure 13-5:** Viewpoints D & E
- **Figure 13-6:** Viewpoints F & G

Scope of Work / EIA Scoping

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

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

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

13.9 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.

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

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

13.12 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. Finally, the judgements about sensitivity of the receptor and the magnitude of the effect are combined to judge the level of the effect. If the assessment forms part of an EIA, a threshold may then be identified to show which effects are considered to be significant and which are not.

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

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

Technical Standards

13.15 Photography and visual representations are based on the principles set out in the Landscape Institute – Technical Guidance Note 06/19 – Visual Representation of

Development Proposals. There is no Irish standard/guidance, and in our experience, it is typically considered sufficient to provide two (annotated) viewpoints on one A3-sized sheet, using a range of horizontal angles of view (i.e. 40˚-110˚) to illustrate the full extent of the development within each photograph presented, as well as the context within which the site is located.

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

Consultations / Consultees

13.17 An initial pre-planning consultation meeting was held between officials of Kildare County Council and the Applicant on the 23rd June 2023 (Ref. No. PP5660). Following the change in the waste policy framework which arose following publication of the draft by-product criteria for greenfield soil and stone in October 2023, the original development scheme was modified, in line with the overall direction of public policy, to reduce the additional waste intake to the site and to make provision for future (non-waste) by-product intake. In light of this, a further consultation meeting was held between officials of Kildare County Council and the Applicant on the 15th January 2024 (Ref. No. PP5660).

13.18 In the course of these consultations, Council officials indicated that it would be beneficial to provide a number of photomontages showing key views of / into the application site to assist with the appraisal of any future planning application. This has been taken on board and incorporated into the assessment presented in this EIAR Chapter.

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

Contributors / Author(s)

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

Sources of Information

13.21 This assessment is prepared on the basis of a desk-based assessment of relevant plans, guidance and landscape character assessments, as well as a thorough site assessment. The desk-based study and field work were informed by:

- Kildare County Development Plan 2023-2029
- digital and paper (Ordnance Survey Ireland) mapping at different scales; and
- information retrieved via the internet (such as satellite imagery and information on local recreational facilities and nature conservation sites)

Study Area

13.22 A study area of up to 2km surrounding the application area was initially identified during the desk-based study, based on prior knowledge of the restricted visibility of the site, due to undulating topography combined with abundant existing hedgerows, as well as wider experience with mineral extraction sites. The continued restricted visibility was confirmed

during follow-up field surveys. Nevertheless, the 2km study area is maintained for the purposes of providing landscape context.

Field Survey

13.23 An initial detailed field survey was carried out on 13th July 2023, followed by a second visit some months later, on 20th September 2023 to collect additional viewpoint photography. Conditions during both visits were partially overcast, with sunny spells and good visibility. Photographs were taken during the field survey, using a Nikon D610 digital SLR full frame camera, with a fixed 50mm lens, mounted on a tripod with a panoramic head. The individual photos were taken in portrait format.

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

Limitations / Difficulties Encountered

13.25 No difficulties were encountered during the desk-based study, field surveys or in the preparation of this report / EIAR Chapter.

Significant Risks

13.26 There are no known significant risks to human health or environmental effects, which warrant consideration by this landscape and visual impact assessment.

REGULATORY BACKGROUND

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

Legislation

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

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

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

Planning Policy and Development Control

13.31 The Kildare County Development Plan (KCDP) 2023-2029 is the statutory plan detailing the development objectives/policies of the authority, covering the application area.

13.32 Those policies/objectives, with relevance to this assessment, are listed below. The location/extent of all relevant landscape and visual designations is shown on Figure 13-1, at the end of this chapter.

Kildare County Development Plan 2023 – 2029

Mineral Resources and Extractive Industry

13.33 Section 9.9 of the KCDP contains a number of policies and objectives specifically in respect of the extractive industry and quarry restoration, some of which are relevant to this assessment, as documented below.

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

13.35 **Objective RD O49** *"Have regard to the following guidance documents (as may be amended, replaced, or supplemented) in the assessment of planning applications for quarries, ancillary services, restoration and after-use:*

… - Environmental Management Guidelines – Environmental Management in the Extractive Industry (Non-Scheduled Minerals), EPA (2006). …"

13.36 **Objective RD O50** *"Ensure the satisfactory and sensitive re-instatement and/or re-use of disused quarries and extraction facilities, where active extraction use has ceased. Future uses should include amenity, recreation and biodiversity areas shall be informed by an assessment of the specific site/lands and shall be subject to an ecological impact assessment or other environmental assessments as appropriate. Where it is proposed to reclaim, regenerate, or rehabilitate old quarries by filling or re-grading with inert soil or similar material, or to use worked-out quarries as disposal locations for inert materials, the acceptability of the proposal shall be evaluated against the criteria set out in Section 15.9.6 of this Plan. The Council will resist development that would significantly or unnecessarily alter the natural landscape and topography, including land infilling/ reclamation projects or projects involving significant landscape remodelling, unless it can be demonstrated that the development would enhance the landscape and / or not give rise to adverse impacts."*

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

Landscape

13.38 **Section 13.3** of the KCDP refers to the 2004 landscape character assessment of the county and related landscape sensitivity assessment (note: the application area is fully located within the Eastern Transition Landscape Character Area (LCA), which is judged to be of Class 2 - Medium Sensitivity). It contains the following policies and objectives relevant to this assessment.

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

13.40 **Objective LR 01** *"Ensure that consideration of landscape sensitivity is an important factor in determining development uses. In areas of high landscape sensitivity, the design, type and the choice of location of the proposed development in the landscape will be critical considerations."*

13.41 **Objective LR 02** *"Require a Landscape / Visual Impact Assessment to accompany proposals that are likely to significantly affect:*

- Landscape Sensitivity Factors;

- A Class 4 or 5 Sensitivity Landscape (i.e. within 500m of the boundary);
- A route or view identified in Map V1 - 13.3 (i.e. within 500m of the site boundary). …"

13.42 **Objective LR O4** "Ensure that local landscape features, including historic features and buildings, hedgerows, shelter belts and stone walls, are retained, protected and enhanced where appropriate, so as to preserve the local landscape and character of an area."

13.43 **Objective LR 08** *"Ensure that all quarrying activities and projects associated with the extractive industry comply with all relevant Planning and Environmental Legislation and the Guidelines for the Protection of Biodiversity within the Extractive Industry document 'Wildlife, Habitats & the Extractive Industry'."*

13.44 **Objective LR 09** *"Continue to support development that can utilise existing structures, settlement areas and infrastructure, whilst taking account of local absorption opportunities provided by the landscape, landform and prevailing vegetation."*

13.45 **Objective LR 10** *"Recognise that the lowlands and the transitional area are made up of a variety of working landscapes, which are critical resources for sustaining the economic and social well-being of the county and include areas of significant landscape and ecological value, which are worthy of protection. …"*

13.46 **Objective LR 14** *"Maintain the visual integrity of Eastern Transition Lands which have retained an upland character."*

13.47 **Objective LR 15** *"Continue to facilitate appropriate development in the Eastern Transition Lands, in an incremental and clustered manner, where feasible, that respects the scale, character and sensitivities of the local landscape, recognising the need for sustainable settlement patterns and economic activity within the county."*

Areas of High Amenity

13.48 Section 13.4 of the KCPD identifies a number of Areas of High Amenity, which *"classified because of their outstanding natural beauty and/or unique interest value and are generally sensitive to the impacts of development."* One of the listed Areas of High Amenity, Dun Ailinne on top of Knockaulin Hill, is located at the northern edge of the study area. Section 13.4 contains the following policy relevant to this assessment:

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

Scenic Routes and Protected Views

13.50 Section 13.5 of the current Kildare CDP states the following: *"Scenic routes provide views of the landscape of the county and many built and archaeological features. In addition to scenic routes there are a number of protected views throughout the county. These are located particularly along water corridors and to and from the hills in the countryside. Scenic routes and protected views consist of important and valued views and prospects within the county. These scenic routes, hilltop views and scenic viewpoints are listed in Table 13.5, 13.6 and 13.7 below and their locations can be seen on Map V1 - 13.3."*

13.51 Section 13.5 of the KCDP contains the following relevant policies and objectives.

13.52 **Policy LR P3** *"Protect, sustain and enhance the established appearance and character of all important views and prospects."*

13.53 **Objective LO 32** *"Avoid any development that could disrupt the vistas or have a disproportionate impact on the landscape character of the area, particularly upland views, river views, canal views, views across the Curragh, views of historical or cultural significance (including buildings and townscapes), views of natural beauty and specifically those views listed in Tables 13.5 – 13.7 of this plan."*

13.54 **Objective LO 33** *"Ensure developments (due to excessive bulk, scale, inappropriate siting or siting on steep slopes i.e. >10%) do not have a disproportionate visual impact or significantly interfere with or detract from scenic upland vistas when viewed from nearby areas, scenic routes, viewpoints and settlements."*

13.55 **Objective LO 35** *"Encourage appropriate landscaping and screen planting of developments along scenic routes. Where scenic routes run through settlements, street trees and ornamental landscaping may be required."*

13.56 Three of the Scenic Routes identified in the KCDP (i.e. Scenic Routes 1, 2 & 23; refer to Table 13.5 of the KCDP) are located within the study area, within 1km to the northwest and 100m to the northeast:

- "**Scenic Route 1** – Description: Views of Old Kilcullen to the east and Dún Aillinne to the west, from the R418 Motorway Interchange to the south of Moortown House; Location: Knockbounce, Knockaulin, Old Kilcullen, Glebe North, Moortown and Moortowncastle."
- "**Scenic Route 2** – Description: Views to the east of Yellowbogcommon, from the junction of R418/R448 to Halverstown crossroads; Location: Yellowbogcommon and Glebe South."
- "**Scenic Route 23** – Description: Views to the north-west of the Kildare Plains along the R418, south of Moortown House to Tippeenan Lower; Location: Moortown, Thomastown, Ballyshannon and Tippeenan Lower."

13.57 None of the described views are focused towards the application area and in most cases are focused in the opposite direction. Nevertheless, all three routes were checked during the field survey for available views toward the application site, as described as part of the visual baseline below.

13.58 The view from Dun Ailinne (on top of Knockaulin Hill), at the northern edge of the study area, is listed as one of the 'Hilltop Views' in Table 13.6 of the KCDP. The intervisibility between this hilltop view and the site is described as part of the visual baseline below.

13.59 None of the 'Views to and from bridges', listed in listed in Table 13.7 of the KCDP, are located in the vicinity of, or are directed at, the application area and will therefore not be considered further as part of this assessment.

13.60 In addition to the Scenic Routes, Hilltop Views and Views to and from bridges specifically listed, Section 13.5.1 of the KCDP ('V*iews to and from Hills'),* references ridgelines, as follows: *"As the landform of the county is generally flat, with very little variation in topography and predominantly low vegetation, extensive views can be obtained from hilltops, allowing vistas over long distances, and similarly from the lowland areas the eye is drawn to the primary and secondary ridgelines that define the skyline throughout the county.*

Ridgelines are conspicuous features of the natural landscape as they perform an important role as dominant landscape focal points. It is important that development does not interrupt the integrity of ridgelines. Development on steeply sloping land can be viewed over greater distances."

13.61 The topography of the application area is generally flat / gently sloping and therefore does not contain a ridgeline. Also, none of the ridgelines indicated on Map V1 – 13.2 of the current KCDP are located within the application area. Therefore, ridgelines will not be considered further in the below assessment.

Development Management Standards

13.62 Section 15.9.6 of the KDCP contains the following criteria regarding the Extractive Industry of relevance to this assessment.

13.63 *"… In addition to the above, all planning applications for quarry and ancillary developments, such as batching plants, crushing and screening, shall appropriately detail the environmental baseline of the area in which extraction is proposed, the likely impacts and proposed mitigation measures relating to;*

- … Sensitive local receptors such as residences, Areas of High Amenity, Landscape Sensitivity Areas, Key Scenic Views and Prospects, and Key Amenity Routes as outlined in Chapter 13 of this Plan;
- Landscaping, berms and screening proposals; ".

13.64 *Planning applications shall also include general details on the proposed development as follows:*

- … Description of cumulative impact when taken together with all other quarries in the vicinity;
- Phasing programme for extraction and rehabilitation;
- Restoration and after care proposals for the site (plans and section drawings), including long-term quarry face stability, long-term water pollution potential and control, removal of buildings, plant and machinery, fencing and security.
- Remediation plans provide for environmental benefit, biodiversity, and re-wilding rather than simply re-grassing and reverting back to agricultural use / sheep grazing "

RECEIVING ENVIRONMENT

Landscape Baseline

Existing Relevant Landscape Character Assessment

13.65 As mentioned previously the application area is fully located within the Eastern Transition LCA, as described in the 2004 Landscape Character Assessment for County Kildare. This comprises a 3-5km wide band of a mostly undulating land, parallel to the southeastern boundary of Co. Kildare. It provides a buffer between the lowland landscapes to the west and the upland landscapes further east associated with the foothills of the Wicklow Mountains. The application area is located approximately 2km east of the boundary with the Central Undulating Lands LCA and 2km west of the Eastern Uplands LCA.

