Derrygreenagh Power Project
Environmental Impact Assessment Report

Chapter 10: Landscape and Visual

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10.0 LANDSCAPE AND VISUAL

10.1 Introduction

10.1.1 This chapter of the Environmental Impact Assessment Report (EIAR) identifies and assesses the likely significant effects of the Proposed Development and Overall Project on the landscape character and visual amenity of the study area.

10.1.2 It identifies the mitigation and compensation measures that will be implemented to prevent, reduce, or offset potential adverse landscape and visual effects or enhance potential beneficial effects, where possible.

10.1.3 The chapter is supported by the following technical documents:

- Appendix 10A – Photomontage Booklet (refer to EIAR Volume II);
- Appendix 10B – Landscape Mitigation Strategy (refer to EAIR Volume II);
- Figure 10.1 Landscape Designations (refer to EIAR Volume III);
- Figure 10.2 ZTV – OCGT 45m Stack (refer to EIAR Volume III);
- Figure 10.2 ZTV – CCGT 60m Stack (refer to EIAR Volume III);
- Figure 10.3 ZTV – Lattice towers (refer to EIAR Volume III); and
- Figure 10.4 ZTV – All Project Elements (refer to EIAR Volume III).

10.1.4 A full description of the Overall Project site is presented in Chapter 4 of this EIAR, and details of the Proposed Development and Overall Project are presented in Chapter 5 of this EIAR. The Proposed Development area predominantly comprises a brownfield site and was previously a commercially harvested raised peat bog.

Statement of Authority

10.1.5 Chapter 10: Landscape and Visual, was prepared and reviewed by the following AECOM consultants:

10.1.6 **Author: Maria Donohoe**

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10.1.7 This Chapter has been prepared by Maria Donohoe, Landscape Architect, BA (Hons) MILI. Maria is a Landscape Architect with AECOM Ireland Ltd. Maria has Bachelor of Honours in Landscape Architecture from University College Dublin and is a corporate member of the Irish Landscape Institute. She has worked in the Republic of Ireland and the UK and has experience on a range of projects across the public and private sectors. Maria has provided landscape and visual impact assessment for urban and rural developments, in residential, renewable energy projects as well as industrial, electricity, and road infrastructure developments. She provides technical reviews of architectural and landscape architectural design proposals, develops landscape mitigation strategies and design solutions to reduce/minimise potential landscape and visual effects through landscape change.

10.1.8 **Co-Author / Reviewer: John Nelson**

Title: Principal Landscape Architect & LVIA, AECOM

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10.1.9 Principal Landscape Architect with experience in UK, Republic of Ireland and Middle East as design lead and in preparation of Landscape and Visual Impact Assessment, Mitigation and Landscape Management for various residential schemes, road schemes and industrial schemes for both local authority and private clients. John is a chartered member of the Landscape Institute.

10.1.10 **Co-Author / Reviewer: Joerg Schulze**

Title: Associate Director Landscape Architecture & LVIA, AECOM

Qualifications: Diplom-Ingenieur (FH) Landscape Architecture (Erfurt, Germany), MILI

10.1.11 Joerg Schulze is a qualified Landscape Architect since 2003 and a corporate member of the Irish Landscape Institute since 2008. He has over 20 years' professional experience working for clients in the private and public sectors. He has a comprehensive track record in developing and managing landscape and visual impact assessments of industrial, infrastructural, commercial, renewable energy, tourism, residential and civic developments throughout the island of Ireland and in the UK.

10.1.12 Joerg has developed and prepared ECR, EIA & EIAR chapters including constraints studies, site suitability assessments, feasibility studies and associated mapping. He has also produced residential visual impact assessments of individual private properties, manages the production of photomontages and the preparation of ZTV/TVI mapping and has been supervising the required maintenance period for mitigation planting schemes.

10.1.13 Joerg is a regular expert witness at Oral Hearings / Public Inquiries and prepared affidavits. He is an experienced team leader and works closely with other disciplines. He undertakes stakeholder engagements, consultations with communities and planning authorities, and has organised and participated in public workshops.

10.2 Methodology

Scope

10.2.1 The Proposed Development comprises a Power Plant Area (which includes a Combined Cycle Gas Turbine (CCGT) unit and an Open Cycle Gas Turbine (OCGT) unit), an Electricity Grid Connection (including 220 kV and 400kV substation sites, 220 kV overhead transmission line and underground cable) within the Derrygreenagh bog group in Co. Offaly.

10.2.2 The Overall Project includes a Gas Connection Corridor. The Gas Connection Corridor is not being applied for in the planning application for the Proposed Development (as it will be applied for by Gas Networks Ireland (GNI) under a separate consenting processes), however, it has been assessed in this EIAR as part of the 'Overall Project' due to the integral nature between the gas connection and operation of the Proposed Development.

10.2.3 Full details of the Proposed Development and Overall Project are presented in Chapter 5 of this EIAR.

10.2.4 The type and duration of landscape and visual effects will fall within three main stages, those being the construction, operational, and decommissioning phases.

10.2.5 Construction phase effects include:

- Physical effects arising from construction of the Proposed Development and Overall Project on the local landscape resource;
- Effects to landscape character and visual amenity within the study area as a result of changes to elements present within the existing landscape and/ or visual amenity as a result of construction activities;
- Effects of short term construction phase site infrastructure such as site traffic and construction compounds;
- Effects of partially built Proposed Development and Overall Project in various stages of construction; and
- In-combination effects of the elements of the Proposed Development and Overall Project, as well as cumulative effects with other permitted developments of a similar type and scale upon the landscape and visual resource of the study area.

10.2.6 Operational phase effects include:

- Effects of the Proposed Development and Overall Project on landscape resources and landscape character, including the perceptual qualities of the landscape;
- Effects of the Proposed Development and Overall Project on views and visual amenity; and
- In-combination effects of the elements of the Proposed Development and Overall Project, as well as cumulative effects with other permitted developments of a similar type and scale upon the landscape and visual resource of the study area.
- Decommissioning phase effects will be similar to construction effects as listed above, as the removal / demolishing works will require similar machinery affecting the landscape and visual amenity.

10.2.7 Elements of the Proposed Development and Overall Project will become long-term (PPA) or permanent (EGC & GCC) features in the visual amenity of parts of the study area following the completion of construction works. The assessment takes account of this in the determination of residual visual effects.

10.2.8 Offaly and Westmeath County landscape designations have been reviewed as part of this assessment. However, given the nature of the Overall Project, its location, scale, and setting, it is considered that the majority of likely significant effects will occur within the locality of the Site and will not affect the wider landscape character or visual amenity (please refer to Section 10.5 Predicted Impacts for further details).

10.2.9 The landscape designations of County Kildare were reviewed as part of this assessment; however, significant landscape and visual effects were screened out due to intervening topography and vegetation as well as due to the effects of distance (The Proposed Development is located more than 10 km away from the border of County Kildare).

10.2.10 It is envisaged that the Power Plant Area will have a design life of at least 25 years. At the end of the design life, this element of the Proposed Development and Overall Project will be either decommissioned, or the lifetime could potentially be extended. Decommissioning or extension of the lifetime of the asset will therefore be expected to commence at some point after 2052. At that time, detailed decommissioning procedures will be produced in line with prevailing good practice to ensure that there will be no significant, adverse environmental effects from the decommissioning of the Power Plant Area. As a result, additional potential impacts and associated effects arising during the decommissioning phase are not anticipated above and beyond those already assessed during the construction phase.

Effects Scoped Out

10.2.11 Effects arising from the process of decommissioning of the Power Plant Area are considered to be of a similar nature and duration to those arising from the construction process and have therefore not been considered separately in this chapter. Where this assessment refers to potential construction effects of the structures of the Power Plant Area, these are also representative of predicted decommissioning effects.

10.2.12 The Electricity Grid Connection and the Gas Connection Corridor will be managed by the transmission asset operators (TAO) and transmission system operators (TSO) (ESBNI and EirGrid for electricity, and GNI for gas) as part of the national grid electricity and the national gas networks respectively. Upon decommissioning of the Power Plant Area, the 220 kV and 400 kV substations and associated transmission infrastructure will remain in-situ and form part of the national grid infrastructure. Similarly, the Gas Connection Corridor may have residual life remaining and the operational life may be extended if appropriate and/or the asset refurbished and retained as part of the national transmission network. Therefore, effects of the decommissioning of the Electricity Grid Connection and Gas Connection Corridor have not been considered as this is not envisaged.

Assessment Guidelines:

10.2.13 The following main guidelines used in the assessment include:

- EPA: Guidelines on the information to be contained in Environmental Impact Assessment Reports[1];
- LI/IEMA: Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (referred to as GLVIA3 henceforth)[2];
- TII: Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (PE-ENV-01101)[3]; and
- Landscape Institute - Visual Representation of Development Proposals, Technical Guidance Note 06/19[4].

10.2.14 A full list of references is included in Section 10.9 References.

Assessment Process

10.2.15 The assessment is undertaken based on the following key tasks and structure:

- Establishment of the Baseline or receiving environment;
- Appreciation of the Proposed Development and Overall Project;
- Identification of mitigation measures; and
- Assessment of landscape and visual effects (including cumulative).

Limitations and Assumptions

10.2.16 The Gas Connection Corridor does not form part of this planning application but is considered by this EIAR as it is integral to the project. Consent for the Gas Connection Corridor will be applied for by Gas Networks Ireland (GNI) subject to detailed design and supported by specific assessments. A 1 km wide tract of land in a generally northwest –

[1] Environmental Protection Agency, Guidelines on the information to be contained in Environmental Impact Assessment Reports (May 2022)
[2] Landscape Institute and Institute of Environmental Management and Assessment - Guidelines for Landscape and Visual Impact Assessment, Third Edition (2013).
[3] Transport Infrastructure Ireland, Landscape Character Assessment (LCA) and Landscape and Visual Impact Assessment (LVIA) of Specified Infrastructure Projects - Overarching Technical Document, PE-ENV-01101, December 2020
[4] Landscape Institute - Visual Representation of Development Proposals Technical Guidance Note 06/19, 17 September 2019

southeast alignment is identified as the proposed corridor. Given the uncertainty over the final route and development footprint of the Gas Connection Corridor, the examination of the associated effects on landscape character and visual amenity is considered in so far as practicable at high level within this EIAR chapter.

10.2.17 A cumulative assessment of the interaction of the predicted effects between the Gas Connection Corridor and the Proposed Development is provided in Section 10.8.

Establishment of the Receiving Environment

10.2.18 A baseline study has been undertaken through a combination of desk-based research (prior to the on-site appraisal) and on-site appraisal (as described below in Section 10.2.71 'Fieldwork') in order to establish the existing conditions, including landscape value, susceptibility and sensitivity of the landscape and visual resources of the study area. Desk based research has involved a review of relevant planning and policy documents, existing Landscape Character Assessments (LCAs) provided by planning authorities (Kildare, Westmeath & Offaly County Councils), as well as mapping (Ordnance Survey Ireland (OSI) Discovery Mapping, 1:50,000) and aerial photography (Google Earth) and other relevant documents and publications as listed in Section 10.9 References.

Assessment of Effects

10.2.19 The landscape and visual impact assessment seeks to identify, predict, and evaluate the significance of potential effects to landscape characteristics and established views. The assessments are based on an evaluation of the value and susceptibility, and therefore sensitivity to change and the magnitude of change for each landscape or visual receptor.

10.2.20 The assessment acknowledges that landscape and visual effects change over time as the existing landscape evolves and proposed planting establishes and matures. The assessment therefore reports on likely effects during both construction and operation of the Proposed Development and Overall Project. The visibility of the Proposed Development and Overall Project in the landscape or view will vary according to the existing screening effects of local topography, structures, and buildings, intervening existing vegetation and type and height of the proposed structures.

Study Area

The initial 'Area of Search' for the desktop review extended approximately 10 km from the boundary of the Proposed Development and Overall Project in all directions. This was informed by the consideration of the location and scale of the Proposed Development and desk based analysis of OSI mapping and aerial photography. The production of Zone of Theoretical Visibility (ZTV) mapping (refer to EIAR Volume III, Figures 10.2 – 10.5) and the mapping of landscape designations (refer to EIAR Volume III, Figure 10.1 Landscape Designations) provided further guidance on the initial study area radius. This information was used to determine the potential visibility of the Proposed Development.

Fieldwork was subsequently undertaken to verify the findings of the desktop study. This analysis determined that the majority of likely significant landscape and visual effects will arise within a 5km study area and within approximately 500m from the Gas Connection Corridor boundary due to the scale of the Proposed Development and Overall Project, the effects of distance, intervening topography, existing vegetation and built structures.

It is acknowledged that the Proposed Development / Overall Project may be visible from locations beyond the study area of 5km / 500m radius and as such it is important to note that the study areas define the area within which potential effects could be significant, rather than defining the extent of visibility.

Zone of Theoretical Visibility (ZTV)

10.2.21 Mapping the extent of the area from which a development is likely to be visible is commonly referred to as a ZTV.

10.2.22 ZTV mapping is based on Ordnance Survey terrain data and has been produced for a 10 km radius from the centre of tall components of the Proposed Development, namely the OCGT 45m stack, the CCGT 60m stack, lattice towers as well as combined elements (refer to EIAR Volume III, Figures 10.2 to 10.5). The ZTVs illustrate the theoretical visual extent of these elements of the Proposed Development.

10.2.23 It should be noted that ZTV mapping does not consider the effects of seasons, lighting, weather conditions or visibility over distance. Moreover, a ZTV does not consider the screening effects of existing vegetation or built structures and therefore indicates a 'worst-case scenario'. For this reason, ZTV mappings' principal use was to assist during the desktop viewpoint selection process identifying viewpoints for further analysis on site.

Landscape and Visual Impact Assessment Criteria

10.2.24 The assessment acknowledges that landscape and visual effects change over time as the existing landscape external to the Proposed Development evolves and proposed planting establishes and matures.

10.2.25 The significance of an effect or impact is determined by two distinct considerations:

10.2.26 The **Nature** of the receptor likely to be affected, namely:

- The value of the receptor.
- The susceptibility of the receptor to the type of change arising from the Proposed Developments.
- The sensitivity to change is related to the value attached to the receptor.

10.2.27 The **Magnitude** of the effect likely to occur, namely:

- The size and scale of the landscape and visual effect (for example, whether there is a complete or minor loss of a particular landscape element).
- The geographical extent of the areas that will be affected.
- The duration of the effect and its reversibility.
- The quality of the effect – whether it is neutral, beneficial or adverse.

10.2.28 **Error! Reference source not found.** provides the definition of the duration of both l andscape and visual effects.

Table 10.1: Definition of Duration of Effects

Duration	Description
Temporary	Effects lasting one year or less.
Short Term	Effects lasting one to seven years.
Medium Term	Effects lasting seven to fifteen years.
Long Term	Effects lasting fifteen to sixty years.
Permanent	Effects lasting over sixty years.
Reversible	Effects that can be undone, for example through remediation or restoration.

10.2.29 Both landscape and visual effects can be beneficial (positive), adverse (negative), or neutral according to the definitions set out in the Table 10.2.

Table 10.2: Definition of Quality of Effects

Quality of effects	Description
Neutral	This will neither enhance nor detract from the landscape character or view.
Beneficial (positive)	This will improve or enhance the landscape character or view.
Adverse (negative)	This will reduce the quality of the existing landscape character or view.

Landscape Effects

10.2.30 Landscape effects describe the impact on the fabric or structure of a landscape or landscape character.

10.2.31 The assessment of landscape effects firstly requires the identification of the components of the landscape. The landscape components are also described as landscape receptors and comprise the following:

- Individual landscape elements or features.
- Specific aesthetic or perceptual aspects; and
- Landscape character, or the distinct, recognisable, and consistent pattern of elements (natural and man-made) in the landscape that makes one landscape different from another.

10.2.32 The assessment will identify the interaction between these components and the Proposed Development and Overall Project during construction and operational phases. The condition of the landscape and any evidence of current pressures causing change in the landscape will also be documented and described.

Landscape sensitivity

10.2.33 Paragraph 5.39 of GLVIA3 states that "*landscape receptors need to be assessed firstly in terms of their sensitivity, combining judgements of their susceptibility to the type of change or development proposed and the value attached to the landscape*".

Landscape Value

10.2.34 Landscape value is frequently addressed by reference to international, national, regional, and local designations, determined by statutory and planning agencies. However, the absence of such a designation does not necessarily imply a lack of quality or value. Factors such as accessibility and local scarcity can render areas of nationally unremarkable quality, highly valuable as a local resource. The quality and condition are also considered in the determination of the value of a landscape.

10.2.35 With reference to GLVIA3, landscape value refers to the relative value that is attached to different landscapes by society. The definition and application of landscape value has also been informed by the Landscape Institute Technical Guidance Note 02/21: Assessing landscape value outside national designations.

10.2.36 The assessment of the value of each landscape receptor has been informed by the information set out in the baseline, including any relevant landscape designations, geographic criteria and valued attributes as set out in GLVIA3 Box 5.1, e.g., aesthetic, perceptual or experiential value.

10.2.37 Landscape value is assessed on a three-point scale, applying professional judgement and with reference to the criteria in Table 10.3.

Table 10.3: Landscape Value

Classification	Criteria
Very High	The landscape is likely to be valued for one or more of its attributes at a national or regional level, and may be protected by a statutory landscape designation, e.g., National Park. The landscape may contain elements/features which are rare or perceived as very representative of the national or regional attributes and cultural associations. The landscape may provide a high scenic and landscape quality as well as many recreational opportunities.
Medium	The landscape is likely to be valued for one or more of its attributes at a community or local level and may be designated by a landscape policy designation. The landscape may contain elements/features which are representative of the community or local level attributes and cultural associations. The landscape may provide some scenic and landscape quality and some recreational opportunities.
Very Low	The landscape is likely to be valued at a limited level only and not covered by any landscape designations. The landscape may contain features which are common and therefore do not specifically contribute to the wider landscape or cultural association. The landscape may provide a limited scenic and landscape quality and few recreational opportunities.

Landscape Susceptibility

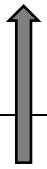
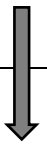
10.2.38 GLVIA3 paragraph 5.40 defines landscape susceptibility as: "*the ability of the landscape receptor (whether it be overall character or condition of a particular landscape type or area, or an individual element and/or features, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies*".

10.2.39 The following aspects of the landscape are considered to be particularly susceptible to the change proposed:

- Overall agricultural character of the landscape.
- Sense of remoteness from development.
- Openness of landscape.
- Landscapes with sloping or elevated topography.
- Intricate, historic landscapes.
- Vegetation patterns formed by the network of hedgerows and blocks of woodland; and
- Sense of separation between existing settlements.

10.2.40 Landscape susceptibility is assessed on a three-point scale applying professional judgement and with reference to the criteria set out in Table 10.4.

Table 10.4: Landscape Susceptibility Criteria

Classification	Criteria
Very High 	The receptor has a low capacity to accommodate the Proposed Development and Overall Project without effects upon its overall integrity. The landscape is likely to have a strong pattern/texture or is a simple but distinctive landscape and essentially intact. Undue consequences are likely to arise from the Scheme.
Medium 	The receptor has some capacity to accommodate the Proposed Development and Overall Project without effects upon its overall integrity. The pattern of the landscape is mostly intact and/or with a degree of complexity and with features mostly in reasonable condition. Undue consequences may arise from the Scheme.
Very Low	The receptor is robust; it can accommodate the Proposed Development and Overall Project without effects upon its overall integrity. The landscape is likely to be simple, monotonous and/or partially degraded with common/indistinct features and minimal variation in landscape pattern. Undue consequences are unlikely to arise from the Scheme.

Landscape Sensitivity

10.2.41 Landscape sensitivity to change is determined by employing professional judgment to combine value and susceptibility in order to determine landscape sensitivity, with reference to Table 10.5.

Table 10.5: Landscape Sensitivity to Change Criteria

Landscape sensitivity	Description
High	• Landscape characteristics or features with little or no capacity to absorb change without fundamentally altering their present character. • Landscape designated for its international or national landscape value or with highly valued features. • Outstanding example in the area of well cared for landscape or set of features that combine to give a particularly distinctive sense of place. • Few detracting or incongruous elements.

Medium-High	• Landscape characteristics or features with a low capacity to absorb change without fundamentally altering their present character. • Landscape designated for regional or county-wide landscape value where the characteristics or qualities that provided the basis for their designation are apparent or a landscape with highly valued features locally. • Good example in the area of a well-cared for landscape or set of features that combine to give a clearly defined sense of place.
Medium	• Landscape characteristics or features with moderate capacity to absorb change without fundamentally altering their present character. • Landscape designated for its local landscape value or a regional designated landscape where the characteristics and qualities that led to the designation of the area are less apparent or are partially eroded or an undesignated landscape which may be valued locally – for example an important open space. • An example of a landscape or a set of features which is relatively coherent, with a good but not exceptional sense of place - occasional buildings and spaces may lack quality and cohesion.
Medium-Low	• Landscape characteristics or features which are reasonably tolerant of change without determent to their present character. • No designation present or of little local value. • An example of an un-stimulating landscape or set of features; with some areas lacking a sense of place and identity.
Low	• Landscape characteristics or features which are tolerant of change without determent to their present character. • An area with a weak sense of place and/ or poorly defined character/ identity. • No designation present or of low local value or in poor condition. • An example of monotonous unattractive visually conflicting or degraded landscape or set of features.

Magnitude of Landscape Change

10.2.42 Magnitude of change is an expression of the size or scale of change in the landscape, the geographical extent of the area influenced and the duration and reversibility of the resultant effect. The variables involved are described below, as per GLVIA3:

- The extent of existing landscape elements that will be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape;
- The extent to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by addition of new ones;
- Whether the effect changes the key characteristics of the landscape, which are integral to its distinctive character;
- The geographic area over which the landscape effects will be felt (within the site itself; the immediate setting of the site; at the scale of the landscape type or character area; on a larger scale influencing several landscape types or character areas); and
- The duration of the effects (short term, medium term or long term) and the reversibility of the effect (whether it is permanent, temporary or partially reversible).

10.2.43 Changes to landscape characteristics can be both direct and indirect. Direct change occurs where a proposed development will result in a physical change to the landscape within or adjacent to the site. Indirect changes are a consequence of the direct changes resulting from a proposed development. They can often occur away from the site (for example, off-site construction staff parking) and may be a result of a sequence of interrelationships or a complex pathway (for example, a new road or footpath construction may increase public access and associated problems such as littering).

