Planning and Environmental Consultants

Environmental Impact Assessment Report

Gannow Renewable Energy Development, Co. Galway

Chapter 13 Landscape and Visual

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13. LANDSCAPE AND VISUAL

13.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) provides the Landscape and Visual Impact Assessment (LVIA) of the Proposed Project. The LVIA assesses the likely significant direct and indirect effects of the Proposed Project on landscape and visual amenity, and covers the assessment methodology, a description of the Proposed Wind Farm site and the existing landscape baseline, based on relevant guidance. The chapter also includes a description of the landscape policy of Co. Galway, with specific reference to wind energy and the LVIA Study Area in which the Proposed Wind Farm is located.

The landscape of the Site and the wider LVIA Study Area are described in terms of their existing character, which includes a description of landscape values and the landscape's sensitivity to change. This LVIA utilises theoretical visibility mapping, assigns representative viewpoints of the LVIA Study Area and presents photomontage visualisations. The potential impacts in terms of both landscape and visual effects are assessed, including cumulative impacts with other plans and projects, with the primary focus on existing, permitted and proposed wind energy developments.

The remainder of this chapter is organised as follows:

- Section 13.2: Brief Methodology and Assessment Criteria,
- Section 13.3: Visibility of the Proposed Project,
- Section 13.3.5.2: Landscape Baseline,
- Section 13.5: Visual Baseline,
- Section 13.5: Cumulative Context: Other Wind Farms,
- Section 13.7: Likely Significant Landscape and Visual Effects,
- Section 0: Conclusion.

This chapter is accompanied by one volume booklet and five appendices as follows:

- *EIAR Volume 2: Photomontage Booklet*, presenting existing and cumulative imagery of the proposed turbines in multiple fields of view from selected viewpoints.
- *Appendix 13-1: LVIA Methodology*, outlining the detailed methodology of the assessment conducted in this chapter.
- *Appendix 13-2: LCA Assessment Tables*, assessing landscape, visual and cumulative effects of designated Landscape Character Areas (LCAs).
- *Appendix 13-3: Photomontage Visual Impact Assessment Tables*, assessing landscape, visual and cumulative effects of the selected viewpoints presented in the *Photomontage Booklet*.
- *Appendix 13-4: A0 LVIA Baseline Map*, showing all baseline landscape features, viewpoints, and visual receptors.
- *Appendix 13-5: Photowire Visualisation Booklet*, presenting supplemental 'early draft-stage' wireline visualisations known as 'photowires' from selected additional locations representing views of the proposed turbines.

13.1.1 Statement of Authority

MKO has extensive expertise and experience over the last 15 years in the LVIA of large-scale infrastructure developments for EIAR. The MKO Landscape and Visual team have produced LVIAs for a diverse range of project types, including renewable energy and grid infrastructure, residential developments, transport infrastructure, extraction infrastructure, and a range of other projects requiring EIAR.

This LVIA was written by Jack Workman and Rachel Smith and reviewed by Michael Watson. Keelan Crawford provided technical support for the production of the LVIA including fieldwork and GIS with oversight from Jack and Michael.

Jack Workman MSc., TMLI. is the Landscape & Visual Project Director at MKO and is chartered as a Technician Member of the British Landscape Institute. Jack is an environmental scientist and an LVIA specialist with an academic background in the field of Environmental Science and Geography. Jack's primary role at MKO is scoping and writing LVIA for EIARs with over 5 years' experience managing all aspects of LVIA for a broad range of commercial infrastructure developments. Jack holds a BSc. in Psychology, and an MSc. in Coastal and Marine Environments (Physical Processes, Policy & Practice). Jack is an active participant in the National Landscape Forum, presenting in 2023, 2024 and 2025 on the topic of LVIA, he also regularly delivers guest lectures for students on the topic of LVIA at top third level institutions in Ireland including University of Galway, Trinity College Dublin, University College Dublin and University College Cork. Jack holds a membership with the Chartered Institute of Water and Environmental Management and is also a member of the Landscape Research Group.

Rachel Smith, MSc., is a Project Environmental Scientist and LVIA Specialist who has been working with MKO since October 2023. Rachel is an Earth & Environmental Science consultant with more than 10 years of professional experience in producing and editing technical scientific reports, and collecting, analysing and reporting environmental data for regulatory compliance in both the US and Ireland, including the utilisation of QGIS mapping, organisation of field work, management of environmental databases and training of environmental science staff. Rachel's primary role at MKO is producing and reviewing the LVIA chapter of EIA reports accompanying Planning Applications for multi-scale onshore renewable energy and non-wind developments, as well as conducting research in Irish landscape policy. Rachel holds an MSc. in Coastal and Marine Environments (Physical Processes, Policies & Practice) and a BSc. in Geology.

Michael Watson is the Environment Division Director at MKO, overseeing a team of highly skilled environmental professionals working on EIAR for a wide range and scale of projects, in particular large-scale infrastructure, housing, commercial and renewable energy development. Michael has over 25 years' experience in the environmental sector. Following the completion of his master's degree in environmental resource management, Geography, from National University of Ireland, Maynooth he worked for the Geological Survey of Ireland and then a prominent private environmental consultancy prior to joining MKO in 2014. Michael's professional experience includes managing Environmental Impact Assessments and Landscape & Visual Impact Assessments on behalf of clients in the wind farm, waste management, commercial and industrial sectors nationally. Michael worked on the capture and development of photomontages as well as compiling the Landscape & Visual Impact Assessments for some of the first wind turbines being proposed in Ireland in the early 2000's and has been compiling and reviewing LVIA chapters for multiple wind farm projects each year since 2014. Michael is a key member of the MKO senior management team and as head of the Environment Division has responsibilities to mentor various grades of team members, foster a positive working environment and promote continuous professional development for employees. Michael also has a Bachelor of Arts Degree in Geography and Economics from NUI Maynooth, and is a Member of IEMA and a Chartered Environmentalist (CEnv).

Keelan Crawford is an LVIA Specialist who has been working at MKO since September 2023. Keelan holds a BA (Hons) in Geography & Economics and Masters in Applied Coastal and Marine Management. Keelan's key strengths and areas of expertise are in GIS, mapping, fieldwork and conducting LVIA. His primary role at MKO is writing the Landscape and Visual chapter of EIA reports. Keelan is a qualified Unmanned Aerial Vehicle Operator and holds A1/A3 and A2 drone licences.

13.1.2 Proposed Project Description

A full description of the Proposed Project is provided in Chapter 4: Description of the Proposed Project In the present chapter, the following terminology is used in relation to the Gannow Renewable Energy Development, Co. Galway:

- **'Proposed Project'** refers to the entirety of the project ('Proposed Wind Farm' and 'Proposed Grid Connection' as described below).
- **'Proposed Wind Farm'** refers to the 8 no. turbines and associated foundations and hardstanding areas, including access roads, underground internal cabling, permanent meteorological mast, temporary construction compounds, peat and spoil management areas, biodiversity enhancement, tree felling and vegetation removal, site drainage, operational stage signage, 38kV onsite substation, and all ancillary works and apparatus.
  - The **'proposed turbines'** refers to the 8 no. turbines associated with the Proposed Wind Farm as outlined above.
- **'Proposed Grid Connection'** refers to the 38kV underground cabling connection from the proposed onsite 38kV substation to the existing Cashla 220kV substation, and all ancillary works and apparatus.
- The **'Site'** refers to the primary study area for the EIAR, as delineated by the EIAR Site Boundary in green as shown on Figure 1-1 of the EIAR and encompasses an area of approximately 884 hectares.
- **'Proposed Wind Farm site'** refers to the portion of the Site containing the proposed turbines and ancillary infrastructure but excluding the portion of the Site surrounding the Proposed Grid Connection.

The Proposed Wind Farm site comprises 8 no. wind turbines (maximum tip height of 185m) and associated foundation infrastructure, a permanent 38kV substation compound, a meteorological mast (height 30m), new and upgraded site access roads, and other associated temporary and ancillary infrastructure; see full project description in Chapter 4 of this EIAR.

The Proposed Wind Farm site is located within a rural, agricultural setting in eastern Galway, approximately 9.7km east of Athenry, Co. Galway and 13km north of Loughrea, Co. Galway. The village of Attymon, Co. Galway is located approximately 1km northwest of the nearest proposed turbine (T01) and the village of New Inn is located approximately 4.6km southeast of the nearest proposed turbine (T07).

The Proposed Grid Connection includes for 38kV underground cabling from the proposed onsite 38kV substation, in the townland of Attimonmore South, Co. Galway, to the existing Cashla 220kV substation in the townland of Barrettspark, Co. Galway. The Proposed Grid Connection measures approximately 21.8km in length and is located primarily within the curtilage of the public road corridor with three sections (approximately 0.2km, 0.6km and 1.5km) being located within private land.

13.1.3 Essential Aspects of Proposed Project from an LVIA Perspective

In terms of landscape and visual effects, this LVIA takes the proposed turbines as the essential aspect of the Proposed Project from an LVIA perspective and also gives due to consideration to the associated ancillary elements and underground Proposed Grid Connection. A detailed description of the Proposed Project and its component parts under the application can be found in Chapter 4 of this EIAR.

The tall, vertical nature of the proposed turbines make them the most prominent element from a landscape and visual perspective, having the most potential to give rise to significant landscape and

visual effects. The best-practice guidance for LVIA utilised in Ireland and UK, i.e. Guidelines for Landscape and Visual Impact Assessment Third Edition or **GLVIA3** published by Landscape Institute & Institute of Environmental Management and Assessment (LI&IEMA) (2013), states that:

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

In this regard, the proposed turbines are deemed to be the 'essential aspect' of the Proposed Project which will give rise to effects on the landscape and visual amenity and therefore are the primary focus of the LVIA. Ancillary elements of the Proposed Project are deemed to be less visually prominent than the proposed turbines; however, these components may also potentially give rise to localised landscape and visual effects. Although these ancillary elements are not the primary focus of the LVIA, they are also given due consideration and assessment in this chapter.

13.1.4 Range of Turbine Dimensions Assessed in this Chapter

As detailed in Chapter 1: Introduction of this EIAR, the proposed turbines to be installed on the Proposed Wind Farm site will have a ground-to-blade tip height, hub height and rotor diameter within the following ranges:

- Turbine Tip Height: 178m – 185m,
- Turbine Hub Height: 101m – 104m,
- Turbine Rotor Diameter: 149m – 163m.

The range of different turbine envelopes shown above are considered and assessed in this LVIA. The different turbine models assessed include the full extent of the range and are discussed below.

13.1.5 Primary Turbine Model used for Assessment

Scenario 1 is considered the primary representative configuration model for illustrating the proposed turbines and was used to derive all 'Zone of Theoretical Visibility (ZTV)' mapping in this chapter (see Section 13.3.1 ZTV Mapping) as well as to model all graphics for the photomontage viewpoints presented in the *EIAR Volume 2: Photomontage Booklet*.

- **Scenario 1**
  - Tip Height: 185m;
  - Hub Height: 103.5m;
  - Rotor Diameter: 163m;
  - Represented by all 13 no. photomontage viewpoints assessed.

Scenario 1 has been identified as the most representative turbine configuration model for assessment on the basis that the greatest extent of the entire turbine structure (blades and tower) would potentially be visible from the official viewpoints assessed in this LVIA (described in Section 13.5.10 Viewpoint Selection: Photomontage Viewpoints). Please note, with respect to the scenario outlined above, due to the similarities between the turbine dimensions for Scenario 1 and the Scenario 2, it is not warranted to conduct a specific assessment on Scenario 2 within this EIAR when assessing the identified turbine parameter range.

Please refer to *Volume 2: Photomontage Booklet* viewpoints 12 and 13 for a comparison of all scenarios.

This turbine configuration is likely to show the greatest extent of the entire turbine structure (hub, blades and tower) and is likely to have the greatest visibility from the viewpoints assessed in this LVIA. The hub (or 'nacelle') of a turbine is a prominent focal point and the visual prominence of a turbine is typically increased if the hub is viewed above a landscape feature, rather than below. Therefore, the **Scenario 1** turbine configuration is likely to increase the visual prominence of turbines and represents a theoretical precautionary scenario for likely 'Significant' landscape and visual effects within the range proposed.

13.1.6 Assessing Turbine Dimension Range with Photomontages and Comparative Wirelines

Photomontage visualisations are the best LVIA tool to assess any likely effects arising due to differences of turbine configurations used within the proposed turbine dimension range.

Irrespective of which combination of hub height and blade length within the **Scenario 1** range outlined above is installed on site, the significance of residual landscape and visual effects will not be altered. However, for the avoidance of doubt, two alternative turbine configurations are presented for two selected viewpoints included in the *EIAR Volume 2: Photomontage Booklet*:

- VP12: Gannow (located 660m from the proposed turbines),
- VP13: Ballyfa (located 3.7km from the proposed turbines).

As per Chapter 1: Introduction of this EIAR, these configurations are termed **Scenario 2**, **Scenario 3**, and **Scenario 4**; the detailed measurements are described in Appendix 13-1: LVIA Methodology (Section 1.6.8 Turbine Range Assessment: Comparative Wirelines) as well as in this Section 13.7.3.2.8 Assessment of Turbine Range Envelope.

The two above selected viewpoints are representative of short-range (VP12) and medium-range (VP13) views where the difference in the scale of the proposed turbines is most likely to be perceptible. The photomontage assessment tables for these viewpoints contained in Appendix 13-3: Photomontage Visual Impact Assessment Tables include a comment addressing the alternative turbine configurations and confirm that the turbine configuration ultimately installed on-site will not alter the assessment of residual visual effects.

Differences in the turbine range are only discernible through the aid of a comparative wireline views where the different model is overlain the other configuration used for all viewpoints (see Appendix 13-1 for more information on comparative wireline views presented). As demonstrated by the visualisations of the proposed turbine ranges presented in the *Photomontage Booklet*, irrespective of which combination of hub height and blade length within the range outlined in this application is installed on-site, the significance of residual landscape and visual effects as set out below in this LVIA in Section 13.7 Likely Significant Landscape and Visual Effects will not be altered.

13.1.7 Mitigation by Design

The Proposed Project was strategically selected in a landscape highly suitable for the development of wind energy. Through the iterative project design process, various best practice tools for assessing the landscape and visual impact of a proposed wind farm development were utilised to bring forward the optimum design for the Proposed Wind Farm with respect to landscape and visual factors. These tools include landscape modelling, Zone of Theoretical Visibility (ZTV) mapping and the preparation of photomontage visualisations.

The iterative design process was informed by the siting and design guidance for wind farms in specific landscape types as set out in the Wind Energy Development Guidelines for Planning Authorities (Department of the Environment, Heritage, and Local Government [DoEHLG], 2006), hereafter the

Guidelines (DoEHLG, 2006), and with regard to the Draft Revised Wind Energy Development Guidelines (Department of Housing, Planning and Local Government [DoHPLG], 2019), hereafter the **Draft Guidelines (DoHPLG, 2019)**.