13.66 The published landscape character assessment describes The Eastern Transition Lands as follows:

"The terrain gently rises from the lowland areas to the hilltops of the Eastern Kildare Uplands (see Chapter 19). The land undulates through a series of hilltops, the main ones being: Old Kilcullen Hill (179m O.D.) Bullhill (174m O.D.), Mullacash Hill (171m O.D.), Nine Tree Hill (168m O.D.) and Carrighill (166m O.D.). The elevated vantage points along the local roads provide long-distance views of the Kildare lowlands. The skyline to the east of this unit is defined by the Eastern Uplands, distant views including the neighbouring Wicklow Mountains, define the extent of visibility. The hilltops of the Chair of Kildare Hills (see Chapter 9, Volume 1) partially define the skyline to the west.

Preferred scenic drives are located within this unit, as part of the drives from Naas and Kilcullen to Ballymore Eustace. The unit is perceived as having some development potential to the south, along the primary national road.

The major and most extensive land-use in the area is pasture, with patches of non-irrigated agricultural lands (mainly tillage). Small clusters of naturally occurring vegetation together with some coniferous forests and woodlands can also be found."

13.67 Critical Landscape Factors, as relevant, are cited as follows.

"Undulating topography: Undulating topography, which characterises this unit, provides a physical shielding within the lee of hills and thus, can conceal relatively large new features on the lower-lying lands. Furthermore, the dynamic and complex nature of undulating land encloses local vistas, rendering development unobtrusive on the overall landscape.

Slopes: Sloping land often provides an area with its character and intensifies the visual prominence of any feature over greater distances. The gentle slopes of the hills in this character unit start to define the visual boundary of the adjacent lowland areas (further defined by the Eastern Uplands) and provides an increased potential for development to penetrate the ridgelines when viewed from local roads and villages in the area.

Low Vegetation: The grassland, tillage fields and generally low hedgerows of this area are usually uniform in appearance, failing to break up vistas, and allowing long distance visibility. Existing well-maintained hedgerows partially screen the lowest land parcels. Nevertheless, the commonly low vegetation proves unable to visually absorb new development.

Shelter Vegetation: Shelter vegetation is represented at some stretches of this unit by coniferous plantations and the presence of scattered trees that grow on field hedgerows. In a similar manner to undulating topography, shelter vegetation has a shielding and absorbing quality in landscape terms. It can provide a natural visual barrier and also adds to the complexity of a vista, breaking it up to provide scale and containment for built forms…"

13.68 The current KCDP refers to the landscape sensitivity rating applicable to Kildare's landscapes. This is defined as being *"a measure of the ability of the landscape to accommodate change or intervention without suffering unacceptable effects to its character and values. It is determined using the following factors: slope, ridgeline, water bodies, land use and prior development."*

13.69 The Eastern Transition Lands is judged to be of class 2 medium sensitivity and is defined as follows: *"Areas with the capacity to accommodate a range of uses without significant adverse effects on the appearance or character of the landscape having regards to localized sensitivity factors."*

Landscape of the Site and its Context

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

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

Landscape Elements

13.71 The broadly rectangular application area is c. 18.0 ha in size and comprises of the existing backfilling areas and previously approved site and services infrastructure including, site office, staff welfare facilities, weighbridge (with dedicated office), wheelwash, hardstand areas, fuel storage tanks, waste inspection and quarantine facility and covered shed.

13.72 The two backfilling areas occupy the majority of the site, i.e. a large area comprising nearly three quarters of the site to the south and west of the internal access road and a smaller area to the north and east, covering nearly one quarter of the site. The above-mentioned site and services infrastructure are located along the internal access road and in the north-western corner of the application site.

13.73 Ground levels within the site currently range from 120m above Ordnance Datum (AOD) to 125m, with some locally higher topsoil stockpiles. Due to the ongoing works the ground within the fill areas is currently bare of vegetation, except for some annuals which have germinated from the local seedbank. The site boundaries are marked by mostly dense hedgerows and treebelts. There are some small gaps along the southwestern and northern boundary, as well as a low section of hedgerow along the eastern boundary, the boundary with the R448 Regional Road.

13.74 The main land-use surrounding the site on all sides is agricultural, with most fields under pasture and some tillage fields. The fill pattern is irregular with field sizes ranging from small to large. Field boundaries are typically marked with hedgerows, some of which are maintained at a low height with none or few tall trees, whereas others contain many tall / mature trees. Occasional clumps of deciduous woodland and tracts of commercial forestry are present.

13.75 The topography of the surrounding land is gently rolling / undulating, with levels within the study area ranging from just below 120m AOD to 179m AOD, i.e. the hill at Old Kilcullen 1km north of the site. Other local high points can be found just north of Calverstown, 2km west of the site (166m AOD) and within 1km south of the site in the townland of Kilgowan (132m AOD). In the wider landscape, levels overall fall towards the lowlands to the west and rise towards the foothills of the Wicklow Mountains to the east.

13.76 The main settlements located closest to the application area are Old Kilcullen, located 1km to the north and Calverstown located 2km to the south west. Isolated dwellings and clusters of dwellings are located along a dense network of the regional and local roads surrounding the site. The larger settlements of Kilcullen and Newbridge are located approximately 3.5km to the northeast and 8km to the northwest, respectively.

13.77 The M9 motorway crosses the study area in a north south direction, approximately 700m to the east of the site. The R448 Regional Rad, which passes the eastern boundary of the site, runs broadly parallel to the M9 motorway. The R418 Regional Road runs in a north-east to south-west direction linking Kilcullen with Athy.

13.78 Human activity has strongly influenced land-use within the study area, in the form of agriculture and to a smaller extent sand and gravel extraction (as was previously present within the site). On a smaller scale, human influences are visible in the form of roads and buildings, as well as wooden electricity poles. On the whole, while this is an attractive rural landscape, due to the abundance of vegetation, there are few locations from where no man-made structures are visible (i.e. mostly roads, buildings or electricity poles).

Aesthetic and Perceptual Aspects

13.79 While there are many large fields within the study area, the scale of the landscape is generally reduced, due to the enclosure from (tree-lined) hedgerows, as well as the undulating topography. In locally elevated locations, such as along the local road, approximately 500m to the north of the stie, where views through gaps in or over hedgerows are available, the scale increases. However, it is ultimately still restricted by the combination of many layers of hedgerows and undulating topography, within the study area. This is with the exception of a small number of views in a south-eastern direction, where distant views of the Wicklow Mountains are available.

13.80 Due to the dominance of agricultural fields, bound by hedgerows, the colours and textures throughout the study area are simple and repetitive, but with no regular pattern. There are some areas where the complexity of colours and textures locally increases, i.e. where tillage fields are recently ploughed or where crops are growing. The simple colour palette is dominated by multiple shades of green, with the tillage fields contributing some contrasting shades of browns and creams. The imported soil and stone spread over the

site, as part of the existing backfilling and recovery activities have a similar appearance in colour to the tillage fields within the study area.

13.81 While the study area has an overall natural appearance, there is little sense of wildness or remoteness, due to the many signs of human activity, such as improved grassland, tillage, electricity poles, roads and buildings. Also, traffic noise from the busy M9-motorway and R448-Regional Road are audible in many locations in the eastern half of the study area, diminishing any sense of tranquillity. In the vicinity of the existing facility, plant and machinery noises from within the site are also intermittently audible.

13.82 The round tower and mobile phone transmission mast on the two local highpoints at Old Kilcullen, to the north of the site, are noticeable features in the local area. However, due to their broad shape with shallow slopes, the two hills themselves merge with the surrounding undulating topography, reducing their distinctiveness.

Overall Character

13.83 The site assessment supports the inclusion of the Site and its immediate context within the Eastern Transition LCA, as set out in the 2004 Landscape Character Assessment for Co. Kildare.

Protected Nature Conservation Sites

13.84 There are no nature conservation sites within the study area. The closest such site, outside the study area is listed below;

- Dunlavin Marshes proposed Natural Heritage Area (pNHA) – Site Code: 001772 – circa. 2.3km southeast of the application area.

Visual Baseline

Existing Visibility

13.85 The visibility of the application area / existing facility was initially assessed by a desktop study of OSI Discovery Maps (1:50,000) and available aerial / satellite photography, followed by verification in the field.

13.86 It was found that views of the application area are greatly restricted by a combination of roadside / intervening vegetation and the undulating topography within the study area. The application area is only visible in views from a small number of locations. They are views from the R448 along the eastern boundary and views from some locations along the local road to the north, as well as the adjoining elevated agricultural land. Also, a few glimpsed views of parts of the site can be gained from the local road north of Calverstown, between 0.8km and 1.4km west of the site.

13.87 Some residential properties with potential views of the existing backfilling / recovery facility were identified. However, the total number of properties with visibility is greatly reduced by mature vegetation along most property boundaries, as well as intervening vegetation and topography.

13.88 Views from the existing Scenic Routes within the study area were checked and it was confirmed that there is no visibility of any parts of the existing facility or ongoing site operations due to intervening vegetation and topography. This includes the southern end of Scenic Route No. 2, in the vicinity of the Halverstown Cross Roads, where mature vegetation in the north-eastern corner of the site provides substantial site screening. Furthermore, there is no intervisibility between the site and the protected hilltop view from Dun Ailinne. The highpoint at Old Kilcullen, which is situated between the two, obscures any such views.

13.89 Viewpoint photography was taken during the two field surveys from several locations throughout the study area. A total of seven viewpoints were subsequently selected to

represent the range of available views, including some viewpoints illustrating how the site is screened by intervening vegetation / topography.

13.90 The location of the seven viewpoints is illustrated on Figure 13-1. For each of the viewpoints, annotated panoramic images showing the existing view are provided (refer to Viewpoints A-G on Figures 13-2 to 13-6). The panoramas are made up from 57 individual photographic frames, which were merged together using Adobe Photoshop software. It should be noted that photography is a tool to assist in the visualisation process and cannot be expected to replicate the actual view that would be attained on the ground.

13.91 For three of the viewpoints photomontages (PM) were prepared, illustrating the final landform, which would result from the proposed increased intake at the existing permitted facility (refer to Viewpoints A-C). Two versions are provided for each of the PM. The first version illustrates the final landform restored to grassland, without any of the proposed woodland planting in place. For the second version, the proposed planting was added at a height of approximately 3m, which it should reach within 5-7 years, illustrating the additional screening this will provide.

13.92 **Viewpoint A** represents open views from an approximately 200m long stretch along the R448 along the eastern boundary of the application area. The north-eastern section of the existing backfilling / recovery facility is visible in the field next to the road. This comprises an area of disturbed ground where fill material was placed, as well as two grass seeded topsoil mounds. Parts of the internal access road and offices/weighbridge located along it are visible in the midground. The south-western part of the SRF is largely screened by intervening topography / vegetation. Some of the existing block plant to the northwest of the existing facility are visible in the background for vehicles travelling in a northern direction. The highpoint at Old Kilcullen and mobile phone mast are also visible in the background of these views, in a more northern direction. In views from vehicles travelling in a southern direction, views are restricted to the mature vegetation along the south-western boundary of the site. There are no residential properties located along this stretch of road.

13.93 **Viewpoint B** was taken through a gap in the boundary hedgerow in the north-eastern corner of the site, in the vicinity of Halverstown Cross Roads. Due to the location in the gap, the view of the northern section of the site is quite open. It comprises an area of disturbed ground where fill material was placed, in the foreground, with the access road and site office visible in the background. Some of the material placed within the southern part of the existing facility is visible above the access road, but the majority is screened. The tops of the existing tall trees along the southern and south-western site boundaries are visible along the skyline, but views into the wider landscape are not available. It should be noted that the viewing angle into the site is much more restricted, when standing / passing on the adjoining road, with the mature vegetation along the northern boundary providing substantial screening (refer to Viewpoint D).

13.94 **Viewpoint C** represents intermittent views along the elevated section of the local road which runs to the north of the application area, within 300m to 700m. Due to this elevation, views over the lower lying fields to the south open up in some locations, where not restricted by the roadside hedgerow. In any available views the neighbouring agricultural field is visible in the foreground, while parts of the existing facility, comprising areas of disturbed ground and the site offices along the internal access road, are visible in the midground. The existing tall trees along the southern and south-western site boundaries block much of the views into the wider landscape, but glimpses of elevated distant ground are available. Approximately eight residential properties along this section of road are likely to experience similar views from their driveways or gardens, but few appear to have windows facing the site.