10.2.44 They may be separated by distance or in time from the source of the effects.

10.2.45 The indicative criteria applied to determine the magnitude of landscape effects are set out in Table 10.6. These are indicative and provide an example of considerations, supported and modified by explanative text in the LVIA.

Table 10.6: Indicative Criteria for Magnitude of Landscape Effects

Magnitude	Typical Criteria Descriptions
High	Large alteration to the landscape receptor or may impact an extensive area or unique characteristics at a local level. May be longer term impacts, permanent or reversible.
Medium	Partial alteration to the landscape receptor or may impact a wide area or characteristics at a local level. May be medium term impacts, permanent or reversible.
Low	Slight alteration to the landscape receptor or may impact a restricted area and few key characteristics. May be short to medium term impacts, permanent or reversible.
Very Low	Very slight alteration to the landscape receptor or may impact a limited area or no key characteristics. May be short term impacts, permanent or reversible.
None	No change to the landscape receptor.

Visual Effects

10.2.46 Visual effects are determined by the extent of visibility and the nature of the visibility (i.e., how a development is seen within the landscape); for example, whether it appears integrated and balanced within the visual composition of a view or whether it creates a focal point.

10.2.47 Adverse visual effects may occur through the intrusion of new elements into established views, which are out of keeping with the existing structure, scale, and composition of the view. Visual effects may also be beneficial, where an attractive focus is created in a previously unremarkable view, or the influence of previously detracting features is reduced. The significance of effects will vary, depending on the nature and degree of change experienced and the perceived value and composition of the existing view.

Receptors

10.2.48 For there to be a visual impact, there is the need for a viewer. Views experienced from locations such as settlements, recognised routes and popular vantage points used by the public have been included in the assessment. Receptors are the viewers at these locations. The degree to which receptors, i.e., people, will be affected by changes as a result of a proposed development depends on a number of factors, including:

- Receptor activities, such as taking part in leisure, recreational and sporting activities, travelling or working;

- Whether receptors are likely to be stationary or moving and how long they will be exposed to the change at any one time;
- The importance of the location, as reflected by designations, inclusion in guidebooks or other travel literature, or the facilities provided for visitors;
- The extent of the route or area over which the changes will be visible;
- Whether receptors will be exposed to the change daily, frequently, occasionally or rarely;
- The orientation of receptors in relation to the site and whether views are open or intermittent;
- Proportion of the developments that will be visible (full, sections or none);
- Viewing direction, distance (i.e., short-, medium- and long-distance views) and elevation;
- Nature of the viewing experience (for example, static views, views from settlements and views from sequential points along routes);
- Accessibility of viewpoint (public or private, ease of access);
- Nature of changes (for example, changes in the existing skyline profile, creation of a new visual focus in the view, introduction of new man-made objects, changes in visual simplicity or complexity, alteration of visual scale, landform and change to the degree of visual enclosure); and
- Nature of visual receptors (type, potential number and sensitivity of viewers who may be affected).

Value of the View

10.2.49 GLVIA3 stresses the importance of considering the value attached to views, for example in relation to heritage assets within the view, or through planning designations. It provides a list of indicators of the value of views in paragraph 6.37, including:

- Appearance in guidebooks or tourist maps.
- Provision of facilities, such as parking places, sign boards and interpretive materials; and
- References in literature or art.

10.2.50 The assessment of the value attached to views is also informed by the location of the viewing place and the quality or designation of the existing elements in the view, with reference to the criteria set out in Table 10.7.

Table 10.7: Value of the View

Classification	Criteria
Very High	Recognised or iconic views within nationally/internationally designated landscapes, such as National Parks, and/or national/international landmarks with views recognised in planning policy and/or management plans.
High	Views or viewing places identified in regional strategies.
Medium	Views across high quality landscape which might include features of interest, such as landmarks, which may be identified in a Local Area Plan.
Low	Views of relatively common landscape elements, likely to be valued by the communities which experience the view.
Very Low	Views across poor quality landscape with a high degree of detracting or common elements.

Visual Susceptibility

10.2.51 GLVIA3 identify that the susceptibility of visual receptors to changes in views and visual amenity is a function of:

- The occupation or activity of people experiencing the view at a particular location; and
- The extent to which their attention or interest may therefore be focused on the views and visual amenity they experience at particular locations.

10.2.52 For example, residents in their home, walkers whose interest is likely to be focused on the landscape or a particular view, or visitors at an attraction where views are an important part of the experience often indicate a higher level of susceptibility. Whereas receptors occupied in outdoor sport, where views are not important, or at their place of work, are often considered less susceptible to change. Visual susceptibility is determined with reference to the three-point scale and criteria outlined in Table 10.8.

Table 10.8: Visual Susceptibility

Classification	Criteria
Very High	People visiting areas where the view is a very important part of the experience and specific to the reason for visiting the location.
High	People visiting areas where the view is an important part of the experience and/or residents with an expectation of enjoyment of the view.
Medium	People passing through the area where views are relevant to the experience of the journey but are not specific to the reasons for visiting.
Low	People passing through the area on secondary roads, where the view is not relevant to the activity. People working outdoors where the view is not relevant to the activity but may enhance it.
Very Low	People working in buildings where the view is not relevant to the activity or passing through the area of main road and rail networks, such that views are variable and expectation of enjoyment of them is secondary.

Visual Sensitivity

10.2.53 Sensitivity to change considers the nature of the receptor; for example, a person occupying a residential dwelling is generally more sensitive to change than someone working in a factory unit. The importance of the view experienced by the receptor also

contributes to an understanding of the susceptibility of the visual receptor to change as well as the value attached to the view.

10.2.54 A judgment is also made on the value attached to the views experienced. This takes account of:

- Recognition of the value attached to particular views, for example in relation to heritage assets, or through planning designations;
- Indicators of the value attached to views by visitors, for example through appearance in guidebooks or on tourist maps, provision of facilities for their enjoyment (sign boards, interpretive material) and references to them in literature or art; and
- Possible local value; it is important to note that the absence of view recognition does not preclude local value, as a view may be important as a resource in the local or immediate environment due to its relative rarity or local importance.

10.2.55 The visual sensitivity to change is based on interpretation of a combination of all or some of the criteria outlined in Table 10.9.

Table 10.9: Visual Sensitivity to Change Criteria

Classification	Criteria
High	• Users of outdoor recreational facilities, on recognised national cycling or walking routes or in nationally designated townscapes. • Residential buildings.
Medium-high	• Users of outdoor recreational facilities, in highly valued townscapes or locally designated • townscapes or on local recreational routes that are well publicised in guidebooks. • Road and rail users in nationally designated townscapes or on recognised scenic routes, likely to be travelling to enjoy the view.
Medium	• Users of outdoor recreational facilities including public open space in moderately valued townscapes. • Users of primary transport road network, orientated towards the Proposed Development, likely to be travelling for other purposes than just the view.
Medium-Low	• People engaged in active outdoor sports or recreation and less likely to focus on the view. • Primary transport road network and rail users likely to be travelling to work with oblique views of the project or users of minor road network.
Low	• People engaged in work activities indoors, with limited opportunity for views of the Proposed Development.

Magnitude of Visual Change

10.2.56 Visual effects are direct effects as the magnitude of change within an existing view will be determined by the extent of visibility of a proposed development. The magnitude of the visual effect resulting from the development at any particular viewpoint or receptor is based on the size or scale of change in the view, the geographical extent of the area influenced and its duration and reversibility. The variables involved, as per GLVIA3, are described below:

- The scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the development;
- The degree of contrast or integration of any new features or changes in the landscape form, scale, mass, line, height, skylining, back-grounding, visual clues, focal points, colour and texture;
- The nature of the view of a proposed development, in relation to the amount of time over which it will be experienced and whether views will be full, partial or glimpses;
- The angle of view in relation to the main activity of the receptor, distance of the viewpoint from the development and the extent of the area over which the changes will be visible; and
- The duration of the effects (short-, medium-, or long-term) and the reversibility of the effect (whether it is permanent, temporary or partially reversible).

10.2.57 The magnitude of visual effect resulting from the development at any particular viewpoint or receptor is based on the interpretation of the above range of factors and is set out in Table 10.10.

Table 10.10: Magnitude of Visual Change Criteria (Visual effects)

Magnitude of visual change	Classification criteria
High	The Proposed Development and Overall Project will cause a pronounced change to the composition of the view or may be viewed in the foreground or directly. May be longer term effects, permanent or reversible and could include glint and glare effects.
Medium	The Proposed Development and Overall Project will cause a noticeable change to the composition of the view or may be viewed in the middle ground or indirectly. May be medium term effects, permanent or reversible and could include glint and glare effects.
Low	The Proposed Development and Overall Project will cause an unobtrusive change in the composition of the view or may be viewed in the background or obliquely. May be short to medium term effects, permanent or reversible and is not likely to include glint and glare effects.
Very Low	The Proposed Development and Overall Project will cause a barely perceptible change in the composition of the view or may be viewed in the background and very obliquely. May be short term effects, permanent or reversible and would not include glint and glare effects.
None	No change to the view.
High	The Proposed Development and Overall Project will cause a pronounced change to the composition of the view or may be viewed in the foreground or directly. May be longer term effects, permanent or reversible and could include glint and glare effects.

Significance Criteria

10.2.58 The objective of the assessment process is to identify and evaluate the likely significant effects arising from the Proposed Development and Overall Project. The assessment will identify the residual effects likely to arise from the finalised design considering mitigation measures and the change over time.

10.2.59 The significance of effects is assessed by considering the sensitivity of the receptor and the predicted magnitude of effect in relation to the baseline conditions. In order to provide

a level of consistency and transparency to the assessment and allow comparisons to be made between the various landscape and visual receptors subject to assessment, the assessment of significance is informed by pre-defined criteria as outlined in Table 10.11. When assessing significance, individual effects may fall across several different categories of significance and professional judgment is therefore used to determine which category of significance best fits the overall effect to a landscape or visual receptor.

Table 10.11: Categories of Significance of Landscape and Visual Effects

Significance category	Description of effect
Profound	An effect that obliterates sensitive characteristics within the landscape and/ or visual environment.
Very Significant	An effect which, by its character, magnitude, duration, or intensity significantly alters most of a sensitive aspect of the landscape and/ or visual environment.
Significant	An effect which, by its character, magnitude, duration, or intensity alters a sensitive aspect of the landscape and/ or visual environment.
Moderate	An effect that alters the landscape in a manner that is consistent with existing and emerging baseline trends.
Slight	An effect which causes noticeable changes in the landscape and/ or visual environment without affecting its sensitivities.
Not Significant	An effect which causes noticeable changes in the landscape and/ or visual environment but without significant landscape and/ or visual consequences.
Imperceptible	An effect capable of measurement but without significant landscape and/ or visual consequences.

10.2.60 The significance of effects is determined by considering the magnitude of the effect and the quality of the baseline environment affected by the Proposed Development and Overall Project. The basis for consideration of the significance of effects is included in Plate 10.1.

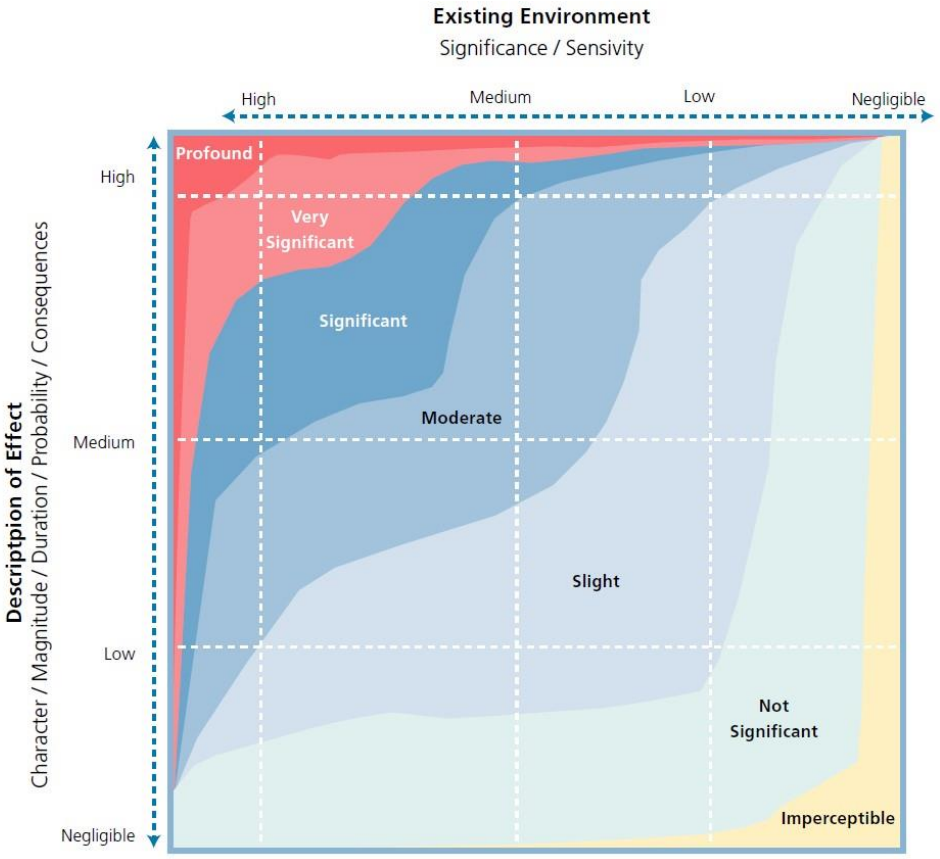


Plate 10.1 Basis for consideration of significance of effects[5]

10.2.61 Effects have been assessed for all phases of the Proposed Development and Overall Project.

10.2.62 The significance of each effect is based on the ability of the landscape character or visual receptor to accommodate changes resulting from the Proposed Development and Overall Project. The quality of the effect can then be assessed as being neutral, beneficial, or adverse. Note, a change to the landscape or visual resource need not considered be adverse simply because it constitutes an alteration to the existing situation.

Cumulative Effects

10.2.63 The approach used to determine cumulative effects has drawn on guidance on cumulative impact assessment published by the GLVIA3[6]. Cumulative landscape and visual effects may result from additional changes to the baseline landscape or views as a result of the Proposed Development and Overall Project in conjunction with other developments of a similar type and scale.

10.2.64 As stated in Chapter 19: Cumulative & Interactions of this EIAR, cumulative effects are those that accrue over time and space from other developments or activities which may contribute to likely significant cumulative effects. The impacts of the Proposed Development and Overall Project are considered in conjunction with the potential impacts from other projects or activities which are both reasonably foreseeable in terms

[5] Environmental Protection Agency (EPA) (2022), *'Guidelines on the Information to be contained in Environmental Impact Assessment Reports'*. Available at: https://www.epa.ie/publications/monitoring--assessment/assessment/guidelines-on-the-information-to-be-contained-in-environmental-impact-assessment.php

[6] Landscape Institute and Institute of Environmental Management & Assessment (IEMA), 2013 '*Guidelines for Landscape and Visual Impact Assessment'*, 3rd Edition, Page 120 and following.

of delivery (i.e., have planning consent or relevant applications which have been submitted and are in the planning system) and are located within a realistic geographical scope where environmental impacts could act together with the Proposed Development and Overall Project to create a more significant overall effect.

10.2.65 Combined effects are those resulting from a single development (the Proposed Development and Overall Project) on any one receptor that may collectively cause a greater effect.

10.2.66 It is considered that the value, susceptibility and sensitivity of receptor groups will remain the same for the assessment of cumulative effects.

Magnitude of Cumulative Effects

10.2.67 The principle of magnitude of cumulative effects makes it possible for the Proposed Development and Overall Project to have a major impact on a particular receptor, while having only a minor cumulative impact in conjunction with permitted developments of similar scale and nature as the Proposed Development and Overall Project.

10.2.68 The evaluation of the magnitude of cumulative change is based on the criteria outlined in the assessment methodology for landscape and visual effects, as stated in Tables 10.6 and 10.10 above, as well as on the interpretation of the following parameters:

- The additional extent, direction, and distribution of existing and other developments in conjunction with the Proposed Development and Overall Project;
- The distance between the viewpoint, the Proposed Development and Overall Project, and the cumulative developments; and
- The landscape setting, context and degree of visual coalescence of the Proposed Development and Overall Project, and cumulative developments.

Significance of Cumulative Effects

10.2.69 As for the assessment of landscape and visual effects, the significance of any cumulative effects follows the same classification as listed in Table 10.11 above, and will be assessed as **Profound, Very Significant, Significant, Moderate, Slight, Not Significant,** or **Imperceptible**.

10.2.70 The cumulative assessment focuses on potential cumulative effects relating to the main permanent structure of a cumulative development. This is due to the uncertainty of the timing of construction activities for identified developments. As a result, temporary structures and activity relating to construction have not been considered within the cumulative assessment.

Fieldwork

10.2.71 Site surveys of the study area were carried out by the author and co-author on the 21st March during overcast conditions but with long distance visibility as well as on the of 6th April 2023 during a clear day with a long distance of visibility. The site visits identified the potential visibility of the Proposed Development and Overall Project along publicly accessible locations and key viewpoints within the study area. The extent of the study area has been identified through the production of a ZTV mapping (refer to EIAR Volume III, Figures 10.2 to 10.5) and a review of maps and aerial photographs and site survey data.

10.2.72 Verified photography showing the existing view and photomontages showing the superimposed development have been produced from key representative viewpoints, considering topography, existing buildings, screening vegetation and other localised

factors. The Photomontages 1 - 22 are included in Appendix 10A (refer to EIAR Volume II), and provide details on viewpoint locations.

Interaction of landscape and visual effects with other environmental factors including historic landscapes

10.2.73 The landscape and visual impact assessment focuses on the physical and visual appearance and character of the landscape as it is experienced today.

10.2.74 Landscape is also a consideration under other environmental aspects and assessments, e.g., the natural landscape (Chapter 9: Biodiversity), the geological landscape (Chapter 13: Soil and Geology), the cultural/ historical landscape (Chapter 8: Cultural Heritage), the human landscape (Chapter 15: Population and Human Health), and resources (Chapter 16: Material Assets).

10.2.75 While it is evident that an interaction of effects exists between the landscape and visual environment and these other related landscape environments/ environmental factors (not least in in terms of potential for interactions of effects), assessments under these areas are generally addressed separately by other competent specialists in separate chapters of this EIAR. However, the presence/ absence of such indicators can inform judgments on quality and therefore sensitivity.

Selection of Viewpoints

10.2.76 It is not feasible to take photography from every possible viewpoint located in the study area. Photography has been taken from viewpoints, which are representative of the nature of visibility at various distances and in various contexts. Viewpoint photography is used as a tool to come to understand the nature of likely significant effects. The selection process of viewpoint locations is consistent with the following guidance: '*Guidelines for Landscape and Visual Impact Assessment*', 3rd Edition, 2013, Landscape Institute (UK) & Institute of Environmental Management and Assessment (IEMA), and is as follows:

- The location of viewpoints within the study area is informed by desktop and site surveys;
- Mapping of a number of Zones of Theoretical Visibility (ZTV) for various project elements, namely the OCGT 45m stack, the CCGT 60m stack, lattice towers as well as combined elements considering a 10 km radius (refer to EIAR Volume III, Figures 10.2 to 10.5);
- Identification and selection of representative viewpoints from publicly accessible locations showing typical open or intermittent views within a local area, which will be frequently experienced by a range of viewers; and
- Identification and selection of specific viewpoints in the landscape such as protected focal points and views.

Photomontages

10.2.77 Photomontages are photorealistic visualisations produced using specialist software. They illustrate the likely future appearance of the Proposed Development from a specific viewing point. Once operational the elements of the Gas Connection Corridor will consist predominantly of below ground infrastructure such as the gas pipeline, which will not visually perceivable. The Gas Connection Corridor is therefore not included in photomontages.

10.2.78 Photomontages are useful tools for examining the visual impact of the development from a number of critical viewpoint positions along the public road network within the study area.

10.2.79 However, photomontages in themselves can never provide the full picture in terms of potential effects, they can only inform the assessment process by which judgments are made. A visualisation can never show exactly what the Proposed Development will look like in reality due to factors such as: different lighting, weather, and seasonal conditions which vary through time and the resolution of the image. As the photomontages are representative of viewing conditions encountered, some of them may show existing buildings or vegetation screening some or all parts of the developments. Such conditions are normal and representative.

10.2.80 The images provided give a reasonable impression of the scale of the development and the distance to the development, but it is recognised and understood within the industry that they can never be 100% accurate. It is recommended that decision-makers and any interested parties or members of the public should ideally visit the viewpoints, where visualisations can be compared to the 'real life' view, and the full impact of the Proposed Development can be understood.

10.2.81 The landscape and visual impact assessment identified a range of viewpoints located within the study area at varying distances from the Site to show the effect of the Proposed Development in key close, middle, and distant views.

10.2.82 Viewpoints/ Photomontages 1 - 22 show the Proposed Development including the following information:

- Existing View, showing the baseline image; and
- Photomontage, showing the Proposed Development and all visible elements, or red wirelines indicating the location of the Proposed Development in case it is fully screened.

10.2.83 Photomontage images have been produced according to the following industry guidelines:

- '*Guidelines for Landscape and Visual Impact Assessment (GLVIA3)*', 3rd Edition, Landscape Institute and Institute of Environmental Management and Assessment, IEMA, 2013; and
- '*Visual Representation of Development Proposals*', Landscape Institute, Technical Guidance Note 06/19, 17 September 2019.

10.2.84 Elements related to the Gas Connection Corridor including the Above Ground Infrastructure (AGI) have not been included in the photomontages as the detailed design for this infrastructure has yet to be carried out by GNI.

10.3 Regulatory, Policy and Guidance Framework

<u>European</u>

10.3.1 The European Landscape Convention provides guidelines for managing landscapes/ landscapes. The Convention is not an EU Directive. Countries that sign and ratify the Convention make a commitment to upholding the principles it contains within the context of their own domestic legal and policy frameworks. The convention was ratified by Ireland in March 2002 and came into effect in Ireland in 2004. The European Landscape Convention requires "*landscape to be integrated into regional and town planning policies and in cultural, environmental, agricultural, social and economic policies, as well as any other policies with possible direct or indirect impacts on Landscape*".