The final design of the Proposed Project included the careful micro-siting of infrastructure with the aim of preventing the potential for significant landscape and visual effects. Details of the various turbine layout iterations included as part of this design process are included in this EIAR, Chapter 3: Consideration of Reasonable Alternatives. Landscape and visual 'mitigating' factors which were key to the site selection and design of the Proposed Wind Farm are established below, these factors or of key relevance to this LVIA in this chapter:

- **Appropriate Wind Energy Development Zoning Ratings in Local Planning:** All proposed turbines are in Co. Galway land area zoned as 'Open to Consideration' for wind energy development in the Galway wind energy strategy policy.
- **Appropriate Landscape Sensitivity in Local Planning:** The Proposed Wind Farm has been strategically sited within an area designated as 'Low' landscape sensitivity in local planning policy (Galway County Development Plan 2022-2028), a Landscape Character Area of the lowest landscape sensitivity rating in Co. Galway.
- **Compliance with Wind Energy Development Guidelines Set-Back Distance:** Siting of proposed turbines exceeds the minimum 500m set-back distance from residences set out in the Guidelines (DoEHLG, 2006).
- **No Impact on Designated Scenic Routes and Views:** The Proposed Wind Farm has been strategically sited in a location where there is no impact on any designated protected views as set out in local planning policy.
- **No Impact on Designated Landscape Receptors:** The Proposed Wind Farm has been strategically sited in a landscape setting (an LVIA Study Area to 20km from the proposed turbines) with no designated or protected high sensitivity landscape receptors in local planning policy of county, regional or national renown.
- **Sparsely Settled & Highly Modified Landscape**: The infrastructure of the Proposed Wind Farm has been strategically sited within a sparsely settled landscape characterised by common agricultural land, commercial forestry and cutover peatland. It is therefore a modified working landscape deemed to be of low landscape sensitivity, and a site capable of effectively absorbing the Proposed Wind Farm.
- **Flat Nature of the Proposed Wind Farm site & Surrounds.** The proposed turbines have been located within a flat site surrounded by lands of similar elevations which limit open views of the project. This topographic feature of the Proposed Wind Farm site and surrounds mitigates the potential for overbearing or domineering effects provided sufficient setback from receptors is designed into the project. It also means that separation distances between receptors and turbines becomes important as the proposed turbines appear smaller in scale quickly (over shorter distances) when viewed in this planar view.
- **Localised Visual Screening:** Mature vegetation and undulating terrain restrict wider landscape visibility to primarily within a 5km radius.
- **Large Setback from Population Centres and Receptors:** Site selection and siting of proposed turbines ensures limited visibility and large setback distances from large population centres and designated landscape and visual receptors of high sensitivity.
- **Coherent Turbine Layout:** The proposed turbines are spaced appropriately in a curved linear array, such that they read coherently within the landscape and are of acceptable layout according to the recommended siting and design of turbines for Hilly and Flat Farmland in the Guidelines (DoEHLG, 2006), and cognisant of the Draft Guidelines (DoHLPG, 2019).
- **Underground Grid Connection:** The intended connection to the national electricity grid is underground, thereby eliminating potential landscape and visual effects during the operational phase.

13.1.8 Assessment of Alternative Turbine Layouts

The design of the Proposed Project has been an informed and collaborative process from the outset, involving the designers, developers, engineers, landowners, environmental, hydrological and geotechnical, archaeological specialists and traffic consultants; the aim being to reduce the potential for environmental effects while designing a project capable of being constructed and viable.

Throughout the preparation of this EIAR, the layout of the Proposed Project has been revised and refined to take account of the findings of all site investigations including landscape and visual factors, which have brought the design from its first initial layout to the current proposed layout, please see Section 3.3 of Chapter 3.

The design process has also taken account of the recommendations and comments of the relevant statutory and non-statutory organisations, the local community and the local authority as detailed in Section 2.5 of Chapter 2: Background.

13.1.9 Scoping Replies & Pre-Planning Meetings

As part of the application process, scoping and pre-planning meetings were carried out for the Proposed Project during 2023-2025; all meeting dates, attendees, responses and matters discussed are detailed in Section 2.7 of Chapter 2. No landscape or visual issues were raised in scoping responses, and the meetings discussed topics related to landscape and visual factors are detailed below.

Pre-Application Meeting: March 2025

Members of the Proposed Project team and Gannow Ltd. (the Applicant) met with representatives from Galway County Council (GCC) via Microsoft (MS) Teams to deliver a high-level overview of the Proposed Project with discussions to follow. Among other topics, the landscape designation of the Proposed Wind Farm site was discussed; it was noted by GCC that all proposed turbines are located within an area designated as 'Open to Consideration' within the GCC wind energy designations. It was also noted that the Proposed Wind Farm site is located in a landscape setting that is not sensitive to change as per the GCDP 2022-2028.

Design Flexibility Meeting: May 2025

Members of the Proposed Project team and the Applicant met with GCC via MS Teams to discuss design flexibility for the Proposed Project. This flexibility meeting request was made in accordance with the legislative provisions relating to design flexibility. The Proposed Project team outlined the details of the Proposed Project that would not be confirmed at the time of the application for permission and would need to avail of design flexibility provisions: tip height, rotor diameter and hub height. The parameters within which the proposed turbine specifications will fall were set out (see previous Sections 13.1.4 through 13.1.6).

13.2 Brief Methodology and Assessment Criteria

This section briefly outlines the guidance and methodology used to undertake the LVIA of the Proposed Project; the full detailed description of the methodology is provided in Appendix 13-1: LVIA Methodology. There are five main sections to this assessment:

- **Visibility of the Proposed Project** – describing ZTV mapping and on-site visibility appraisals.
- **Landscape Baseline** – identifying and scoping all landscape receptors including Landscape Character Areas (LCAs).

- **Visual Baseline** – identifying and scoping all visual receptors including sites of local sensitivity and residential visual amenity.
- **Cumulative Context** with respect to other existing, permitted and proposed wind energy developments within the 20km LVIA Study Area.
- **Likely Significant Effects** – summarising all landscape, visual and cumulative residual effects of the Proposed Project as determined by this LVIA.

13.2.1 Guidance

Regarding legislation and general guidance on overall Environmental Impact Assessment, please refer to Section 1.7.2 of Chapter 1. The LVIA was guided and informed by guidance documentation specifically pertaining to LVIA. Details of the guidance used to conduct this LVIA are outlined in Appendix 13-1: LVIA Methodology (Section 1.3 Guidelines). Meanwhile, a full list of all documents referenced in all sections of this chapter is provided in the bibliography at the end of this EIAR.

13.2.2 Scope and Definition of LVIA Study Area

In this chapter, the Proposed Wind Farm is the key focus of the assessments in as the proposed turbines are the primary essential aspect of the Proposed Project under assessment of the LVIA (refer to Section 0 above).

The assessment of effects on landscape and visual amenity uses wider study areas beyond the Proposed Wind Farm site. For this assessment, two study areas with different radii were defined with respect to the location of the proposed turbines:

- 20km LVIA Study Area for the assessment of effects on landscape and visual receptors, hereafter the '**LVIA Study Area**';
- 15km LCA Study Area for the assessment of effects on designated 'Landscape Character Areas' (LCAs) within Co. Galway, hereafter the '**LCA Study Area**'.

In addition, five broad topics were decidedly scoped out of this assessment, on the basis of desk studies, survey work and professional judgement of the assessment team; these are related to:

- Receptors with minimal/no visibility or no theoretical visibility as indicated by the ZTV;
- General landscape receptors beyond 20km;
- Visual receptors beyond 20km;
- Designated LCUs beyond 15km;
- Cumulative effects beyond 20km.

The full justification and rationale for use of the LVIA Study Area for assessment of effects on landscape and visual receptors, LCA Study Area for assessment of effects on LCUs, and topics scoped out of the assessment are presented in detail in Appendix 13-1: LVIA Methodology (Section 1.4 Scope and Definition of LVIA Study Area).

13.2.3 Baseline Landscape and Visual Information

An initial desk study of baseline information was undertaken that has informed the LVIA, divided into 'Landscape Baseline' and 'Visual Baseline' components, as follows:

Landscape Baseline

- Policies, objectives and designations contained in the relevant county development plans pertaining to landscape and wind energy:

- Galway County Development Plan (GCDP) 2022-2028,
- GCDP Appendix 1: Renewable Energy Strategy,
- GCDP Appendix 4: Landscape Character Assessment.

- Landscape Character Areas (LCAs) in the LCA Study Area and preliminary analysis of LCAs scoped in for assessment.
- Landscape character of the Proposed Wind Farm site based on site surveys undertaken in 2023, 2024 and 2025.
- Landscape sensitivity of the Proposed Wind Farm site assigning an overall Sensitivity rating to the site and its surrounding area according to its Value and Susceptibility to Change.
- Landscape characterisation of the Proposed Wind Farm site as indicated in *Section 6.9 Landscape Character Types as a Basis for Guidelines* of wind energy guidance of the 2006 Guidelines and draft 2019 Guidelines.
- Landscape character of the wider landscape setting of the LVIA Study Area.

Visual Baseline

- Visibility of the proposed turbines:
  - ZTV mapping,
  - Visibility appraisal within 5km through Route Screening Analysis, a method developed by MKO to quantify on-the-ground visual screening relative to the proposed turbines.
- Investigation of visual receptors in the LVIA Study Area:
  - Designated Scenic Routes and OSi Viewing Areas,
  - Designated Protected Views,
  - Settlements,
  - Recreational routes (multiple types),
  - Recreational, popular cultural heritage and tourist destinations,
  - Destinations of local importance,
  - Transport routes,
  - Residential receptors.
- Preliminary analysis of visibility from visual and residential receptors according to ZTV mapping and on-site visibility appraisals.
- Selection of 13 no. viewpoints (VP01-VP13) representing a good geographic spread of visual receptors throughout the LVIA Study Area, selected for photomontage visualisation and assessment in the LVIA.

13.2.4 Assessment of Potential Impacts

The LVIA process used in this chapter is presented in Appendix 13-1: LVIA Methodology and includes clearly documented methods based on guidelines of the GLVIA3 (LI & IEMA, 2013) as follows.

The LVIA considers landscape and visual “Sensitivity” balanced with the “Magnitude of Change” to determine the likely significance of effects. Mitigating factors are then considered to arrive at “Residual” landscape and visual effects. Residual landscape and visual effects are graded upon an “impact assessment classification of significance” scale, as defined by the EPA (2022) ranging as follows: “Imperceptible”, “Not Significant”, “Slight”, “Moderate”, “Significant”, “Very Significant” or “Profound”.

Photomontages are used as an illustrative tool to assess potential impacts, whereby the potential landscape and visual effects arising as a result of the proposed turbines are assessed from viewpoint locations representative of prominent landscape and visual receptors located within the LVIA Study Area. Throughout this chapter, ‘theoretical visibility’ is referred to, based on Zone of Theoretical Visibility (ZTV) mapping (see below Section 13.3 Visibility of the Proposed Project), and is assessed to

compare 'theoretical' versus 'actual' visibility. The detailed methods used to produce ZTV maps and photomontages are included in Appendix 13-1.

13.2.5 LVIA: Wind Energy Context

Given Ireland's renewable energy targets which have been set by the State for on-shore renewable wind energy development, wind turbines will form a new component in the working landscape for the foreseeable future. The focus for visual impact assessment of wind energy developments is therefore on distance, arrangement, location and potential disruption to key scenic sensitivities rather than a commonly misconceived focus on whether turbines are visible or not from a particular vantage point. The outcome of the visual impact assessment, with regards to the EPA, 2022 definition of significance, is calibrated in the overall context of LVIA of wind energy developments in Ireland and what is acceptable in the context of emerging baseline trends and the acceptability of wind turbines within views as a result of national policy.

Over time, wind turbines have, and will become, a more familiar and accepted component of the Irish landscape, particularly in working rural contexts. Accordingly, their presence may not carry the same level of perceived visual intrusion as less common or incongruous forms of development. In this context, the calibration of visual impact significance reflects both the policy-driven imperative for renewable energy development and the evolving visual baseline in parts of the Irish landscape. While the visibility of turbines remains an important consideration, it does not in itself equate to significant visual impact.

Key factors of focus in the overall impact assessment on visual receptors in relation to photomontages are:

- The scale of the proposed turbines as a result of setback distance,
- The number of proposed turbines visible,
- Full or partial visibility of proposed turbines e.g. are they partially screened by features,
- Overall visual coherency with regards to form and arrangement and how the proposed turbines correspond to the landscape from a particular vantage point as per best practice siting and design guidance.

13.3 Visibility of Proposed Project

13.3.1 Zone of Theoretical Visibility (ZTV) Mapping

Zone of Theoretical Visibility (ZTV) mapping is an important step in the LVIA process, in that it clearly shows which areas have no theoretical visibility of the proposed turbines and indicates areas with potential visibility. ZTV mapping (see Appendix 13-1: LVIA Methodology) was used to examine the theoretical visibility of the proposed turbines from all landscape and visual receptors within the LVIA Study Area. As noted in Appendix 13-1, the actual visibility in the direction of the proposed turbines, on the ground, is significantly less than that predicted by the ZTV mapping.

Generation of the ZTV utilises large-scale topographical data (interpolation across 10m OSi contour data) and does not account for topographical variation of smaller scale (e.g. <10m). Therefore, in reality, localised small undulations in topography further inhibit visibility of the proposed turbines that may not be represented in the ZTV maps. Other features of the landscape such as vegetation and man-made elements (e.g. buildings, infrastructure, etc.) also obscure the proposed turbines from view from many areas where the ZTV indicates that there is full visibility. In this regard, the ZTV maps are a useful tool to indicate where there is **no visibility** of the proposed turbines, and thus any receptors located in these areas can be scoped out from further assessment.

Figure 13-1 below shows the theoretical visibility of the proposed turbines within the LVIA Study Area, assuming a bare-ground scenario (i.e. no visual screening, no vegetation, no built structures, etc.) and maps the relevant settlements of Co. Galway. The ZTV is used within several mapping figures in this chapter to enable assessment of theoretical visibility from all landscape and visual receptors which are presented together in Appendix 13-4: A0 LVIA Baseline Map.

In the ZTV, separate colour bands are used to indicate the number of turbines of which at least one half-blade is theoretically visible on each turbine, representing the visibility of that turbine. The legend on each ZTV map shows the number of visible turbines for each corresponding colour as follows:

- Teal: 1–3 turbines theoretically visible,
- Yellow: 4–6 turbines theoretically visible,
- Grey: 7–8 turbines theoretically visible.

13.3.2 Landforms of the LVIA Study Area

Figure 13-2 below shows the topographical features and elevation gradients existent within the receiving landscape of the LVIA Study Area in eastern-central Co. Galway, along with settlements and water bodies (Lough Rea and local rivers/streams); the geography of the topographical features defines the distribution of theoretical visibility illustrated in the ZTV map.

The Proposed Wind Farm site is located in a primarily flat landscape with localised undulations and low hilly terrain. Due to the nature of the flat landscape, the proposed turbines cannot generally be seen outside of a 5km radius, unless from an elevated vantage point.

In relation to landscape-related terminology and definitions of the topographical features within the LVIA Study Area, this chapter uses the following:

- **'Lough Rea'** is the small lake approximately 12.6km south from the proposed turbines, where Loughrea town is located,
- **'Kilnadeema'** refers to the area comprising multiple small peaks immediately south of Lough Rea, between 15-20km from the proposed turbines, representing the points of highest elevation in the LVIA Study Area, ranging from approximately 150m to 275m elevation,
- **'Knockroe'** refers to the area of localised small undulations (up to 158m elevation) in the north-west approximately 14.5km from the Proposed Wind Farm site, situated between Abbeyknockmoy and Monivea rural settlements,
- **'Killooaun'** refers to the area comprising localised small undulations (up to 121m elevation) to the north approximately 8.5km from the proposed turbines,
- **'Kilconnell'** refers to the area comprising localised small undulations (up to 120m elevation) to the north-east approximately 1km from the proposed turbines, situated between the small villages of Woodlawn and New Inn;
- **'Urraghry Hill'** refers to the localised small undulation (elevation 89m) in the east, approximately 17.4km from the proposed turbines;
- **'Doonaree'** refers to the area comprising the localised small undulation (150m elevation) to the south-east approximately 10.6km from the proposed turbines.