13.95 **Viewpoint D** is located at the southern end of the same local road as Viewpoint C and a little further north than Viewpoint B. It illustrates how, due to the lower elevation of the road at this point, roadside and other intervening vegetation substantially screens views of the existing facility. Small sections of disturbed ground within the site are visible through the gap at Viewpoint B, in and over a field gate. However, the remainder of the site is fully screened, as are views into the wider landscape. Four residential properties are located in the vicinity of this viewpoint, which are likely to experience similarly restricted views, if not more so.

13.96 **Viewpoint E**, located along the R448,Regional Road, approximately 500m south of the site entrance to the existing facility, illustrates how the site is generally screened by intervening vegetation in views from locations to the south. This is even the case for views from slightly elevated locations, such as Viewpoint E. Views from locations further south and to the southeast, including residential properties are similarly screened.

13.97 **Viewpoint F** represents a small number of glimpsed views of the existing SRF, including views from approximately 5 residential properties, from the local road to the north of Calverstown. Views from locations to the southwest and west of the site are generally restricted by intervening topography and vegetation. However, in a number of elevated locations, views over the undulating agricultural landscape south of Kilcullen and towards the distant Wicklow Mountains open up. A small section of the southern half of the existing facility can be glimpsed in the midground of some of these views.

13.98 **Viewpoint G,** taken on the M9 overpass approximately 1km southeast of Old Kilcullen, illustrates how the existing facility is generally screened by intervening vegetation and topography in views from locations to the northeast and east of the site. This is even the case in slightly elevated locations, such as Viewpoint G.

Outdoor Recreational Facilities within the Study Area

13.99 The church and round tower on the local highpoint east of the local road at Old Kilcullen are publicly accessible. Vast panoramic views can be gained from this site, however, due to intervening topography and vegetation, the existing backfilling / recovery facility at Halverstown is not visible.

13.100 There are no known other outdoor recreational facilities, such as long-distance walking routes, located within the study area.

Sensitive Receptors

Landscape Receptors

13.101 No individual landscape elements will be affected by the proposed development, as the proposed increased intake will not result in the removal of agricultural land, hedgerows or similar. Further to that, no distinctive or sensitive aesthetic / perceptual aspects were identified within the study area, such as wildness or tranquillity.

13.102 The proposed development would be a continuation of an existing permitted activity, which would result in an extension of the working life by a short period of 3 years. While the proposed increased soil intake will result in a slightly taller landform within the application area, this is considered to have a minimal impact on landscape character (due to its rounded form, and the proposed restoration to grassland with substantial native woodland planting).

13.103 Considering the above, no individual landscape elements, any aesthetic or perceptual aspects or overall landscape character types/areas, were identified as sensitive landscape receptors to be brought forward to the assessment of landscape effects. Please note that the visual impact of the proposed slightly larger landform will be assessed separately.

Visual Receptors

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

- Residents:
  - Eight residential properties along the local road between 300-700m north of the site (represented by Viewpoint & Photomontage C on Figure 13-4);
  - Four residential properties along the local road to the north of the site, in the vicinity of Halverstown Cross Roads (represented by Viewpoint & Photomontage B on Figure 13-3 & Viewpoint D on Figure 13-5); and
  - Five residential properties along the local roads to the north of Calverstown, between 0.8-1.4km west of the site (represented by Viewpoint F on Figure 13-6).
- Vehicle users:
  - Along a c. 200m section of the R449 along the eastern site boundary (represented by Viewpoint & Photomontage A on Figure 13-2);
  - Intermittently along a c. 400m section of the local road between 300-700m north of the site (represented by Viewpoint & Photomontage C on Figure 13-4);
  - Few glimpsed locations along a c. 300m section of the local road to the north of the site, in the vicinity of Halverstown Cross Roads (represented by Viewpoint & Photomontage B on Figure 13-3 & Viewpoint D on Figure 13); and
  - Few glimpsed locations along a c. 700m section of the local roads to the north of Calverstown, between 0.8km and 1.4km west of the site (represented by Viewpoint F on Figure 13-6)

IMPACT ASSESSMENT

13.105 This section sets out the effects that the proposed development would have visual receptors (as identified in the previous section; note: no landscape receptors were identified). The effects will be assessed for the extended operational stage of the existing backfilling / recovery facility, including restoration activities (i.e. and additional three years, up to 2029), as well as during the post-operational stage (i.e. permanent, on completion of all restoration works). It is based on the detailed project description and layout drawings contained in Chapter 2 of this EIAR.

Aspects of the Development with Potential to Cause Visual Effects

Operational Stage

13.106 The operational stage of the proposed development, for the purpose of this assessment, is considered to include the extended soil recovery / restoration period, i.e. by three additional years up to 2029).

13.107 The following elements of the proposed increased intake at the existing facility, at the operational stage, are those which are most likely to result in visual effects:

- the changes to the currently permitted landform on the western side of the internal access road, by increasing the overall height of filling by 1m and steepening the side slopes to 1v:6h. In other words, a marginally taller landform with slightly steeper side slopes would be created on the southern side of the internal access road;
- the changes to the currently permitted landform on the northern side of the internal access road, by creating a 3m high, 20m wide screening berm and steepening the side slopes facing the internal road to 1v:4h. In other words, a landform, which is up to 3m taller than what is currently permitted would be created. This landform would have steeper side slopes facing the internal access road, but would be gently sloping

on its northern and eastern sides, i.e. the sides facing the public roads and nearby residential properties; and

- the proposed native woodland planting on the majority of the area to the north of the internal access road (Phase 1); and around the edges of the finished landform to the south of the internal access road and restoration of the remainder of the area to grassland (Phase 2), with associated post and wire fencing to protect the woodland planting and create a barrier to prevent access to the side slope area (refer to the Proposed Restoration Plan, EIAR Figure 2-5.

13.108 It should be noted that no additional lighting over and above what is already in place within the existing facility would be installed. The existing lighting includes light poles in the vicinity of the office and weighbridge along the internal access road and mobile lighting on the HGVs bringing soil fill material to the site and the machinery used for the placement and spreading of this material within backfill areas. All lighting would continue to only be in use for wintertime operations, when darkness has fallen.

13.109 It is proposed to continue to operate the facility between 08:00 hours and 18:00 hours Monday to Friday, and on Saturday, from 08:00 hours to 13:00 hours, in line with the current planning permission and Waste Licence (i.e. Condition No. 5 of Planning Ref. No. 18/453 and Condition 1.7 of EPA Waste Licence W0300-01). There would therefore continue to be a period where such lighting would be required for up to 1 hour in the morning and 2 hours in the evening in mid-winter. Night-time light pollution caused by the proposed development would continue to be of brief duration during winter months and is not considered significant.

Post-Operational Stage

13.110 The post-operational stage of the proposed development, for the purpose of this assessment, is considered to be the period following the completion of all backfilling and restoration works.

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

- The proposed native woodland planting within the site, which would take a number of years to mature.

Operational Stage Visual Effects

Visual Receptor Sensitivity

13.112 The value placed on each of the types of visual receptors identified above is described in Table 13-1 below. Also, the susceptibility to change of each of the receptor types (as per the LVIA Methodology in Appendix 13-A) is described and a judgement of the overall sensitivity made.

Table 13-1
Sensitivity of Visual Receptors

Visual Receptors	Value	Susceptibility	Overall Sensitivity
Residents			
All residential receptors identified.	LOW (No designated or locally promoted views)	HIGH (Susceptible to changes in views, particularly from gardens and living rooms)	MEDIUM

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

Magnitude of Visual Change

13.113 **Table 13-2** describes the size and scale, geographical extent and duration / reversibility of the visual effects for each visual receptor, all of which contribute to the assessment of the magnitude of these effects.

Table 13-2
Magnitude of Visual Change

Visual Receptors	Factors	Magnitude of Change
Residents and Vehicle Users		
Along the local road between 300m - 700m north of the site (**Viewpoint C**)	Size and Scale: **SMALL** Geographical Extent: **SMALL** Duration / Reversibility: **TEMPORARY / SHORT-TERM – REVERSIBLE** **Notes:** The existing backfilling / recovery facility is visible as a narrow band in the midground of views, surrounded and partially screened by existing tall hedgerows / trees. The currently permitted soil recovery activities will result in the current ground levels being raised further within the visible areas of disturbed ground. The southern section of the site will be raised c. 3m higher than the northern section. The existing disturbed ground within the site has a similar appearance to a ploughed field and therefore is not conspicuous in this agricultural landscape, although there is more visible activity within the site than would be on an agricultural field. The main change due to the proposed development, would be that the landform in the northern part of the application area (i.e. the area closest to Viewpoint C) will be raised by up to 3m above what is currently permitted and closer to the level in the southern section of the site. As a result, it will screen the internal access road, including offices and weighbridge, and parts of the southern section of the site. The lower parts of the existing tall trees currently visible along the southern and western site boundaries will be screened by both the permitted and by the proposed landforms. However, the existing glimpsed views of distant elevated ground in the wider landscape will not be blocked by either. It is proposed to complete the landform in the northern half of the site initially, so that the majority of the works within the southern part of the site (including HGVs moving along the internal access road) will be screened. Also, the ground within the northern half will be planted with a native woodland mix, as soon as the backfilling / recovery activities are completed, softening its appearance and providing additional screening as it matures.	**SLIGHT**

Visual Receptors	Factors	Magnitude of Change
	As illustrated by the photomontages provided for Viewpoint C, due to its shallow outer slopes and the proposed native woodland planting, the proposed landform will not be visually intrusive and will merge with the surrounding undulating topography and rural character. Views are available intermittently from a 400m section of road and from the driveways/gardens of c. eight residential properties. The soil backfill / recovery activities would be visible for a short period (c. 3 years), before the northern section of the site is completed and restored to grassland, providing screening of the majority of the works within the southern section of the site. While the changes to the landform would be permanent and irreversible, they would result in a reduction of visibility of activities within the site and once restored could be seen as a partial reversal of / improvement on existing effects.	
Along the local road within 300m north of the site (**Viewpoints B & D**)	Size and Scale: **SMALL** Geographical Extent: **NEGLIGIBLE** Duration / Reversibility: **TEMPORARY / SHORT-TERM – REVERSIBLE** **Notes:** Some parts of the existing facility can be glimpsed through gaps in the existing hedgerow along the northern site boundary but make up small proportions of the overall views (except when standing in one of the gaps along the northern boundary, such as Viewpoint B, which is located several meters from the public road and not typically experienced by members of the public). The currently permitted soil recovery works will result in the current ground levels being raised further within the visible areas of disturbed ground, with the southern section of the site being raised c. 3m higher than the northern section. The existing disturbed ground within the site has a similar appearance to a ploughed field and therefore is not conspicuous in this agricultural landscape, although there is more visible activity within the site than would be on an agricultural field. The main change due to the proposed development, would be that the landform in the northern part of the application area (i.e. the area closest to Viewpoints B & D) will be raised by up to 3m above what is currently permitted and closer to the level in the southern section of the site. As a result, it will screen the internal access road, including offices and weighbridge, and the currently visible parts of the southern section of the site. The already restricted views will not be restricted further by the proposed development. It is proposed to complete the landform in the northern half of the site initially, so that the works within the southern half of the site (including HGVs moving along the internal access road) will be fully screened. Also, the ground within the northern half will be planted with a native woodland mix, as soon as the recovery activities are completed, softening its appearance and providing additional screening as it matures.	**SLIGHT-NEGLIGIBLE**