<u>National</u>

10.3.2 The National Landscape Strategy for Ireland 2015-2025

10.3.3 (NLS) was launched in May 2015 and is to be implemented by the Government in the future. The NLS promotes the sustainable protection, management and planning for the landscape/ landscape. The NLS states that:

10.3.4 *"The National Landscape Strategy will be used to ensure compliance with the European Landscape Convention and to establish principles for protecting and enhancing the landscape (landscape) while positively managing its change. It will provide a high-level policy framework to achieve balance between the protection, management and planning of the landscape by way of supporting actions". It also states that "The Strategy sets out Ireland's high-level objectives and actions with regard to landscape (landscape). It also positions landscape in the context of existing Irish and European strategies, policies and objectives, and outlines methods of ensuring co-operation at a sectoral and at a European level by the State".*

Regional

Offaly County Development Plan 2021 – 2027 (OCDP)

10.3.5 The Offaly County Council Development Plan (OCDP) is the main strategic and planning policy document guiding the sustainable development of the functional area of County Offaly. Within Chapter 6: Tourism and Landscape, one strategic aim is relevant to the Proposed Development and Overall Project:

10.3.6 *"The Council supports the longer-term strategic planning for industrial peatland areas, which should include a comprehensive after-use framework plan for the industrial peatlands and associated infrastructure including workshops, office buildings and industrial sites reflecting the current transition from employment based around peat extraction".*

10.3.7 The OCDP identifies and describes Landscape Classification Areas in County Offaly, in Chapter 4.14: Landscape. The landscape classification aims to identify landscape areas of similar landscape character and of landscape sensitivity in the county and assess each character type for capacity to absorb new development in the county. According to the OCDP:

10.3.8 *"Developments which are likely to create a significant environmental and particularly visual impact will best be absorbed into areas where the landscape is most robust, i.e., has the capacity to absorb development without significantly changing its character".*

10.3.9 The capacity of each landscape character type to absorb new development largely depends on the sensitivity of the landscape type. The Proposed Development and Overall Project is located in an area identified as Moderate Sensitivity where acceptable development requires "some form of development subject to appropriateness / conditions" (OCDP, 2021). The study area is characterised by the presence of exploited raised bog, sand and gravel extraction, fields in agricultural usage and areas of commercial forestry.

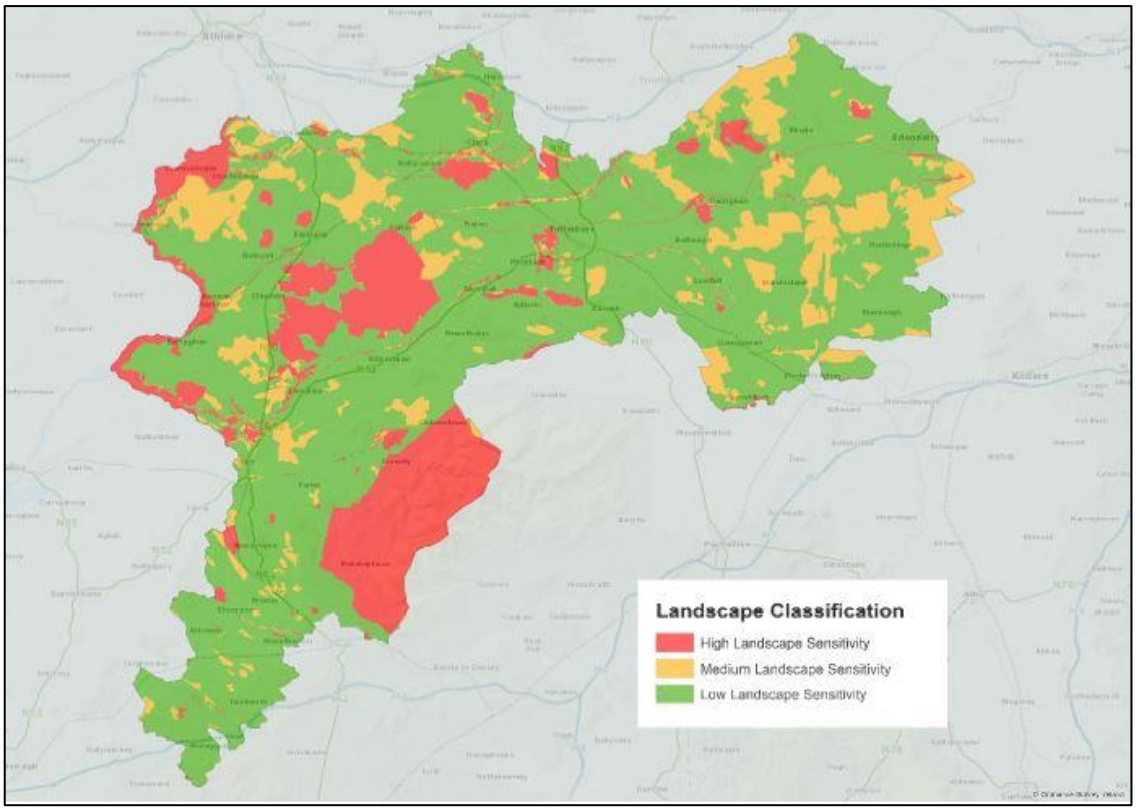


Plate 10.2 Landscape Classification Areas in County Offaly *(Source: OCDP. 2021)*

10.3.10 Based on this assessment and the location of the Proposed Development and Overall Project, the following policy objectives set out in the OCDP are relevant to this assessment:

- **BLP-01**: *It is Council policy to protect, conserve, and seek to enhance the county's biodiversity and ecological connectivity*;
- **BLP-05**: *It is Council policy to ensure that development does not have a significant adverse impact, incapable of satisfactory avoidance or mitigation, on plant, animal or bird species protected by law*;
- **BLP-06**: *It is Council policy to consult with the National Parks and Wildlife Service, and take account of any licensing requirements, when undertaking, approving or authorising development which is likely to affect plant, animal or bird species protected by law;*
- **BLP-07**: *It is Council policy to support the implementation of the National Biodiversity Action Plan 2017-2021 and the Offaly Heritage Plan Key Actions 2017-2021 and future editions in partnership with relevant stakeholders subject to available resources*;
- **BLP-14**: *It is Council policy to protect the county's designated peatland areas and landscapes, including any historical walkways through bogs and to conserve their ecological, archaeological and cultural heritage and to develop educational heritage*;
- **BLP-15**: *It is Council policy to work with adjacent local authorities and relevant stakeholders in promoting a National Park designation for the peatlands in the midlands and a 'Regional Peatway' connecting natural and cultural attractions*;
- **BLP-16**: *It is Council policy to support the provision of outdoor pursuits, walking and cycling routes through the county's peatlands and network of industrial railways linking the River Shannon Blueway, Royal Canal, Grand Canal and Barrow Blueway across the midlands as outlined in the 'Major Cycling Destination in the Midlands of Ireland –*

Feasibility Study 2016', which is a priority of the 'Outdoor Recreation Plan State Lands and Waters' (2017);

- **BLP-18**: *It is Council policy to support collaboration between Offaly County Council, Regional Transition Team and relevant stakeholders of a partnership approach to integrated peatland management for a just transition that incorporates the management, rehabilitation and restoration/ re-wetting of significant tracts of peatlands in conjunction with appropriate developed after uses*;
- **BLP-20**: *It is Council policy to preserve riparian buffer strips free from development by reserving a minimum of 10 metres either side of all watercourses (measured from top of bank) with the full extent of the protection determined on a case-by-case basis by the Council, based on site specific characteristics and sensitivities*;
- **BLP-21**: *It is Council policy to promote clear span bridging structures as the preferred option for culverts. Any development proposal requiring culverting should also document stream habitat lost and provide compensatory habitat where possible. Realignment of water courses should incorporate stream enhancement measures, as outlined in Office of Public Works Environmental Guidance. The Council will consult with Inland Fisheries Ireland in relation to riparian and instream works as appropriate*;
- **BLP-22**: *It is Council policy to promote the removal of historic culverts and infilling of watercourses*;
- **BLP-23**: *It is Council policy to consider the Waterways Corridor Study 2002 and protect the recreational, educational and amenity potential of navigational and non-navigational waterways within the county, such as the Grand Canal Corridor, towpaths and adjacent wetland landscapes, taking into account more recent heritage and environmental legislation (including the SEA Directive) and environmental policy commitments*;
- **BLP-24**: *It is Council policy to support the protection and management of existing networks of woodlands, trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character, and to strengthen local networks*;
- **BLP-25**: *It is Council policy to encourage the planting of native species in all new residential developments (individual and multiple units) and as part of landscaping for commercial and industrial developments*;
- **BLP-26**: *It is Council policy to require, where practical, the management of mature trees, such as tree surgery instead of felling particularly where the trees contribute to amenity*;
- **BLP-27**: *It is Council policy to recognise the economic, social, environmental, and physical value of green infrastructure*;
- **BLP-28**: *It is Council policy to protect existing green infrastructure within the county, to provide additional green infrastructure where possible and to encourage green infrastructure to be spatially connected to facilitate the extension or establishment of ecological corridors*;
- **BLP-30**: *It is Council policy to integrate the provision of green infrastructure with infrastructure provision and replacement, including walking and cycling routes, as appropriate, while protecting natural heritage*;
- **BLP-31**: *It is Council policy to support the use of green infrastructure for carbon sequestration to combat climate change;*
- **BLP-38**: *It is Council policy to protect and enhance the county's landscape, by ensuring that development retains, protects and where necessary, enhances the appearance and character of the county's existing landscape;*

- **BLP-39**: *It is Council policy to seek to ensure that local landscape features, including historic features and buildings, hedgerow, shelter belts and stone walls, are retained, protected and enhanced where appropriate, so as to preserve the local landscape and character of an area, whilst providing for future development*;
- **BLP-40**: *It is Council policy to ensure that consideration of landscape sensitivity is an important factor in determining development uses*; and
- **BLO-25**: *It is an objective of the Council to protect skylines and ridgelines from development where such developments will create significant visual intrusion*.

10.3.11 Key Scenic Views and Prospects in County Offaly are identified in Chapter 4, Table 4.21 of the OCDP. The following views are located within the study area as shown in Figure 10.1 – Landscape Designations:

- **View 7** Road No. L-01018 in the townlands of Cannakill and Croghan Demesne

  This view is orientated to the southwest towards the Slieve Bloom Mountains. It faces away from the Proposed Development and the Overall Project and has therefore been screened out from further assessment.

- **View 8** Townlands of Barnan, Kilduff, Old Croghan, Croghan Demesne, Down

  This view orientates towards Croghan Hill and bog lands from the above stated townlands. The view located in the study area is located south looking north from the townlands of Down towards Croghan Hill. This area in the south has been screened out from further assessment due to intervening topography (Croghan Hill), which will screen views towards the Proposed Development and Overall Project. This has been confirmed by ZTV mapping contained in Figures 10.2 – 10.5 as well as site surveys.

- **View 9** Townlands of Grovesend and Coole

  This view is orientated south towards boglands. It faces away from the Proposed Development and the Overall Project and has therefore been screened out from further assessment.

10.3.12 The OCDP establishes the following policy objectives for the protection of key scenic views and prospects:

- **BLO-26**: *It is an objective of the Council to protect Key Scenic Views and Key Prospects contained in Table 4.21, and Key Amenity Routes as listed in Table 4.22 from inappropriate development*.

10.3.13 The OCDP identifies also 'Restricted Regional Routes'. These are "*Regional routes, especially those which carry higher volumes of traffic, the Council shall adopt a restrictive policy in relation to new development in the interests of preserving the traffic capacity of these routes and in order to avoid the creation of traffic hazards. These routes are of strategic importance to the county and region*".

10.3.14 "*Four of the county's regional routes have been identified as Key Amenity Routes which offer very attractive "cross section" views of differing landscapes of the county. The enjoyment of such varying landscapes for the visitor, the person who regularly traverses the county or the local person can be lessened by insensitive levels of roadside development and indeed excessive levels of development*".

10.3.15 Two of these key amenity routes are located within the study area (refer to Figure 10.1 – Landscape Designations) and include the following:

  - R400: Rhode to county boundary towards Rochfordbridge, link to M6. This route is defined as having 'carrying capacity'.

Views of elements of the Proposed Development and Overall Project will be experienced and have been assessed herein.

- R402: Ballina Cross to Edenderry. This route is defined as having 'carrying capacity'.

  This route has been screened out from further assessment due to intervening topography and intervening vegetation, which will screen views towards the Proposed Development and Overall Project, which was reviewed during site surveys.

- **BLO-27**: *It is an objective of the Council to ensure that proposed developments take into consideration their effects on views from Key Scenic Views and Prospects and Key Amenity Routes and are designed and located to minimise their impact on this views and prospects*; and
- **BLP-43**: *It is Council policy to require a Landscape/Visual Impact Assessment to accompany significant proposals that are likely to significantly affect Key Scenic Views and Prospects as listed in Table 4.21 and Key Amenity Routes as listed in Table 4.22*.

10.3.16 Regarding the protection and management of vegetation and green infrastructure, the OCDP sets out the following relevant policies:

- **BLO-16:** *It is an objective of the Council to encourage the preservation and enhancement of native and semi-natural woodlands, groups of trees and individual trees […] and (b) as part of the development management process, require the planting of native, deciduous, pollinator friendly trees in all new developments where possible*;
- **BLO-17**: *It is an objective of the Council to encourage pursuant to Article 10 of the Habitats Directive, the management of features of the landscape, such as traditional field boundaries, important for the ecological coherence of the Natura 2000 network and essential for the migration, dispersal and genetic exchange of wild species*;
- **BLO-18**: *It is an objective of the Council to encourage the retention, wherever possible, of hedgerows and other distinctive boundary treatment in the county. Where removal of a hedgerow, stone wall or other distinctive boundary treatment is unavoidable, provision of the same type of boundary will be required of similar length and set back within the site in advance of the commencement of construction works on the site (unless otherwise agreed by the Planning Authority)*; and
- **BLO-19**: *It is an objective of the Council to require all new developments to identify, protect and enhance ecological features by making provision for local biodiversity (for example, through provision of swift boxes or towers, bat roost sites, green roofs, etc.) and provide ecological links to the wider Green Infrastructure network as an essential part of the design process*.

10.3.17 The Planning Authority shall implement the aforementioned policy objectives set out in the OCDP.

Westmeath County Development Plan 2021 – 2027

10.3.18 The Westmeath County Development Plan (WCDP)7 is the main strategic and planning policy document guiding sustainable development. Given that part of the Overall Project (Gas Connection Corridor) is located within the Westmeath County administrative

[7] Westmeath County Development Plan 2021 – 2027, available at: https://www.westmeathcoco.ie/en/ourservices/planning/developmentplans/countydevelopmentplan2021-2027

boundary, this report provides a desktop assessment to explore and assess any landscape or visual sensitivities in the area and the relevant policy documents.

10.3.19 The WCDP has established Landscape Character Areas in County Westmeath. The Westmeath landscape classification aims to identify landscape areas of similar landscape character and areas of landscape sensitivity in the county and assess the capacity of each character type to absorb new development in the county. According to the WCDP:

10.3.20 *"developments which are likely to create a significant environmental and particularly visual impact will best be absorbed into areas where the landscape is most robust, i.e., has the capacity to absorb development without significantly changing its character".*

10.3.21 The Gas Connection Corridor will traverse a portion of County Westmeath northwest of the Power Plant Area. This character area is identified in Chapter 13: Landscape and Lake Amenities as 'Westmeath Character Area 10 - Lough Ennell and the Southeast Corridor'. Lough Ennell is designated as an Area of High Amenity and is located approximately 10km northwest of the Power Plant Area, and 3km from the Gas Connection Corridor. The Southeast Corridor follows the county boundary in a roughly southwest in a northeast alignment and includes both the M6 and the N52 route corridors. The Landscape is described as:

10.3.22 *"The area around Lough Ennell and particularly to the south of the lake is characterised by scrub land with a mixture of marsh, bog and poor pastureland. There is also a large tract of bog to the east of Rochfortbridge and Milltownpass along the county boundary. The bog areas in this LCA are mainly exploited but some have been left intact".*

10.3.23 Appendix 5 of the WCDP lists Protected Views which are categorised according to their significance at national, regional, county and local level. A number of these views are located within the 5km stud area, however, relevant ones facing in the direction of the Proposed Development and Overall Project include the following 2 views:

- **View 13**: "*Panoramic views from Garrane Hill on the Regional road R-446. This is a panoramic view of the surrounding landscape from the highest point on the R-446 road when looking down the roads to the NE and SW*". The WCDP states that the view has a significance at county level.

10.3.24 A second view close to the 5km study area border with potential open views towards sections of the Proposed Development and Overall Project is the following located southeast of Milltownpass along the M6:

- **View 14**: "*Views of Sculpture along the M6. The foreground focus of this view is the roadside sculpture by the motorway. Another important feature is the flatness of the open landscape off to the southwest (mostly bog) which allows for a distant horizon view that draw attention to dramatic skies. Croghan Hill can be seen in the distance on a clear day and is an important feature of the view. This view should be considered to begin at 653385,744319 where the roadside trees stop, and end at 648377,740294 where a patch of forestry cuts off the view along the M6*". The WCDP states that the view has a significance at county level.

10.3.25 Based on this assessment, the Planning Authority will be cognisant of the following policy objectives within the WCDP:

- **CPO 9.10**: *Protect the integrity of the landscapes as identified in the Landscape Character Assessment and protected views*;
- **CPO 13.8**: *Protect the landscapes and natural environments of the County by ensuring that any new developments do not detrimentally impact on the character, integrity***,**

distinctiveness, or scenic value of their area. Any development which could unduly impact upon such landscapes will not be permitted;

- **CPO 13.9**: *Ensure the preservation of the uniqueness of a landscape character type by having regard to the character, value, and sensitivity of a landscape in new development proposals*;
- **CPO 13.10:** *Ensure development reflects and, where possible, reinforces the distinctiveness and sense of place of the landscape character types, including the retention of important features or characteristics, taking into account the various elements which contribute to their distinctiveness;*
- **CPO 13.17**: *Minimise impact on the ecological, archaeological, biodiversity and visual amenity surrounding quarry sites and quarrying of sensitive sites within the Landscape Character Areas including the lake valley landscape, eskers and canal corridor;*
- **CPO 13.21**: *Protect and preserve designated High Amenity Areas from inappropriate urban generated housing development or any other development which would be injurious to or detract from the natural amenity of Areas of High Amenity;*
- **CPO 13.20**: *Protect High Amenity areas from inappropriate development and reinforce their character, distinctiveness, and sense of place;*
- **CPO 13.27**: *Cooperate with Coillte, Bord na Mona, Waterways Ireland and other state agencies in establishing access ways, nature trails, etc. with a view to opening up state lands for recreational use; and*
- **CPO 13.81:** *Protect and sustain the established appearance and character of views listed in Appendix 5 of this plan that contribute to the distinctive quality of the landscape from inappropriate development.*

10.4 Receiving Environment

10.4.1 A baseline study has been undertaken through a combination of desk-based research and site appraisal in order to establish the existing conditions of the landscape and visual resources of the study area. Desk based research involved a review of mapping and aerial photography, relevant planning, and policy documents, the relevant County Development Plans including landscape sensitivities, and other relevant documents and publications. A study area radius of 5km from the Proposed Development site boundary as well as 500m from the Gas Connection Corridor was selected to identify potential significant landscape and visual effects (refer to EIAR Volume III, Figure 10.1). A comprehensive analysis was conducted to assess various sensitive receptors with regards to the potential visual consequences of the Proposed Development and Overall Project. The assessment encompassed a wide range of visual receptors, including nearby residential dwellings, significant archaeological and tourism sites, as well as those travelling on the adjacent M6 motorway and local road network.

10.4.2 The Proposed Development and Overall Project lands are predominantly located on Bord na Mona lands (i.e., Drumman, Derryarkin and Ballybeg Bogs) which historically operated for commercial peat harvesting activities between the 1950s and 2020. Peat extraction permanently ceased in these areas in 2020. In January 2021, Bord na Móna stated it had ceased all peat extraction works and was wholly focused on climate energy solutions, recycling, waste management and peatland restoration.

10.4.3 Land use across the Proposed Development and Overall Project site varies; however, the landscapes possess similar geological formations, ecological systems, historical contexts, or visual qualities which create a sense of coherence and unity.

Power Plant Area

Land use and Settlement

10.4.4 The Power Plant Area relates to the proposed main thermal power plant and Derrygreenagh AGI located on the existing Derrygreenagh Works to the east of regional road R400. The process water discharge pipe will extend west of regional road R400.

10.4.5 The Derrygreenagh works contains a number of built structures, including an office, storage facilities, workshop complex, and hard standing occupy approximately half of the area. There are large areas of scrub type vegetation and stands of trees partially screen the view across the landscape.

10.4.6 Settlements within this landscape have developed mainly along the main road network; clusters include: Milltownpass 4.7 km northeast, Rochfortbridge 3km northwest, and Tyrrellspass 6.6 km west along the former N6, now M6 (measured from the closest point to the Power Plant Area site). The landscape south of the Power Plant Area is sparsely populated. There are a limited number of residential dwellings and farmsteads along the local road network. The closest residential dwelling to the Power Plant Area is located approximately 1km to the south.

10.4.7 The immediate land-use which surrounds the Power Plant Area is mainly regenerating bog or agricultural lands, primarily used as pastureland for livestock. Field boundaries are comprised of hedgerows with bands of trees.

10.4.8 Residential dwellings impacted by the visual changes brought about by the Power Plant Area are considered the most sensitive receptors, as well as those travelling on the adjacent M6 motorway and local road network.

10.4.9 The existing brownfield site is an undesignated landscape containing several degrading elements, resulting in a low baseline value, however the surrounding boglands which are naturally regenerating with native scrub and woodland, while not a designated landscape, can be considered to have pleasing views with few detracting elements and can be considered of good local value with a medium landscape value.

Future Baseline

10.4.10 In landscape terms, if the works did not go ahead, the Power Plant Area and the brownfield industrial character will be managed in accordance with conditions of IPC Licence P0501-01.

10.4.11 In visual terms, the content in available views will remain similar, although changes will occur to existing vegetation due to natural revegetation, maturing plants, or natural decay.

Electricity Grid Connection

Land use and Settlement

10.4.12 The Electricity Grid Connection will consist of the 220 kV substation west of regional road R400, lattice tower towers, overhead transmission lines, Line-Cable Interface Compound, underground cabling, associated cabling and connections to a new 400 kV substation site and compound.

10.4.13 The Electricity Grid Connection line is located predominantly within a linear area of cutover raised bog to the south of the Power Plant Area (on Derryarkin Bog and Ballybeg Bog) with the exception of agricultural land as site of 400 kV substation and sections of UGC. Historical commercial peat extraction has been carried out in Derryarkin and Ballybeg Bogs between the 1950s and 2020. The existing environment of the Electricity Grid Connection comprises predominantly of bare cutaway peat production fields, and

areas of bog woodland and scrub where natural revegetation has occurred in areas out of production for longer periods of time. There are a number of water bodies within the bogs due to localised flooding.