The LVIA Study Area has a relatively small range in elevation; the highest peaks (reaching 275m elevation) are located in the area of Kilnadeema immediately south of Lough Rea in the south of the LVIA Study Area, at a distance of more than 15km from the Proposed Wind Farm site. Although the landscape is flat at a macro scale, localised slight undulations are evident throughout the landscape including (from the north-west moving clockwise around the Proposed Wind Farm site) the areas of Knockroe (up to 158m elevation) in the north-west, Killooaun (up to 121m elevation) in the north, Kilconnell in the north-east (up to 121m elevation), Urraghry Hill (89m elevation) in the east and Doonaree (150m elevation) in the south-east.

Map Legend

- County Borders
- LVIA Study Area
- EIAR Site Boundary
- Proposed Turbines
- Physical Landscape Features

Co. Galway Settlement Hierarchy

- Metropolitan Area (None in the Study Area)
- Strategic Potential
- Key Town (None in the Study Area)
- Self-Sustaining Town
- Small Growth Town (None in the Study Area)
- Small Growth Village
- Rural Settlement

Zone of Theoretical Visibility

- 1-3 Turbines Theoretically Visible
- 4-6 Turbines Theoretically Visible
- 7-8 Turbines Theoretically Visible

Drawing No.

Figure 13-1

Drawing Title

Zone of Theoretical Visibility Map

Project Title

Gannow Renewable Energy Development, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	240323	09/09/2025	JC	RS

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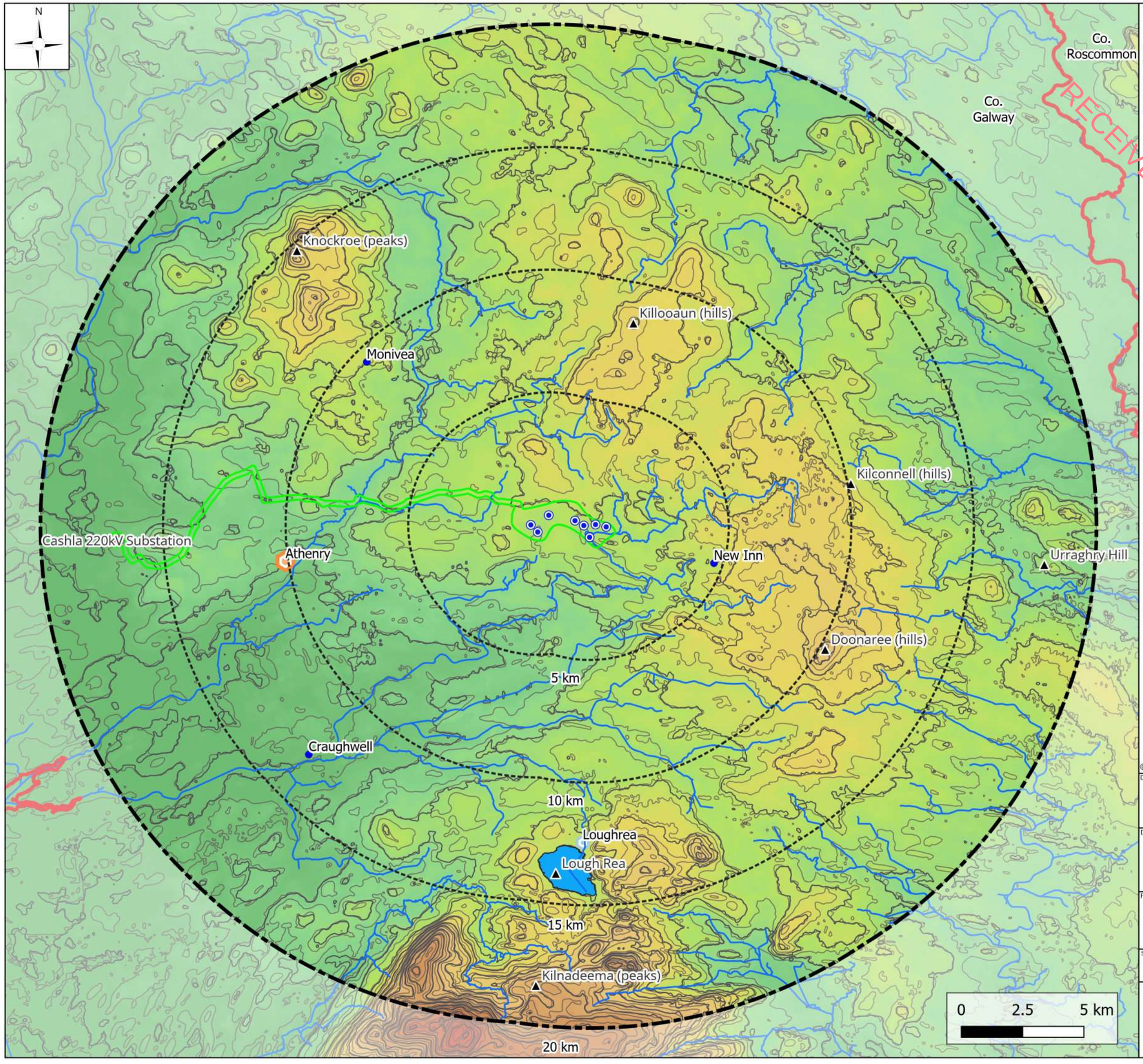

Map Legend

- County Borders
- LVIA Study Area
- EIAR Site Boundary
- Proposed Turbines

Co. Galway Settlement Hierarchy

- Metropolitan Area (None in the Study Area)
- Strategic Potential
- Key Town (None in the Study Area)
- Self-Sustaining Town
- Small Growth Town (None in the Study Area)
- Small Growth Village
- Rural Settlement

Topographical Elevation (m)

- 25
- 50
- 75
- 100
- 150
- 200
- 250
- 300
- Contours (10m)
- Physical Landscape Features
- Watercourses

Drawing No.

Figure 13-2

Drawing Title

Physical Landscape Features Map

Project Title

Gannow Renewable Energy Development, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	240323	09/09/2025	JC	JW

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13.3.3 Discussion of Theoretical Visibility

It is important to note that, in practice, vast areas of the LVIA Study Area which have an indication of full theoretical visibility (i.e. 7-8 turbines) by the ZTV map (see above Figure 13-1) are likely to have *little to no actual visibility* of the proposed turbines, due to natural screening factors existent within the landscape.

Figure 13-1 indicates generally full theoretical visibility within 5 km of the proposed turbines, owing to the primarily flat landscape surrounding the Proposed Wind Farm site, though the landscape does contain many areas of slight undulation; these are discussed below. There is primarily full theoretical visibility up to 15km with patches of no visibility to the north and east of the proposed turbines. Areas of slightly higher elevation to the northwest and the east have no theoretical visibility from 15 to 20km.

North: Knockroe and Killooaun. The northwestern part of the LVIA Study Area features the largest patch of no visibility, situated behind the elevated area of Knockroe with multiple peaks reaching the second-highest elevation. The rural settlements of Abbeyknockmoy and Turloughmore are within the area behind Knockroe and have no visibility. The east-facing aspects of Knockroe peaks have primarily full theoretical visibility, and the rural settlement of Monivea is situated in that region. To the north, small patches of no visibility are situated behind the localised small undulations of the Killooaun area, and the rural settlement of Menlough is situated there, greater than 10km from the theoretical visibility that is surrounded by equal-sized patches of partial and no visibility.

East: Kilconnell, Doonaree and Urraghry Hill. The eastern part of the LVIA Study Area consists of large patches of no visibility owing to areas of localised undulations effectively visually screening the landscape beyond 10km from the proposed turbines; Kilconnell in the north-east, Urraghry Hill in the east and Doonaree in the south-east. Some elevated points within these areas do have partial to full theoretical visibility on the western-facing aspects of the topography; the rural settlements of New Inn and Woodlawn are situated closer to the proposed turbines, within this area of primarily full theoretical visibility.

South: Lough Rea and Kilnadeema. Loughrea town, the second-largest population centre in the LVIA Study Area, is located on the north-western shore of Lough Rea and is bounded by the area of Kilnadeema to the south, featuring the highest elevated peaks of the LVIA Study Area. The southern part of the LVIA Study Area primarily features full theoretical visibility in the lowlands to the north of Lough Rea and Loughrea town. The elevated area of Kilnadeema to the south shows large patches of no visibility, with patches of primarily full theoretical visibility on the northern aspects of the elevated features.

West: Athenry and Lowlands. The western part of the LVIA Study Area consists primarily of flat, low-elevation topography where Athenry town, the largest population centre in the LVIA Study Area, is located, in an area of primarily full theoretical visibility. The rural settlement of Craughwell is also situated in this lowland area. Beyond 15km, the theoretical visibility in this area is intermittent between equal-sized patches of full, partial and no visibility.

13.3.4 Disproportionate Visual Screening Effect

Any landscape feature that blocks a view and prevents a clear onward view has a 'visual screening effect,' whether it is a one-metre-tall wall, a two-metre-high roadside hedgerow, a five-metre-high building, or a 15-metre tree. As a full visual screen, such features only allow a person to see over them, thereby pushing the person's line of sight higher into the sky rather than along the level of the ground.

The impact of visual screening elements such as vegetation (forestry, road-side hedgerows, and trees) and buildings (particularly within cities, towns, and villages) on long-range visibility are accentuated in flat lowland landscapes, this is called a disproportionate visual screening effect. The graphic in Figure

13-3 below best explains this 'disproportionate screening effect'. A ZTV may indicate full theoretical visibility of the proposed turbines from an open field or roadway. However, when a receptor is located at the same base elevation as a turbine, a feature such as a distant treeline has the capacity to greatly restrict or completely obscure visibility of the proposed turbine. Distance becomes a substantial factor determining visibility of proposed turbines as it is difficult to see beyond a few kilometres above visual screening within a flat landscape.

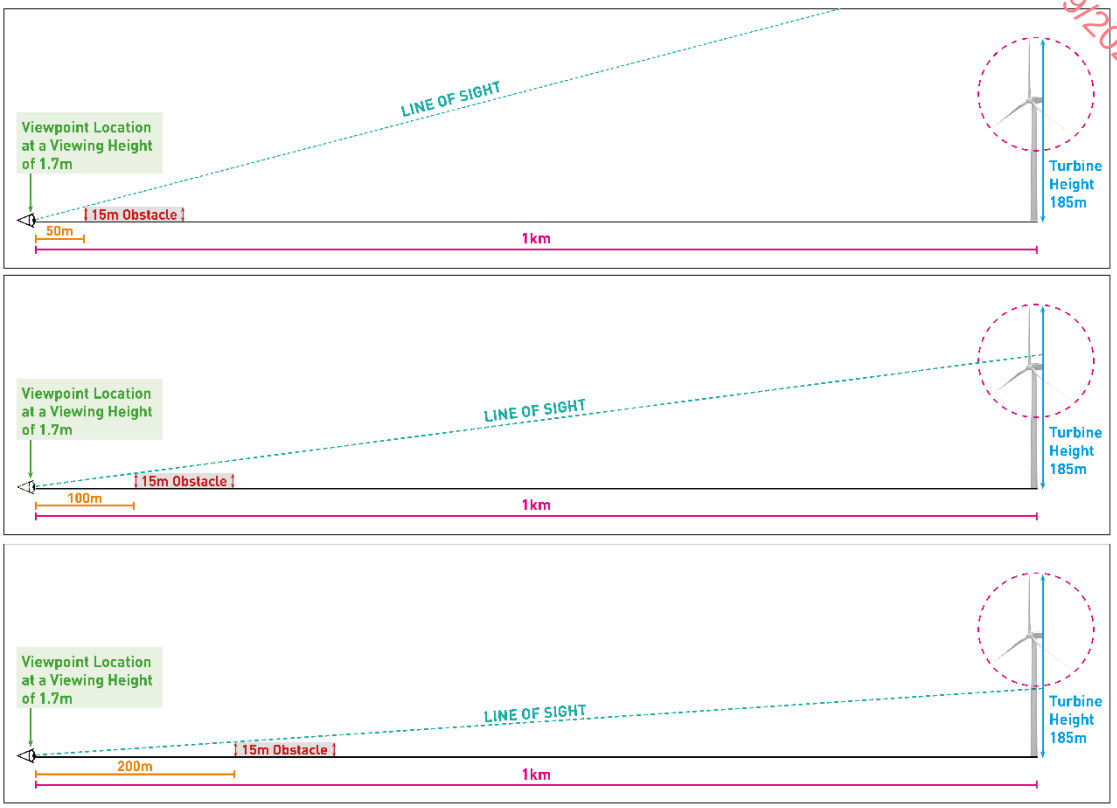


Figure 13-3 Disproportionate Visual Screening Effect

Figure 13-3 above illustrates the disproportionate screening effect that small features in the landscape can have on screening a proposed wind turbine from view. The figure shows a 185-metre-tall wind turbine located one kilometre from a viewing location. The illustration is modelled proportionally to ensure measurement accuracy and scaled to fit this report. A 15-metre-tall obstacle, such as a treeline is used as the landscape feature giving rise to the visual screening effect. In the three examples shown, the 15m obstacle is shown at a distance of 50m, 100m and 200m from the viewing location, and the resultant line of sight is shown as a blue line running from the viewing location upwards towards the top of the obstacle.

13.3.5 On-Site Visibility Appraisal

Field surveys and on-site visibility appraisals were conducted during November 2023, September, November and December 2024, and April 2025. The surveys determined that the likelihood of being able to view the proposed turbines from vast regions of the LVIA Study Area is substantially reduced. This is owing to visual screening by localised undulations in topography, built structures and vegetation, as well as owing to visibility being obscured by great distance from the proposed turbines (e.g. Loughrea) in the flat landscape.

Whilst the impact assessments and analysis of visibility in this chapter are informed by ZTV mapping and photomontage visualisations, the determination of landscape and visual effects is also informed by data gathered during site visits, including visibility appraisals and capture of site photos and drone imagery, as well as a detailed analysis of visual screening and visibility within 3 to 5 km of the proposed turbines. The findings of the surveys are reported in the next Sections 13.3.5.1 and 13.3.5.2.

13.3.5.1 Visibility in Close Proximity: Route Screening Analysis (RSA)

For this LVIA, Route Screening Analysis (RSA) was carried out within a 5km radius of the proposed turbines and on major roads extending to 5km, in April 2025. RSA was conducted to record the varying degrees of visual screening along the local road network and demonstrate the actual potential for visibility of the Proposed Turbines compared to ZTV mapping. The full methodology is outlined in Appendix 13-1: LVIA Methodology (Section 1.5.3 On-Site Visibility Appraisal: RSA). The RSA visual screening categories are:

- **'Little/No'** visual screening: areas of the road that are mainly open with open views in the direction of the proposed turbines (see example below in Plate 13-1);
- **'Intermittent/Partial'** visual screening: areas of the road where there are intermittent or partial views in the direction of the proposed turbines (see Plate 13-2);
- **'Dense/Full'** visual screening: areas of the road with dense visual screening, sufficient to block views in the direction of the proposed turbines (see Plate 13-3).

Following the plate imagery examples below, Table 13-1 lists the distribution of the screening classes on 93.7km of public road recorded during the survey and Figure 13-4 maps the quantified results of the RSA, illustrating the extent of visual screening.