Visual Receptors	Factors	Magnitude of Change
	As illustrated by the photomontages provided for Viewpoint B, due to its shallow outer slopes and the proposed native woodland planting, the new landform will not be visually intrusive and merge with the surrounding undulating topography and rural character. Some views can be glimpsed along a 300m section of road and there are c. four residential properties in its vicinity, but which have similar, if not more restricted views towards the site. The soil backfilling / recovery activities would be visible for a short period (c. 3 years), before the northern section of the site is completed and restored to grassland, providing screening of the remainder of the works within the southern section of the site. While the changes to the landform would be permanent and irreversible, they would result in a reduction of visibility of activities within the site and once restored could be seen as a partial reversal of / improvement on existing effects.	
Along the local road within 0.8km to 1.4km to the west of the site (**Viewpoint F**)	Size and Scale: **NEGLIGIBLE** Geographical Extent: **NEGLIGIBLE** Duration / Reversibility: **TEMPORARY / SHORT-TERM – REVERSIBLE** **Notes:** Part of the southern section of the existing facility can be glimpsed through gaps in the existing vegetation in the vicinity of the local road west of the site. Where visible, the site takes up a minute portion of the overall view and is almost imperceptible. The currently permitted soil backfilling / recovery activities will result in the current ground levels being raised further within the visible areas of disturbed ground. Due to the small extent of visibility and slight distance, the disturbed ground within the site is indistinguishable from a ploughed field, which is a common feature in this agricultural landscape. The only and almost imperceptible change due to the proposed development, would be that the landform in the southern part of the application area will be raised by c. 1m above what is currently permitted. Few views can be glimpsed along a 700m section of road and there are c. five residential properties in its vicinity, which are likely to experience similar restricted views towards the site. The soil backfilling and recovery activities would continue to be distantly visible for a short period (c. 6 years), before the southern section of the site is completed and restored to grassland with bands of woodland planting. While the changes to the landform would be permanent and irreversible, once restored, they could be seen as a partial reversal of / improvement on existing effects.	**NEGLIGIBLE**

Visual Receptors	Factors	Magnitude of Change
Vehicle Users only		
Along the R448 within 200m north of the existing site entrance (**Viewpoint A**)	Size and Scale: **MEDIUM** Geographical Extent: **SMALL** Duration / Reversibility: **TEMPORARY / SHORT-TERM – REVERSIBLE** **Notes:** The northern section of the existing facility is visible as a narrow band in the foreground of views, surrounded and partially screened by existing hedgerows / trees. The southern section is largely screened by topography and vegetation. The currently permitted soil backfilling / recovery works will result in the current ground levels being raised further within the visible areas of disturbed ground, to a level similar to the existing internal access road. The levels within the southern section will be raised c. 3m higher and the top of the permitted landform is therefore likely to become visible at the back of the internal access road. The visible disturbed ground within the site has a similar appearance to a ploughed field and therefore is not conspicuous in this agricultural landscape. The main change due to the proposed development, would be that the landform in the northern part of the application area (i.e. the area closest to Viewpoint A) will be raised by up to 3m above what is currently permitted and closer to the level in the southern section of the site. As a result, in views from the R448, the new landform will completely screen the internal access road, including the offices and weighbridge, and all of the southern section of the site. Views of the existing tall trees along the western site boundary and the existing block plant will also be screened. However, views of the highpoint at Old Kilcullen in a northern direction will be largely retained. The new feature along the road will increase the enclosure along the road and thereby alter the composition of the views to a moderate degree. It is proposed to complete the landform in the northern half of the site initially, so that the majority of the works within the southern half of the site (including HGVs moving along the internal access road) will be screened. Also, the ground within the northern half will be planted with a native woodland mix, as soon as the recovery activities are completed, softening its appearance and providing additional screening, as it matures. As illustrated by the photomontages provided for Viewpoint A, while blocking views into the application area, the new landform will not be visually intrusive. This is due to its shallow outer slope and due to the proposed native woodland planting, which will merge with the surrounding undulating topography and rural character. Also, the screening of activities within the site, including HGVs accessing the existing block plant, is an improvement on current views. Views are available intermittently from a 200m section of road.	**MEDIUM-SLIGHT**

Visual Receptors	Factors	Magnitude of Change
	The soil backfilling / recovery activities would be visible for a short period (c. 3 years), before the northern section of the site is completed and restored to grassland, providing screening of the majority of the works within the southern section of the site (and associated with the existing block plant). While the changes to the landform would be permanent and irreversible, they would result in a reduction of visibility of activities within the site and once restored could be seen as a partial reversal of / improvement on existing effects.	

Assessment of Visual Effects and Significance

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

Table 13-3
Magnitude of Visual Change

Visual Receptor	Sensitivity	Magnitude	Visual Effects	Nature of Effect
Residents				
Along the local road between 300-700m north of the site (**Viewpoint C**)	MEDIUM	SLIGHT	MINOR	Negative (becoming positive)
Along the local road within 300m north of the site (**Viewpoints B & D**)	MEDIUM	SLIGHT / NEGLIGIBLE	MINOR	Negative (becoming positive)
Along the local road within 0.8-1.4km to the west of the site (**Viewpoint F**)	MEDIUM	NEGLIGIBLE	MINOR / NEGLIGIBLE	Neutral
Vehicle Users				
Along the R448 within 200m north of the existing site entrance (**Viewpoint A**)	LOW	MEDIUM-SLIGHT	MINOR	Negative (becoming positive)
Along the local road between 300-700m north of the site (**Viewpoint C**)	LOW	SLIGHT	MINOR / NEGLIGIBLE	Negative (becoming positive)
Along the local road within 300m north of the site (**Viewpoints B & D**)	LOW	SLIGHT / NEGLIGIBLE	MINOR / NEGLIGIBLE	Negative (becoming positive)
Along the local road within 0.8-1.4km to the west of the site (**Viewpoint F**)	LOW	NEGLIGIBLE	NEGLIGIBLE	Neutral

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

Post – Operational Stage Visual Effects

13.116 At the post-operational stage, the internal grass area on the southern landform is likely to be returned to an agricultural grazing use, while the woodland planting would continue to mature and provide biodiversity benefits. Both will ensure that the two landforms will continue to integrate with the surrounding land. The additional screening provided by the slightly taller landform in the northern section of the site will also have an additional benefit. That is that most activities associated with the existing adjoining block plant to the north-west of the application area will be permanently screened in views from locations to the north and east of the site, including some residential properties. Ultimately, the visual effects on all visual receptors will reduce to NEGLIGIBLE at the post-operational stage.

Direct/Indirect Effects

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

Compliance with Relevant Planning Policies

Mineral Resources and Extractive Industry

13.118 The above assessment was carried out in line with current best practice, taking account of the Kildare Landscape Character Assessment and the 2006 EPA Guidelines on 'Environmental Management in the Extractive Industry'. The assessment confirmed that no sensitive landscapes, scenic views and prospects or established rights of way or walking routes would be affected by the proposed development.

13.119 A detailed Restoration Plan is submitted with this application (refer to Figure 2-5 of this EIAR), illustrating the details the phased restoration of the site. The proposed woodland mix contains native species only. The planting of a total of ca. 63,900m^2 of this woodland mix, will result in a substantial portion of the site being restored to a natural habitat. This will have multiple biodiversity benefits, such as pollinator friendly flowering trees, bird nesting and foraging habitat and habitat linkage with the treelines/hedgerows surrounding the site. It is, however, proposed to return the central sections of the southern fill area to an agricultural grazing land-use, due to the size of the area and the location of the site within a generally agricultural landscape.

13.120 In view of the above, the development is considered to be in compliance with Policy RD P8 and Objectives RD O49, RD O50, RD O51 of the current KCDP.

Landscape

13.121 The above landscape and visual impact assessment was carried out in accordance with current best guidance and taking account of relevant environmental legislation, as well as the existing landscape character assessment for County Kildare. This includes the sensitivity assessment for the landscape surrounding the application area, listed scenic routes and protected views and prospects.

13.122 The assessment concluded that there are no sensitive landscape receptors that would be affected by the proposed increased intake at the existing / permitted soil backfilling / recovery facility. Also, the proposed landforms, once restored, were assessed as able to integrate into the surrounding agricultural landscape, where visible in views. This is due to their shallow undulating appearance and proposed restoration to grassland and native woodland areas. Therefore, the character of the local landscape would be protected.

13.123 It was further found that no designated scenic routes, views and prospects or sensitive landscapes would be affected by the proposed development. Also, no further removal of existing hedgerows, agricultural land or other local landscape features would be required.

13.124 In view of the above, the development is considered to be in compliance with Policy LR P1 and Objectives LR 01, LR 02, LR 04, LR 08, LR 09, LR 10, LR 14 & LR 15 of the current KCDP.

Areas of High Amenity

13.125 There is no intervisibility of the proposed development and Dun Ailinne on top of Knockaulin Hill, due to the screening from the highpoint at Old Kilcullen, which is located between the two sites. Consequently, the proposed development will have no affect on the character, distinctiveness and sense of place of this Areas of High Amenity and is therefore considered to be in compliance with Policy LR P2 of the current KCDP.

Scenic Routes and Protected Views

13.126 The above landscape and visual impact assessment has concluded that no scenic routes, protected views, ridgelines or hilltop views listed in the current Kildare CDP or indicated on the CDP mapping would be affected by the proposed development. It is therefore considered to be in compliance with Policy LR P3 and Objectives LR O32, LR O33, LR O35 of the current KCDP.

Development Management Standards

13.127 The Restoration Plan included with this planning application (refer to EIAR Figure 2-5) provides information on the proposed phased restoration of the site, including proposed woodland planting, which will provide biodiversity benefits, as well as screening.

13.128 Sensitive visual receptors, Areas of High Amenity, Landscape Sensitivity Areas, Views and Prospects and Scenic Routes were all considered as part of the assessment and none were found to experience significant landscape or visual impacts. Also potential cumulative impacts are described.

13.129 It is therefore considered that the development management standards set out in Section 15.9.6 of the KDCP regarding the Extractive Industry, relevant to this assessment, were all addressed.

Unplanned Events (i.e. Accidents)

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

Cumulative / Synergistic Impacts

13.131 There is no intervisibility between the existing backfilling / recovery facility and any sand and gravel pits, quarries or other backfilling facilities in the wider landscape. Also, there are no known existing developments or developments currently in the planning process that would result cumulative landscape or visual impacts in combination with the proposed development.

Transboundary Impacts

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

Interaction with Other Impacts

13.133 Both the visual impacts and noise impacts experienced by local residential receptors to the north of the site were assessed as minor or less and not significant (refer to above

assessment and EIAR Chapter 10). Nevertheless, some of these receptors may experience a slightly elevated level of impact, due to an interaction of the visibility of activities within the site and noise from the HGVs and other machinery within it.

13.134 As discussed previously, the proposed taller landform(screening berm) within the northern section of the site will provide screening of the activities along the internal access road, within the southern part of the site and at the existing block plant to the northwest of the site.

13.135 In addition to that, the landform is likely to provide a barrier to some of the noise produced within the site. Considering the proposed early completion and restoration of the landform within the northern section of the site (within c. 3 years), this would have a positive long-term influence on the combined noise and visual effects experienced by the local residents. This would be both for the remainder of the proposed works in the southern section of the site, as well as the continued activities associated with the existing block plant.

‘Do-nothing Scenario’

13.136 If the proposed development is not carried out, the ongoing soil backfilling / recovery activities would continue to be carried out in line with the permitted development. The recovery activities and very similar restoration of the site would cease 3 years earlier than what is now proposed. However, the visibility of the internal access road and existing block plant in views from location to the north and east would remain more open for longer, as it would take some time for the proposed woodland planting to have a similar screening effect, as will be achieved by the proposed taller landform in the northern section of the site, as part of this application.

MITIGATION MEASURES

Operational Stage

13.137 The proposed development is largely screened in views from the surrounding area, by existing vegetation and topography. The phased restoration of the fill areas to grassland and native woodland are the main mitigating features integrated into the development design. This ensures that the landscape and visual effects are kept to a minimum. Considering the assessed absence of landscape effects and low level of visual effects, no further mitigation measures are considered necessary during the operational stage of the proposed development.

Post – Operational Stage

13.138 While the landform would remain altered, the restored site would have a similar appearance to the surrounding undulating agricultural landscape and would visually merge with this in available views. The predicted visual effects would reduce to negligible, and further mitigation measures are therefore not considered necessary for the post-operational stage of the proposed development.

RESIDUAL IMPACT ASSESSMENT

Operational Stage

13.139 As no additional mitigation measures are proposed during the operational stage, the residual levels of landscape and visual impact would be as per the assessment above. In summary, the assessment has found that the proposed development would have no landscape impacts. The visual impact on views ranges from none for the majority of locations within the study area to minor or less (i.e. impacts not regarded as significant)

for a limited number of viewpoints within 700m north and 1.4km west of the site, as well as along its eastern boundary.

Post – Operational Stage

13.140 As no additional mitigation measures are proposed during the post-operational stage, the residual levels of landscape and visual impact would be as per the assessment above. In summary, on completion of all extraction and restoration the predicted visual impacts would reduce to negligible for all identified visual receptors. There would remain no landscape impacts.

MONITORING

13.141 Apart from the proposed aftercare period (of up to 3 years), as part of the Restoration Proposals to ensure the successful establishment of the grassland area and native woodland planting (refer to EIAR Figure 2-5), there are no monitoring requirements, arising from this landscape and visual assessment.