10.4.14 The closest urban cluster to the proposed Electricity Grid Connection is Rhode, located 2.0 km to the east, while the closed residential dwellings are located towards the southern end of the proposed cable route and south of the 400 kV substation site. A number of dwellings are located along local road L1010 where the Electricity Grid Connection will cross the road at Togher and continue south towards the proposed 400 kV substation.

10.4.15 Main receptor groups are residents located in close proximity to the Electricity Grid Connection impacted by the visual changes brought about by the Proposed Development and Overall Project are considered the most sensitive receptors, particularly those located along local road L1010 as well as vehicles users travelling along the adjacent local road network. Recreational users (walking and cycling) concentrate mainly along the Grand Canal.

Future Baseline

10.4.16 In landscape terms, if the works did not go ahead, the Electricity Grid Connection sites and exposed bog character will remain unchanged.

10.4.17 In visual terms, the content in available views will remain similar, although changes will occur to existing vegetation due to natural revegetation, maturing plants, or natural decay.

Gas Connection Corridor

Land use and Settlement

10.4.18 The area around Lough Ennell and particularly to the south of the lake is characterised by scrub land with a mixture of marsh, bog, and poor pastureland. The land use of the study area, which includes the Gas Connection Corridor, includes exposed open raised bog land, scrubland, fields in agricultural use, and sections of public road network.

10.4.19 The Gas Connection Corridor is located predominantly within areas of pasture and arable fields and extends c. 9.7 km total in length northwest of the Power Plant Area. The proposed corridor route traverses mostly through agricultural land west of Rochfortbridge, however, it is proposed c. 1.4 km to be routed within regional road R400. The corridor will traverse townlands of Derrygreenagh, Farthingstown, Castlelost, Oldtown, Castlelost West, Piercetown, Kilbrennan, Walterstown, Calverstown, and Meedian. This route will require crossing two local roads, one regional road, the M6 motorway, and the Mongagh River and three streams (i.e., Castlejordan, Rochfortbridge, and Brosna).

10.4.20 Residential dwellings in close proximity to the Gas Connection Corridor, particularly those located along regional road R400, will be affected by the visual changes, particularly during the construction period of the gas connection and are therefore considered receptors most sensitive to change.

Future Baseline

10.4.21 In landscape terms, if the works did not go ahead, the landscape will remain unchanged.

10.4.22 In visual terms, the content in available views will remain similar, although changes will occur to existing vegetation due to maturing, pruning, or natural decay.

Receptor Groups

10.4.23 The main receptor groups within the study area are as follows:

- Residents;
- Vehicle users; and
- Recreational users

Residents

10.4.24 Residential receptors will have a high susceptibility and sensitivity to visual changes as views will be experienced on a daily basis and therefore, even the smallest change in the landscape character or visual amenity will be noticed. The majority of affected residential receptors are located along national, regional and local road network or in settlements.

Vehicle users

10.4.25 Vehicular users, including cyclists, travelling along the local road network are considered to have a low susceptibility to changes in the landscape character and visual amenity. Their sensitivity can range between Low and Medium depending on the type of road and users. Receptors often travel to get from one place to another where the primary focus is not concerned about views.

Recreational Users

10.4.26 The visual amenity is part of the experience for recreational users throughout the study area. Recreational users can be visitors / tourists exploring the area. Recreational receptors will have therefore a Medium or High susceptibility to visual changes. Changes to views and the landscape character will be noticed as views are often part of the main reason for visiting. The sensitivity is therefore considered High.

10.5 Predicted Impacts

10.5.1 The following likely direct and indirect landscape and visual effects have been identified arising from the Proposed Development and Overall Project. Direct or indirect landscape and visual effects on the fabric of the landscape and its receptors are closely related to the nature and extent of visibility.

10.5.2 Photomontages 1-22 illustrate the Proposed Development from representative viewpoint locations within the study area. A description of each photomontage is included herein.

Do-Nothing Scenario

10.5.3 The Do-Nothing scenario will not result in any significant changes to the baseline landscape character or visual resource.

10.5.4 If the Proposed Development and Overall Project were not to proceed, environmental monitoring and site management will continue, as required under the conditions of the IPC Licence (P0501-01).

10.5.5 In landscape terms, if the Proposed Development and Overall Project did not go ahead on the site of the Power Plant Area, the site and the brownfield industrial character will be managed in accordance with conditions of IPC Licence P0501-01, or the buildings at Derrygreenagh Works will likely be sold to a suitable 3rd party for future use.

10.5.6 In landscape terms, if the Proposed Development and Overall Project did not go ahead on the site of the Electricity Grid Connection will continue to revegetate, peatland species will re-establish and form a vegetive layer across the bog supporting biodiversity regeneration.

10.5.7 In landscape terms, if the Gas Connection Corridor development did not go ahead, the landscape character will remain similar.

10.5.8 In visual terms, the content in available views will remain similar without significant changes to the visual amenity. Likely changes will relate to changes to the existing vegetation due to maturing, pruning or natural development / decay.

Landscape and Visual Impact Assessment

10.5.9 The following potential direct and indirect landscape effects arising from the Proposed Development and Overall Project, have been identified for both the construction and operational phases.

10.5.10 Construction and decommissioning effects are considered to be of short duration arising from the building activities. Operational/ residual effects are those long-term effects, which will occur as a result of the presence and operation of the Proposed Development and Overall Project.

Power Plant Area (PPA)

Construction Phase

Landscape Effects

10.5.11 The construction stage will give rise to effects on the landscape character resulting from the following:

- Loss of existing vegetation and habitat.
- Soil stripping, earthworks, grading, etc.
- Potential indirect effects to visual amenity within the locality or the wider study area as a result of the visibility of construction activities such as ground works, the construction and associated scaffolding, cranes etc.
- Effects of temporary to short-term site infrastructure such as site traffic, construction compounds, soil storage areas etc. especially those located in areas adjacent to visual receptors.
- Physical effects arising from construction of the Power Plant Area will be confined to the development site.

10.5.12 Offaly County Council does not define specific landscape character areas yet. It however, does indicate that the Power Plant Area is located in an area identified as Moderate Sensitivity. The site is currently a predominantly post-industrial brownfield site bordered by areas with regenerating bog to the east and north. The existing landscape character of the site will change to industrial, which is not considered uncharacteristic. The site is bordered by the R400 to the west and agricultural fields to the south. The wider landscape character to the east and north will remain similar and consists largely of regenerating bog as well as sand and gravel pits of which some are flooded. While regenerating, the landscape character contains a degree of monotony and desolation. It can therefore accommodate the Power Plant Area without losing its overall integrity. The susceptibility of the landscape to accommodate change is considered low. However, the value of the landscape is considered medium as it is part of an industrial heritage landscape related to peat harvesting, and which is now in parts regenerating creating a new character in the future. This confirms the classification of the landscape character as being moderate sensitive by Offaly County Council.

10.5.13 The construction of the proposed Power Plant Area will require localised changes to the landform, including excavations of a trench for cabling. Construction plant, including boring equipment and lifting machinery and typical construction features such as fencing,

will be introduced. Sensitive features such as regenerating bog areas will remain largely unchanged.

10.5.14 The introduction of these features will be temporary, short-term and reversible.

10.5.15 Construction will alter a small area within the wider landscape character but it will not result in the permanent loss of key features such as the overall landscape structure. The magnitude of landscape change is therefore medium. The significance / quality of the landscape change will be Moderate / Adverse.

10.5.16 Landscape character areas located in County Westmeath and County Meath will not be affected by the construction of the proposed Power Plant.

Visual Effects

10.5.17 Construction activity will not be visible to all of the visual receptors, as identified in the visual baseline, due to intervening landform, vegetation and distance to the site boundary. Construction activity, including earth moving equipment and lifting machinery and typical construction features such as site fencing, will be introduced in close distance views within approximately 1km. It will become a prominent focus point in available fore- and middle ground views. Existing intervening hedgerows and trees will partially screen views of construction works. However, elevated construction works will be visible in middle and long distance views between 1-3km and 3-5km and beyond.

10.5.18 The presence of construction specific elements and activity will be reversible and of short-term duration.

10.5.19 The magnitude of visual change is considered medium and the significance / quality will be Moderate / Adverse.

Operational Phase

Landscape Effects

10.5.20 Direct and long-term change will occur locally where the proposed Power Plant Area will be physically located.

10.5.21 The receiving environment is located within County Offaly in an area listed as Moderate Sensitivity within the County Development Plan.

10.5.22 Changes to the landscape character will be most noticeable within 1 km distance from the boundary of the Power Plant Area in all directions, and particularly from elevated areas in the southwest, extending to a distance of up to approximately 5.5km at Croghan Hill. At this distance, the scale of the proposed Power Plant Area will only occupy a small percentage of the open landscape character.

10.5.23 It is anticipated that the development will introduce a prominent industrial component in the landscape character within approximately 1 km radius from the site of Power Plant Area. The magnitude of landscape change during operation is considered high, with a medium landscape value and high sensitivity and the resulting significance / quality is Significant / Adverse.

Visual Effects

10.5.24 The Power Plant Area will be visible for approximately 5 km affecting a number of visual receptors within the study area. The effects will range from none to significant depending on their distance to the Power Plant Area. The main receptor groups (as defined in Section 10.4 above) are residents, vehicle users and recreational users. The susceptibility to change is highest for residents and recreational users as they will experience any available views of the Power Plant Area on a daily basis or specifically visit an area to enjoy the visual setting, these views are of primary importance to

residents who are likely to notice even minor changes resulting in a High receptor sensitivity. The susceptibility of vehicle users is considered Low to Medium as views are transient, and while the view is important to this receptor, it is not the primary focus. The sensitivity of vehicle users is Low. Views will be experienced while passing-by resulting in a higher tolerance of change. Significant visual effects tend to occur where there is no intervening vegetation between the viewer and the Power Plant Area, or where either the viewer or development is at an elevated position.

10.5.25 The potential for significant visible plumes from the OGCT development is considered to be very low with no real risk of significant plumes as a result of the water content and temperature of the flue gas (refer to EIAR Volume II, Appendix 7A for further details).

10.5.26 The CCGT development will experience occasional plumes due to the lower temperature of the stack gas and the risk of prolonged visibility of plumes is low.

10.5.27 A total of 22 viewpoint locations were selected and used to produce photomontages to assist the assessment of visual effects. Views and visibility from these locations are described and assessed in detail herein.

Decommissioning Phase

10.5.28 As outlined in Chapter 5: Project Description, it is envisaged that the Power Plant Area will have a design life of at least 25 years. At the end of the design life, the Power Plant Area will either be decommissioned, or the lifetime could potentially be extended. Decommissioning or extension of the lifetime of the asset will therefore be expected to commence at some point after 2052.

10.5.29 At the end of its operating life, all above-ground equipment associated with the Power Plant Area will be decommissioned and removed from the site.

10.5.30 During decommissioning and demolition there will be a requirement for office, accommodation and welfare facilities which will be located adjacent to the Power Plant Area. Decommissioning activities will be conducted in accordance with the appropriate guidance and legislation at the time of decommissioning.

10.5.31 Potential impacts and associated effects arising during the decommissioning phase are not anticipated above and beyond those already assessed during the construction phase.

<u>Electricity Grid Connection (EGC)</u>

10.5.32 Landscape and visual effects of the proposed Electricity Grid Connection will be associated with the introduction of one 220kV and one 400kV substation compound including GIS buildings (17m high), 2 lattice gantries each (20m and 28m high), other ancillary buildings and 2.6m tall palisade fencing.

10.5.33 A c. 5km long 220kV overhead transmission line, with up to 45m tall lattice towers, will connect the 220kV substation in a southern direction through Derryarkin Bog and Ballybeg Bog with a 220kV Line-Cable Interface Compound, which includes up to 20m gantries and ancillary structures including 2.6m high palisade fencing.

10.5.34 A c. 3.4km long 220kV underground cabling will connect the 220kV Line-Cable Interface compound with the proposed 400kV substation located adjacent to the existing 400kV Oldstreet-Woodland overhead transmission line. The underground cable will be routed along the existing railway line and machine pass on Bord na Móna lands.

10.5.35 Peat and Soil Deposition Areas will be located in the vicinity of each substation compound.

10.5.36 A full description of all elements of the Electricity Grid Connection is contained in Chapter 5: The Proposed Development.

Construction Phase

Landscape Effects

10.5.37 Adverse effects to vegetation and habitat will occur due to the following:

- Loss of existing vegetation and habitat;
- Extended soil stripping, earthworks, grading, etc.;
- Temporary to short-term effects resulting from site infrastructure such as site traffic, construction compounds, access tracks etc. especially those located in areas adjacent to visual receptors;
- Construction of a 4m wide service road along the 220kV underground cable routeand
- Physical effects arising from construction of the elements of the proposed Electricity Grid Connection will be confined to the development site.

10.5.38 It is anticipated that the Electricity Grid Connection will permanently change sections of the local landscape character within approximately 1 km radius from the corridor. This will be due to an intensification of the industrial character, particularly due to the introduction of noticeable vertical elements. The magnitude of landscape change during construction is considered High combined with a Low susceptibility and Medium sensitivity. The resulting significance / quality is Temporary, Moderate / Adverse.

Visual Effects

10.5.39 It is anticipated that the development will alter the visual amenity within approximately 1 km radius of the Electricity Grid Connection corridor due to the introduction of prominent new vertical elements as well as due to construction plant, including earth moving equipment and lifting machinery, typical construction features such as fencing and activity across a series of construction compounds. Sensitive features such as retained field boundaries and hedgerows will be protected along construction corridors and access tracks. Vehicles and machinery entering the construction areas of the Electricity Grid Connection will increase the level of activity across the local road network in the study area.

10.5.40 The change resulting from construction will be temporary to short term and largely reversible. Construction will alter a wide area at a local level potentially resulting in permanent loss of key features such as trees and hedgerows along the construction corridor. The changes to the landscape character will be noticeable within 1 km of the corridor and up to approximately 5.5 km in elevated areas to the southwest including Croghan Hill.

Operational Phase

Landscape Effects

10.5.41 Direct and permanent change will occur locally where the elements of the proposed Electricity Grid Connection will be physically located. This change will include tall vertical elements and ancillary structures, as described above, as well as localised changes to landform. The magnitude of landscape change during operation is considered High combined with a Low susceptibility and Medium sensitivity, the resulting significance / quality is Significant / Adverse.

Visual Effects

10.5.42 The Electricity Grid Connection will alter the visual amenity within approximately 1 km radius from its boundary. The introduction of tall vertical features will result in changes to the visual amenity locally, where receptors are able to gain access to close or middle distance views of Electricity Grid Connection elements such as the substation compounds and lattice towers and gantries (refer to photomontages for VP3, VP4a, VP11, and VP14 -17). Tall above ground elements will be also noticeable beyond 1 km in the wider study area, particularly from elevated areas such as Croghan Hill and Knockdrin Hill (refer to photomontages for VP5, and VP12 – 13). At this distance they will become recognisable features in open panoramic views and one component of several in each view.

10.5.43 A total of 22 photomontages have been produced for 22 viewpoints located throughout the study area to support the assessment of visual effects during operation. A detailed description and visual impact assessment of each viewpoint / photomontage is included in this section herein under 'Visual Effects'.

Decommissioning Phase

10.5.44 As outlined in Chapter 05 – Project Description, the Electricity Grid Connection will be managed by the transmission asset operators (TAO) and transmission service operators (TSO) (ESBNI and EirGrid for electricity) as part of the national grid electricity. When the Electricity Grid Connection will be decommissioned depends on the asset owner's operational requirement and asset management policy.

10.5.45 Decommissioning activities will be conducted in accordance with the appropriate guidance and legislation at the time of decommissioning.

10.5.46 Potential impacts and associated effects arising during the decommissioning phase are not anticipated above and beyond those already assessed during the construction phase.

Gas Connection Corridor (GCC)

Construction Phase

Landscape Effects

10.5.47 The construction corridor for the gas connection is largely located within County Westmeath. This character area is identified in Chapter 13: Landscape and Lake Amenities as 'Westmeath Character Area 10 - Lough Ennell and the Southeast Corridor'. Lough Ennell is designated as an Area of High Amenity and is located approximately 3km from the Gas Connection Corridor.

10.5.48 Landscape effects of underground pipelines include surface disturbance, hedgerow and hedgerow tree removal, soil compaction, erosion, watercourse crossings, and the risk of spills or leaks. During the installation of underground pipelines, excavation and construction activities will cause temporary surface disturbances. This will include the removal of vegetation, soil disturbance, and reprofiling of the existing topography.

10.5.49 The extent of surface landscape disturbance depends on the pipeline's depth, construction methods, and the sensitivity of the surrounding landscape. The installation of pipelines will require the clearing of vegetation, hedgerows, and hedgerow trees, this will contribute to a likely disruption of vegetation patterns.

10.5.50 Adverse effects to the landscape character and vegetation will be localised and are highest in locations where the route alignment is not located within existing road corridors. Changes to existing vegetation will occur where the pipeline will be placed underground including:

- Loss of existing vegetation;
- Extended soil stripping, earthworks, grading, etc.;
- Installation of additional structures related to the gas grid connection;
- Effects of temporary to short-term site infrastructure such as site traffic, construction compounds, soil storage areas etc. especially those located in areas adjacent to landscape receptors; and
- Physical effects arising from construction of the Gas Connection Corridor will be confined to the development site.

10.5.51 It is anticipated that the Gas Connection Corridor has the potential to alter the landscape character within approximately up to 500 m radius from the route alignment. Change to the landscape character will not be noticeable or significant beyond 500 m. The magnitude of landscape change during construction is considered to be High and the resulting significance / quality is Significant / Adverse.

Visual Effects

10.5.52 Areas experiencing visual effects during the construction stage will vary, depending on the location of the active section of construction works. It is anticipated that the development will alter the landscape visual appearance within approximately 300 to 500 m radius from the future route alignment depending on intervening existing screening by topography and vegetation.

10.5.53 The change resulting from construction will be temporary to short term and largely reversible. Construction will alter a localised area with the likelihood of a permanent loss of key features such as trees and hedgerows along the future route alignment. The change in the views will likely be noticeable within 1 km of the route alignment and beyond approximately 5 km in elevated areas to the southwest including Croghan Hill.

Operational Phase

Landscape Effects

10.5.54 Direct and permanent change will occur locally where the Gas Connection Corridor will be physically located. The magnitude of landscape change during operation is considered Medium due to a localised and permanent loss of landscape features such as trees and hedgerows and the resulting significance / quality is Slight/ Adverse.

10.5.55 Landscape effects on the Westmeath Character Area 10 - Lough Ennell and the Southeast Corridor are also considered Slight / Neutral as the Gas Connection Corridor will still only occupy a small part of this unit considering the overall scale of the area. The Gas Connection Corridor will not significantly alter the landscape character of Westmeath Character Area 10.

Visual Effects

10.5.56 The route alignment corridor within the overall Gas Connection Corridor will be of a relatively narrow width and affect a small section of the overall visible features in available views. Changes to views will therefore be localised and rarely extent in their visibility beyond 300m. Localised visual changes will be recognisable when in close proximity to the route alignment affecting residential and vehicular receptors. The magnitude of visual effects is considered to be Medium and their significance / quality will be Slight-Moderate / Adverse. Visual effects reduce quickly with distance to Low and Negligible and their significance / quality to Not significant and Imperceptible / Neutral.

Decommissioning Phase

10.5.57 As outlined in Chapter 05 – Project Description, the gas connection will be managed by the transmission asset operators (TAO) and transmission service operators (TSO) (GNI for gas) as part of the national gas networks. When the gas pipeline will be decommissioned depends on the asset owner's operational requirement and asset management policy.

10.5.58 Decommissioning activities will be conducted in accordance with the appropriate guidance and legislation at the time of decommissioning.

10.5.59 Potential impacts and associated effects arising during the decommissioning phase are not anticipated above and beyond those already assessed during the construction phase.

Summary of Landscape Effects

10.5.60 A summary of landscape effects at construction, operation and decommissioning phases on receptors located within the study area is provided in the following tables.

10.5.61 Elements of the Proposed Development and Overall Project are considered to become long-term (PPA) or permanent (EGC & GCC) features in the landscape character.

Table 10.12: Summary of Landscape Effects - Power Plant Area

Receptor	Susceptibility	Sensitivity	Magnitude of change	Significance / Quality of landscape effects
Landscape Character (Construction / Decommissioning)	High	Medium	High	Moderate / Adverse
Landscape Character (Operation)	Low	Medium	High	Significant / Adverse

Table 10.13: Summary of Landscape Effects - Electricity Grid Connection

Receptor	Susceptibility	Sensitivity	Magnitude of change	Significance / Quality of landscape effects
Landscape Character (Construction / Decommissioning)	High	Medium	High	Moderate / Adverse
Landscape Character (Operation)	Medium	High	High	Significant / Adverse

Table 10.14: Summary of Landscape Effects - Gas Connection Corridor

Receptor	Susceptibility	Sensitivity	Magnitude of change	Significance / Quality of landscape effects
Landscape Character (Construction / Decommissioning)	High	Medium	Low	Slight / Adverse
Landscape Character (Operation)	High	Medium	Low	Slight / Adverse

Visual Effects

10.5.62 In total, 22 photomontages have been prepared illustrating the nature of visibility of above ground structures of the Proposed Development and Overall Project (excluding effects of the Gas Connection Corridor) at the operational phase (Year 1 without landscape mitigation) at key viewpoint locations. The detailed assessment of each view below should be viewed in conjunction with the photomontage booklet contained in EIAR Volume II, Appendix 10A, which also contains detailed information about the location of the viewpoints, including their distance to the nearest component of the Proposed Development and Overall Project.

Elements of the Proposed Development and Overall Project are considered long-term (PPA) or permanent (EGC & GCC) features in the visual amenity.

Viewpoint 1 - R400, Roundabout at Junction 3 of M6

10.5.63 Viewpoint 1 is representative of views southeast from the R400 roundabout at the M6 Junction 3. The viewpoint is located approximately 2.2km northwest of the Power Plant Area.

10.5.64 The topography is largely low lying with localised gentle undulations; overall, the ground elevation decreases towards the south and some distant hills are visible on the horizon. The character of the view is influenced by the existing road network where the focus of vehicle users will be on the road, other traffic and traffic signage. The roadside vegetation, including clusters of young trees to the left and along the R400 is without foliage in this view. A block of commercial forestry to the right of this image screens any vista of the mid distance.