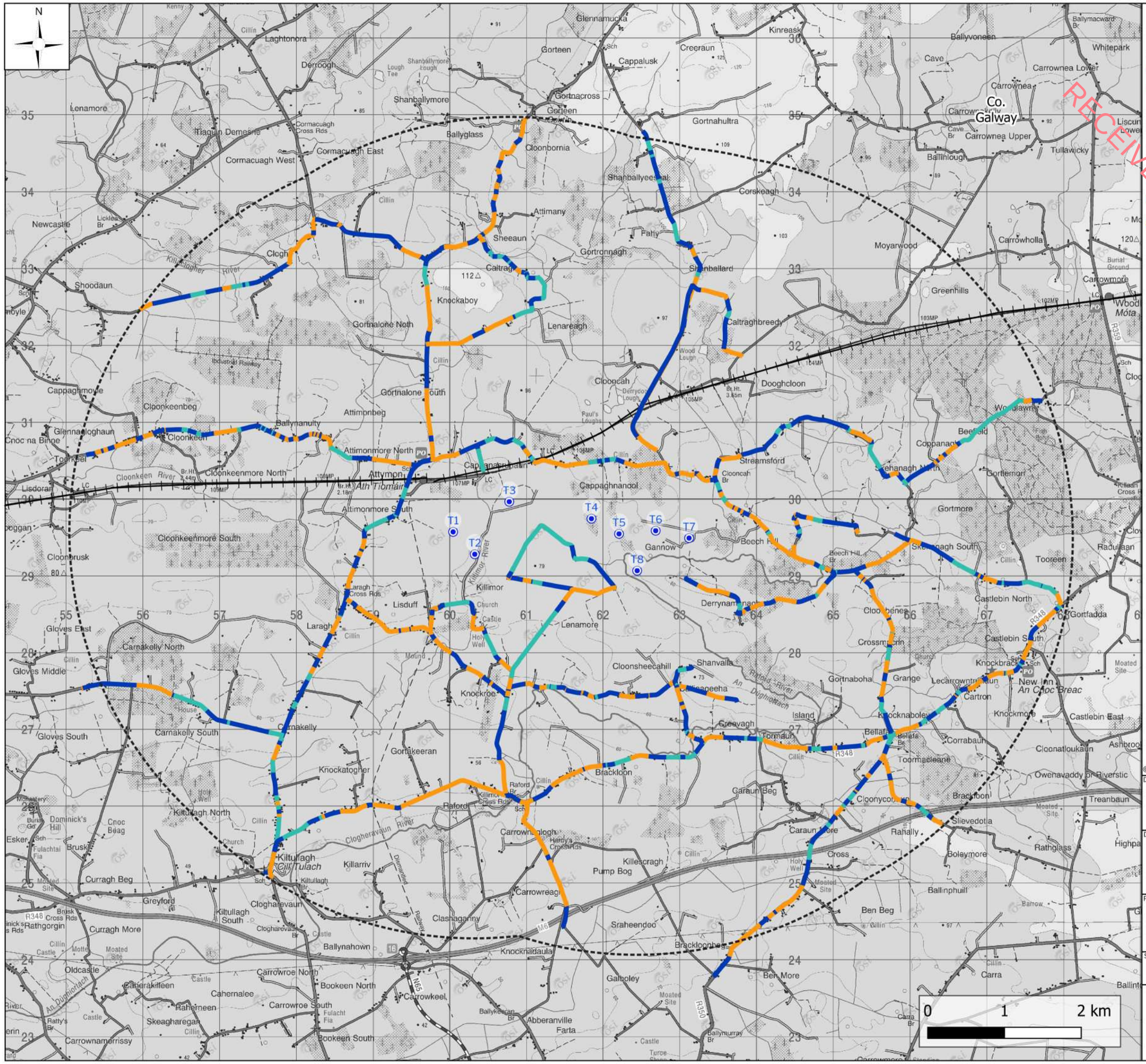
Plate 13-1: Example of 'Little/No' Visual Screening along L7166 Local Road at Knockroe

Plate 13-2: Example of 'Intermittent/Partial' Visual Screening along L3118 at Knocknaboley

Plate 13-3: Example of 'Dense/Full' Visual Screening off L3116 at Gortnalone North

Table 13-1: Distribution of Roadside Visual Screening Recorded during RSA

Visual Screening Class	Length of Road Mapped in Figure 13-4	Percentage Distribution of Visual Screening on Surveyed Roads
'Little/None'	15.8km	16.8%
'Intermittent/Partial'	39.8km	42.5%
'Dense/Full'	38.1km	40.7%



Map Legend

- Route Screening Analysis Study Area (5km)
- EIAR Site Boundary
- Proposed Turbines
- Railway Network

Route Screening Analysis

- 'Little/No' Visual Screening
- 'Intermittent/Partial' Visual Screening
- 'Dense/Full' Visual Screening

Drawing No.

Figure 13-4

Drawing Title

Route Screening Analysis Map

Project Title

Gannow Renewable Energy Development, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:48,000	240323	09/09/2025	JC	RS

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13.3.5.2 Key Areas with Potential Visibility

The results of the RSA indicate "Little/No" visual screening for a very small percentage of the screened roads. Small portions of L3115 Local Road immediately to the west of proposed turbines T01, T02 and T03 at the western edge of the Proposed Wind Farm site have open visibility; these are small patches amongst longer stretches of "Intermittent/Partial" and "Dense/Full" visual screening. As the area is flat and the road is within close proximity to the proposed turbines, there is greater potential to see the proposed turbines in an intermittent nature.

Immediately south of the Proposed Wind Farm site, L7166 Local Road has larger portions of open visibility. The road in this area mainly traverses uninhabited bogland in a loop. To the southwest, the L7166 near the townland of Killimordaly has small portions of open visibility which occur amongst larger stretches of Dense/Full visual screening owing mostly to mature woodlands and slightly hiller terrain.

Very small patches of "Little/No" visual screening are located to the north beyond 2km from the proposed turbines, along L3116 Local Road at slightly higher elevations, and one stretch of "Little/No" visual screening is located to the east of the Proposed Wind Farm site nearly 5km, in hilly terrain near Woodlawn.

13.4 Landscape Baseline

The Landscape Baseline section is divided into the following topics, reported below in Section 13.4.1 through Section 13.4.6:

- **Landscape Designations and Policy Context** pertaining to the location and features of the Proposed Wind Farm site and its surrounding area based on the developments plan for Co. Galway and its relevant appendices.
- **Landscape Character Areas and Preliminary Analysis** analysing the designated character areas of the Proposed Wind Farm site and its surrounding area based on:
  - Identification of LCUs within 15 km of the proposed turbines (i.e. LCA Study Area),
  - Preliminary analysis and scoping of LCUs based on ZTV mapping.
- **Landscape Character of the Proposed Wind Farm site** describing the localised physical characteristics of the site and its immediate setting, based on site visit findings from 2023-2025.
- **Landscape Sensitivity of the Proposed Wind Farm site** assigning an overall 'Sensitivity' rating to the site and its surrounding area according to its 'Value' and 'Susceptibility to Change' based on the appraisal of multiple indicators:
  - Landscape designations,
  - Quality/condition of landscape elements,
  - Scenic/aesthetic qualities,
  - Rarity/conversation status,
  - Wildness/naturalness,
  - Recreational value,
  - Cultural meaning/associations.
- **Landscape Character from Wind Energy Development Guidelines** describing the landscape setting of the Proposed Wind Farm site and reviewing the relevant policies and siting guidance based on:
  - Guidelines (DoEHLG, 2006),
  - Draft Guidelines (DoHPLG, 2019).
- **Landscape Character of the wider setting** describing the character, land use and setting of the overall LVIA Study Area.

13.4.1 Landscape Designations and Policy Context: GCDP (2022-2028)

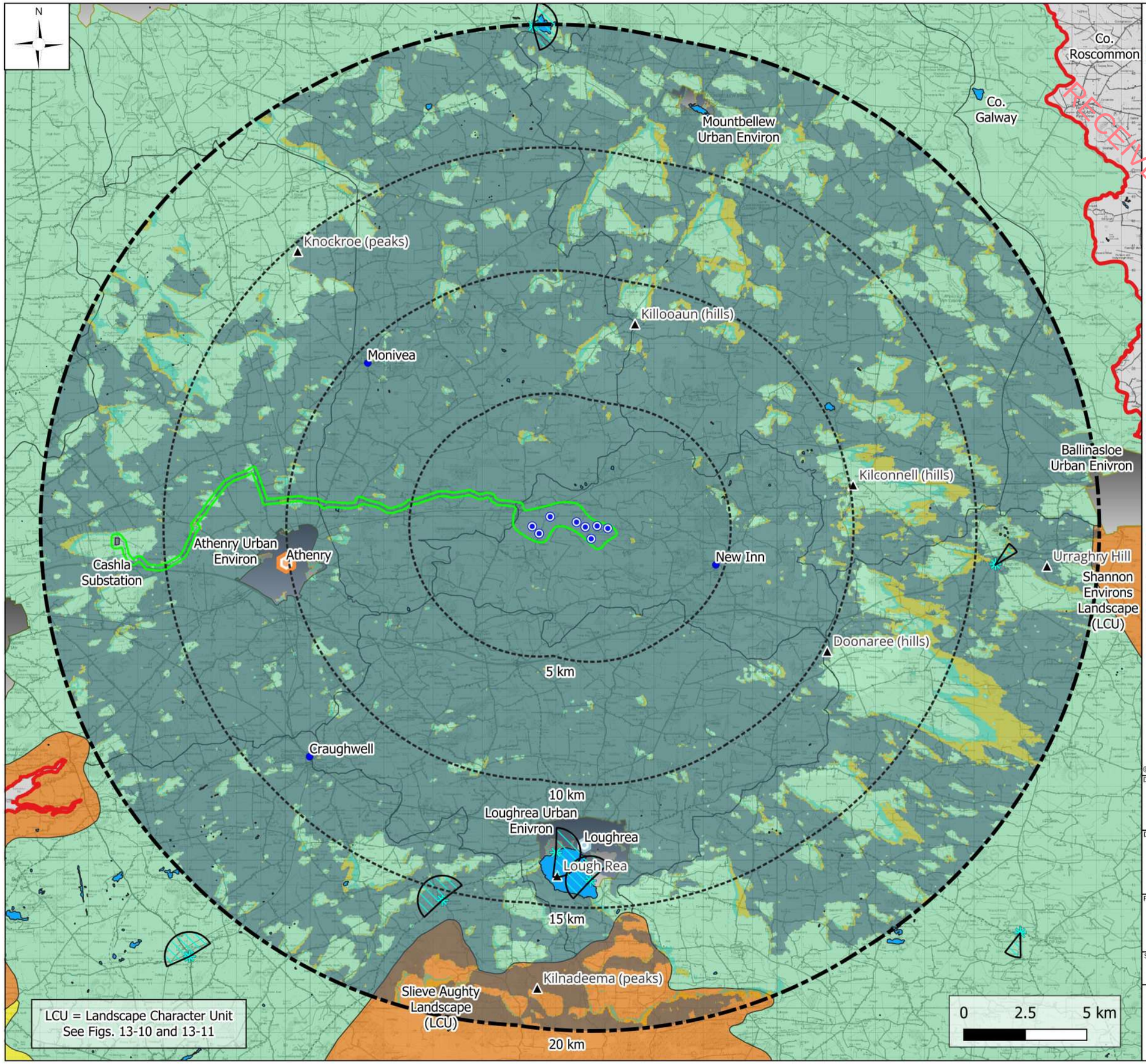
This section reviews the policies, objectives, designations and classifications relating to landscape, planning and the locational siting of wind farms with respect to the Proposed Wind Farm site, located in Co. Galway. The relevant volumes, maps and appendices of the Galway County Development Plan (GCDP) 2022-2028 consulted include:

- GCDP Volume 1: Written Statement, including:
  - Chapter 1 – Introduction;
  - Chapter 8 – Tourism and Landscape;
  - Chapter 14 – Climate Change, Energy and Renewable Resource;
- GCDP Appendix 1: Renewable Energy Strategy (a.k.a. LARES);
- GCDP Appendix 4: Landscape Character Assessment;

Within the 20km LVIA Study Area (and within the 15km LCA Study Area in the case of landscape character designations), the following number and type of landscape designations were identified according to the GCDP:

- 5 no. designated Protected Views (mapped and scoped as visual receptors in Section 13.5 Visual Baseline).
- Areas comprising 4 (out of 5) no. classifications of wind energy strategy, including 'Acceptable in Principle', 'Open to Consideration', 'Not Normally Permissible' and 'Generally to be Discouraged'.
- Areas comprising 3 (out of 5) no. classifications of Landscape Sensitivity, including 'Special', 'Low' and 'Urban Environs'.
- 9 no. designated LCAs and Urban Environs according to county-level Landscape Character Assessment carried out to meet national landscape management policy targets, existent within the 15km LCA Study Area for the assessment of effects on landscape character.

All Landscape Policy Context designations are mapped (except wind energy and LCAs) along with identified settlements in the 20km LVIA Study Area and overlaid with the ZTV to show indicative theoretical visibility of the proposed turbines, followed by a map of the wind energy strategy classifications according to the GCDP LARES. The wind energy strategy and all identified landscape designations along with their relevant policies are explained in the sections below. Subsequently, GCDP landscape character designations are mapped and discussed in Section 13.4.2 Landscape Character Areas and Preliminary Analysis.



Map Legend

- County Borders
- LVIA Study Area
- EIAR Site Boundary
- Proposed Turbine Layout

Co. Galway Settlement Hierarchy

- Metropolitan Area (None in the Study Area)
- Strategic Potential
- Key Town (None in the Study Area)
- Self-Sustaining Town
- Small Growth Town (None in the Study Area)
- Small Growth Village
- Rural Settlement

GCDP Landscape Sensitivity Classes

- 4 - Iconic (None in the Study Area)
- 3 - Special
- 2 - High (None in the Study Area)
- 1 - Low
- Urban Environs

GCDP Other Designations

- Co. Galway Protected Views
- Co. Galway Protected Views Direction-of-View

Zone of Theoretical Visibility

- 1-3 Turbines Theoretically Visible
- 4-6 Turbines Theoretically Visible
- 7-8 Turbines Theoretically Visible

Drawing No.

Figure 13-5

Drawing Title

Landscape Policy Context Map & ZTV

Project Title

Gannow Renewable Energy Development, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	240323	09/09/2025	JC	RS

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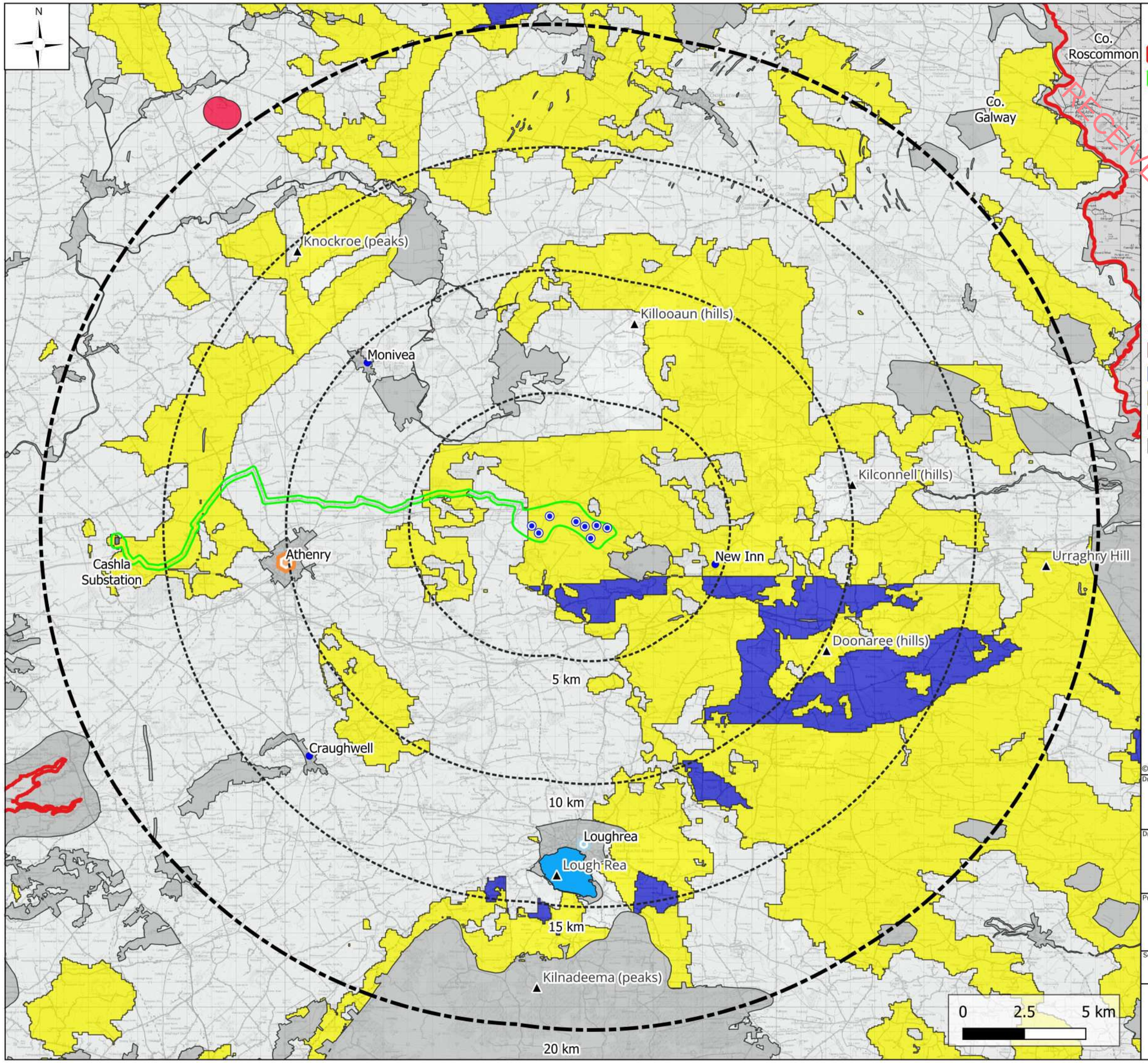


Map Legend

- County Borders
- EIAR Site Boundary
- Proposed Turbines

Co. Galway Settlement Hierarchy

- Metropolitan Area (None in the Study Area)
- Strategic Potential
- Key Town (None in the Study Area)
- Self-Sustaining Town
- Small Growth Town (None in the Study Area)
- Small Growth Village
- Rural Settlement

GCDP Wind Energy Strategy

- Strategic Area (none in study area)
- Acceptable in Principle
- Open to Consideration
- Generally to be Discouraged
- Not Normally Permissible

Drawing No.