REFERENCES

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

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

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

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

FIGURES

Legend:

- PLANNING APPLICATION BOUNDARY
- LAND HOLDING BOUNDARY
- VIEWPOINT LOCATIONS
- PHOTOMONTAGE LOCATIONS
- AREAS / SECTIONS OF ROAD WITH SIMILAR VIEWS OF THE APPLICATION AREA TO THAT OF THE SAMPLE VIEWPOINT WITHIN THE AREA
- DISTANCE FROM APPLICATION AREA BOUNDARY

LANDSCAPE / VISUAL DESIGNATIONS (KILDARE COUNTY DEVELOPMENT PLAN 2023-2029)

- SCENIC ROUTES
- HILLTOP VIEW

NATURE CONSERVATION SITES (REFER TO NPWS.IE)

- PROPOSED NATURAL HERITAGE AREAS (pNHAs)

Rev	Amendments	Date	By	Chk	Auth

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Project: INCREASED INTAKE TO EXISTING SOIL WASTE RECOVERY FACILITY
HALVERSTOWN, KILCULLEN, CO. KILDARE.

Figure Title: LANDSCAPE DESIGNATIONS AND VIEWPOINT LOCATIONS

Scale	SLR Project No.
1:20,000 @ A3	501.065158.00001

Designed	Drawn	Checked	Authorised
SH	SH	AM	AM
Date: 04/07/23	Date: 04/07/23	Date: 19/09/23	Date: 19/09/23

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

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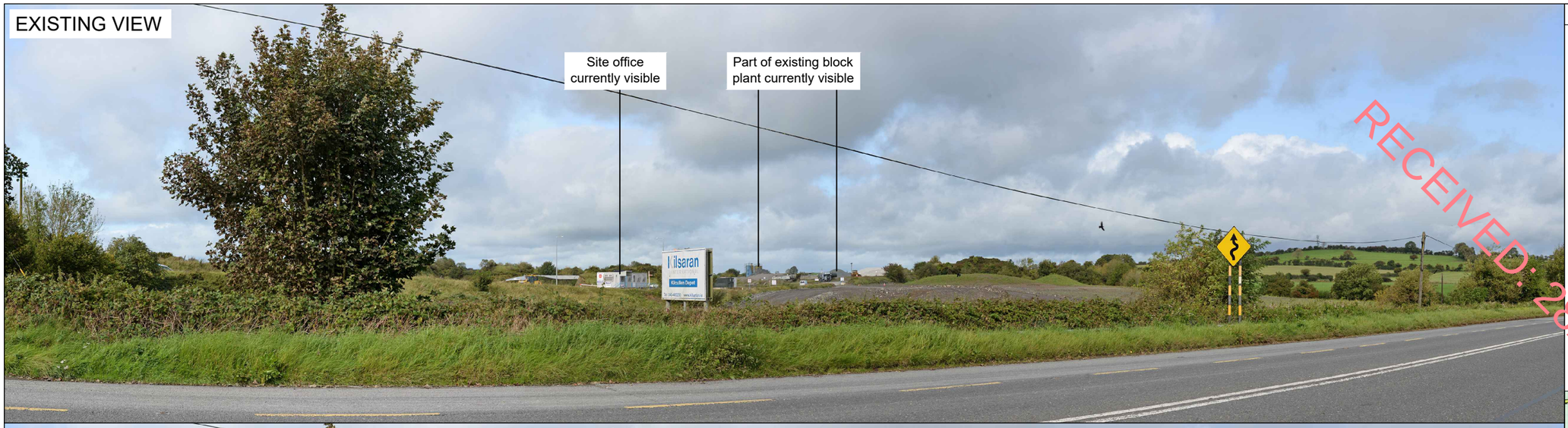
EXISTING VIEW



PHOTOMONTAGE: RESTORED FILL AREA **WITHOUT** PLANTING

PHOTOMONTAGE: RESTORED FILL AREA **WITH** PLANTING

VIEWPOINT & PHOTOMONTAGE A: R448 - Regional Road, opposite the entrance to the existing soil recovery facility at Halverstown

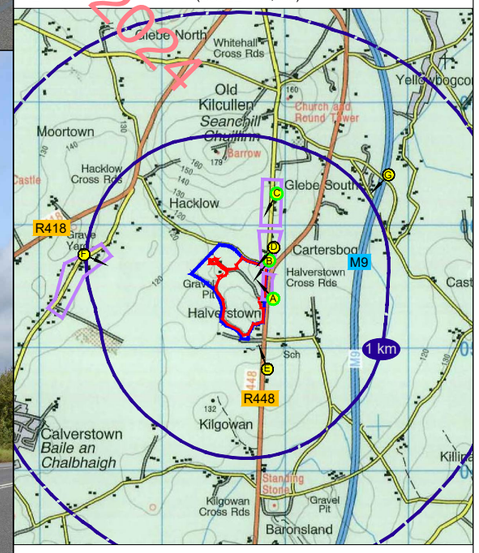
Grid Coordinates (ITM): **682790:705470** Approximate Elevation: **125m AOD** Distance from planning application boundary: **40m** Direction of View: **Northwest** Date/time of photograph: **20/09/2023 @ 11:50**

Description: This viewpoint represents views from the R448, north of the entrance to the existing soil recovery facility at Halverstown. The existing vegetation is low along sections of this part of the eastern site boundary, allowing open views over the site. It should be noted that there are no residential properties experiencing similar views along the R448. The above photomontages illustrate the shape and appearance of the proposed slightly taller fill area, with and without the proposed woodland planting.

Legend:

- LAND INTEREST BOUNDARY
- PLANNING APPLICATION AREA
- VIEWPOINT LOCATIONS
- PHOTOMONTAGE LOCATIONS
- AREAS / SECTIONS OF ROAD WITH SIMILAR VIEWS OF THE APPLICATION AREA TO THAT OF THE SAMPLE VIEWPOINT WITHIN THE AREA
- DISTANCE FROM APPLICATION AREA BOUNDARY

VIEWPOINT LOCATION MAP (SCALE 1:50,000)



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Project: INCREASED INTAKE TO EXISTING SOIL WASTE RECOVERY FACILITY
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Figure Title: VIEWPOINT A

Scale	SLR Project No.
NTS @ A3	501.065158.00001

Designed	Drawn	Checked	Authorised
SH	SH	AM	AM
Date: 21/07/23	Date: 21/07/23	Date: 25/09/23	Date: 25/09/23

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

EXISTING VIEW

PHOTOMONTAGE: RESTORED FILL AREA **WITHOUT** PLANTING

PHOTOMONTAGE: RESTORED FILL AREA **WITH** PLANTING

VIEWPOINT & PHOTOMONTAGE B: Halverstown Cross Roads, through gap in hedgerow at northern-eastern corner of the existing soil recovery facility at Halverstown

Grid Coordinates (ITM): **682785:705705** Approximate Elevation: **120m AOD** Distance from planning application boundary: **0m** Direction of View: **Southwest** Date/time of photograph: **20/09/2023 @ 12:10**

Description: This viewpoint represents the most open view of the existing soil recovery site in the vicinity of the Halverstown Cross Roads, as it was taken standing in a gap in the boundary hedgerow (i.e. not from the local road). It should be noted that views by road users and from neighbouring properties are much more restricted by intervening vegetation (refer to Viewpoint D). The above photomontages illustrate the shape and appearance of the proposed slightly taller fill area, with and without the proposed woodland planting.

Legend:

- LAND INTEREST BOUNDARY
- PLANNING APPLICATION AREA
- VIEWPOINT LOCATIONS
- PHOTOMONTAGE LOCATIONS
- AREAS / SECTIONS OF ROAD WITH SIMILAR VIEWS OF THE APPLICATION AREA TO THAT OF THE SAMPLE VIEWPOINT WITHIN THE AREA
- DISTANCE FROM APPLICATION AREA BOUNDARY

VIEWPOINT LOCATION MAP (SCALE 1:50,000)

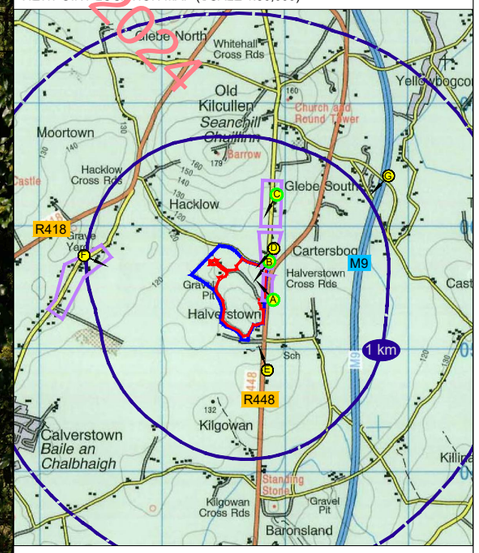

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Figure Title: VIEWPOINT B

Scale	SLR Project No.
NTS @ A3	501.065158.00001

Designed	Drawn	Checked	Authorised
SH	SH	AM	AM
Date: 21/07/23	Date: 21/07/23	Date: 25/09/23	Date: 25/09/23

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

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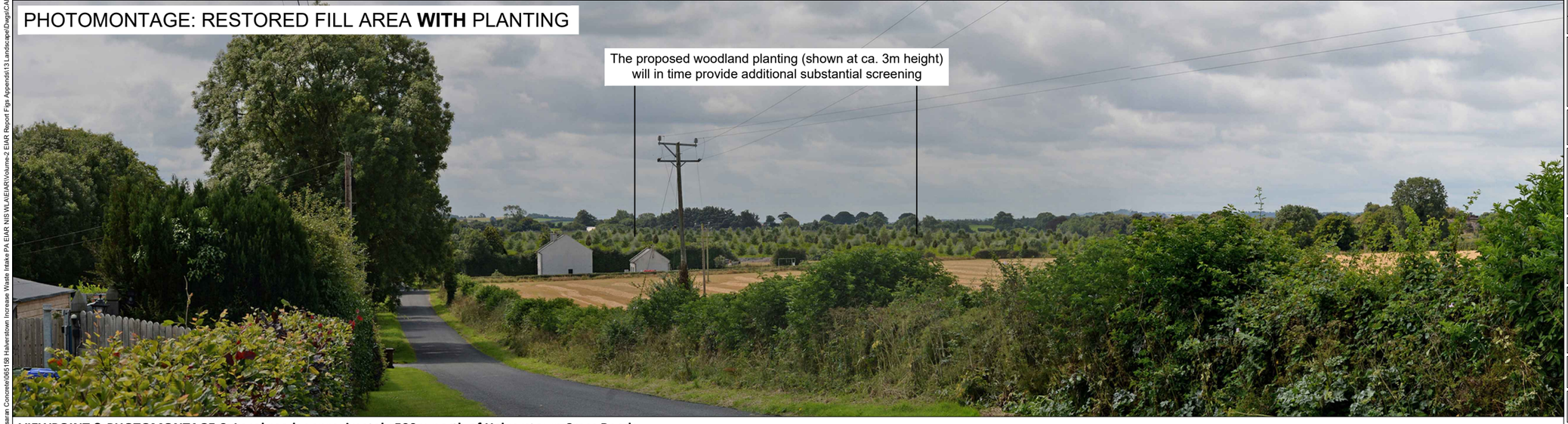
EXISTING VIEW

PHOTOMONTAGE: RESTORED FILL AREA **WITHOUT** PLANTING

PHOTOMONTAGE: RESTORED FILL AREA **WITH** PLANTING



VIEWPOINT & PHOTOMONTAGE C: Local road, approximately 500m north of Halverstown Cross Roads

Grid Coordinates (ITM): **682830:706245** Approximate Elevation: **140m AOD** Distance from planning application boundary: **550m** Direction of View: **Southwest** Date/time of photograph: **13/07/2023 @ 11:50**

Description: This viewpoint represents from an elevated section of the local road north of the Halverstown Cross Roads. There are eight residential properties in the vicinity of this section of road. None of them appear to have windows directly facing the application area. However, they are likely to experience similar views from their driveways/gardens. The above photomontages illustrate the shape and appearance of the proposed slightly taller fill area, with and without the proposed woodland planting.