10.5.65 The view consists of common landscape elements such as roadside vegetation, fields and coniferous plantations. The prominent road infrastructure is detracting within the view. The value is therefore assessed as Low. The visual receptors at this location are vehicle users, these receptors will experience a transient view. Therefore, their susceptibility to visual change is Medium as this view may be their daily travelling route. Their sensitivity to visual change is considered Medium.

10.5.66 This viewpoint permits views towards the PPA and EGC. The Proposed Development and Overall Project will create a change in this view. The PPA will be partially visible in the middle distance along the R400 (through the gap in the vegetation). Components of the power plant equipment including the CCGT turbine hall, HRSG Air intake and auxiliary buildings alongside a 45 m Emissions stack are visible on the landscape. The upper section of the proposed lattice towers, which are part of the EGC development will also be visible in the middle distance but are mostly screened by intervening vegetation.

10.5.67 The magnitude of visual change is considered Medium and resulting significance / quality of visual effects is considered to be Moderate / Adverse due to the modest intensification of the industrial nature of the view when seen from this or similar viewpoints in the area.

Viewpoint 2 - R400 at Farthingstown

10.5.68 Viewpoint 2 is representative of views southeast along the R400 adjacent to the PPA and approximately 1km from the existing site entrance. This section of the R400 is identified in OCDP as a restricted regional route and key amenity route. Views are experienced by vehicles moving along this often busy stretch of road. The topography is generally low lying and scrub vegetation has established on the roadside verge. A stand of commercial forestry is evident on the horizon.

10.5.69 The view consists of common landscape elements including roadside vegetation and small scale overhead distribution lines. The value of this view is assessed as Low. The

visual receptors at this location are vehicular drivers, these receptors will experience a transient view. The susceptibility to visual change is Medium as this may be a view experienced daily. The sensitivity is considered Medium.

10.5.70 This image represents a broad view of the Power Plant Area and sections of the EGC development including the upper sections of the substation and lattice towers. The cluster of components of the Proposed Development and Overall Project will add large industrial facilities to the middle ground in this view. However, the addition of these elements is not considered out of character at this location. The 220 kV substation located west of the R400 is largely screened by existing vegetation.

10.5.71 The magnitude of change is considered Medium and resulting significance / quality of visual effects is considered to be Moderate / Adverse due to the modest intensification of the industrial nature of the view when seen from this or similar viewpoints in the area.

Viewpoint 3 - R400 at Derrygreenagh, opposite Bord na Móna site entrance

10.5.72 Viewpoint 3 orientates in a broadly southerly direction towards the 220 kV substation site and is representative of the views experienced when traveling along the R400 road. This section of the R400 is identified in OCDP as a restricted regional route and key amenity route. The immediate context is in a brownfield condition although in largely rural setting. In the foreground are large areas of hardstanding and the existing structure to the left of this image was associated with raised bog harvesting activities and is now in a derelict condition. Scrubby vegetation has re-established on areas of exploited bogland across the landscape. Croghan Hill approximately 5 km to the south of this viewpoint location is a localised high point on the landscape.

10.5.73 The view consists of common landscape elements including abandoned and overgrown built structures. The value of this view is assessed as Low. The visual receptors at this location are vehicle users, these receptors will experience a transient view. The susceptibility to visual change is Medium. The sensitivity is considered Low.

10.5.74 The proposed substation, lattice towers, and ancillary developments such as access roads and fencing will become dominant features in the foreground and middle distance of this view. The character of the view will change considerably. The magnitude of visual change is considered High and the resulting significance / quality of visual effects is considered to be Significant / Adverse due to the material change of the nature of the view.

Viewpoint 4a/b – R400 at Junction with L1009

10.5.75 Viewpoint 4a/b is a panoramic view, which has been separated into two images as the human eye cannot see all of the components of this view at the same time. The viewpoint is located southeast of the Proposed Power Station Area along the R400 at the junction with local road L1009. It is representative of views experienced by vehicles moving along this often busy stretch of road. The proposed PPA and EGC areas are located approximated 500m and 700m from this viewpoint.

10.5.76 The immediate surroundings are largely exploited peatlands within a larger rural context. Scrubby vegetation has re-established across areas of former bog extraction. Mixed deciduous and coniferous vegetation as well as hedgerows along the road become more evident and mature in the background. The topography is generally low lying in the foreground but rises gently to the north in the background. An existing telecommunications mast is visible in the background and forms the tallest element in this view.

10.5.77 The view consists of common landscape elements and the value of this view is therefore assessed as Low. The visual receptors at this location are vehicular users, these

receptors will experience a transient view. The susceptibility to visual change is Medium. The sensitivity is considered Medium.

10.5.78 The northwestern view (4a) permits a view of sections of the 220 kV substation building and associated lattice towers and gantries, as well as a meteorological mast. The northeastern view (4b) permits a broad view of the southern elevation where the Proposed Power Plant Area components, including the CCGT turbine hall, the HRSG - Air intake, auxiliary buildings alongside water tanks and the two emissions stacks (45m and 60m) are visible on the landscape. The proposed PPA and EGC will introduce significant industrial components into the overall panoramic view.

10.5.79 The magnitude of change in View 4a is considered Medium and resulting significance / quality of visual effects is considered to be Moderate / Adverse. The magnitude of change in View 4b will be Significant / Adverse due to the introduction of the prominent PPA facility.

Viewpoint 5 - L1009 near Knockdrin Hill

10.5.80 Viewpoint 5 is located along the L1009 near Knockdrin Hill, east of the R400 and southeast of the Proposed Power Plant and Electricity Grid Connection. Tall roadside vegetation screens some northerly views; however, the elevation permits panoramic views across the landscape. A low voltage powerline crosses the road in a northwest-southeast alignment.

10.5.81 The landscape has an overall rural appearance with large areas of peatland in various conditions, the scars of peat harvesting and re-establishing peatland vegetation. An open view of the Proposed Power Plant Area Site is possible from this location. There are a number of individual residential dwellings along the road, these dwellings are considered a highly sensitive receptor.

10.5.82 The view contains mainly common landscape elements such as mature roadside hedgerows and groups of trees. It's elevation provides interest and long distance views to the west across mainly regenerating bog. The value of this view is considered to be medium. The visual receptors are residents and vehicle users. The susceptibility to change is considered High for residents who will experience this and similar views on a daily basis resulting in a high sensitivity for visual change. The susceptibility to change for vehicle users is considered Medium as the views are not their primary reason for travelling along this road. Their sensitivity is considered Medium.

10.5.83 The distance of this viewpoint to the proposed PPA is approximately 1.3 km. The proposed PPA, including the 2 no. emission stacks (45m and 60m), will create a noticeable change in this view and create a new and prominent new point of focus. The proposed lattice towers of the EGC will also become noticeable in the middle distance and particular the upper sections, which break the horizon line. The proposed PPA and EGC introduce industrial components in this view and alter aspects of the overall visual environment.

10.5.84 The magnitude of change is considered High and the resulting significance / quality of visual effects is considered to be Significant / Adverse due to the industrialisation of elements of this view.

Viewpoint 6 - Local Road east of Gortnatruple Graveyard west of Corbertstown

10.5.85 Viewpoint 6 is located approximately 4km east of the PPA and EGC. At the centre of the composition is Gortnatruple Graveyard, a local landmark with heritage value. The larger landscape appearance is rural in nature, with open views across fields in agricultural use. Partial views of the commercial forestry plantations to the west are screened by the

limestone wall of the graveyard and the existing tree and hedgerow vegetation. The local road is sparsely populated along this stretch.

10.5.86 The view is comprised of common rural landscape elements. The value of this view is considered Low. The visual receptors at this location are vehicle users, these receptors will experience a transient view. Therefore, their susceptibility to visual change is Medium as this view may be part of their daily travelling route. Their sensitivity to visual change is considered Low.

10.5.87 The Proposed Development and Overall Project is almost fully screened from this location. The tip of the 60 m emissions stack with protrude slightly above the commercial forestry in the background. The image was captured in September with early autumnal foliage cover. Therefore, as the trees reach maturity, their growth will increasingly screen the proposed stack.

10.5.88 The magnitude of change is considered Very Low and resulting significance / quality of visual effects is considered to be Not Significant / Neutral due to the limited visibility of the stack when seen from this or similar viewpoints in the area.

Viewpoint 7 - Rahanine, M6 overbridge

10.5.89 Viewpoint 7 is located 1.6 km north of the Proposed Power Plant Area and captures an elevated view from a M6 overpass north of the PPA. This local road is used by vehicle users and pedestrians. The M6 is located below this overbridge and runs in a northeast to southwest alignment. Commercial, coniferous forestry plantations in the middle ground fully screen views towards the Proposed Development and Overall Project.

10.5.90 The view is comprised of common rural landscape elements. The large coniferous plantation is a detracting element due to its non-native nature and scale. The value of this view is therefore considered Low. Visual receptors at this location are vehicle users and recreational users. The susceptibility to visual change for both receptor groups is Medium as this view may be part of their daily travelling route. The sensitivity of vehicle users is considered Low. The sensitivity of recreational users is considered Medium.

10.5.91 The Proposed Development and Overall Project will not be discernible from this location resulting in no visual effects.

Viewpoint 8 - Rahanine, M6 overbridge - Protected View No: 14 (WCDP)

10.5.92 Viewpoint 8 captures Milltownpass Cemetery off the R446 and located approximately 4.5 km east from the Power Plant Area and 220 kV substation.

10.5.93 The cemetery context defines the view. The landscape is low lying, the larger context is rural and agricultural in character with open grassland. A band of mature poplar trees provide a wind barrier and screen across the landscape, together with clusters of trees in the background.

10.5.94 The view is comprised of common rural landscape elements. The rural setting of the cemetery is important to the visual experience when visiting the cemetery. The value of this view is therefore considered Medium. The visual receptors at this location are vehicle users and visitors to the cemetery. The susceptibility to visual change for both receptor groups is Medium as views are part of the regular visits and changes will be immediately noticeable. The sensitivity is considered low for vehicle users. The sensitivity of visitors is High as the visual amenity is an important feature in the perception of the cemetery.

10.5.95 The Proposed Development and Overall Project will be fully screened by intervening topography and existing vegetation resulting in no visual effects.

Viewpoint 9 - R446 at Gortumly northeast of Rochfortbridge

10.5.96 Viewpoint 9 is representative of a range of views along the R446 northeast of Rochfordbridge. The PPA and EGC are located approximately 4 km to the southeast. This location allows for open views across a gently undulating landscape of grasslands in pasture, wetlands and hedgerow vegetation. The area is sparsely populated. The lattice tower of a 220 kV overhead transmission line is prominent vertical feature in the middle distance. In the far distance, a communications mast and areas of commercial forestry are located along the horizon.

10.5.97 The gently undulating landscape is attractive and consists of generally common elements. The value of this view is considered medium. Visual receptors at this location are vehicle users and a number of residents along the R446 with open views towards the Proposed Development and Overall Project. Vehicle users will experience a transient view at considerable speed. The susceptibility to visual change is Medium as views are likely part of daily travels. The sensitivity of vehicle users is considered Low. The susceptibility and resulting sensitivity of residential receptors is High as they will experience this view on a daily basis.

10.5.98 Elements of the PPA will form a new feature and point of focus on the horizon. The introduction of the PPA will add an industrial layer to this view which is, given the effects of distance and existing prominent overhead transmission lines, no totally uncharacteristic. While readily noticeable in clear weather conditions, the PPA will not become a prominent point of focus and will remain as one of several features in the overall view. The magnitude of visual change is considered Low and the resulting significance / quality of visual effects is considered to be Slight / Adverse due to the modest intensification of industrial components in this view.

Viewpoint 10 - R446 near Junction with L51254 northeast of Tyrrellspass – Protected View No: 13 (WCDP)

10.5.99 Viewpoint 10 is representative of a number of views along the R446 facing southeast . The view points towards the proposed PPA and the EGC which are located approximately 6km distance at their closest. This viewpoint location is part of protected view No:13: Panoramic Views from Garrane Hill, which has a significance at county level according to WCDP.

10.5.100 This viewpoint is located on elevated ground and permits open and long distance vistas across the landscape. The view is across a rural landscape with field boundaries consisting of bands of trees and hedgerows and includes an existing 200kV overhead transmission line and associated lattice towers in the far middle distance. The silhouettes of the Wicklow Mountains can be seen on the horizon.

10.5.101 The elevated view across the landscape is pleasant and consists of generally common landscape elements with some detracting elements, namely 220 kV overhead transmission line infrastructure. The value of this view is assessed as Medium. The visual receptors at this location are vehicle users experiencing a transient view at speed. The susceptibility to visual change is Medium. The sensitivity is considered Low. There is currently no designated viewing area with car parking available to appreciate the view.

10.5.102 The majority of the PPA will be fully screened by intervening vegetation during the summer months. In the absence of foliage, during the winter months (as shown in the photomontage), small sections of the PPA buildings may become recognisable in the far distance but are unlikely discernible due to the effects of distance and intervening vegetation. The substation of the EGC will be fully screened. However, a number of proposed lattice towers of the proposed overhead transmission line will become discernible in the far middle ground and in conjunction with the existing 220 kV overhead

transmission line. The magnitude of change is considered Low and the resulting significance / quality of visual effects is considered to be Slight / Neutral due to the modest intensification of electricity infrastructure in this view.

Viewpoint 11 - Access road to Sand and Gravel Facility at Derryarkin

10.5.103 Viewpoint 11 from the Kilmurray Sand and gravel quarry access road, 1.1 km southwest of the proposed 220 kV Substation site and PPA. The proposed EGC has a roughly north south alignment to the right of this image.

10.5.104 The immediate context of dominant gravel stockpiles, quarry by-products and scrubby vegetation define this view. A water retention pond is located in the middle distance. Vegetation relating to regenerating bog, roadside vegetation along the R400 as well as coniferous plantations adjacent to the Derrygreenagh Works can be seen in the middle ground and extending to the background. Existing telecommunication and met masts are located in the background.

10.5.105 The view contains mainly detracting elements as part of extraction industries. The value of the view is therefore considered Very Low. Visual receptors at this location are vehicle users (lorry drivers) experiencing a transient view. The susceptibility to change is considered Low. The sensitivity is Low.

10.5.106 The PPA and EGC structures will become new elements of focus in this view. Their visibility will reinforce the industrial nature of this view. However, considering the existing nature of the view, the Proposed Development and Overall Project will not be uncharacteristic. The magnitude of visual change is considered Low and resulting significance / quality of visual effects is considered to be Slight / Neutral due to the further intensification of the industrial nature of the view.

Viewpoint 12 - Local Road at Ballyfore, north of Croghan Hill

10.5.107 Viewpoint 12 is located at an elevated location along the northern slopes of Croghan Hill allowing for open and expansive views to the north and east. The EGC is located approximately 3.6km northeast from this viewpoint. The PPA approximately 4km in the same direction. The overhead transmission line of the EGC will pass approximately 1.6km to the east of this location.

10.5.108 This viewpoint permits an open vista across a low-lying landscape. The immediate context is a small gravel quarry as well as agricultural fields. Large areas of low and regenerating vegetation cover former peat harvesting areas extending to the middle ground and background within interspersed areas of agricultural fields. A communication mast is visible in the middle distance in the north, and a number of scattered residential dwellings to the east.

10.5.109 The landscape contains generally common elements, however, the elevated nature and the scale of regenerating bog areas are specific to this view. The value of this view is therefore assessed as Medium. Visual receptors at this location are vehicle users experiencing a transient view. The susceptibility to change is considered Medium as any development of scale will become visible in this low lying and generally featureless expansive view. The sensitivity is Low.

10.5.110 The PPA with its 2 no. emission stacks (45m and 60m) will create a discernible change in this view, and introduce a noticeable industrial feature and new point of focus. The EGC, and in particular the overhead transmission line will extend this change along its alignment across this view. Sections of the PPA and EGC protrude above the horizon line. The magnitude of visual change is considered Medium and resulting significance / quality of visual effects is considered to be Moderate / Adverse due to the introduction of a large industrial feature and new points of focus in the middle distance. However,

considering the scale of this view and the effects of distance, the Proposed Development and Overall Project will not become dominant features in this view.

Viewpoint 13 – View from Croghan Hill

10.5.111 Viewpoint 13 from a location close to the summit of Croghan Hill, the remains of an extinct volcano, permits a wide panoramic view across the landscape. The EGC is located approximately 5km northeast from this viewpoint. The PPA approximately 5.3km in the same direction. The overhead transmission line of the EGC will pass approximately 2.3km to the east of this location.

10.5.112 The immediate context is agricultural in character. At low ground, a mosaic of large areas of regenerating bog defines the view in the middle distance. Low vegetation, mixed with bands of hedgerows and trees along field boundaries extend to the horizon. Patches of commercial coniferous forestry, water retention ponds and wetlands are dispersed across the low-lying landscape.

10.5.113 The industrial facility and chimney stack of Breedon Cement works, southwest of Kinnegad in County Meath is visible at approximately 13km distance. It provides a distant focus point and industrial feature in this view. Other elements in this view include scattered dwellings, communications and transmission masts as well as an existing 220 kV overhead transmission line in the background.

10.5.114 The value of this view is considered to be High, despite mainly common landscape elements in this view, the nature of this local highpoint offers a significant overview across an entire region. Visual receptors are recreational users of Croghan Hill. The sensitivity to change is considered High as one of the main reasons to walk up Croghan Hill is the view. The receptor sensitivity is also High.

10.5.115 The PPA with its 2 no. emission stacks (45m and 60m) will create a discernible new focus point in this view. It will introduce a noticeable second industrial feature (apart from the Breedon Cement works). The EGC, and in particular the overhead transmission line will extend this change along its alignment across this view. The magnitude of visual change is considered Medium and resulting significance / quality of visual effects is considered to be Moderate / Adverse due to the introduction of a large industrial feature and new points of focus in the middle distance. However, considering the scale of this view and the effects of distance, the Proposed Development and Overall Project will become noticeable but not prominent new features in this view.

Viewpoint 14 - L1010 at Barrysbrook

10.5.116 Viewpoint 14 is located approximately 1 km from the EGC, in particular the overhead transmission line, on elevated ground along the L1010 Togher. The PPA is located approximately 5.7km north of this viewpoint in the background.

10.5.117 The immediate context is rural and agricultural in character with open grassland, peatlands, heath, clusters of mature trees and hedgerows structuring the view. The topography gently undulates, with the elevation decreasing towards the north and increasing again at Knockdrin Hill. Electrical infrastructure and communication masts form part of this vista. A number of residential dwellings located along L1010 Togher will experience similar views.

10.5.118 The landscape consists of common elements and the value of this view is assessed as Low. Visual receptors are residents and vehicle users. Residents will have High susceptibility and sensitivity to change as views will be experienced daily. Vehicles users will have a Medium susceptibility and the resulting sensitivity to change is Low due to the transient nature of the view.

10.5.119 The PPA and EGC will create a discernible change in this view. While the PPA and the substation of the EGC is hard to distinguish in the background, the proposed 2 no. emission stacks (45m and 60m) protrude above the horizon line of the landscape and contribute the overall intensification of the industrial composition in the background. The overhead transmission line associated with the EGC will be prominently visible in this view.

10.5.120 The magnitude of visual change is considered Medium and resulting significance / quality of visual effects is considered to range between Moderate to Significant / Adverse due to the introduction of tall industrial elements across this view, particularly for residents.

Viewpoint 15 - Local Road at Coole, southeast of Croghan

10.5.121 Viewpoint 15 is representative of views southeast from an access road south of local road L1010 Togher located on elevated ground. This viewpoint is located approximately 1km northwest of the proposed 400kV substation component of the EGC.

10.5.122 The immediate context is rural and agricultural in appearance with open grassland, hedgerow vegetation, bands of mature trees, and peatlands at Cavemount Bog and Ballybeg Bog in the mid distance of this view. The peatlands are partially screened from this view by mature trees and vegetation associated with residential dwellings and farm buildings in the foreground.

10.5.123 The landscape consists of common elements and the value of this view is assessed as Low. Visual receptors at this location are residents and vehicle users. Residents will have a High susceptibility to change as views will be experienced daily. Their sensitivity is considered High. Vehicles users will have a Medium susceptibility and resulting sensitivity to change due to the transient nature of the view.

10.5.124 The proposed 400kV substation element of the EGC is located in the middle distance. It will be partially visible through the bare branches of mature trees in the foreground. The Proposed Development and Overall Project will add an industrial component to this view, particularly during the winter months.

10.5.125 The magnitude of change is considered Low, and the resulting significance / quality of visual effects is considered to be Slight / Adverse.

Viewpoint 16 – Local Road at Coole, southeast of Croghan

10.5.126 Viewpoint 16 is located on local road L1010 approximately 240m east from Viewpoint 15 and provides a slightly elevated and open view across the landscape to the southeast.

10.5.127 Agricultural fields define the foreground together with hedgerow boundaries and bands of trees. This is followed by large areas of exposed bog associated with past peat extraction in the middle distance. The background extents to more undulating terrain with agriculture concluded by the silhouettes of the Wicklow Mountains on the horizon. A local distribution line is located in the foreground followed by the 400 kV overhead transmission line in the middle distance running in an east – west direction. Mount Lucas and Cloncreen wind farms are located in the background. A number of residential dwellings and farms are scattered in the foreground and background.

10.5.128 The landscape consists of common elements but includes panoramic views across the region. Detracting elements are harvested and exposed bogs. The value of this view is assessed as Medium. Visual receptors at this location are residents and vehicle users. Residents will have a High susceptibility to change as views will be experienced daily. Their sensitivity is considered High. Vehicles users will have a Medium susceptibility to change due to the transient nature of the view. Their sensitivity is considered Low.

10.5.129 The proposed 400 kV substation element of the EGC is located in the middle ground at approximately 830m distance. It will be mainly openly visible with some screening by intervening field boundary vegetation. The Proposed Development and Overall Project will add a noticeable industrial element to this view reinforcing the prominence of electricity infrastructure. Considering the sloping nature of the ground, the substation will not obstruct the panoramic quality of this view and integrate in the setting. It will, however, become a new point of focus in available views.

10.5.130 The magnitude of change is considered Medium, and the resulting significance / quality of visual effects is considered to be Moderate / Adverse.