Figure 13-6

Drawing Title

Wind Energy Strategy Map
(as designated in GCDP 2022-2028)

Project Title

Gannow Renewable Energy Development, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	240323	09/09/2025	JC	RS

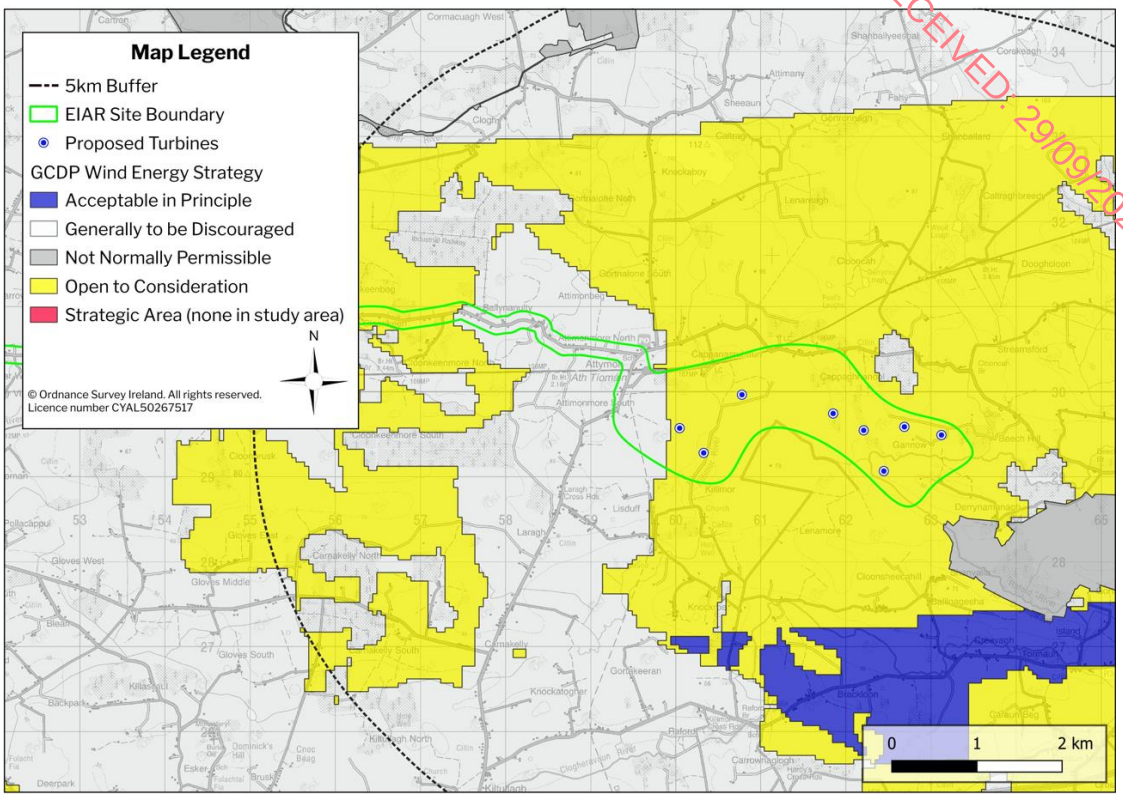


Figure 13-7 Wind Energy Strategy (GCDP 2022-2028) showing all proposed turbines located in 'Open to Consideration'

13.4.1.1 GCDP Wind Energy Strategy

The GCDP Appendix 1: Renewable Energy Strategy is also called the 'County Galway Local Authority Renewable Energy Strategy' (hereafter, LARES). The primary strategic aim of the LARES is given as (p.6):

> *'The aim of this Strategy is to build upon current policy to develop an updated, county-wide tool for identifying potentially suitable locations for renewable energy development'.*

The LARES was prepared in tandem with Co. Galway landscape character and sensitivity assessments; these are discussed in the sections below.

The LARES classifies Co. Galway into 5 no. zones for wind energy designation as follows:

- Strategic Area,
- Acceptable in Principle,
- Open to Consideration,
- Generally to be Discouraged,
- Not Normally Permissible.

The LARES incorporates landscape and many other factors into the determination of wind energy zoning. As stated in the LARES (p.59):

> *'In this strategy, **wind energy and landscape evaluation** have been mapped along with other **critical viability factors** such as proximity to electrical grid, road access and other relevant environmental factors, such as ecological designations, elevation, land cover and population density'.*

As shown in the larger zoning map above, an irregular mosaic of different wind energy zoning exists throughout the LVIA Study Area, ranging from 'Not Normally Permissible' to 'Acceptable in Principle', consisting of many small or irregularly shaped areas in a non-patterned and inconsistent layout impacting the amount of viable area for development. Within 5km of the proposed turbines, the landscape is characterised by this same range of classification levels and inconsistency of layout, as shown in Figure 13-7 above, an enlargement extracted from the above map.

The proposed turbines are located in the zone called **Open to Consideration** (yellow in the maps above), defined in the LARES (p.71) as:

> *'Areas where Wind Energy development is likely to be favourably considered - subject to the results of more detailed assessment of polices and potential effects'.*

The LARES Policy Objective 16 (p.84) outlines the policy relating to wind energy development proposals for this land classification:

> *'Wind energy development proposals in areas that are identified as 'Open to Consideration' for wind energy development will be considered in accordance with the LARES and the proper planning and sustainable development of the area'.*

The LARES was drafted by Co. Galway to follow recommendation of the Sustainable Energy Authority of Ireland (SEAI) by deferring to the Guidelines (DoEHLG, 2006) as the primary guidance for determining development suitability. This LVIA carries out a comprehensive evaluation of the Proposed Wind Farm in relation to meeting siting and design guidelines to the Guidelines (DoEHLG, 2006) and cognisant of the Draft Guidelines (DoHPLG, 2019) below in Section 13.4.5.

13.4.1.2 GCDP Landscape Sensitivity Classifications

The GCDP Section 8.13.2 – Landscape Sensitivity (p.24) and Appendix 4: Landscape Character Assessment (p.22) classify five classes of landscape sensitivity throughout the entire county and provide relevant planning policy and development guidance for each classification. The sensitivity classifications are:

- 4 – Iconic: unique landscape with high sensitivity to change,
- 3 – Special: high sensitivity to change,
- 2 – High: elevated sensitivity to change,
- 1 – Low: unlikely to be adversely affected by change,
- Urban Environs Landscapes [defined collectively as having 'low sensitivity'].

GCDP Section 8.13.2 (p.26) lists the following four policy objectives relating to landscape conservation and management, focussing on the preservation of landscape character as defined in the GCDP as well as landscape sensitivity classes and ratings (with relevant text made bold):

> **LCM1 Preservation of Landscape Character** – *Preserve and enhance the character of the landscape where, and to the extent that, in the opinion of the Planning Authority, the proper planning and sustainable development of the area requires it, including the preservation and enhancement, where possible of views and prospects and the amenities of places and features of natural beauty or interest.*

> **LCM2 Landscape Sensitivity Classification** – *The Planning Authority shall have regard to the landscape sensitivity classification of sites in the consideration of any significant development proposals and, where necessary, require a Landscape/Visual Impact Assessment to accompany such proposals. This shall be balanced against the need to develop key strategic infrastructure to meet the strategic aims of the plan.*

LCM3 Landscape Sensitivity Ratings – *Consideration of landscape sensitivity ratings shall be an important factor in determining development uses in areas of the County. In areas of high landscape sensitivity, the design and the choice of location of proposed development in the landscape will also be critical considerations'.*

LCM 4 Open/Unfenced Landscape **–** *Preserve the status of traditionally open/unfenced landscape. The merits of each case will be considered in light of landscape sensitivity ratings and views of amenity importance."*

This LVIA emphasises that the Proposed Wind Farm is located within a landscape sensitivity area of class '1 – Low' and is not adjacent to or in close proximity to any areas classed as '2 – High' or higher; this and all other landscape sensitivity classes identified within the LVIA Study Area are detailed in the subsequent paragraphs below.

The five sensitivity classes of the GCDP are based on broader landscape designations in Appendix 4 called Landscape Character Types (LCTs) as well as more specific designations called Landscape Character Units (LCUs). Both LCTs and LCUs are comprehensively explained below in the following Section 13.4.2 Landscape Character Areas and Preliminary Analysis and form the basis for the comprehensive assessment of effects on landscape character to 15km reported in Appendix 13-2: LCA Assessment Tables accompanying this chapter. The present section briefly names and identifies areas of landscape sensitivity classification within the 20km LVIA Study Area, which consequently align with LCTs and LCUs, and outlines the relevant landscape sensitivity policy objectives. For comprehensive discussion and scoping/assessment of landscape character areas, see Section 13.4.2 and Appendix 13-2.

The Proposed Project is located within two broad LCT called 'North Galway Complex Landscape' and 'Central Galway Complex Landscape' (see Figure 13-8 below) and is within the area of class '1 – Low' sensitivity (mapped previously in Figure 13-5 above).

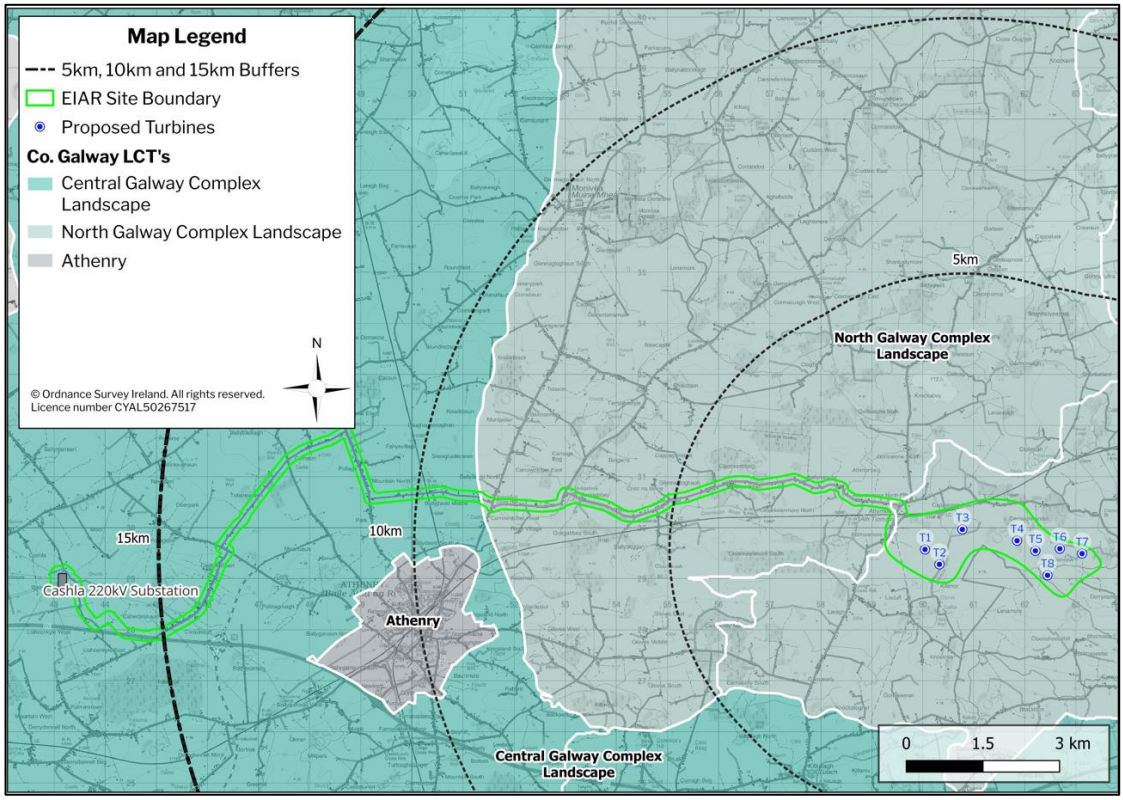


Figure 13-8 Landscape Character Types of the Proposed Wind farm and proposed Grid Connection

The entirety of the Site is located in class '1 – Low' sensitivity; this sensitivity class is mapped as 'light green' on the previous Figure 13-5 Landscape Policy Context Map. Nearly the entire LVIA Study Area is composed of Low-sensitivity landscape classification.

No class '4 – Iconic' or class '2 – High' areas of sensitivity are within the LVIA Study Area. Small areas of the remaining sensitivity classes are within in the LVIA Study Area: '3 – Special' at the south edge of the boundary, and scattered areas of '1 – Low' and 'Urban Environs'.

All landscape sensitivity areas identified within the LVIA Study Area are named in Table 13-2 below and discussed in the following paragraphs; these areas correspond with broader LCTs and more specific LCUs (explained in the next section).

Table 13-2: GCDP Landscape Sensitivity Classes Identified in the LVIA Study Area

Unit Name (LCU)	Landscape (LCT)	Description of Area
Class '3 – Special' Sensitivity		
Slieve Aughty LCU	Slieve Aughty Landscape	38.5km^2 of area is within the LVIA Study Area, located at the southern-most boundary within 15-20km from the proposed turbines.
Shannon Environs LCU	Shannon Environs Landscape	Less than 0.5km^2 of area is within the LVIA Study Area, located at the eastern-most boundary 20km from the proposed turbines.
Class '1 – Low' Sensitivity		
North Loughrea LCU	North Galway Complex	Contains all proposed turbines.
North River Clare Basin LCU	North Galway Complex	Contains approximately 8.5km of the Proposed Grid Connection.
Southern River Clare Basin LCU	Central Galway Complex	Contains approximately 12.3km of the Proposed Grid Connection as well as the termination point at the Cashla 220kV Substation.
Remaining LCUs in the LVIA Study Area	North Galway Complex	Individual LCUs falling within the LVIA Study Area: › Castlegar Basin; › Suck Valley.
	Central Galway Complex	Individual LCUs falling within the LVIA Study Area: › Black River Basin; › Kilchreest Basin; › Kilcrow Basin; › South Loughrea.
Class 'Urban' Sensitivity		
Athenry	Urban Environs Landscape	Total Area = 6.3km^2. Located 5-10km west of the proposed turbines.