Legend:

- LAND INTEREST BOUNDARY
- PLANNING APPLICATION AREA
- VIEWPOINT LOCATIONS
- PHOTOMONTAGE LOCATIONS
- AREAS / SECTIONS OF ROAD WITH SIMILAR VIEWS OF THE APPLICATION AREA TO THAT OF THE SAMPLE VIEWPOINT WITHIN THE AREA
- DISTANCE FROM APPLICATION AREA BOUNDARY

VIEWPOINT LOCATION MAP (SCALE 1:50,000)

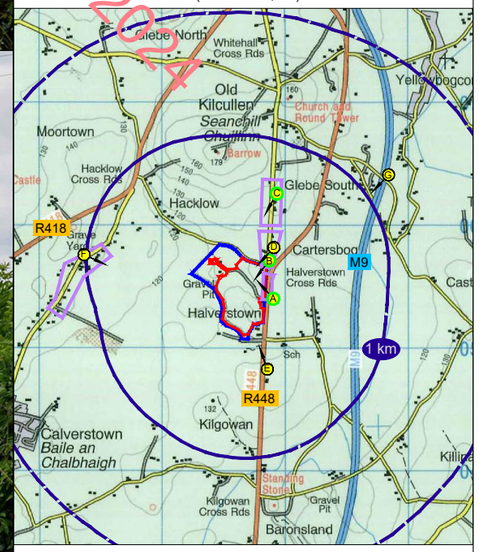


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Figure Title: VIEWPOINT C

Scale	SLR Project No.
NTS @ A3	501.065158.00001

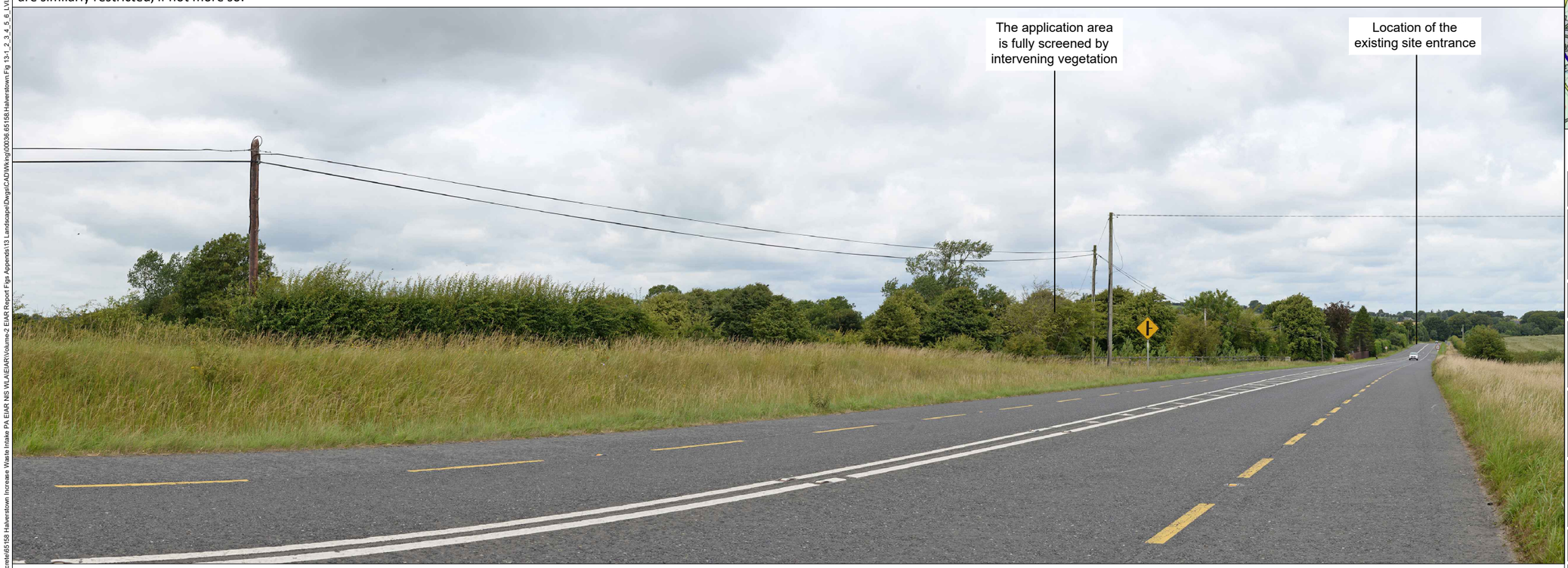
Designed	Drawn	Checked	Authorised
SH	SH	AM	AM
Date 21/07/23	Date 21/07/23	Date 25/09/23	Date 25/09/23

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

VIEWPOINT D: Local road, approximately 110m north of Halverstown Cross Roads

Grid Coordinates (ITM): **682800:705805** Approximate Elevation: **125m AOD** Distance from planning application boundary: **120m** Direction of View: **Southwest** Date/time of photograph: **13/07/2023 @ 12:10**

Description: This viewpoint illustrates how intervening vegetation typically restricts views towards the existing soil recovery facility, from the local road north of Halverstown Cross Roads, in particular from the lower elevations (compare with Viewpoint C). The gap through which Viewpoint B was taken is visible in the left half of the above photo and only allows a glimpse of the eastern half of the application area (i.e. much less open than Viewpoint B). Part of the western half of the site can be glimpsed over a field gate at the centre of the above view. However, generally views are restricted by roadside vegetation, as well as the hedgerow along the northern boundary of the site. There are four residential properties in the vicinity of this viewpoint, the views from which are similarly restricted, if not more so.



VIEWPOINT E: R448 - Regional Road, approximately 500m south of the entrance to the existing soil recovery facility at Halverstown

Grid Coordinates (ITM): **682755:704905** Approximate Elevation: **130m AOD** Distance from planning application boundary: **350m** Direction of View: **Northwest** Date/time of photograph: **13/07/2023 @ 12:45**

Description: This viewpoint illustrates how roadside/intervening vegetation fully screens views of the existing soil recovery facility from locations along the R448, south of the site entrance. This is the case even in slightly elevated locations, such as this. Views from residential properties along this section of the R448 and from locations to the south and southeast of the application area in general are similarly screened.

Legend:

- LAND INTEREST BOUNDARY
- PLANNING APPLICATION AREA
- VIEWPOINT LOCATIONS
- PHOTOMONTAGE LOCATIONS
- AREAS / SECTIONS OF ROAD WITH SIMILAR VIEWS OF THE APPLICATION AREA TO THAT OF THE SAMPLE VIEWPOINT WITHIN THE AREA
- DISTANCE FROM APPLICATION AREA BOUNDARY

VIEWPOINT LOCATION MAP (SCALE 1:50,000)

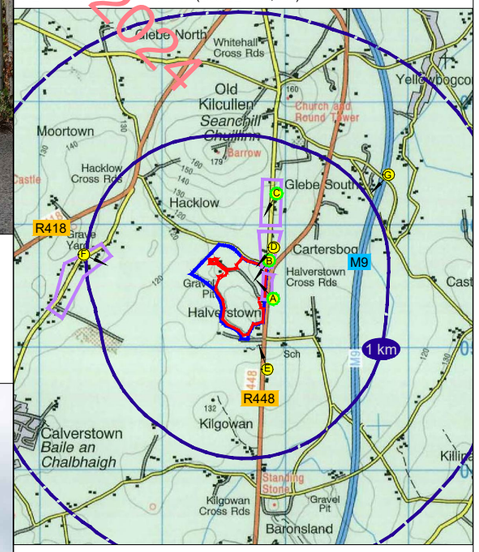


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Figure Title: VIEWPOINTS D & E

Scale	SLR Project No.
NTS @ A3	501.065158.00001

Designed	Drawn	Checked	Authorised
SH	SH	AM	AM
Date: 21/07/23	Date: 21/07/23	Date: 25/09/23	Date: 25/09/23

Figure Number: **FIGURE 13-5** Rev.

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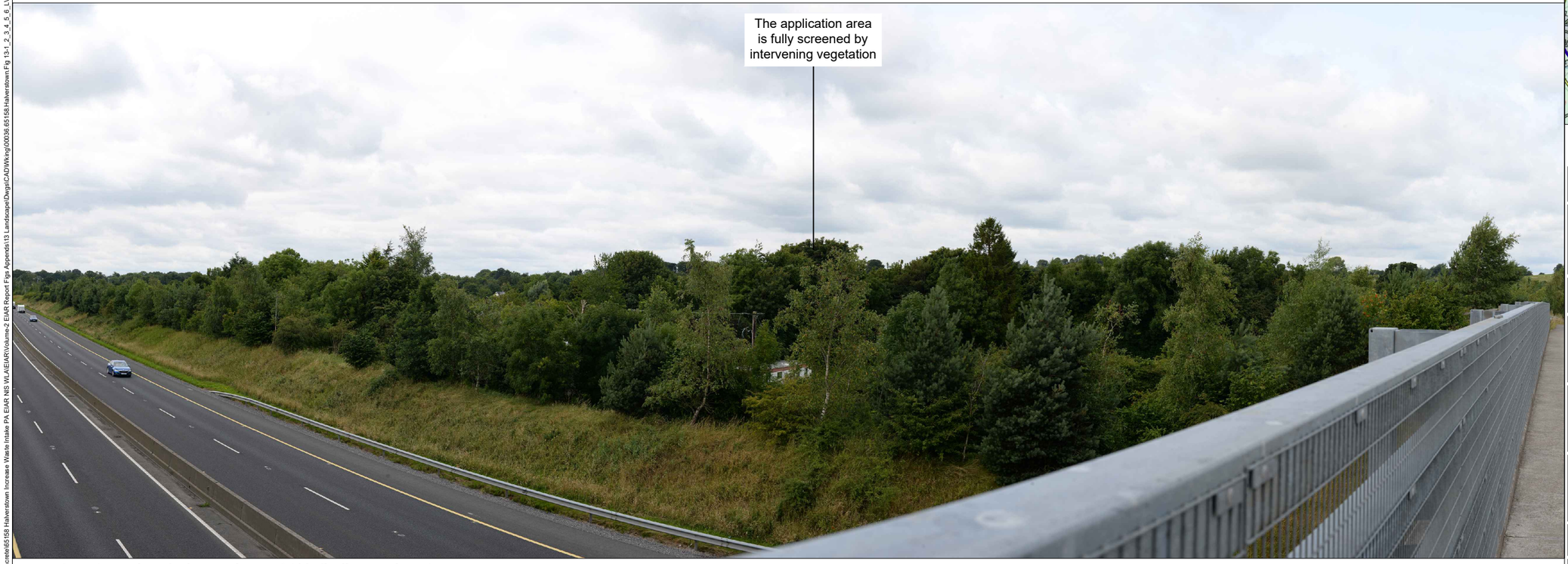
CYAL50316488 (C)

VIEWPOINT F: Local Road, approximately 1.3km northeast of Calverstown

Grid Coordinates (ITM): **681325:705785** Approximate Elevation: **145m AOD** Distance from planning application boundary: **1,070m** Direction of View: **East** Date/time of photograph: **13/07/2023 @ 11:30**

Description: Views towards the application area are generally screen by intervening vegetation and topography, in views from locations to the southwest, west and north-west of the site. This is illustrated by the left half of Viewpoint D, which shows the typically dense vegetation along the local road to the north of Calverstown. Glimpses of parts of the application area are available from very few locations along this road, i.e. in slightly elevated positions and where gaps in the existing vegetation are present, such as in the right half of the above view. The changes within the application area, both as permitted and proposed, will be barely noticeable in these available views, due to the small extent of visibility. Ca. 5 properties were identified in the vicinity of this viewpoint potentially experiencing similar views.



VIEWPOINT G: Local road, 1km southeast of Old Kilcullen, on the M9 overpass

Grid Coordinates (ITM): **683740:706395** Approximate Elevation: **130m AOD** Distance from planning application boundary: **1,200m** Direction of View: **Southwest** Date/time of photograph: **13/07/2023 @ 12:30**

Description: Views towards the application area from locations to the northeast and east are generally screened by intervening vegetation. Even in views from slightly elevated locations such as this overpass.

Legend:

- LAND INTEREST BOUNDARY
- PLANNING APPLICATION AREA
- VIEWPOINT LOCATIONS
- PHOTOMONTAGE LOCATIONS
- AREAS / SECTIONS OF ROAD WITH SIMILAR VIEWS OF THE APPLICATION AREA TO THAT OF THE SAMPLE VIEWPOINT WITHIN THE AREA
- DISTANCE FROM APPLICATION AREA BOUNDARY

VIEWPOINT LOCATION MAP (SCALE 1:50,000)

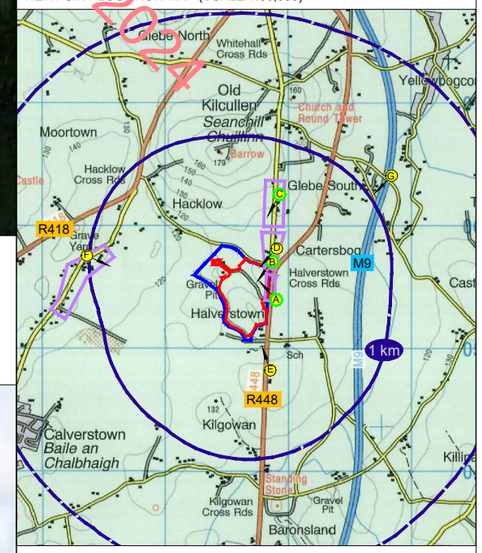


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Figure Title: VIEWPOINTS F & G

Scale	SLR Project No.
NTS @ A3	501.065158.00001

Designed	Drawn	Checked	Authorised
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Date: 21/07/23	Date: 21/07/23	Date: 25/09/23	Date: 25/09/23

Figure Number: **FIGURE 13-6** Rev.