Viewpoint 17 - L1010 at Togher

10.5.131 Viewpoint 17 is representative of views southwest from local road L1010 Togher , located approximately 1km northeast of the proposed 400 kV substation element of the EGC.

10.5.132 Immediately south of the road, there is an open grassland separated by hedgerows, followed by heath vegetation and growing birch woodland. An existing 400 kV overhead transmission line in the middle distance forms, together with a local distribution line, prominent vertical elements in this view.

10.5.133 The landscape consists of generally common elements and the value of this view is considered Low. Visual receptors at this location are vehicle users, these receptors will experience a transient view. The susceptibility to visual change is Medium. The sensitivity is also Low.

10.5.134 The proposed 400 kV substation element and associated structures of the EGC will introduce a noticeable but not prominent new focus point in this view. While the overall structure of this or similar views along this section of the L1010 will remain similar, the Proposed Development and Overall Project will reinforce the prevalence of industrial components in this view.

10.5.135 The magnitude of change is considered Medium and the resulting significance / quality of visual effects is considered to be Slight-Moderate / Adverse due to the intensification of industrial components in the view.

Viewpoint 18 – Toberdaly Bridge crossing the Grand Canal

10.5.136 Viewpoint 18 is representative of views west from the Grand Canal waterway and greenway when crossing Toberdaly Bridge. The viewpoint is located approximately 1.9km southeast of the proposed 400 kV substation site.

10.5.137 The setting surrounding the Grand Canal corridor is rural with substantial belts of mature trees along the Grand Canal and beyond. The greenway follows the tow path. A low voltage distribution line is located in the foreground. The upper section of a lattice tower of an existing 400 kV overhead transmission line is visible above the tree canopy in the background. Croghan Hill is also visible in the background to the left.

10.5.138 Landscape elements include the water body of the Grand Canal, clusters and bands of mature trees which combine to an attractive composition. The value of this view is assessed as High. Visual receptors are recreational uses (including cyclists and pedestrians) and vehicle users. The majority will experience transient views. The susceptibility to visual change is considered High. The sensitivity to visual change is considered High as the setting and the associated views are one of the main reasons for coming to this location or passing by.

10.5.139 The upper most sections of lattice tower structures associated with the proposed 400 kV substation element of the EGC will become visible above the tree canopy located in the middle distance. The proposed structures will be seen in conjunction with the existing

400kV overhead transmission line lattice tower in the background. The magnitude of visual effects is considered Negligible and the resulting significance / quality of visual effects will be Not Significant / Neutral. The proposed structures are barely discernible and will not alter the view.

Viewpoint 19 – R400 at Junction with Clonmeen Rise

10.5.140 Viewpoint 19 is located approximately 8.5km from the PPA and EGC, and approximately 3km from the proposed 400 kV substation element of the EGC.

10.5.141 The immediate context is rural and agricultural in appearance with open grassland, mature trees, and hedgerow vegetation defining the view, as well as a number of residential dwellings. Electrical local distribution infrastructure form a prominent part of the view.

10.5.142 The landscape consists of generally common elements and the value of this view is considered Low. Visual receptors at this location are vehicle users, these receptors will experience a transient view. Susceptibility to visual change is considered Medium. The resulting sensitivity is also considered Low.

The Proposed Development and Overall Project will not be discernible from this location resulting in no visual effects.

Viewpoint 20 – Grand Canal Way car park close to R400

10.5.143 Viewpoint 20 is representative of views northwest from along the Grand Canal Corridor where it intersects with the R400 approximately 7.5 km from the PPA and approximately 2.8km from proposed 400 kV substation element of the EGC.

10.5.144 The view contains the Grand Canal greenway to the left, which is bordered by semi-mature vegetation. Agricultural fields with overgrown field boundaries define the foreground and middle ground. Hedgerows and clusters of mature trees structure the background. Sections of an existing 400 kV overhead transmission line are visible in the middle distance. The overhead wires of a local electricity distribution line cross this view and the Grand Canal.

10.5.145 The landscape consists of generally common elements but the view is adjacent to the Grand Canal environs. The value of this view is assessed as Medium. Visual receptors are recreational uses (including cyclists and pedestrians) and vehicle users. The susceptibility to visual change is considered High. The sensitivity to visual change is considered High as the setting and the associated views are one of the main reasons for coming to this location or passing by.

10.5.146 The Proposed Development and Overall Project will not be discernible from this location resulting in no visual effects.

Viewpoint 21 – R400 at Rathcobican

10.5.147 Viewpoint 21 is representative of open views west from the R400. The proposed 400 kV substation element of the EGC is located approximately 3.1km west.

10.5.148 The landscape is open, gently undulating and in agricultural usage. The Oldstreet-Woodland 400 kV overhead transmission line forms prominent structures and is the main focus point in this view. The elevation of the landscape increases partially to the west. This changing topography coupled with existing treelines screen further distant views. The ruin of Toberdaly Castle is located on the highpoint in the northwest of this view.

10.5.149 The landscape consists of generally common elements as well as considerable detracting elements such as the 400 kV overhead transmission line. The value of this view is assessed as Low. Visual receptors at this location are vehicle users, these

receptors will experience a transient view. The susceptibility is considered Medium. The sensitivity to visual change is Low.

The Proposed Development and Overall Project will not be discernible from this location resulting in no visual effects.

Viewpoint 22 – Priory Lawns, Rhode

10.5.150 Viewpoint 22 was captured from Priory Lawns, a residential housing estate on the outskirts of Rhode village. The proposed 400 kV substation element of the EGC is located approximately 2.9km to the southwest.

10.5.151 The immediate context is suburban but with open long distance views across a rolling agricultural landscape with grassland, a range of hedgerows, bands and cluster of trees interspersed with dwellings. A number of local distribution lines cross the view. The Oldstreet-Woodland 400 kV overhead transmission line and a considerable number of its lattice towers are visible in middle ground and into the background to the west.

10.5.152 The landscape consists of generally common elements as well as detracting elements such as the 400 kV overhead transmission line. The overall composition of this view is attractive and the value of this view is considered Medium. Visual receptors at this location are residents. Residents will have a High susceptibility to change. The sensitivity is considered High as views will be experienced daily.

10.5.153 The Proposed Development and Overall Project will not be discernible from this location resulting in no visual effects.

Summary of Visual Effects

10.5.154 A summary of visual effects for each viewpoint / photomontage is provided in Table 10.15. Elements of the Proposed Development and Overall Project are considered long-term (PPA) or permanent (EGC & GCC) features in the visual amenity at operation.

Table 10.15: Summary of Visual Effects (Year 1 without landscape mitigation)

Viewpoint No. and visible project elements	Receptor Groups	Value	Susceptibility	Sensitivity	Magnitude of visual effects	Significance / Quality of visual effects
Viewpoint 1 PPA & EGC	Vehicle Users	Low	Medium	Medium	Medium	Moderate / Adverse
Viewpoint 2 PPA & EGC	Vehicle Users	Low	Medium	Medium	Medium	Moderate / Adverse
Viewpoint 3 EGC	Vehicle Users	Low	Low	Low	High	Significant / Adverse
Viewpoint 4a EGC	Vehicle Users	Low	Medium	Medium	Medium	Moderate / Adverse
Viewpoint 4b PPA	Vehicle Users	Low	Medium	Medium	High	Significant / Adverse

Viewpoint No. and visible project elements	Receptor Groups	Value	Susceptibility	Sensitivity	Magnitude of visual effects	Significance / Quality of visual effects
Viewpoint 5 PPA & EGC	Vehicle Users	Medium	Medium	Medium	High	Moderate-Significant / Adverse
	Residents	Medium	High	High	High	Significant / Adverse
Viewpoint 6 PPA	Vehicle Users	Low	Medium	Low	Very Low	Not Significant / Neutral
Viewpoint 7 None	Vehicle Users	Low	Medium	Low	None	None
	Recreational Users	Low	Medium	Medium	Noe	None
Viewpoint 8 None	Vehicle Users	Medium	Medium	Low	None	None
	Visitors	Medium	Medium	High	None	None
Viewpoint 9 PPA	Vehicle Users	Medium	Medium	Low	Low	Not Significant / Adverse
	Residents	Medium	High	High	Low	Slight / Adverse
Viewpoint 10 PPA & EGC	Vehicle Users	Medium	Medium	Low	Low	Slight / Neutral
Viewpoint 11 PPA & EGC	Vehicle Users	Very Low	Low	Low	Low	Slight / Neutral
Viewpoint 12 PPA & EGC	Vehicle Users	Medium	Medium	Medium	Medium	Moderate / Adverse
Viewpoint 13 PPA & EGC	Recreational Users	High	High	High	Medium	Moderate / Adverse
Viewpoint 14 PPA & EGC	Vehicle Users	Low	Medium	Low	Medium	Moderate / Adverse
	Residents	Low	High	High	Medium	Moderate to Significant / Adverse
Viewpoint 15 EGC	Vehicle Users	Low	Medium	Low	Low	Not Significant / Neutral
	Residents	Low	High	High	Low	Slight / Adverse

Viewpoint No. and visible project elements	Receptor Groups	Value	Susceptibility	Sensitivity	Magnitude of visual effects	Significance / Quality of visual effects
Viewpoint 16 EGC	Vehicle Users Residents	Medium Medium	Medium High	Low High	Medium Medium	Slight-Moderate / Adverse Moderate / Adverse
Viewpoint 17 EGC	Vehicle Users	Low	Medium	Low	Medium	Slight-Moderate / Adverse
Viewpoint 18 EGC	Recreational Users & Vehicle Users	High	High	High	Negligible	Not Significant / Neutral
Viewpoint 19 None	Vehicle Users	Low	Medium	Low	None	None
Viewpoint 20 None	Recreational Users & Vehicle Users	Medium	High	High	None	None
Viewpoint 21 None	Vehicle Users	Low	Medium	Low	None	None
Viewpoint 22 None	Residents	Medium	High	High	None	None

Effects on Protected Views, Scenic Routes and Amenity Routes

County Offaly

10.5.155 The following Key Amenity Route will experience views of elements of the proposed PPA and EGC development.

- **R400**: Rhode to county boundary towards Rochfordbridge, link to M6.

  This route is defined as having 'carrying capacity'. Views of elements of the Proposed Development and Overall Project will be experienced. Intermittent and partially open views will be experienced of the PPA and EGC elements (220kV substation and overhead transmission line) when travelling along the R400 in both directions due to intervening vegetation and topography. Photomontages produced for VP2, VP3 and VP4 illustrate the nature of views experienced from the R400. A detailed description of the stated viewpoints is included in this section under 'Visual Effects' above. The significance of visual effects range from Negligible / Neutral to Significant / Adverse due to the close proximity to the proposal in available views. The Proposed Development and Overall Project will introduce industrial features and prominent new points of focus in available transient views, which are not totally uncharacteristic considering the character of the surrounding area (as described in Section 10.4 above).

County Westmeath

10.5.156 The following Protected Views are located within the study area and will experience views towards the Proposed Development and Overall Project. All views will be transient and experienced at high speed as no parking areas of viewing facilities are provided along the R446 and M6 in the vicinity of these views.

- **View 13** Panoramic views from Garrane Hill on the Regional road R446

  VP10 depicts a view southeast from this viewpoint towards the Proposed Development and Overall Project. A detailed description of the listed viewpoints is included in this section under 'Visual Effects' above.

  The PPA with its 2 no. emission stacks (45m and 60m) will create a discernible change in a section of the panoramic view and introduce a noticeable industrial feature and new point of focus. The EGC, and in particular the overhead transmission line will extend this change along its alignment across this view. Sections of the PPA and EGC protrude above the horizon line. The magnitude of visual change is considered Medium and resulting significance / quality of visual effects is considered to be Moderate / Adverse due to the introduction of a large industrial feature and new points of focus in the middle distance. However, considering the scale of this view and the effects of distance, the Proposed Development and Overall Project will become noticeable but not prominent new features in available views.

- **View 14** Views of Sculpture along the M6

  This viewpoint is located just outside the 5km study area in the east and has been included in the assessment as the roadside sculptures are a prominent landmark when driving along the M6. The view west and south is open and across regenerating bog with intervening vegetation extending into the background. Views experienced are transient and at high speed. There is no parking bay to park along the M6 in this section. The Proposed Development and Overall Project is located over 5km away and the upper sections of the PPA will become visible on the horizon in available views to the southwest. The value of this view is considered Medium as it contains common landscape elements and former industrially harvested boglands and now regenerating bog. The susceptibility to change is Medium given the flat nature of the area, where any change in height will be noticeable. The sensitivity of the receptor, which will be vehicle users, is Low considering the speed of travel (up to 120km/h). At that speed, the quality of the view is not the main focus. The magnitude of change is considered Low and the resulting significance / quality of visual change is considered Not Significant / Neutral given the distance between the PPA and the visual receptor as well as the effects of intervening screening vegetation. The PPA will become noticeable in the distance as one feature among others in transient open and panoramic views.

10.6 Mitigation and Enhancement Measures

Embedded Mitigation by Design

10.6.1 Embedded mitigation measures form an integral, committed and deliverable part of the Proposed Development and Overall Project design or comprise standard construction practices. They are assumed to be implemented and are therefore factored into the determination of residual significant effects. The following embedded mitigation measures have been identified.

10.6.2 The Proposed Development and Overall Project has been designed, as far as practicable, to avoid adverse effects on the landscape and views through consideration of options, appraisal and refinement. Modifications made to the design of the Proposed Development and Overall Project to avoid and reduce effects include mainly limiting the

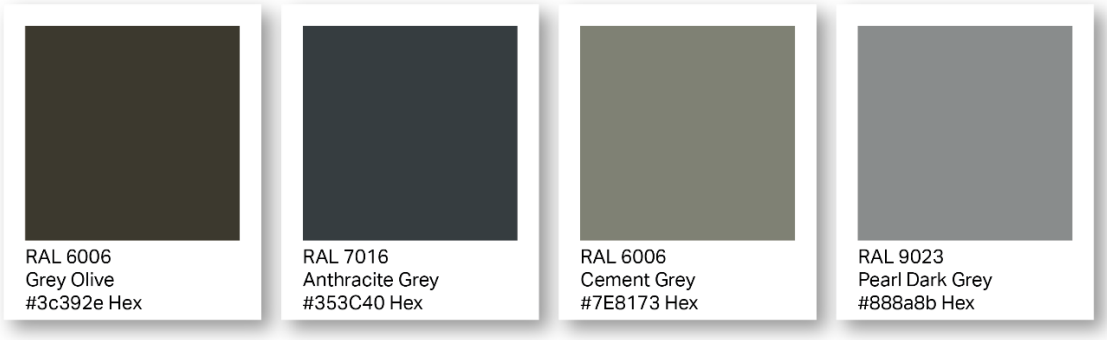
extent of land-take, siting of components, and, where possible, minimise impacts on established vegetation and features that contribute to landscape character and visual amenity.

Facade Colour Scheme for the Proposed Development (including lattice structures)

10.6.3 Considering the scale of the Proposed Development, landscape mitigation can provide screening of the lower parts of the development and the area around the site entrance but not for the upper sections of the built structures and the lattice structures. The PPA and the 220 kV substation is located in a prominent setting along the R400 with a low-lying landscape as a backdrop, particularly when seen from the County Offaly side. The principal visual mitigation measures for the Proposed Development is therefore inherent in the design of its architecture and its colour scheme.

10.6.4 With the primary objective to minimise the visual impact of the built structures and to allow the buildings to be as unobtrusive as feasible against their backdrop, the proposed colour scheme was drawn from colours found the surrounding local landscape.

10.6.5 The building colours consist generally of a mix between the following four main colours, which range all within a muted mid-dark grey and green spectrum.



10.6.6 The colours pick up existing colours of the landscape across the peatland landscape and its hinterland against which the Proposed Development built structures will be seen in the majority of views. The proposed colour scheme will help to take the attention away from individual buildings and roofscapes and help blending-in the proposed built structures better with the landscape in available views from local residences, the public road network, including elevated ground and Croghan Hill.

10.6.7 Sections of Proposed Development will still become a new focus point in a number of available views, particularly the HRSG and turbine halls, as well as storage tanks / silos. The implementation of the proposed colour scheme will help to take the attention away from the Proposed Development and make it one of several other existing industrial facilities across the bog-scape rather than pinpointing it with bright colours, which will otherwise emphasise further the existence of the proposed industrial structures in available views. The colours will also work with varying weather and visibility conditions, where their muted colours can quickly blend in.

10.6.8 The 220 kV and 400 kV substation buildings should be exclusively coloured in a dark green or olive colour in order to pick up colours used for agricultural tanks or buildings and therefore integrate as much as possible into their setting.

10.6.9 All lattice structures should be coated with an anthracite grey or another muted mid-dark grey colour from the outset. Untreated galvanised lattice structures will otherwise stand out significantly and draw unwanted visual attention, particularly when seen against the

land from an elevation (refer to Photomontages 12 and 13). The silver colour of the galvanised lattices will take at least 10-15 years to dull down and can reflect sunlight and begin to glare in certain weather conditions.

10.6.10 The implementation of the proposed colour scheme will help to take the attention away from the Electricity Grid Connection and help assimilate the structures into the landscape colour palette.

Gas Connection Corridor - Colour Scheme for above ground installations (AGI)

10.6.11 AGI, such as buildings, fences, lattice structures etc. should generally consist of a mix between the following two colours (or similar), ranging within a muted dark grey and green spectrum.

10.6.12 The colours will best integrate the AGI into their setting in a rural landscape. The proposed colour scheme will help to take the attention away from individual built structures and help blending-in these structures better with the landscape in available views from local residences, the public road network, including elevated ground.

Lighting

10.6.13 Although not required to reduce any significant adverse effects, the following mitigation measures will be implemented as part of good lighting design practice:

- All proposed luminaires in the lighting design strategy shall be approved by the International Dark Sky Association (IDA) luminaires; any other exterior lighting will follow this principle.
- Utilise back shields, glare cowls, louvres and similar to minimize / obscure source intensity towards the adjacent hedges and nearby residences; use reflector types that redirect light back downward to desired work areas.
- Confine lighting to the task area (use horizontal cut-off optics and zero tilt angles, particularly for floodlights).
- Careful consideration to luminaire positioning and orientation; all floodlight luminaires to be oriented downward or at very low angles to provide lighting only to the areas directly below and adjacent to a given pole.
- Ensure low colour temperature lamps (CCT) ≤ 3000 K are in use where possible; and
- Maximise times where lighting can be shut off or dimmed.

Landscape Mitigation Strategy

Power Plant Area (PPA)

10.6.14 Proposed landscape mitigation measures are detailed in the Landscape Strategy Report included in Appendix 10B.

10.6.15 A synopsis is provided below:

10.6.16 The Power Plant is located east along the R400 with a low-lying landscape as a backdrop. The proposed landscape mitigation and enhancement measures involve the introduction of the following specific elements:

- **Mix of Deciduous Trees:** Positioned to the west of the site, these clusters aim to screen the lower parts of the development and the area around the site entrance. Their placement is intended to enhance visual aesthetics and promote integration with the natural environment.
- **Woodland Mix and Grass Mix:** To the south of the site, a combination of woodland mix and grass mix will be introduced. This aims to facilitate better integration with the existing scrubland adjacent to the site, extending beyond the site boundary, and to enhance the screening of the lower section of the PPA over time when the woodland mix matures.
- **Retention of existing vegetation:** Clusters of existing semi-mature and mature vegetation in the northern section of the existing site entrance east of the R400 shall be retained and protected during construction.

10.6.17 Landscape mitigation in areas to the north and east of the PPA and within the redline boundary will not be suitable for replanting due to the location of the contractors compounds.

Habitat Replacement Areas

10.6.18 As described in Chapter 9 – Biodiversity, Section 9.5, within the Power Plant Area, there will be unavoidable loss of habitats to facilitate the construction phase, including losses to amenity grassland, dry meadows and grassy verges, scrub and immature woodland, and bog woodland.

10.6.19 Habitat loss will be kept to a minimum where possible, by only removing habitat required to facilitate the construction footprint, including working, storage areas and laydown areas etc. Where habitats are disturbed, removed, or damaged for temporary construction compounds, these will be reinstated naturally through succession and left unmanaged following construction.

10.6.20 An area of approximately 8 hectares will be planted with trees, located to the west of the line-cable interface compound within Ballybeg Bog. This is to replace for the loss of trees, in particular bog woodland, as a result of the construction of the Proposed Development, including the Power Plant Area and Electricity Grid Connection. Refer to Figure 9.10 for the location and extent of the replanting lands to compensate for tree felling requirement as well as Appendix 10B Landscape Mitigation Strategy.

10.6.21 Replanting will aim to create an area of bog woodland, dominated by downy birch, but include to a lesser extent include Holly, Rowan, Scots pine, Oaks and Willows, which aligns with the Ballybeg Cutaway Bog Decommissioning and Rehabilitation Plan (see Appendix 9J). Full details are presented in the Habitat Management Plan (refer to Appendix 9K).

Electricity Grid Connection (EGC) - 220 kV Substation

10.6.22 Proposed landscape mitigation measures are detailed in the Landscape Strategy Report included in Appendix 10B.

10.6.23 A synopsis is provided below:

10.6.24 The Electricity Grid Connection is located west of the R400 with a low-lying landscape as a backdrop. The proposed landscape mitigation and enhancement measures involve the introduction of the following specific elements:

- **Mix of Deciduous Trees:** Positioned to the east along the R400, additional clusters of deciduous trees will aim to screen the lower parts of the development from the road and the area around the site entrance. Their placement is intended to enhance visual aesthetics and promote integration with the natural environment.
- **Grass Mix:** Areas to the north and east of the substation compound shall be planted with a grass mix. This aims to increase the biodiversity in this area which his currently mostly hardstanding. Considering the required underground services and overground lattice structures, the establishment of a woodland mix will not be feasible in the vicinity of the substation.
- **Retention of existing vegetation:** Existing regenerating bog vegetation west of the proposed substation compound shall be retained and protected during construction works.

Electricity Grid Connection (EGC) - 400 kV Substation

10.6.25 Proposed landscape mitigation measures are detailed in the Landscape Strategy Report included in Appendix 10B.

10.6.26 A synopsis is provided below:

10.6.27 The Electricity Grid Connection is located north of the Grand Canal and south of the L1010 Togher. The site is adjacent to agricultural fields to the west, south and north. Areas of regenerating bog are located to the east. The proposed landscape mitigation and enhancement measures involve the introduction of the following specific elements:

- **Woodland Mix:** A band of trees is to be planted along the southern and eastern side of the substation compound and separated by a band of grassland from the compound fence. This is to provide screening of the lower section of the substation building and to pick up the pattern of bands of trees along field boundaries. Additional screen planting in form of bands of trees will be provided along the western and southern redline boundary in order to enhance screening in views north from the Grand Canal.
- **Grass Mix:** A band of grassland will be created along the eastern (entrance area), northern, western and southern boundary of the substation compound. Other areas associated with former access tracks and agricultural fields located within the southern tip of the redline boundary are to become grassland.
- **Retention of existing vegetation:** Existing bands of trees along field boundaries north of the substation compound as well as a wide strip south of the substation compound is to be retained.