Unit Name (LCU)	Landscape (LCT)	Description of Area
Ballinasloe		Partial = Approx. 0.5km^2 of the total area (12.9km^2) is within the LVIA Study Area, located 20km east of the proposed turbines.
Loughrea		Total Area = 6.8km^2. Located 10-15km south of the proposed turbines.
Mountbellew		Total Area = 1km^2. Located 15-20km north-east of the proposed turbines.

Class '3 – Special' Sensitivity. This sensitivity class represents the highest-sensitivity landscape type within the LVIA Study Area. One area of class '3 – Special' sensitivity is located at the southern edge of the LVIA Study Area within 15-20km from the proposed turbines; this area is mapped in orange colour on the Landscape Policy Context Map & ZTV above:

- Slieve Aughty LCU (part of Slieve Aughty LCT);
- Approximately 38.5km^2 within the LVIA Study Area boundary.

One very small portion (less than 0.5km^2) of Shannon Environs LCU (part of Shannon Environs LCT) with class '3 – Special' sensitivity is located at the farthest eastern edge of the LVIA Study Area at a distance of 20km from the proposed turbines and shows primarily no theoretical visibility according to the ZTV Map, thus it is not likely to be affected by the Proposed Project. As a result, this portion of Shannon Environs class '3 – Special' landscape is scoped out of assessment and is not considered further in this LVIA.

Class '1 – Low' Sensitivity. The majority of the LVIA Study Area is comprised of class '1 – Low' sensitivity and the entirety of the Site is located in landscape area of this sensitivity class, mapped as green colour in the Landscape Policy Context map (Figure 13-5).

The Proposed Wind Farm site and Proposed Grid Connection are contained within the following three low-sensitivity landscape units:

- North Loughrea LCU;
- North River Clare Basin LCU;
- Southern River Clare Basin LCU.

The remaining low-sensitivity landscape units surrounding the Site within the LVIA Study Area are:

- Black River Basin LCU;
- Castlegar Basin LCU;
- Kilchreest Basin LCU;
- Kilcrow Basin LCU;
- South Loughrea LCU;
- Suck Valley LCU.

Class 'Urban' – 'Low Sensitivity'. Three areas of 'Urban Environs Landscape' are located within the LVIA Study Area; these areas are mapped in grey colour in the maps above. 'Urban Environs' are classed collectively as an LCT with 'low sensitivity to change' in the GCDP Appendix 4 (p.13); see the following section for descriptions and preliminary analysis of Urban Environs.

The 3 no. Urban Environs identified in the LVIA Study Area are:

- Athenry;

- Loughrea;
- Mountbellew.

One very small portion (0.53km^2) of a fourth area, Ballinasloe Urban Environs, is located at the farthest eastern edge of the LVIA Study Area at a distance of 20km from the proposed turbines and shows no theoretical visibility according to the ZTV Map, thus it is not likely to be affected by the Proposed Project. As a result, the Ballinasloe Urban Environs is scoped out of assessment and is not considered further in this LVIA.

13.4.1.3 GCDP Mandatory Objectives

The GCDP Chapter 1 – Introduction (p.4-5) lists a total of 17 no. mandatory planning objectives for Co. Galway, the following four of which relate in part to wind energy development and/or landscape policy considerations addressed in this LVIA (with emphasis added to relevant wording):

> *'**Provision, or facilitation of the provision, of infrastructure** including transport; **energy** and communication **facilities**, water supplies, wastewater services, waste recovery and disposal facilities and any ancillary facilities or services;*
>
> *Preservation of the **character of the landscape**, including the preservation of **views and prospects** and the amenities of places and features of natural beauty or interest;*
>
> *Preservation of the **character** of architectural conservation areas;*
>
> ***Provide a framework** for the identification, assessment, protection, **management and planning of landscapes**'.*

It is noted that the Proposed Wind Farm is considered energy infrastructure and represents a form of landscape management as it requires modifications to current land use and subsequent maintenance of the landscape of the Proposed Wind Farm site. This LVIA carries out a comprehensive analysis of the potential effects on landscape character as well as designated views and prospects and other identified amenities in Section 13.5 Visual Baseline.

13.4.1.4 GCDP Landscape Strategic Aims

The GCDP Chapter 8 – Tourism and Landscape (p.2-3) sets out a total of 10 no. strategic aims for planning in Co. Galway, the following two of which relate to landscape policy:

> *'**To capitalise on** the **distinct tourist attractions** that County Galway has to offer **including** Destination Towns, natural, built and cultural heritage, **scenic landscapes and natural amenities**;*
>
> ***To protect** the **landscape categories** within the County and **avoid negative impacts** upon the natural environment'.*

The GCDP places emphasis on supporting sustainable development while at the same time preserving all varieties of landscape in the county, stating that (p.2) *'...the protection of the landscapes is of significant importance to the Council as it is recognised as one of the key attributes within the county'* and listing examples of landscapes of popular renown including mountain ranges, blanket bogs, bare karst pavements and *'the fertile patchwork of farmland in east Galway'* (most likely) relating to the landscape area of low-lying farmland, bogs and wetlands of Suck Valley along the eastern-most border of Co. Galway with Co. Roscommon.

With respect to the above identified policies, the Proposed Project is not located in the fertile farmlands of east Galway and does not comprise scenic landscape or natural amenity of popular renown or tourist attraction. A comprehensive assessment of the effects on landscape character is provided in Appendix

13-2: LCA Assessment Tables and the results are reported in Section 13.7 Likely Significant Landscape and Visual Effects.

13.4.1.5 GCDP Energy & Renewable Resource Strategic Aims

The GCDP Chapter 14 – Climate Change, Energy and Renewable Resource (p.3) sets out a total of 3 no. strategic aims for planning related to developing renewable energy resources in Co. Galway, the following two of which relate indirectly to wind energy:

> *'To **reduce the County's CO_2 emissions** by **achieving** international, national, regional and any local **targets** for achieving a **low carbon economy by 2050**; and increase energy efficiency in Local Authority activities through its development management functions;*
>
> *To **reduce** County Galway's **dependency on imported fossil fuels** and to **provide alternative energy sources** by harnessing the County's potential for renewable energy sources while strengthening the grid transmission networks'.*

The GCDP Section 14.5 – Integrating Climate Action Into the Plan states policy objective CC6 regarding climate change (p.16):

> *'CC6 Local Authority Renewable Energy Strategy (LARES)*
>
> *To support the implementation of the Renewable Energy Strategy contained in Appendix 1 of the Galway County Development Plan to facilitate the transition to a low carbon county.'*

The Proposed Project is a renewable energy project that would contribute to the GCDP's policy strategic aims listed above, in line with the GCDP's aim to (p.2) *'facilitate the sustainable growth of renewable energies'* through supporting developments representing implementation of the GCDP *Appendix 1: Renewable Energy Strategy*, also known as the LARES and which represents the county's wind energy strategy (see next section).

13.4.1.6 GCDP Designated Scenic Routes & Protected Views

GCDP Section 8.13.3 – Protected Views and Scenic Routes states the following policy objective no. PVSR-1 for Landscape Conservation and Management (p.30):

> *'PVSR-1 Protected Views and Scenic Routes*
>
> *Preserve the protected views and scenic routes as detailed in Maps 8.3 and 8.4 from development that in the view of the Planning Authority would negatively impact on said protected views and scenic routes. This shall be balanced against the need to develop key infrastructure to meet the strategic aims of the plan'.*

Scenic Routes. No designated scenic routes are existent within the LVIA Study Area.

Protected Views. No Protected Views in the LVIA Study Area have potential visibility of the proposed turbines, based on the on-site visibility appraisals. 5 no. Protected Views designated in the GCDP were identified and thereby scoped out:

- G-V38: Kilchreest Church Ruins and Graveyard;
- G-V39: Summerville Lough;
- G-V40: Corry's Field Walk;
- G-V41: Loughrea Swimming Area;
- G-V43: Aughrim Church Spire.

The GCDP Appendix 4 defines Protected Views as (p.41):

> *'An official objective to avoid or minimise adverse change to the appearance of the landscape as seen from a specified location'.*

13.4.2 Landscape Character Areas and Preliminary Analysis

13.4.2.1 GCDP Designated LCTs and LCUs in the LCA Study Area

Landscape Character Assessment, as carried out by counties in Ireland to meet the objectives of the National Landscape Strategy Framework 2015–2025 published by the Department of Arts, Heritage and the Gaeltacht (DAHG) (2015), forms an important basis of this LVIA. This section reports relevant policies relating to the location of the Proposed Wind Farm site and identifies the relevant landscape designations within the 15km LCA Study Area for the assessment of landscape character effects.

Landscape Character Assessment overall is intended to analyse the character, value and sensitivity of landscapes identified within a particular area (i.e. counties) as part of efforts by the DAHG to achieve national-level consistency in terms of landscape decision-making and uphold compliance of European Landscape Convention best practices.

It should be noted that, typically for LVIA, the assessment of effects on landscape character is carried out with respect to designated 'Landscape Character Areas' or LCAs according to local county development policy; however, in the case of the current LVIA for the Proposed Project with the entire LVIA Study Area boundary contained within Co. Galway, the local development plan uses designated 'Landscape Character Units' (LCUs), instead of LCAs, as the basis for landscape character designations, hence all related mapping of the LCA Study Area in this report and tables in its appendices show and discuss LCUs.

For Co. Galway, a Landscape Character Assessment was conducted and published as an appendix to the GCDP (2022-2028) called Appendix 4: Landscape Character Assessment, producing designated Landscape Regions, broad areas further divided into Landscape Character Types (LCTs) and further sub-divided into smaller LCUs for assigning planning and policy objectives.

Appendix 4 (p.5) of the GCDP defines these designated regions as follows:

- *'**Landscape Region:** Broad area of land with a distinctive character due to large-scale natural factors – such as mountains, plains, coasts etc.;*
- ***Landscape Character Type (LCT):** Area of land that has an appearance that is readily recognisable as being different and distinctive from other areas;*
- ***Landscape Character Unit (LCU):** Smallest area of distinctive local features within a Landscape Type that can be practicably identified to assist in policy formulation'.*

Appendix 4 divides Co. Galway into four broad Landscape Regions. Of these, the Site is located within the 'The Eastern Plains Region', characterised in Appendix 4 (p.5) as:

> *'...[U]nderlain by younger, softer rocks. This derives most of its character from the covering blanket of glacial soils that give rise to extensive, level plains of grasslands, with many areas of bog in the north'.*

The Eastern Plains Region is divided into ten LCTs, based on landscape components such as vegetation, soils, drainage and topography.

The Proposed Wind Farm site and part of the Proposed Grid Connection are located within the LCT called 'North Galway Complex Landscape', with the primary description in Appendix 4 (p.5) given as:

'...[A]n extensive grassland plain stretching from the Suck River in the east to the watershed of the River Clare in the west. It includes elevated areas such as Slieve Dart in the north, as well as lakes, turloughs, raised bogs, wetlands and winding rivers'.

The North Galway Complex Landscape is further characterised in Appendix 4 (p.11) as follows, with the 'principal characteristic' shown in bold:

*'Agriculture, scattered forestry and associated field patterns are very mixed and can exhibit **large and abrupt changes of character over very short distances, especially in areas around bogs**. It has a dense network of smaller settlements and roads, though at a lower density than the southern plains of the county. Open areas around bogs produce extensive sky views and areas that are free from light pollution'.*

The North Galway Complex Landscape is sub-divided into six smaller LCUs; of these, three were identified in the LCA Study Area:

- G-LCU-5f: North Loughrea (contains all proposed turbines);
- G-LCU-5e: Northern River Clare Basin (contains 9.6km of the Proposed Grid Connection);
- G-LCU-5b: Castlegar Basin.

The remainder of the Proposed Grid Connection is located within the 'Central Galway Complex Landscape' LCT which comprises the western, southern and eastern portions of the LCA Study Area with the primary description in Appendix 4 (p.5) given as:

'...an extensive plain of grasslands comprising medium-to-large fields with low enclosures and many areas of low stone walls. This area contains the majority of the county's population with associated high levels of rural housing, roads and settlements'.

The Central Galway Complex Landscape is further characterised in Appendix 4 (p.12) as follows, with the 'principal characteristic' shown in bold:

*'Also includes distinctive features, including locally elevated features, such as Knockma, south-west of Tuam as well as areas that overlook Lough Corrib in the west and the complex of lakes and foothills between Gort and Loughrea in the south. [...] The western and southern parts of these landscapes are underlain by karst limestone which results in many unusual hydrological features - such as turloughs and large springs. **Level plain of productive grassland containing many settlements and dwellings**'.*

The Central Galway Complex Landscape is sub-divided into five LCUs; of these, 4 no. LCUs were identified in the LCA Study Area:

- G-LCU-6b: Southern River Clare Basin (contains 12.2km of the Proposed Grid Connection);
- G-LCU-6c: Kilchreest Basin;
- G-LCU-6d: Kilcrow Basin;
- G-LCU-6e: South Loughrea.

LCUs containing the Proposed Project. All proposed turbines (T01-T08) are sited within G-LCU-5f: North Loughrea. The Proposed Grid Connection underground electrical cabling route passes through two additional LCUs to the west of the Proposed Wind Farm site: G-LCU-5e and G-LCU-6b, the Northern and Southern (respectively) River Clare Basin units. The key characteristics of these LCUs are listed in Appendix 4 as:

- **G-LCU-5f: North Loughrea** (p.20):
  - *'Long-occupied working landscape with high levels of occupation and numerous smaller settlements as well as large road and rail corridors;*
  - *Extensive low-lying area with many turloughs and areas of scrub woodland, locally elevated elsewhere;*
  - *Large regular, often stone-walled fields;*
  - *Low enclosure except for localised areas of mature parkland trees'.*
- **G-LCU-5e: Northern River Clare Basin** (p.20):
  - '*Extensive, largely level plain with low enclosure;*
  - *A long-settled working landscape of large regular stone-walled fields;*
  - *Extensive areas of bog in east;*
  - *Transition zone from bog areas to east*;'
- **G-LCU-6b: Southern River Clare Basin** (p.21):
  - '*Undulating long-occupied working landscape with high levels of settlement;*
  - *Large regular fields and numerous parkland remnants;*
  - *Extensive wetland areas near Lough Corrib;*
  - *Low enclosure except for localised areas of mature parkland trees'.*

Urban Environs Landscapes. 2 no. 'Urban Environs' are located in the LCA Study Area: Athenry and Loughrea; these are included in the preliminary analysis and on the landscape character maps in the next section because they are designated collectively as one LCT in the GCDP Appendix 4. (p.13), described with a 'significance' of 'local significance to resident communities' and 'sensitivity' of 'low sensitivity to change'.

The Urban Environs LCT is defined in the GCDP Appendix 4 (p.13) as follows, with the relevant characteristics to this LVIA highlighted in bold text below:

> *'Urbanised landscapes occur[ring] around settlements. These landscapes [are] often concentrations of individual dwellings, old and new. Around larger towns they also consist of modern estate housing and recreation facilities as well as developments of commercial, industrial and educational buildings. This pattern changes from concentric to radial along major transportation corridors that support many residential communities. Many of County Galway's* ***urban environs are highly distinctive*** *because of their* ***proximity to areas of strong natural character*** *such as the* ***rivers, lakes*** *or coasts. Other settlements adjoin extensive areas of naturalized scrub vegetation, bog or low-lying wetlands'.*

For this LVIA, it is noted that Athenry Urban Environ is distinctive for its river landscape, as the River Clarin passes through the middle of the urban setting. The Loughrea Urban Environ is distinctive for its lake landscape, as it is situated on the northern banks of Lough Rea and comprises scenic amenity.