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APPENDICES

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

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

Introduction

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

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

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

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

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

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

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

Landscape Effects

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

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

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

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

Landscape Sensitivity

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

Value Attached to Landscape Receptors

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

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

Table 13A-1
Interpretation of Landscape Designations

Designation	Description	Value
World Heritage Sites, candidate World Heritage Site	Unique sites, features or areas identified as being of international importance according to UNESCO criteria. Consideration should be given to their settings especially where these contribute to the attributes of outstanding universal value for which such an area of landscape is valued.	International
National Parks	Areas of landscape identified as being of national importance for their natural beauty and the opportunities they offer for outdoor recreation. Consideration should be given to their settings especially where these contribute to the special qualities for which the landscape is valued.	National
Local Landscape Designations (such as Areas of Outstanding Natural Beauty or Areas of High Amenity) included in local planning documents; or other landscapes of identified value.	Areas of landscape identified as having importance at the local authority level.	Local Authority
Undesignated landscapes of community value	Landscapes which do not have any formal designation but which are assessed as having value to local communities, perhaps on the basis of demonstrable physical attributes which elevate it above ordinary countryside.	Local Authority / Community
Landscapes of low value	Landscapes in poor condition or fundamentally altered by presence of intrusive man-made structures. Landscapes with no demonstrable physical attributes which elevate it above ordinary countryside.	Low

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

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

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

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

Factor	Criteria
Natural Heritage	Landscape with clear evidence of ecological, geological, geomorphological or physiographic interest. Presence of wildlife and habitats that contribute to the sense of place. Landscape which contains valued natural capital assets that contribute to ecosystem services.
Cultural Heritage	Landscape with clear evidence of archaeological, historical or cultural interest. Landscape which contributes to the significance of heritage assets. Landscape which offers a dimension of time depth.
Landscape Condition	Landscape which is in a good physical state both with regard to individual elements and overall landscape structure. Absence of detracting/incongruous features.
Associations	Landscape which is connected with notable people, events and the arts.
Distinctiveness	Landscape that has a strong sense of identity or place. Presence of distinctive features that are characteristic of a place, or presence of rare/unusual features that confer a strong sense of place. Includes landscape that makes an important contribution to the character or identity of a settlement.
Recreational	Landscape offering recreational opportunities where experience of landscape is important. Includes open access areas, common land and rights of way where appreciation of the landscape is an important element of the experience. Landscape that forms part of a view that that is important to the enjoyment of a recreational activity.
Perceptual (Scenic)	Landscape that appeals to the senses, primarily the visual sense. Distinctive features, or distinctive combinations of features. Strong aesthetic qualities. Visual diversity or contrasts. Memorable/distinctive views or landmarks, or landscape that contributes to these.
Perceptual (Wildness and Tranquillity)	Landscape with a strong perceptual value notably remoteness, wildness, tranquillity and/or dark skies.
Functional	Landscape which performs a clearly identifiable and valuable function, particularly in the healthy functioning of the landscape. Natural hydrological systems, important parts of the green infrastructure network, pollinator rich habitats. Landscapes that have strong physical or functional links with an adjacent national landscape designation or are important to the appreciation of the designated landscape and its special qualities.

Susceptibility of Landscape Receptors to Change

As set out in GLVIA3, susceptibility refers to the ability of the landscape receptor to "accommodate the proposed development without undue adverse consequences for the baseline situation and/or the achievement of landscape planning policies and strategies". Judgement of susceptibility is particular to the specific characteristics of the proposed development and the ability of a particular landscape or feature to accommodate the type of change proposed and makes reference to the criteria set out in **Table 13A-3** below. Aspects of the character of the landscape that may be affected by a particular type of development include landform, skylines, land cover, enclosure,

human influences including settlement pattern and aesthetic and perceptual aspects such as the scale of the landscape, its form, line, texture, pattern and grain, complexity, and its sense of movement, remoteness, wildness or tranquillity.

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

Table 13A-3
Landscape Receptor Susceptibility to Change

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

Defining Sensitivity

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

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

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

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

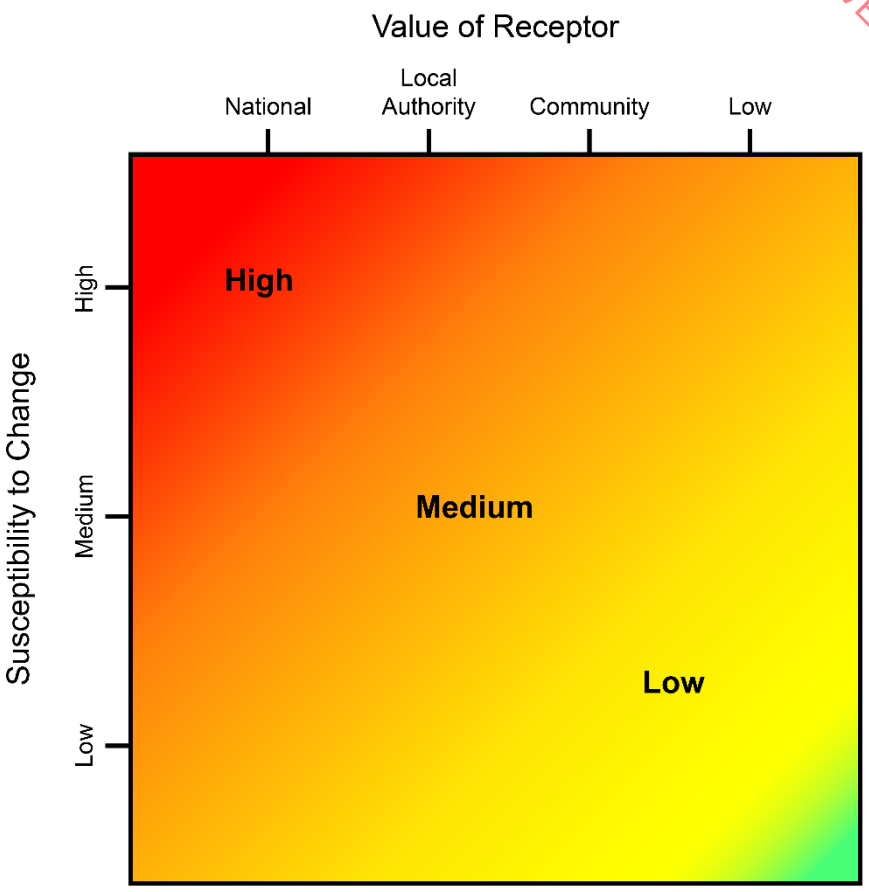


Table 13A-4
Example Levels of Sensitivity defined by Value and Susceptibility of Landscape Receptors

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

Magnitude of Landscape Change

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

Size and Scale of Change

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

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

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

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

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

Geographical Extent of Change

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

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

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

Duration and Reversibility of Change

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

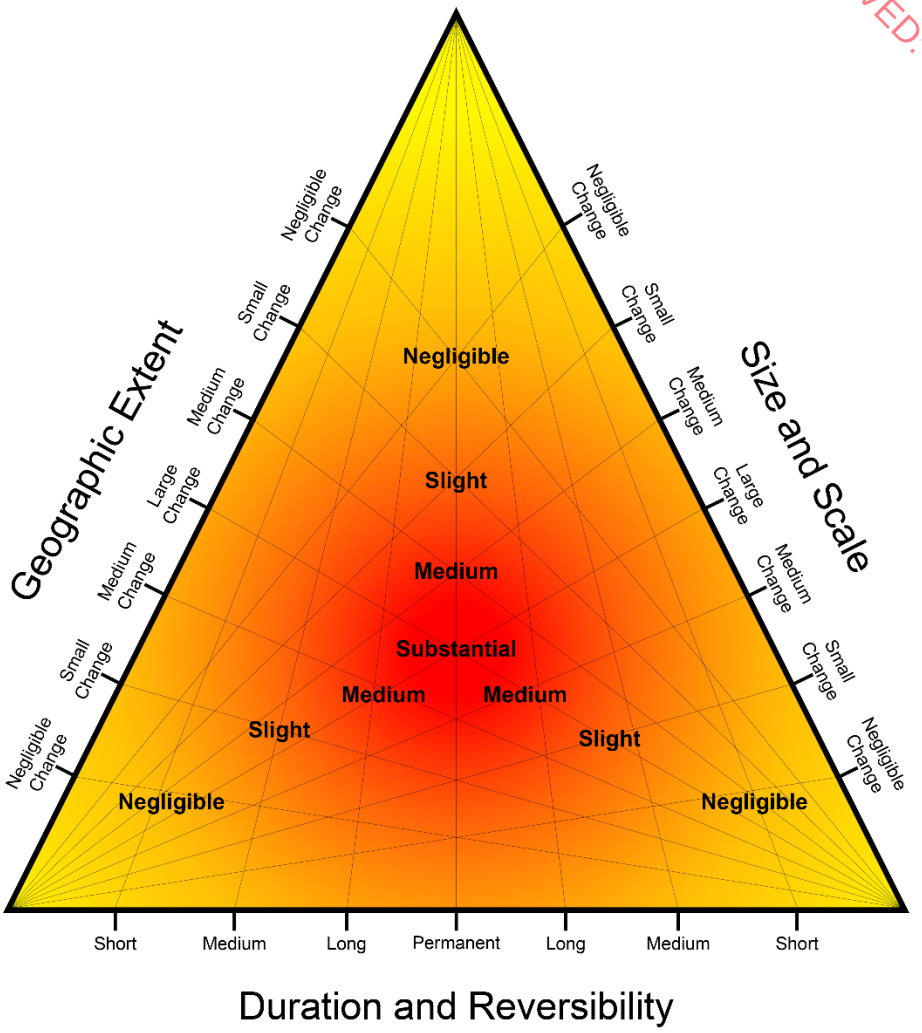
Table 13A-7
Magnitude of Landscape Change: Duration and Reversibility

Category	Description
Permanent/ Irreversible	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.

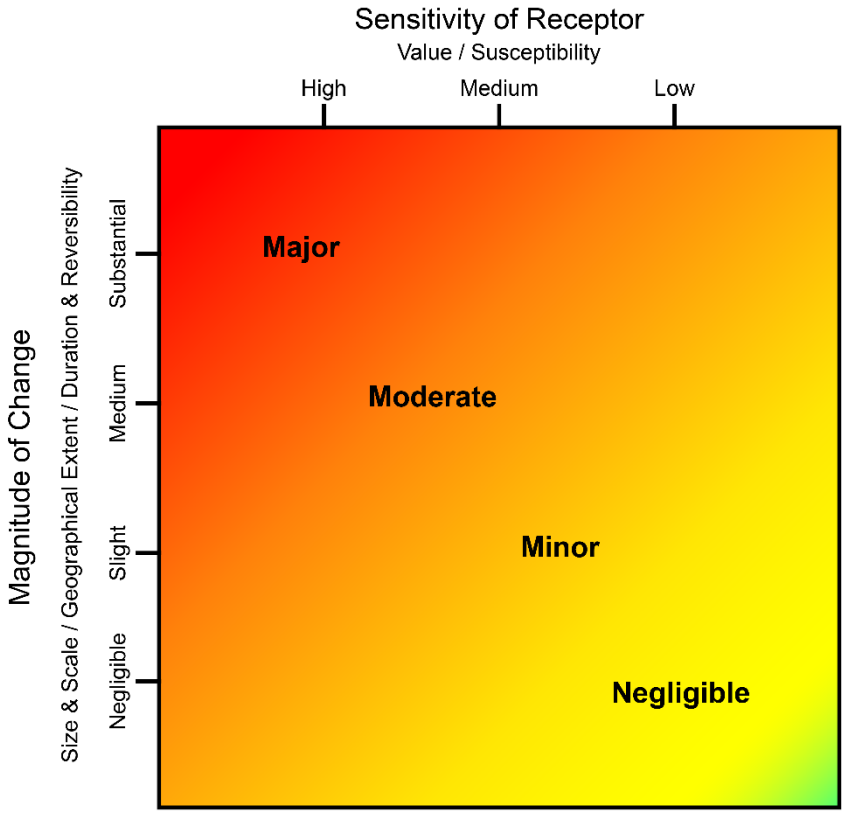
Figure 13A-2
Determining the Magnitude of Landscape Change



Assessment of Landscape Effects

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

Figure 13A-3
Assessment of Landscape Effects



Visual Effects

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

- Communities within settlements (i.e. towns and villages);
- Residents of individual properties and clusters of properties 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;
- Users of other roads;
- Rail passengers;
- People at their place of work.