Electricity Grid Connection (EGC) – Overhead Transmission Line (OHL) and underground cable (UGC)

10.6.28 Proposed landscape mitigation measures are detailed in the Landscape Strategy Report included in Appendix 10B.

Location of Proposed OHL and UGC

- Avoidance of locating the Proposed OHL where there was a specific conflict with a view or amenity;
- Restricting the siting of structures close to a road unless it could be screened by an adjoining hedgerow or hedgerow trees. Towers to be set back well from the edges of local roads, where practical, especially where there was a lack of hedgerows.
- Avoidance of running the Proposed OHL close and parallel to a road;
- Place UGC within existing road / access track corridors where possible;
- Avoidance of placing overhead transmission line structures on axial views, or where there was a change in direction of a road;
- Taking advantage of existing tall hedgerows, bands trees, or stands of trees that enclosed fields within the study area - using them either as a background or screen the overhead transmission line;
- Minimise construction impact on adjoining vegetation;
- Avoidance of placing the overhead transmission line structures on rising ground where they will break the skyline, where possible;
- Alignment of the Proposed OHL as straight as possible in order to minimise the requirement for angle towers;
- Micro-siting of proposed towers/pole-sets in order to avoid mature trees;
- Where possible, location of tower structures near or on field boundaries in order to retain the visual appearance of existing field pattern; and
- Avoidance of traversing relevant roads in a perpendicular manner.

Vegetation

- Retention of existing mature tree planting where possible;
- Minimising removal or pruning of hedgerows and trees/woodland areas; and
- Minimising the removal of roadside vegetation where the Proposed OHL crosses.

Lattice Tower locations

10.6.29 Careful analysis has been undertaken for all tower positions in areas where towers are likely to give rise to significant visual effects. These locations will be reviewed at construction stage to ensure optimum micro-siting is achieved with regard to visual effects.

10.6.30 Adherence to the above listed mitigation measures will reduce the identified landscape and visual effects and will ensure that the residual effects associated with the Proposed OHL can be minimised.

<u>Gas Connection Corridor (GCC)</u>

10.6.31 Landscape mitigation can be developed once a route alignment becomes available. General landscape mitigation measures should comprise the following:

- Provision of a new native hedgerow planting along the boundary of the future AGI site to screen above ground structures.

- Replanting of native hedgerows at crossing points of the pipeline route with field boundaries and along the local road network where existing vegetation is required to be removed to facilitate the undergrounding works and access tracks to the construction site.
- Protection of all existing retained vegetation during the construction phase according to BS 5837:2012; and
- Ensure that maintenance and replacement of failing or failed planting is undertaken.

10.7 Residual Effects

10.7.1 Following the completion of construction works and the implementation of the proposed landscape mitigation measures, the overground structures of the Proposed Development and Overall Project will become long-term (PPA) or permanent (EGC & GCC) features in the landscape and visual amenity.

10.7.2 Effective implementation, establishment and maintenance of the proposed landscape mitigation measures listed in Section 10.6 above will have a positive impact and help to 'soften' landscape and visual effects associated with the Proposed Development and Overall Project, particularly for areas located within close proximity of the proposed structures. The perception of adverse landscape and visual effects will remain similar for large built structures associated with the PPA and EGC development due to their height following the establishment of landscape mitigation measures. Adverse visual effects resulting from lower structures (up to approximately 8-10m) will reduce in tandem with the maturing of the proposed woodland and tree planting where feasible. Residual landscape and visual effects for the various development components are described and summarised herein.

Power Plant Area (PPA)

Residual Landscape Effects

10.7.3 Given the scale and location of the PPA, the landscape mitigation measures focus on architectural mitigation – façade treatment and minimising lighting during night-time. These measures will be implemented immediately and come into effect following the completion of construction works. The landscape mitigation strategy proposes additional woodland and tree belts to integrate the facility where possible. This will not reduce effects on the landscape character as the alteration to the landscape character will remain. Landscape effects will therefore remain unchanged as stated in Section 10.5 Predicted Impacts.

Residual Visual Effects

10.7.4 Residual visual effects will be highest in short and middle-distance views from the adjacent road network as well as from areas on higher ground, where there is no or little intervening existing vegetation.

10.7.5 Residual visual effects in close and middle distance views (up to 1km) along the R400 will reduce slightly due to the implementation of additional screen planting along the PPA site boundary. Middle and long distance views (beyond 1km) from the PPA and from elevated locations, such as Croghan Hill or Knockdrin Hill will remain unchanged due to the scale of the PPA.

Electricity Grid Connection (EGC)

Residual Landscape Effects

10.7.6 Given the scale and location of the EGC, the landscape mitigation measures focus mainly on architectural mitigation – façade treatment, lattice structure colours, and minimising lighting during night-time. These measures will be implemented immediately and come into effect following the completion of construction works. The landscape mitigation strategy proposes bands of woodland and clusters of deciduous trees in the vicinity of the substation compounds where feasible in order to integrate the substation structures in the surrounding setting. This will not reduce effects on the landscape character as the alteration to the landscape character will remain. Landscape effects will therefore remain unchanged as stated in Section 10.5 Predicted Impacts.

Residual Visual Effects

10.7.7 Residual visual effects will be highest in short and middle-distance views from the adjacent road network as well as from areas on higher ground, where there is no or little intervening existing vegetation.

10.7.8 Residual visual effects in close and middle distance views (up to 1km) along the R400 will reduce slightly due to the implementation of additional screen planting along the substation compound boundaries. Middle and long distance views (beyond 1km) from the EGC and from elevated locations, such as Croghan Hill or Knockdrin Hill will remain unchanged due to the scale of the lattice towers of overhead transmission line.

Summary of Residual Visual Effects for viewpoint selection

Table 10.16: Summary of Residual Visual Effects (Year 15 with landscape mitigation)

Viewpoint No. and visible project elements	Receptor Groups	Value	Susceptibility	Sensitivity	Residual Magnitude of visual effects	Residual Significance / Quality of visual effects
Viewpoint 1 PPA & EGC	Vehicle Users	Low	Medium	Medium	Medium	Moderate / Adverse
Viewpoint 2 PPA & EGC	Vehicle Users	Low	Medium	Medium	Medium	Moderate / Adverse
Viewpoint 3 EGC	Vehicle Users	Low	Low	Low	High	Significant / Adverse
Viewpoint 4a EGC	Vehicle Users	Low	Medium	Medium	Medium	Moderate / Adverse
Viewpoint 4b PPA	Vehicle Users	Low	Medium	Medium	Medium	Moderate / Adverse
Viewpoint 5 PPA & EGC	Vehicle Users Residents	Medium Medium	Medium High	Medium High	Medium-High Medium-High	Moderate / Adverse Moderate-Significant / Adverse

Viewpoint No. and visible project elements	Receptor Groups	Value	Susceptibility	Sensitivity	Residual Magnitude of visual effects	Residual Significance / Quality of visual effects
Viewpoint 6 PPA	Vehicle Users	Low	Medium	Low	Very Low	Not Significant / Neutral
Viewpoint 7 None	Vehicle Users Recreational Users	Low Low	Medium Medium	Low Medium	None Noe	None None
Viewpoint 8 None	Vehicle Users Visitors	Medium Medium	Medium Medium	Low High	None None	None None
Viewpoint 9 PPA	Vehicle Users Residents	Medium Medium	Medium High	Low High	Low Low	Not Significant / Adverse Slight / Adverse
Viewpoint 10 PPA & EGC	Vehicle Users	Medium	Medium	Low	Low	Slight / Neutral
Viewpoint 11 PPA & EGC	Vehicle Users	Very Low	Low	Low	Low	Slight / Neutral
Viewpoint 12 PPA & EGC	Vehicle Users	Medium	Medium	Medium	Medium	Moderate / Adverse
Viewpoint 13 PPA & EGC	Recreational Users	High	High	High	Medium	Moderate / Adverse
Viewpoint 14 PPA & EGC	Vehicle Users Residents	Low Low	Medium High	Low High	Medium Medium	Moderate / Adverse Moderate to Significant / Adverse
Viewpoint 15 EGC	Vehicle Users Residents	Low Low	Medium High	Low High	Low Low	Not Significant / Neutral Slight / Neutral
Viewpoint 16 EGC	Vehicle Users Residents	Medium Medium	Medium High	Low High	Low Low	Slight / Adverse Slight / Neutral

Viewpoint No. and visible project elements	Receptor Groups	Value	Susceptibility	Sensitivity	Residual Magnitude of visual effects	Residual Significance / Quality of visual effects
Viewpoint 17 EGC	Vehicle Users	Low	Medium	Low	Low	Slight / Adverse
Viewpoint 18 EGC	Recreational Users & Vehicle Users	High	High	High	Negligible	Not Significant / Neutral
Viewpoint 19 None	Vehicle Users	Low	Medium	Low	None	None
Viewpoint 20 None	Recreational Users & Vehicle Users	Medium	High	High	None	None
Viewpoint 21 None	Vehicle Users	Low	Medium	Low	None	None
Viewpoint 22 None	Residents	Medium	High	High	None	None

Gas Connection Corridor (GCC)

Residual Landscape Effects

10.7.9 Residual effects on the landscape character, following the successful retention of existing vegetation and the establishment of proposed new vegetation, will reduce adverse landscape effects at the site location. The significance effects on landscape character for locations within 250-500m from the development site will reduce to Slight / Neutral and for locations beyond 500m the landscape effects will reduce to Imperceptible / Neutral. The landscape effects resulting from the AGI locations will gradually reduce with the maturing of screen planting along the perimeter of the site, which will help to integrate the proposed light industrial overground structures in the overall landscape character over time.

Residual Visual Effects

10.7.10 Residual visual effects will be highest in short and middle-distance views from the adjacent road network as well as from areas on higher ground, where there is no or little intervening existing vegetation.

10.7.11 Residual visual effects in close distance views will remain similar when located adjacent to the development site boundary where sections of the Proposed Development and Overall Project will remain openly visible and on display. Visual effects from elevated locations in short to middle distance views within approximately 250-500m will decrease with the maturing of anticipated landscape mitigation proposals.

10.7.12 Residual effects in available longer distance views beyond approximately 500m and up to 1km will remain largely similar as at the completion of construction works.

10.8 Cumulative Effects

Impacts – Interaction of Effects between the Various Elements of the Proposed Development and Overall Project

10.8.1 In addition to landscape and visual effects, it is also important to consider cumulative landscape and visual effects. Significant cumulative effects may occur where a number of similar developments combine to increase the prevalence of that type of development within a landscape or view to the extent that they become a defining characteristic.

10.8.2 The above landscape and visual impact assessment has considered all elements of the Proposed Development and Overall Project, as described in Chapter 5, including elements which are not subject to this planning permission, during the construction, operation and decommissioning phases. Due to the proximity, scale and timelines associated with each element, there is potential for cumulative effects with the Proposed Development and Overall Project. A cumulative impact assessment has therefore been carried out below to examine the impacts that the various elements of the Overall Project will have on the landscape and visual resource.

Power Plant Area (PPA) and Electricity Grid Connection (EGC)

10.8.3 The Power Plant Area and Electricity Grid Connection are part of this application while a separate consent application for the Gas Connection Corridor will be made by GNI under Section 39A of the Gas Act. The Gas Connection Corridor and Electricity Grid Connection elements of the Overall Project are integral to the operation of the Power Plant Area. Therefore, there is potential for overlapping construction phases of each element of the Overall Project (*i.e*., Electricity Grid Connection, Gas Connection Corridor and Power Plant Area) resulting in cumulative effects on the landscape character and visual amenity.

Construction Phase (and Decommissioning Phase)

10.8.4 Potential cumulative impacts and associated effects arising during the decommissioning phase are not anticipated above and beyond those assessed during the construction phase below.

Cumulative Landscape Effects

10.8.5 The PPA includes works adjacent to the EGC. This includes underground cabling to connect the PPA with the 220kV substation compound. If construction works of the PPA and the EGC are carried out simultaneously, there will be an increased perception of construction activity within the study area, affecting mainly residential and vehicular receptors along the local and regional road network adversely affecting the landscape character and visual amenity.

10.8.6 Offaly County Council does not define specific landscape character areas yet. However, it does indicate that the Proposed Development and Overall Project is located in an area identified as Moderate sensitivity. Apart from the 400kV substation compound, which is currently located in an agricultural field, the remaining elements of the EGC and all of the PPA are currently located in post-industrial brownfield areas bordered by areas with regenerating bog. The existing landscape character of these sites will change to industrial. The wider landscape character to the east and north will remain similar and consists largely of regenerating bog as well as sand and gravel pits of which some are flooded. While regenerating, the landscape character contains a degree of monotony and desolation. It can therefore accommodate the proposed PPA and EGC developments without losing its overall integrity. The susceptibility of the landscape to accommodate change is considered low. However, the value of the landscape is

considered medium as it is part of an industrial heritage landscape related to peat harvesting, and which is now in parts regenerating creating a new character in the future.

10.8.7 The construction of the proposed PPA and EGC will require localised changes to the landform, including excavations of a trench for cabling. Construction plant, including boring equipment and lifting machinery and typical construction features such as fencing, and access tracks to access the lattice tower construction sites and cable trenches will be introduced. Sensitive features such as regenerating bog areas will remain largely unchanged.

10.8.8 The introduction of these construction features for both sites will be temporary, short-term and reversible.

10.8.9 Construction will alter a small area within the wider landscape character but it will not result in the permanent loss of key features such as the overall landscape structure. The magnitude of cumulative landscape change is therefore medium. The significance / quality of cumulative landscape change will be Moderate / Adverse.

10.8.10 Landscape character areas located in County Westmeath and County Meath will not be affected by the construction of the proposed PPA and EGC due to the effects of distance, intervening topography and vegetation.

Cumulative Visual Effects

10.8.11 There will a number of locations along the local road network within the study area where the construction of both developments will be seen simultaneously given the height of the PPA and, in particular, the lattice tower structures of the EGC.

10.8.12 Visual effects of the PPA in combination the EGC are illustrated in photomontages produced for viewpoints VP1 – 2, VP4a/b – 5 and VP10 – 14 (refer to Section 10.5 above for a detailed description and Appendix 10A for photomontages). While these photomontages do not depict construction works, they provide information on the visibility of the PPA and EGC together from representative viewpoints located within the study area.

10.8.13 In addition to combined visual effects, cumulative effects will also be experienced sequentially throughout the study area where there are gaps in intervening existing vegetation as well as from elevated locations such as Croghan Hill and Knockdrin Hill. Construction works will result in an increased visibility of machinery, soil stripping and activity primarily within the landscape character surrounding the PPA and EGC locations within County Offaly, and in located in Westmeath along the R446 where construction works at height becomes visible.

10.8.14 The magnitude of cumulative visual effects is considered Medium and the significance / quality will be Moderate / Adverse.

10.8.15 The presence of construction specific elements and activity will be reversible and of short-term duration.

Operational Phase

Cumulative Landscape Effects

10.8.16 The PPA and EGC elements are located adjacent to each other at Derrygreenagh.

10.8.17 The landscape character in which the PPA and EGC sites are located has been identified by Offaly County Council as being of Moderate Sensitivity. Apart from the 400kV substation compound, which is currently located in an agricultural field, the remaining elements of the EGC and all of the PPA are currently located in post-industrial brownfield

areas bordered by areas with regenerating bog. The existing landscape character of these sites will change to industrial. The wider landscape character to the east and north will remain similar and consists largely of regenerating bog as well as sand and gravel pits of which some are flooded. While regenerating, the landscape character contains a degree of monotony and desolation. It can therefore accommodate the proposed PPA and EGC developments without losing its overall integrity. The susceptibility of the landscape to accommodate change is considered low. However, the value of the landscape is considered medium as it is part of an industrial heritage landscape related to peat harvesting, and which is now in parts regenerating creating a new character in the future.

10.8.18 The PPA and EGC result in localised changes to the landform. Sensitive features such as regenerating bog areas will remain largely unchanged. The introduction of both, the PPA and EGC, will alter a small area within the wider landscape character but it will not result in the permanent loss of key features such as the overall landscape structure. The magnitude of cumulative landscape change is therefore medium. The significance / quality of cumulative landscape change will be Moderate / Adverse.

10.8.19 Landscape character areas located in County Westmeath and County Meath will not be affected by the construction of the proposed PPA and EGC due to the effects of distance, intervening topography and vegetation.

Cumulative Visual Effects

10.8.20 There will a number of locations along the local road network within the study area where both developments will be seen simultaneously given the height of the PPA and, in particular, the lattice tower structures of the EGC.

10.8.21 Visual effects of the PPA in combination the EGC are illustrated in photomontages produced for representative viewpoints VP1 – 2, VP4a/b – 5 and VP10 – 14 (refer to Section 10.5 above for a detailed description and Appendix 10A for photomontages).

10.8.22 In addition to combined visual effects, cumulative effects will also be experienced sequentially throughout the study area where there are gaps in intervening existing vegetation as well as from elevated locations such as Croghan Hill and Knockdrin Hill.

10.8.23 Cumulative visual effects are considered long-term in combination with the PPA or permanent in combination with the EGC. The magnitude of cumulative visual effects is considered Medium and the significance / quality will be Moderate / Adverse.

Gas Connection Corridor (GCC)

10.8.24 The GCC will be subject to separate consenting applications which will be made by GNI. However, the GCC has been considered part of the Overall Project as it is integral to the operation of the Proposed Development. Therefore, there is potential for overlapping construction phases of each element of the Overall Project (*i.e.*, PPA, EGC and GCC) resulting in cumulative effects on the landscape character and visual amenity. Considering the absence of detailed information on the location of the gas pipeline route alignment, cumulative landscape and visual effects can only be determined at a very high level.

Construction Phase (and Decommissioning Phase)

10.8.25 The GCC includes works adjacent to the PPA and EGC and extents approximately 9.7 km to the northwest of the site. If construction works are carried out simultaneously with the PPA and EGC, there will be an increased perception of construction activity within the study area affecting mainly residential and vehicular receptors along the local and regional road network adversely affecting the landscape character and visual amenity.

10.8.26 There will be locations where the construction of both developments will be seen simultaneously. However, the majority of cumulative effects will be experienced sequentially due to intervening existing vegetation, topography and built structures. In addition to the indirect influence on landscape character areas from the Proposed Development and Overall Project, there will be an increased perception of construction activity within the 'Lough Ennel & South Eastern Corridor' landscape character area, located in County Westmeath. There will be an intensification of machinery, soil stripping and activity primarily within that landscape character area, and in a short section of a landscape area between the Proposed Development and Overall Project and the Offaly / Westmeath County boundary within County Offaly. The magnitude of additional landscape and visual effects is considered Medium, and their significance / quality Slight to Moderate / Adverse.

10.8.27 If construction works are carried out in succession, there will be no intensification of construction within the study area and therefore no increase in the significance of effects as the primary elements and effects in landscape character will not be new or substantially different to those for the Proposed Development and Overall Project in isolation. However, there will be a considerable prolongation of direct and indirect construction effects on the landscape character areas affected.

Operational Phase

10.8.28 There will be locations within the 'Lough Ennel & South Eastern Corridor' landscape character area, located in County Westmeath, and landscape areas located within County Offaly, where the PPA, the EGC, and the gas connection corridor will be seen in combination and exert a cumulative effect on the landscape character and the visual amenity. Considering the nature of the gas connection and the implementation of appropriate landscape mitigation measures as well as existing intervening vegetation and topography, changes to the landscape character and the visual amenity will be localised and range from Low to Negligible and the significance / quality of cumulative effects will range from Slight to Not Significant / Neutral.

<u>Impacts – Interaction of Effects between the Proposed Development and Overall Project, and other developments</u>

10.8.29 Potential cumulative effects of the Proposed Development and Overall Project in combination with the other projects, as described in Chapter 1, have been considered in terms of impacts on the landscape character and visual amenity. There are a number of proposed or permitted housing developments within the vicinity of the Proposed Development and Overall Project. A description of the developments is provided in Chapter 4, and where appropriate the application documentation, EIAR and NIS. Further information on the above is provided in Table 4.1 in of Chapter 4.

10.8.30 A full list of planning applications obtained from the search is presented in Appendix 19A (refer to Volume II). Applications in relation to smaller planning applications predominantly for extensions or alterations to existing dwellings are not considered to be relevant to the cumulative assessment within this EIAR, given their small scale. Therefore, only projects of sufficient size and scale that may potentially act in-combination with the Proposed Development and Overall Project have been considered.