13.4.2.2 GCDP LARES Classification for Identified LCUs

The LARES (p.83-84) provides six specific policy objectives regarding wind energy. Two policies are general ones relating to wind energy generation and guidelines, and four policies relate to wind energy strategy (WES) classifications:

> ***'LARES Policy Objective 13 Wind Energy Generation****: To increase renewable energy generation levels from wind energy developments in County Galway, given the recognised wind energy potential of the County'.*
>
> ***LARES Policy Objective 14 National Wind Energy Guidelines****: All onshore wind energy developments shall comply with the National Wind Energy Development Guidelines or any subsequent version thereof'.*
>
> ***LARES Policy Objective 15 Acceptable in Principle****: Wind energy development proposals in the areas that are 'Acceptable in Principle' for renewable energy development will be*

considered in accordance with the LARES and the proper planning and sustainable development of the area'.

LARES Policy Objective 16 Open to Consideration *(reported from above in Section 14.4.1.4): Wind energy development proposals in areas that are identified as 'Open to Consideration' for wind energy development will be considered in accordance with the LARES and the proper planning and sustainable development of the area'.*

LARES Policy Objective 17 Generally to be Discouraged*: Wind energy development proposals in areas that are identified as 'Generally to be Discouraged' for wind energy development will be considered in accordance with the LARES and the proper planning and sustainable development of the area'.*

LARES Policy Objective 18 Not Normally Permissible*: Wind energy development proposals in areas that are identified as 'Not Normally Permissible' for wind energy development will be considered in accordance with the LARES and the proper planning and sustainable development of the area'.*

Within the 15km LCA Study Area, all four WES classifications are present, showing a complicated mosaic of classification types; Figure 13-9 below shows the distribution of classification across the seven designated LCUs and two Urban Environs within the LCA Study Area. Four LCUs are within 5km of the proposed turbines, demonstrating that the development policies applying to the land across these LCUs vary drastically. The common key characteristics of the LCUs within 5km of the proposed turbines include low-lying, extensive areas and plains with reclaimed bog or wetland features, indicating that the landscape is generally suitable for wind energy development.

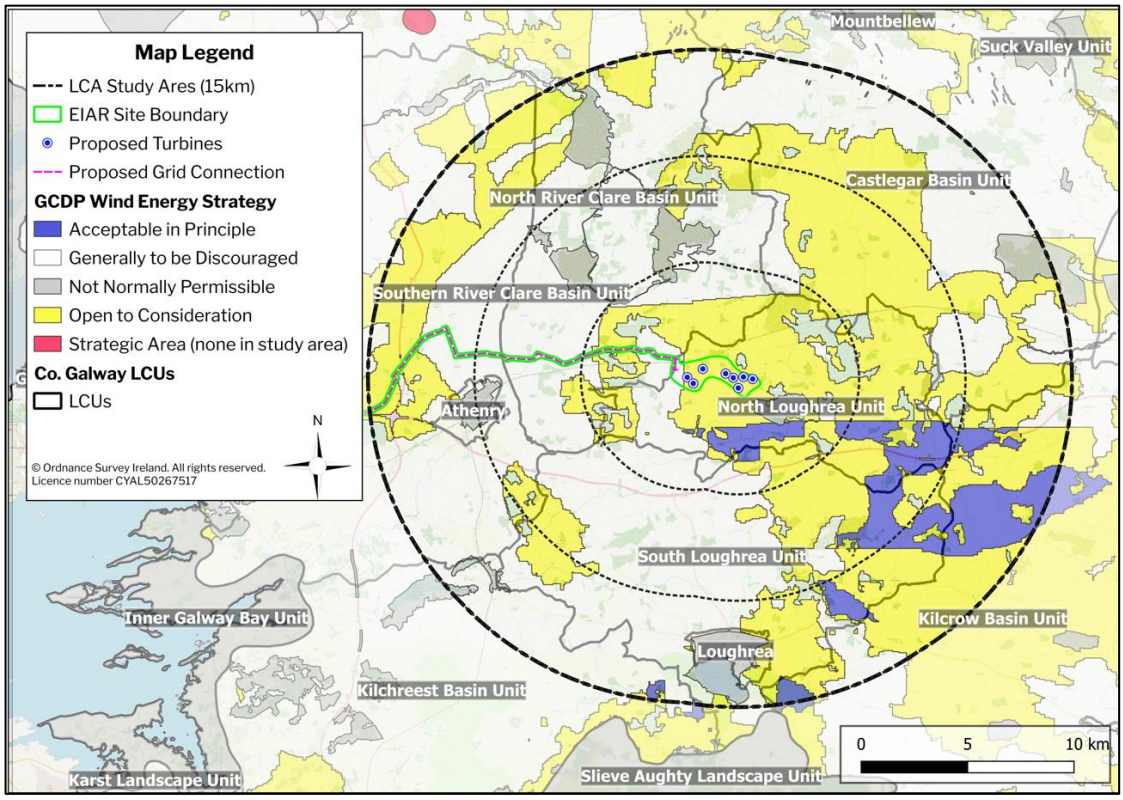


Figure 13-9 Distribution of WES classifications across LCUs in the 15km LCA Study Area

13.4.2.3 Preliminary Analysis of LCUs for Assessment

Following preliminary assessment, 4 no. LCUs in the 15km LCA Study Area were scoped in for assessment in this LVIA. The comprehensive assessment is detailed in Appendix 13-2: LCA Assessment Tables:

- G-LCU-5e: Northern River Clare Basin;
- G-LCU-5f: North Loughrea (contains all proposed turbines);
- G-LCU-6b: Southern River Clare Basin;
- G-LCU-6e: South Loughrea.

In addition, 3 no. LCUs and 2 no. Urban Environs (comprising one collective LCT) are existent in the LCA Study Area; these have been scoped out of further assessment:

- G-LCU-5b: Castlegar Basin;
- G-LCU-6c: Kilchreest Basin;
- G-LCU-6d: Kilcrow Basin;
- Urban Environ: Athenry;
- Urban Environ: Loughrea.

All LCUs identified within the 15km LCA Study Area are mapped below in Figure 13-10 and Figure 13-11 to indicate theoretical visibility from within the landscape areas. Table 13-3 lists the preliminary analysis and scoping of each LCU/Urban Environ and rationale for scoping out individual LCUs from further assessment.

Table 13-3: Preliminary Assessment of LCUs & Urban Environs in the LCA Study Area

Map Ref.	LCU	Theoretical Visibility from ZTV Mapping	Actual Visibility from Site Visits	Scoped In
G-LCU-5b	Castlegar Basin	None to full. Within 5km, the south-westernmost tip of the LCU has primarily full theoretical visibility. Between 5-10km, primarily full theoretical visibility with patches of no visibility on the north and north-east facing aspects of the hilly areas of Killooaun at the north-west end of the LCU and Kilconnell at the south-east end. Between 15-20km, a small region of full theoretical visibility is in the low-lying lands between Killooaun and Kilconnell. Patches of no theoretical visibility are situated on the north- and east-facing aspects of these hilly areas directed away from the proposed turbines.	None.	No.
G-LCU-5e	Northern River Clare Basin	Within 5km, primarily full theoretical visibility with one small patch of no visibility on the north-	Primarily full, with intermittent visibility	Yes.

Map Ref.	LCU	Theoretical Visibility from ZTV Mapping	Actual Visibility from Site Visits	Scoped In
		facing aspect of the slightly elevated hill called Knockaboy, 3.2km north of the nearest Proposed Turbine (T3). From 5-20km, primarily full with scattered linear patches of partial and no visibility in the north and north-eastern parts of the LCU.	screened by mature vegetation and built structures. Contains 9.6km of the Proposed Grid Connection route.	
G-LCU-5f	North Loughrea	Primarily full theoretical visibility with very few small patches of no visibility at the eastern end of the LCU.	Full. Contains all proposed turbines T01-T08.	Yes.
G-LCU-6b	Southern River Clare Basin	None to full. The LCU is orientated linearly N-S at the western edge of the LCA Study Area, primarily between 15-20km from the proposed turbines. Primarily mixed in the northern half of the LCU, with full theoretical visibility on the east-facing aspects of the Knockroe peaks area at the northern tip, with no visibility in the corresponding pockets behind peaks. Primarily full in the southern half of the LCU, with small patches of no visibility behind corresponding elevated, undulating hills throughout the landscape.	None to full, with intermittent visibility screened by mature vegetation and the nature of the flat topography. Contains 12.2km of the Proposed Grid Connection route.	Yes.
G-LCU-6c	Kilchreest Basin	None to full. The LCU is orientated linearly NW-SE along the south-western edge of the LCA Study Area between 15-20km from the proposed turbines. Primarily full theoretical visibility in the low-lying landscape of the north-western half of the LCU, as well as on the north-facing aspects of hilly features in the south-western half. Corresponding pockets of no visibility are situated behind the elevated hilly features.	None. Visual screening from this area is provided by the nature of the flat topography, which affords little visibility at this distance.	No.

Map Ref.	LCU	Theoretical Visibility from ZTV Mapping	Actual Visibility from Site Visits	Scoped In
G-LCU-6d	Kilcrow Basin	Primarily none. Some patches of full theoretical visibility are indicated in the south-southwestern part of the LCU, adjacent to the east of the Kilnadeema peaks area, between 15-20km from the proposed turbines.	None.	No.
G-LCU-6e	South Loughrea	Primarily full theoretical visibility from within 5km of the proposed turbines to 20km, where Lough Rea, Loughrea town and Loughrea ACA are located at the southern-most edge of the LCA Study Area. Minimal small pockets of no visibility occur across the middle of the LCU in a slightly crescent-shaped pattern, approximately 15km from the proposed turbines, owing to localised small hilly areas.	Actual visibility ranges from full views in the close-in areas of the LCU which are intermittent along roadways, to primarily no visibility in the distant parts of the LCU, with visual screening primarily by the nature of the flat topography.	Yes.
Urban Environ	Athenry	Situated at 10km from the proposed turbines, primarily full theoretical visibility with small patches of no theoretical visibility at the north, west and south edges, and one slightly larger patch of no visibility at the eastern corner.	Primarily no actual visibility, with visual screening by mature vegetation and built structures.	No.
Urban Environ	Loughrea	Situated nearly 20km from the proposed turbines, primarily full theoretical visibility with small patches of no visibility along the south edges of the landscape as it encircles the perimeter of Lough Rea.	Primarily no actual visibility, with visual screening by mature vegetation, built structures and topography which includes enclosure hillsides around the lake.	No.

N

G - LCU 5e

G - LCU 5b

G - LCU 6b

G - LCU 5f

Anthenry Urban Environ

5 km

G - LCU 6e

10 km

G - LCU 6d

Loughrea Urban Environ

G - LCU 6c

15 km

LCU = Landscape Character Unit

0 2.5 5 km

Map Legend

- County Borders
- LCA Study Area (15km)
- EIAR Site Boundary
- Proposed Turbines

Co. Galway LCUs

- Athenry
- G-LCU 5b Castlegar Basin Unit
- G-LCU 6c Kilchreest Basin Unit
- G-LCU 6d Kilcrow Basin Unit
- Loughrea
- G-LCU 5fNorth Loughrea Unit
- G-LCU 5e North River Clare Basin Unit
- G-LCU 6e South Loughrea Unit
- G-LCU 6b Southern River Clare Basin Unit

Drawing No.

Figure 13-10

Drawing Title

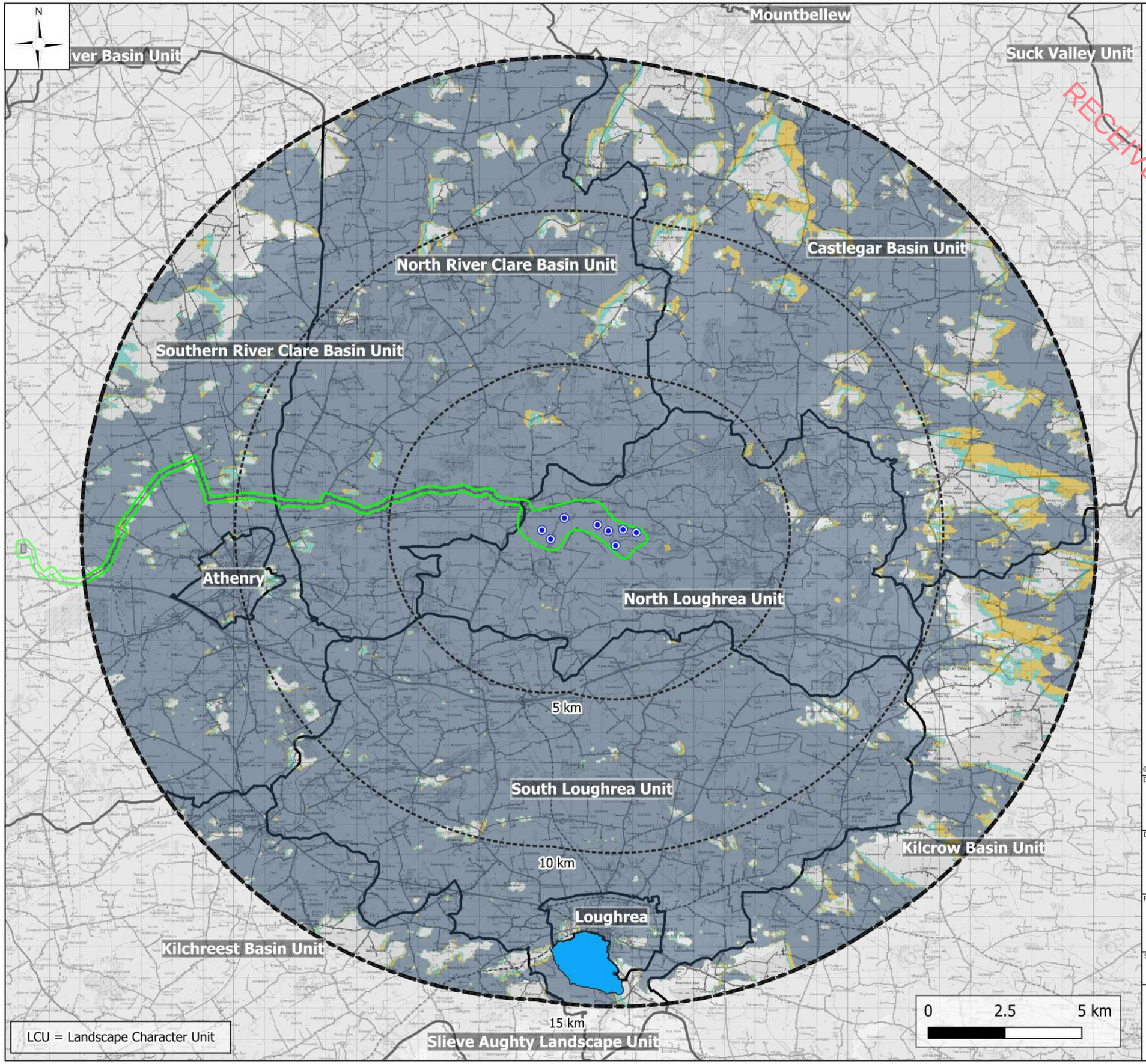
Designated Landscape Character Areas (LCAs) Map

Project Title

Gannow Renewable Energy Development, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:120,000	240323	09/09/2025	JC	RS

MKO



Map Legend

- LCA Study Area (15km)
- County Borders
- EIAR Site Boundary
- Proposed Turbines
- Co. Galway LCU's in the LCA Study Area

Zone of Theoretical Visibility

- 1-3 Turbines Theoretically Visible
- 4-6 Turbines Theoretically Visible
- 7-8 Turbines Theoretically Visible

Drawing No.