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

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

Visual Sensitivity

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

Value Attached to Views

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

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

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

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

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

Susceptibility of Visual Receptors to Change

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

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

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

Table 13A-9
Visual Receptor Susceptibility to Change

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

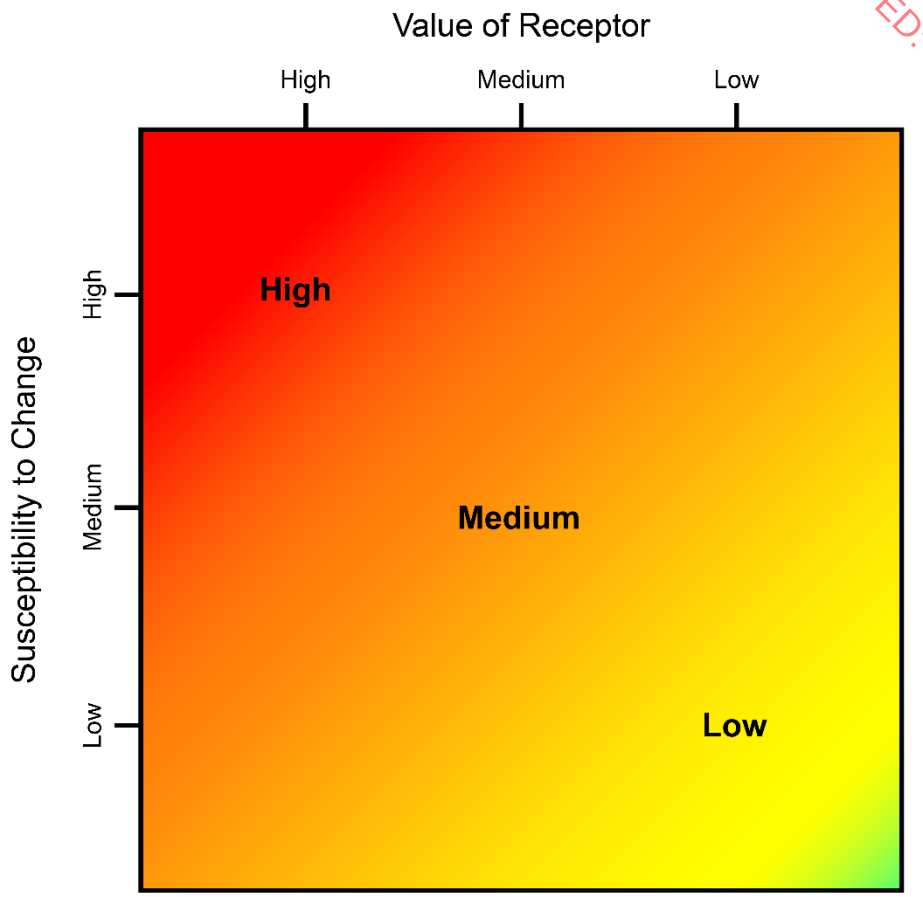
Defining Sensitivity

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

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

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

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



Magnitude of Visual Change

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

Size and Scale of Change

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

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

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

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

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

Geographical Extent of Change

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

The following factors are considered for each representative viewpoint:

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

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

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

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

Duration and Reversibility

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

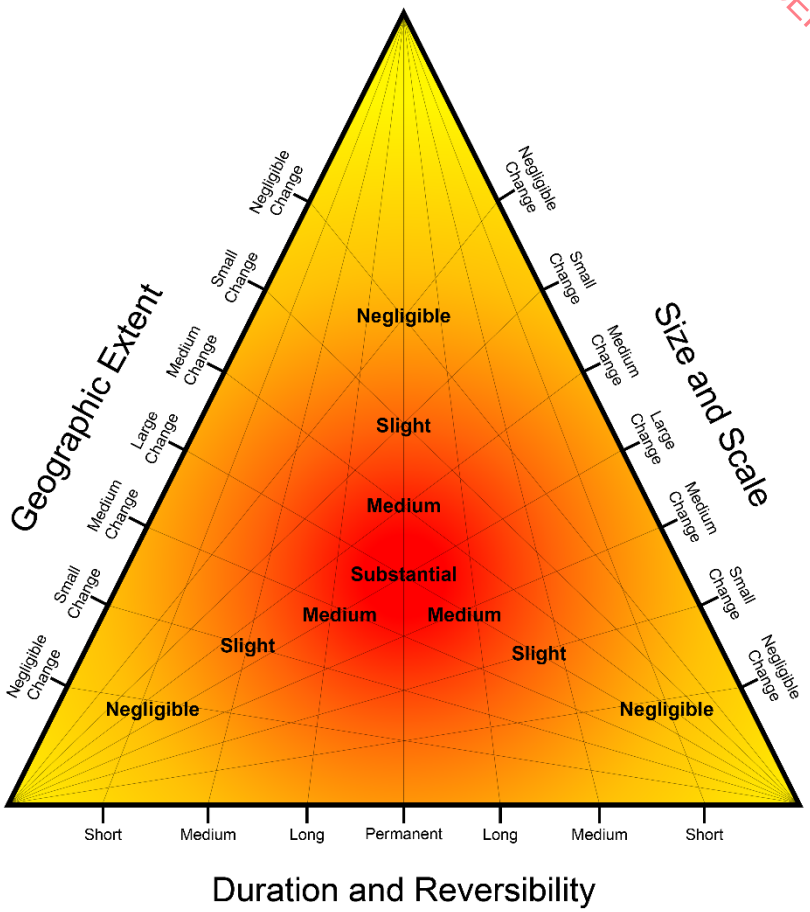
Table 13A-13
Magnitude of Visual Change: Duration and Reversibility

Category	Description
Permanent/ Irreversible	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.

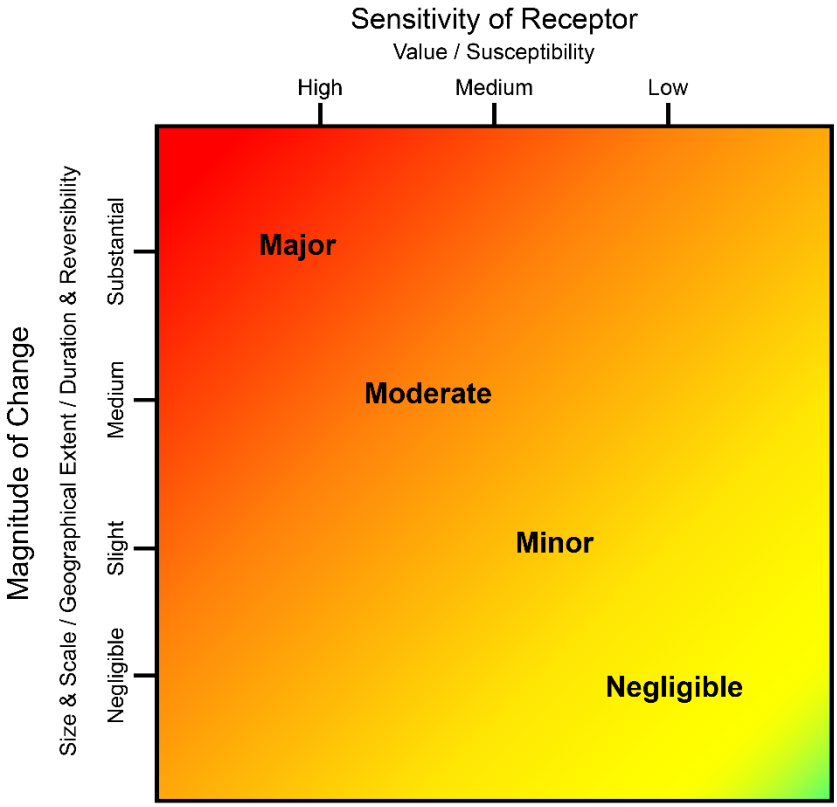
Figure 13A-5: Determining the Magnitude of Visual Change



Assessment of Visual Effects and Significance

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

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



APPENDIX 13-B

Viewpoint Photography and Photomontage Methodology

Appendix 13-B
Viewpoint Photography and Photomontage Methodology

Introduction

An integral part of the assessment/appraisal process is often the recording of viewpoint photography and the preparation of visualisations, including photomontages. Such output is valuable in illustrating visual change for assessment purposes and in helping readers to understand the nature of that change.

It is essential that such output is prepared to be technically correct and an accurate representation of that which is illustrates.

The photography and visualisations are prepared with knowledge and understanding of the principles and guidance provided in a number of relevant documents, including:

- Landscape Institute (2011) Advice Note 01/11, Photography and Photomontage in Landscape and Visual Impact Assessment;
- Landscape Institute (2017): Technical Guidance Note 06/19: Visual Representation of Development Proposals;
- Scottish Natural Heritage (December 2014) Visual Representation of Wind Farms, Version 2.2; and
- The Highland Council (2017) Visualisation Standards for Wind Energy Developments.

Note that not all elements the above documents are relevant to all developments and a pragmatic and proportionate approach has been taken to illustrate the Proposed Development effectively.

Viewpoints

The viewpoints are chosen to reflect a range of views towards the Proposed Development and the selection process is explained in the assessment/appraisal.

At each viewpoint baseline photography is recorded to allow the analysis of the effects that are predicted to occur as a result of the proposed development. Where appropriate, the assessment / appraisal involves the production of computer-generated visualisations / photomontages for a number of viewpoints to illustrate views of the Proposed Development. The viewpoints form an important element of the visual assessment/appraisal and can also be used to inform judgements in relation to the potential effects on landscape/townscape receptors.

Viewpoint Photography

Photography is undertaken through the use of digital single lens reflex (dSLR) camera and a prime lens[2], with the camera and lens combination being comparable with a 35mm format camera and 50mm focal length lens combination. The camera is mounted on a tripod with a panoramic head in order to obtain a stable platform for single frame and panoramic views. A camera height of approximately 1.5m is used at each location, unless otherwise stated. The position of the tripod is recorded with a handheld GPS device. In addition to recording the location of the viewpoint, observations in regard to time of day, weather, cloud cover, and visibility are made.

Following completion of the fieldwork, the photography is reviewed and the clearest images selected for the production of panoramic images. In some cases, limited adjustments are made to the images through the use of Adobe Photoshop software in order to improve appearance of the photography e.g. adjustments to exposure and sharpness. The photography for each viewpoint

[2] fixed focal length, as opposed to a zoom lens

comprises a panorama created by joining the images in Adobe Photoshop, using cylindrical projection.

Three Dimensional Modelling

A three-dimensional model has been prepared for the proposed development and the surrounding area using survey software. This links a model of the proposed development with digital terrain model data for the surrounding landform using Ordnance Survey grid co-ordinates.

Reference points are selected and positioned in the survey software. These reference points reflect clearly identifiable elements that are visible in the baseline photography. These use of reference points allows verification of the visualisations/photomontages and accurate scaling/positioning of the Proposed Development in relation to baseline components of the view.

Where fully rendered views of the proposed development are produced in 3D modelling software, virtual cameras are positioned in the correct position relative to the development to match the baseline viewpoint photography. The lighting of the view in the 3D model is selected based upon the date, time and weather conditions applicable to the photography. While every effort is undertaken to render the development to account for the prevailing lighting conditions, some adjustment of the rendering and/or photograph is sometimes required to create a suitably realistic impression of the development.

Visualisations

The visualisations/photomontages that form part of the assessment/appraisal are presented in a way that provides a predicted view of the Proposed Development relative to, and within, the surrounding context. The main objective of the visualisation/photomontage process is to assist the assessor in determining the change and resultant effect on the receptors at the viewpoint location.

In the case of photomontages, Adobe Photoshop is used to combine the image of the three-dimensional survey model with the baseline photography using the reference points present in both (as described in the three dimensional modelling step above). The modelled view of the proposed development is then integrated with the photography as a third layer and matched to the reference points in the survey model and rendered view to accurately position and scale the Proposed Development within the view. The Proposed Development is also placed carefully in relation to foreground and background vegetation to ensure it is depicted in a realistic way.

The visualisations/photomontages are presented in at A3 size for ease of viewing. The visualisations should be used in the field at the viewpoint location to help appreciate the level of effect that is likely to result from the Proposed Development.