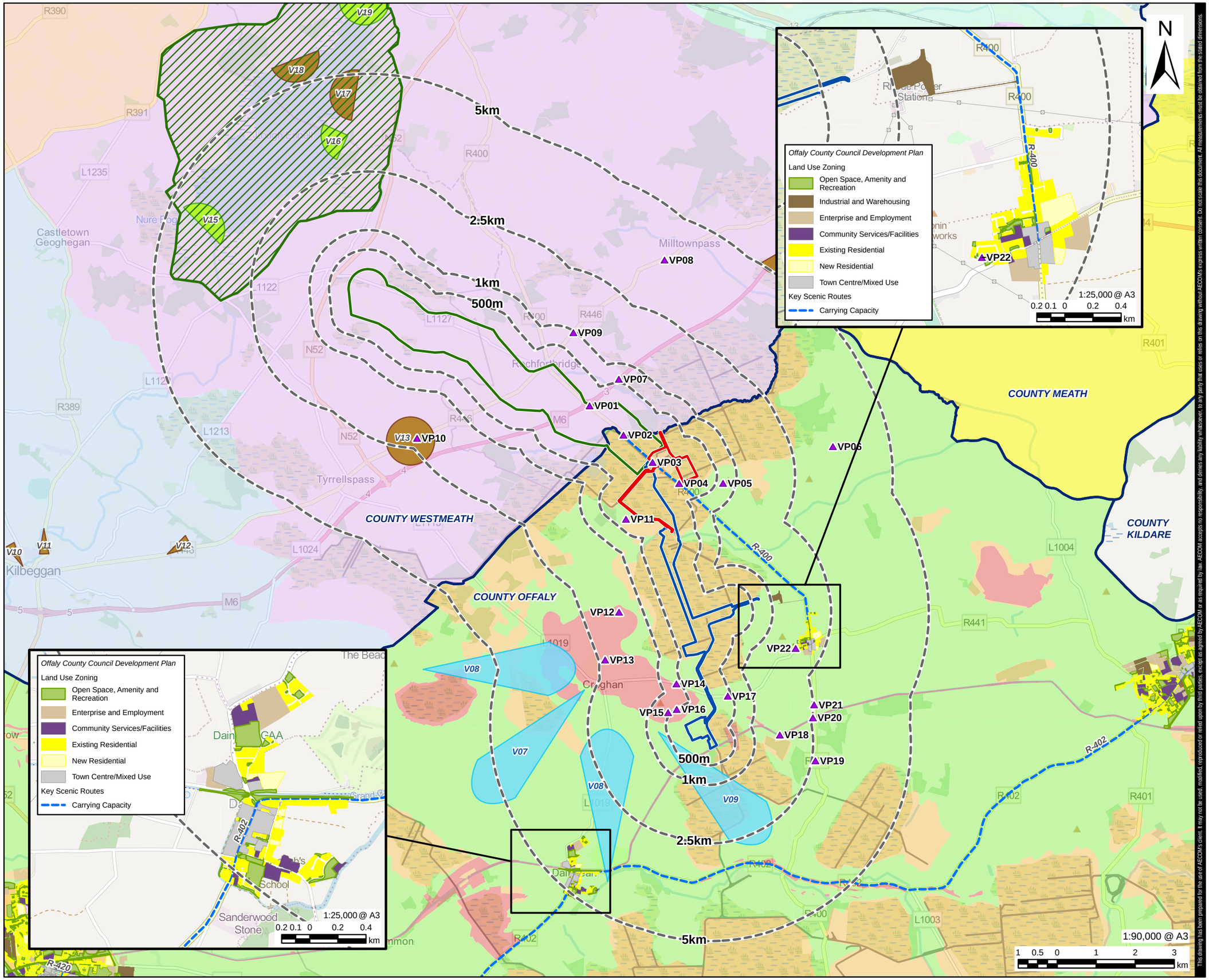
10.8.31 Projects considered (refer to Appendix 19A) have the potential to create varying degrees of combined and sequential landscape effects due to a further industrialisation of the landscape. While these changes will be most evident in locally up to approximately 500m-1km from site boundaries, in combination they can increase the prevalence of industrial elements in the wider study are. Overall, the magnitude of cumulative

landscape change is considered to be Low. The significance / quality will be Slight / Adverse.

Visually, cumulative effects will be mainly related to a combined visibility of industrial features in available views, particularly from elevated locations throughout the study area such a Croghan Hill and Knockdrin Hill or elevated sections of the R446. Combined visibility will increase industrial elements in available views, intensifying the prevalence of industrial focus points in open views in particular where there is no or little intervening screening vegetation or topography. The frequency of sequential views of industrial facilities will likely increase altering the perception of the visual experience in the study area. Overall, the magnitude of cumulative landscape change is considered to be Low. The significance / quality will be Slight / Adverse.

10.9 References

- Environmental Protection Agency (EPA) (2022), 'Guidelines on the information to be contained in Environmental Impact Assessment Reports';
- Environmental Protection Agency (EPA) (2002), 'Guidelines on the Information to be contained in Environmental Impact Statements';
- Environmental Protection Agency (EPA) (2003), 'Advice Notes on Current Practice (in the preparation of Environmental Impact Statements)';
- Landscape Institute (UK) & Institute of Environmental Management and Assessment (IEMA), 'Guidelines for Landscape and Visual Impact Assessment', 3rd Edition, 2013;
- Landscape Institute (2019), Technical Guidance Note 06/19 'Visual Representation of Development Proposals';
- Landscape Institute (2011), Technical Advice Note 01/2011 'Photography and Photomontage in Landscape and Visual Impact Assessment';
- Offaly County Council (2021), 'Offaly County Development Plan 2021 – 2027';
- Westmeath County Council (2021), 'Westmeath County Development Plan 2021 – 2027';
- Kildare County Council (2023), 'Kildare County Development Plan 2023 – 2029';
- National Parks and Wildlife Service (NPWS) Website http://www.npws.ie/;
- National Inventory of Architectural Heritage at http://buildingsofireland.ie/;
- Irish Trails Website https://www.sportireland.ie/outdoors/find-your-trails;
- Google Streetview at https://www.google.co.uk/maps;
- Google Earth; and
- Ordnance Survey Ireland, 1:50,000 Discovery Mapping.



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Proposed Derrygreenagh Power Project

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LEGEND

- Power Plant Area Boundary
- Electricity Grid Connection Boundary
- Gas Connection Corridor Boundary
- Study Area
- County Boundary
- Viewpoint

West Meath County Council

High Amenity Areas
- High Amenity Areas

Protected Views
- County
- Local

Landscape Character Areas
- Lough Ennell & South Eastern Corridor
- Royal Canal Corridor
- South Central Hills
- South Westmeath Eskers

Meath County Council

Landscape Character Areas
- Lowland Landscapes - South West Lowlands

Offaly County Council Development Plan

Key Scenic Routes
- Carrying Capacity

Protected Views
- Protected Views

Landscape Sensitivity
- High
- Moderate
- Low

NOTES

ISSUE PURPOSE

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PROJECT NUMBER

60699676

FIGURE TITLE

Landscape Designations

FIGURE NUMBER

Figure 10.1

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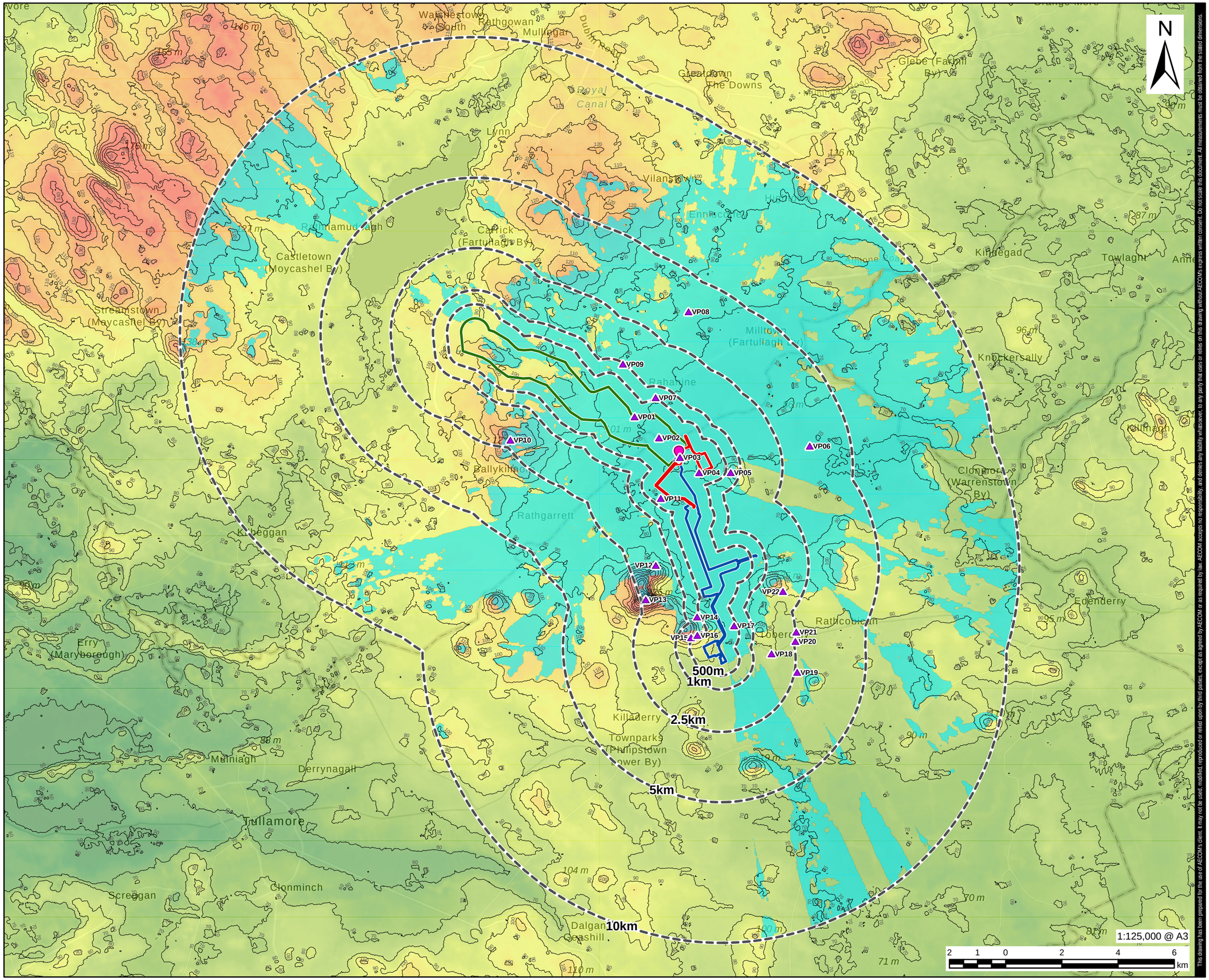

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LEGEND

- Power Plant Area Boundary
- Electricity Grid Connection Boundary
- Gas Connection Corridor Boundary
- Study Area
- Viewpoint
- OCGT 45m Stack

Contour Lines (10m)
- Contour Lines (10m)

Terrian Relief
- 225m
- 40m

ZTV Analysis
- OCGT 45m Stack - Visible

NOTES

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FIGURE TITLE

Zone of Theoretical Visibility (ZTV)
OCGT 45m Stack

FIGURE NUMBER

Figure 10.2

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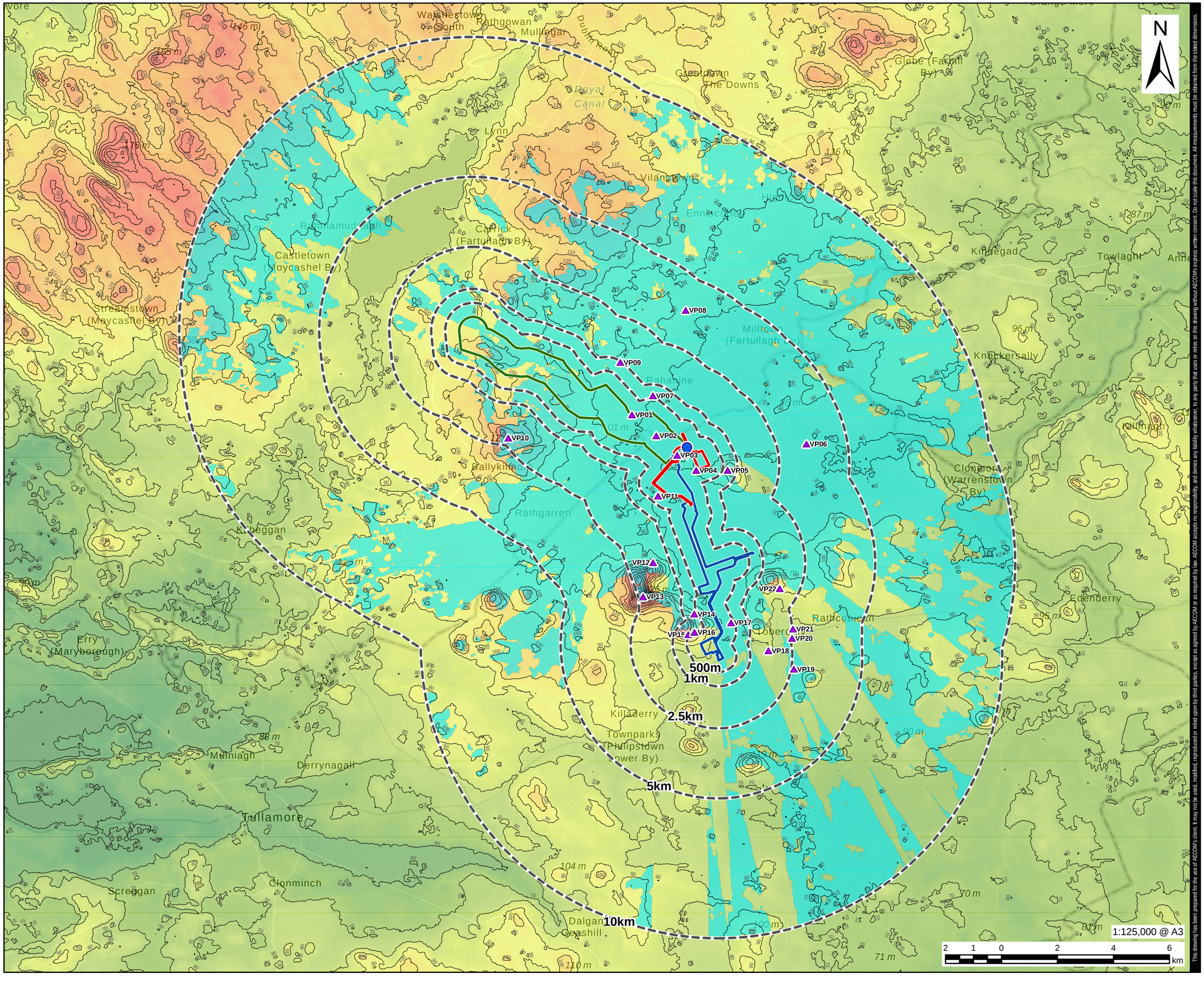

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LEGEND

- Power Plant Area Boundary
- Electricity Grid Connection Boundary
- Gas Connection Corridor Boundary
- Study Area
- Viewpoint
- CCGT 60m Stack
- Contour Lines (10m)

Terrian Relief
225m
40m

ZTV Analysis
CCGT 60m Stack - Visible

NOTES

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FIGURE TITLE

Zone of Theoretical Visibility (ZTV) CCGT 60m Stack

FIGURE NUMBER

Figure 10.3

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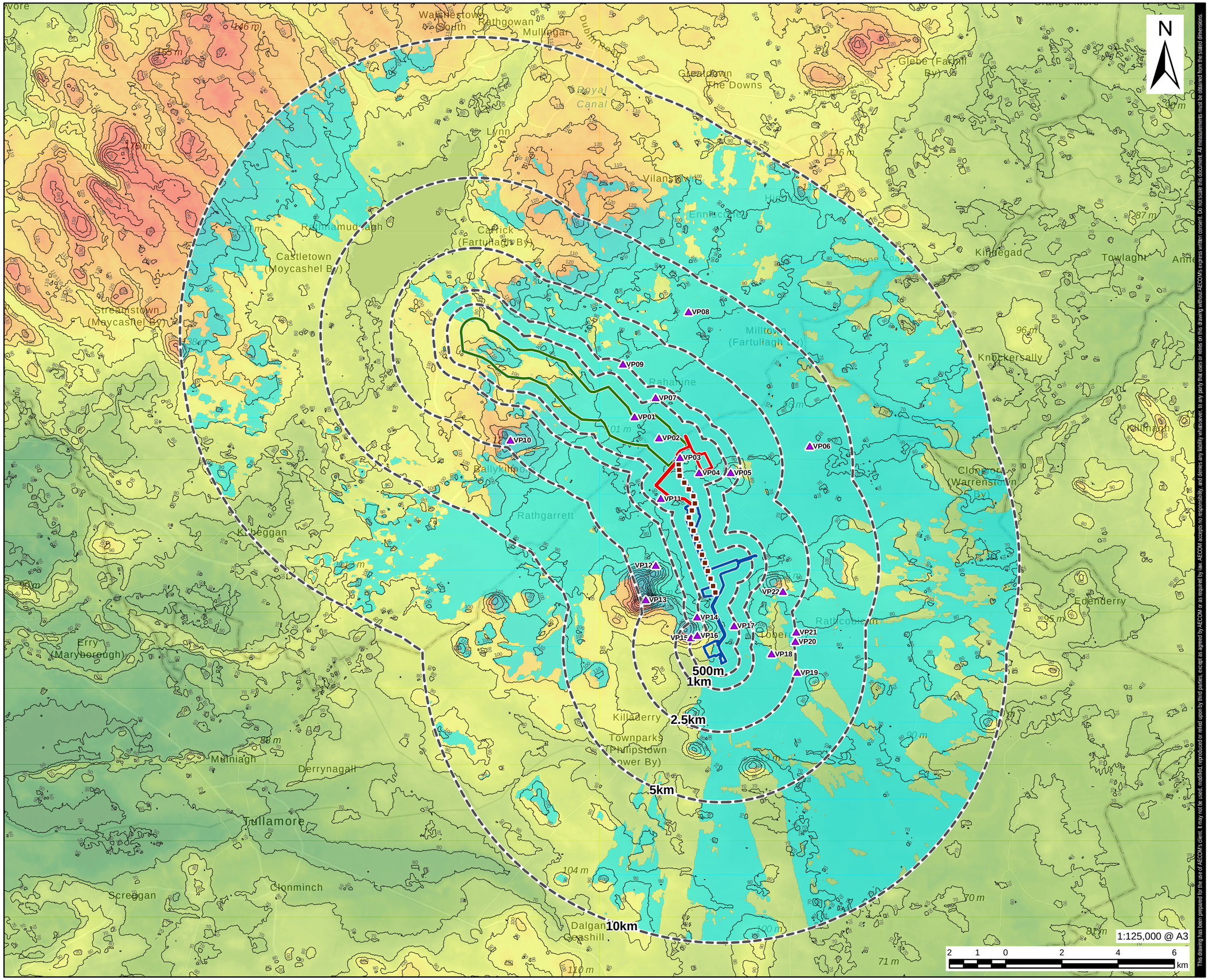

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LEGEND

- Power Plant Area Boundary
- Electricity Grid Connection Boundary
- Gas Connection Corridor Boundary
- Study Area
- Viewpoint
- Electricity Pylons
- Contour Lines (10m)

Terrain Relief
225m
40m

ZTV Analysis
Pylons - Visible

NOTES

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FIGURE TITLE

Zone of Theoretical Visibility (ZTV) Electricity Pylons

FIGURE NUMBER

Figure 10.4

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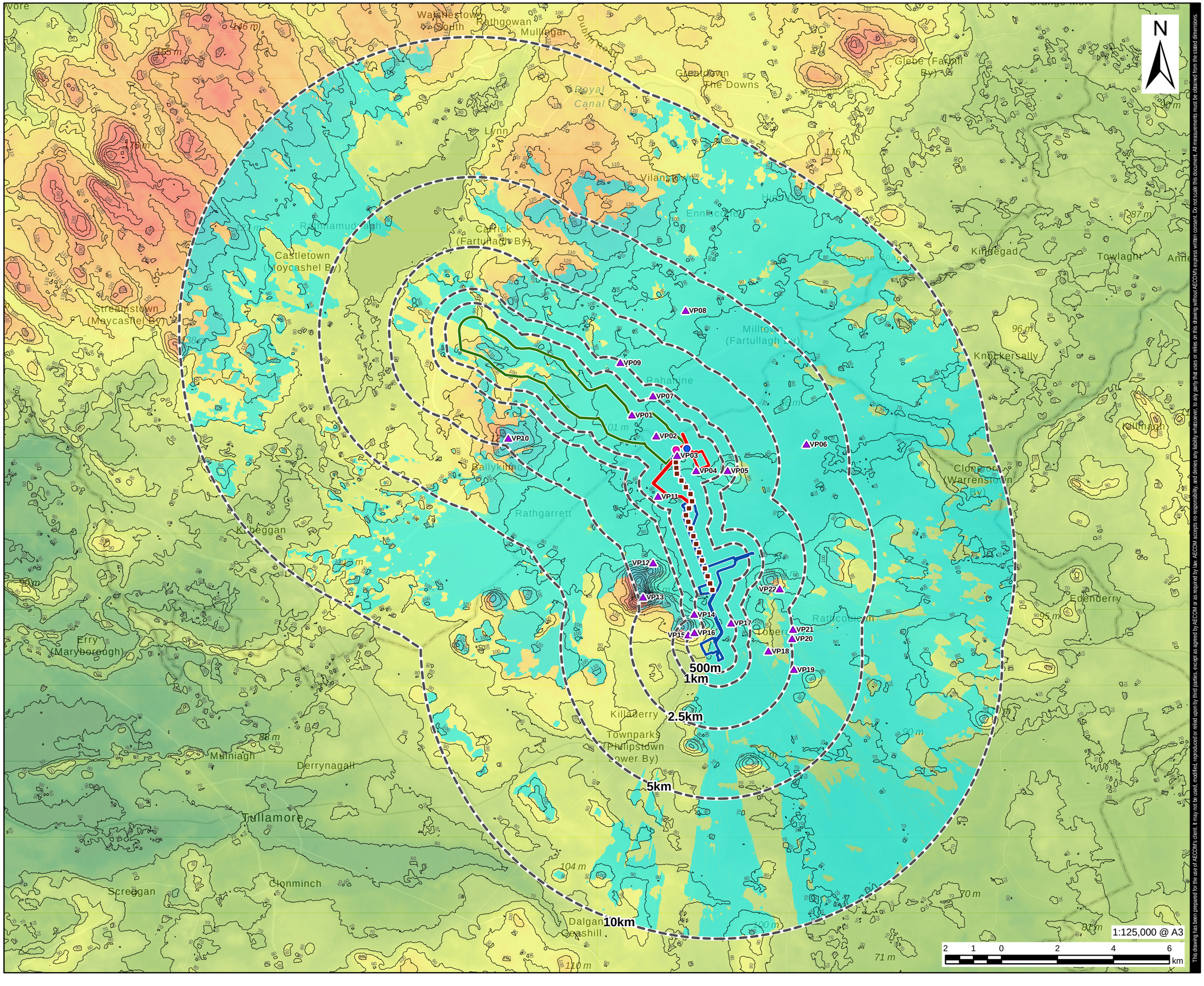

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LEGEND

- Power Plant Area Boundary
- Electricity Grid Connection Boundary
- Gas Connection Corridor Boundary
- Study Area
- Viewpoint
- OCGT 45m Stack
- CCGT 60m Stack
- Electricity Pylons
- Contour Lines (10m)

Terrian Relief
225m
40m

ZTV Analysis
All Project Elements - Visible

NOTES

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PROJECT NUMBER

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FIGURE TITLE

Zone of Theoretical Visibility (ZTV)
All Project Elements

FIGURE NUMBER

Figure 10.5