Figure 13-11

Drawing Title

Designated Landscape Character Areas (LCAs) Map & ZTV

Project Title

Gannow Renewable Energy Development, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:120,000	240323	09/09/2025	JC	RS

13.4.3 Landscape Character of the Proposed Wind Farm Site

The Proposed Wind Farm site is located in a rural and flat lowland landscape, with a total elevation change of approximately 18m. The highest point of elevation is 86m, lowest point is 68m, see the topography map below, see Figure 13-12.

Site drainage is mainly controlled by minor streams and rivers (in some cases, with dry beds) crossing the lowland landscape lined with mature scrub and vegetation. No major rivers or rivers of popular destination are within the Proposed Wind Farm site. The land use comprises cutover bog, low-intensity agricultural land, and commercial forestry. The landscape has been heavily modified and is a working landscape.

The following images, Figure 13-13 to Figure 13-16, show the landcover and views of the Proposed Project elements:

- Cutover bog with mixed scrub: T01, T02, T03 at the west of the Proposed Wind Farm site.
- Separate tracts of commercial forestry: T04 and T05 at the centre-east of the Proposed Wind Farm site.
- Low-intensity agricultural fields: T06, T07 and T08 at the east of the Proposed Wind Farm site and the proposed onsite 38kV substation located at the western edge of the Proposed Wind Farm site.

The land use around the Proposed Grid Connection route, from the proposed onsite 38kV substation to the existing Cashla 220kV substation, is mainly low-intensity agricultural fields amongst scattered, rural dwellings. Immediately west of the Proposed Wind Farm site, the Proposed Grid Connection will follow the proposed new access road from the proposed onsite 38kV substation to the L3115 local road and then continue along the public road corridor. The primary land use around the L3115 and public road corridor consists of agricultural fields.

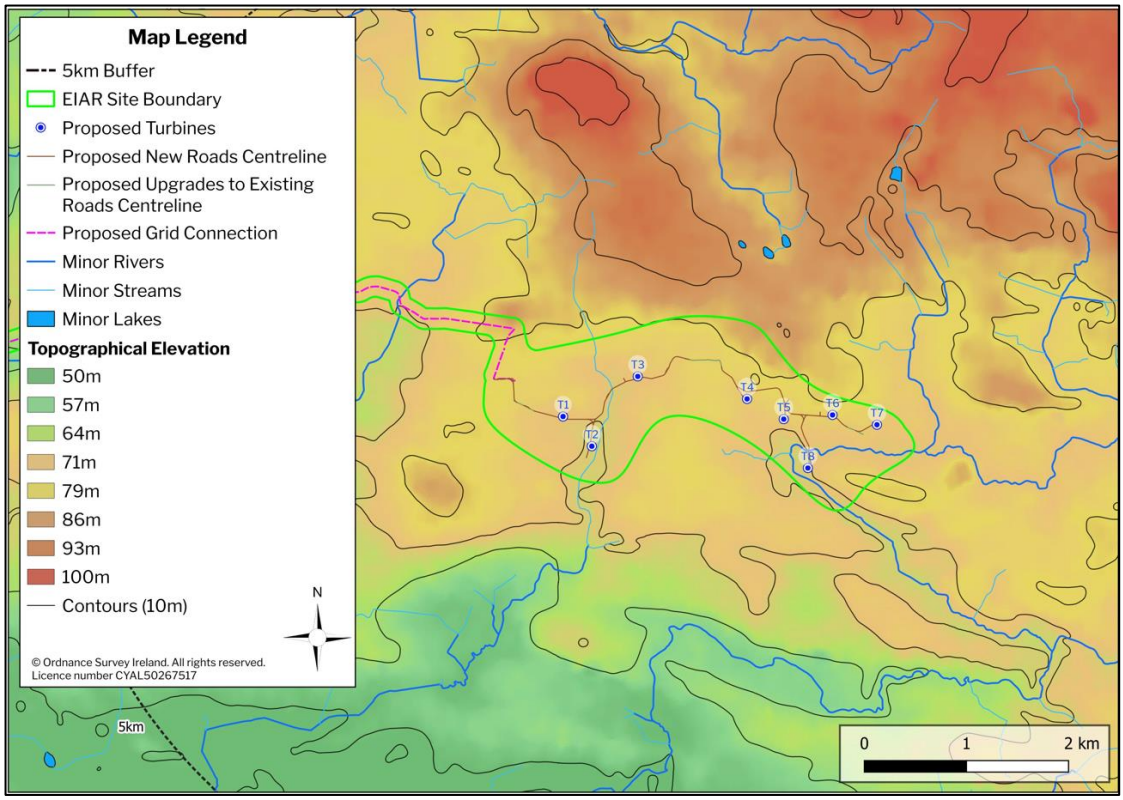


Figure 13-12: Topography within the Proposed Wind Farm site

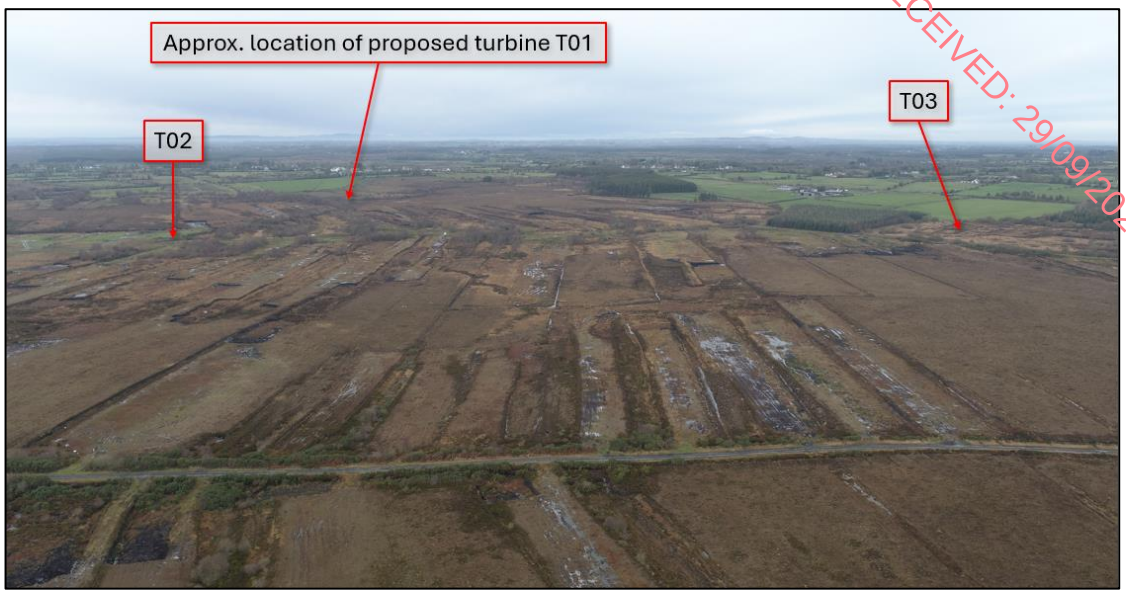


Plate 13-4 View W from the centre of the Proposed Wind Farm site, showing the locations of T01, T02 and T03 in cutover bogs with mixed scrub

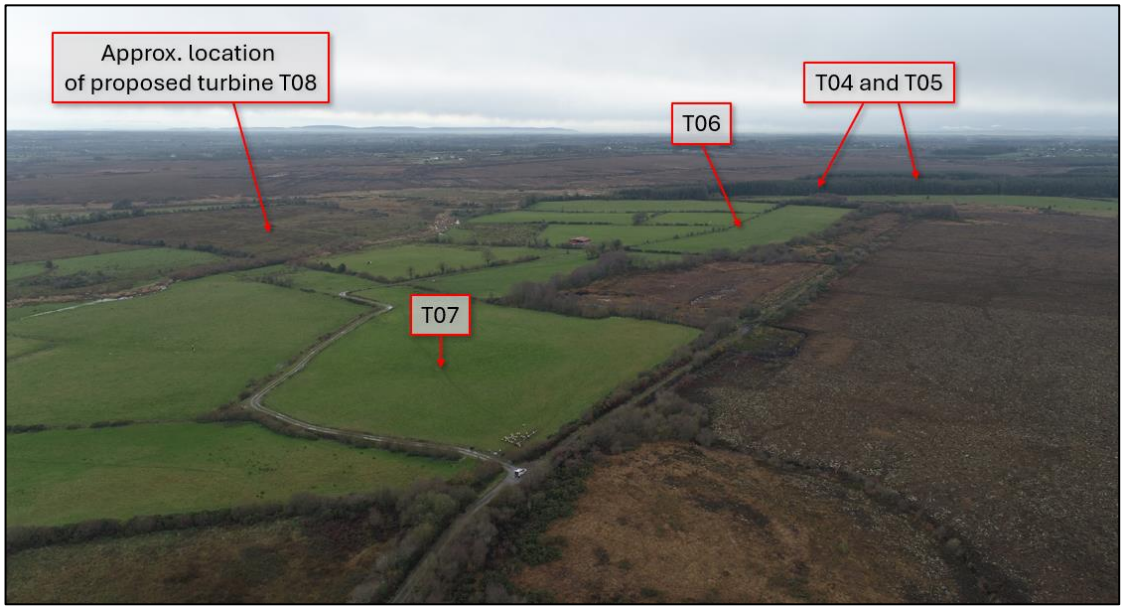


Plate 13-5 View SW from the eastern side of the Proposed Wind Farm site looking towards the locations of T08 in a field of mixed scrub, T07 and T06 in agricultural fields, and T04 and T05 in tracts of commercial forestry

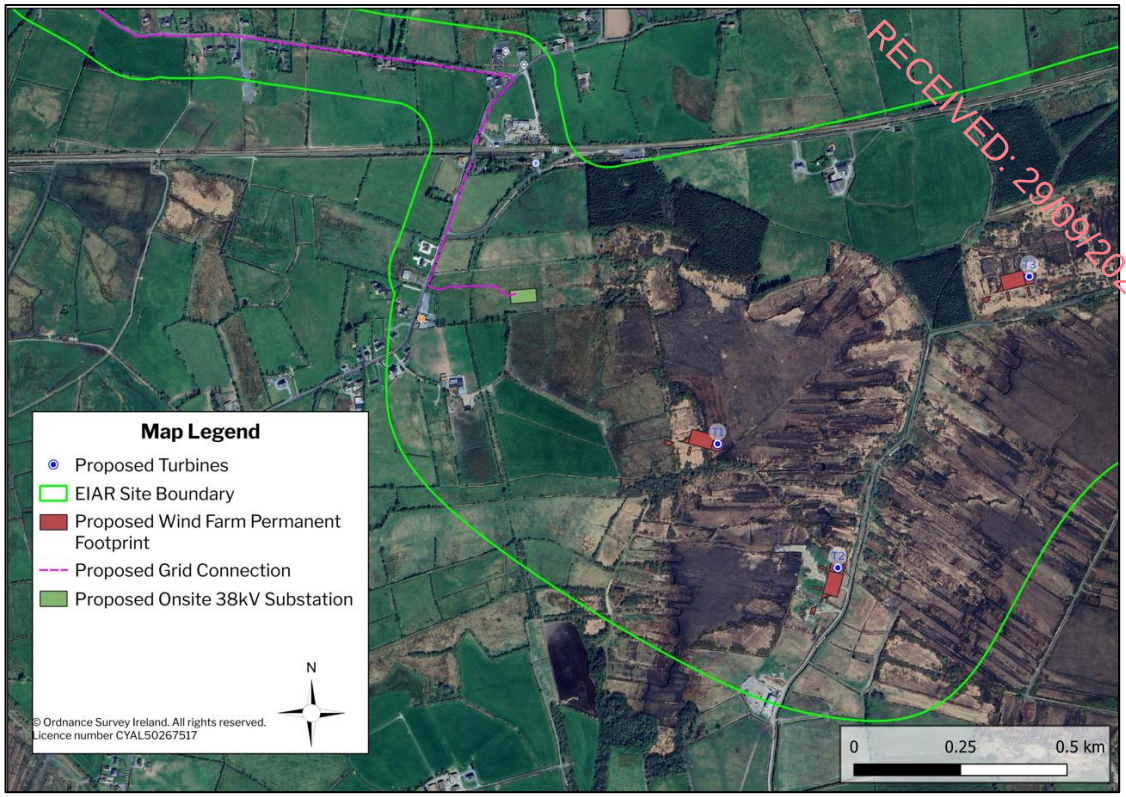


Figure 13-13: Land use and landcover of the Proposed Wind Farm site: proposed turbines T01, T02, and T03

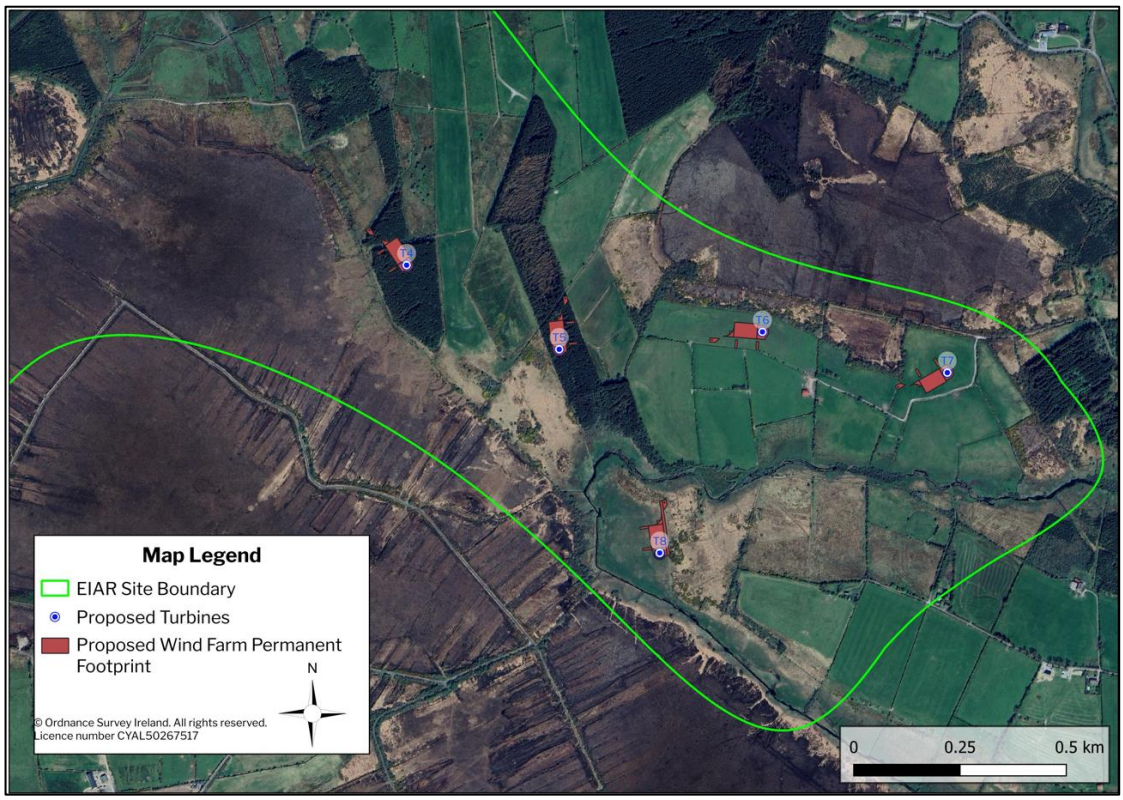


Figure 13-14: Land use and landcover within the Proposed Wind Farm site: proposed turbines T04, T05, T06, T07 and T08

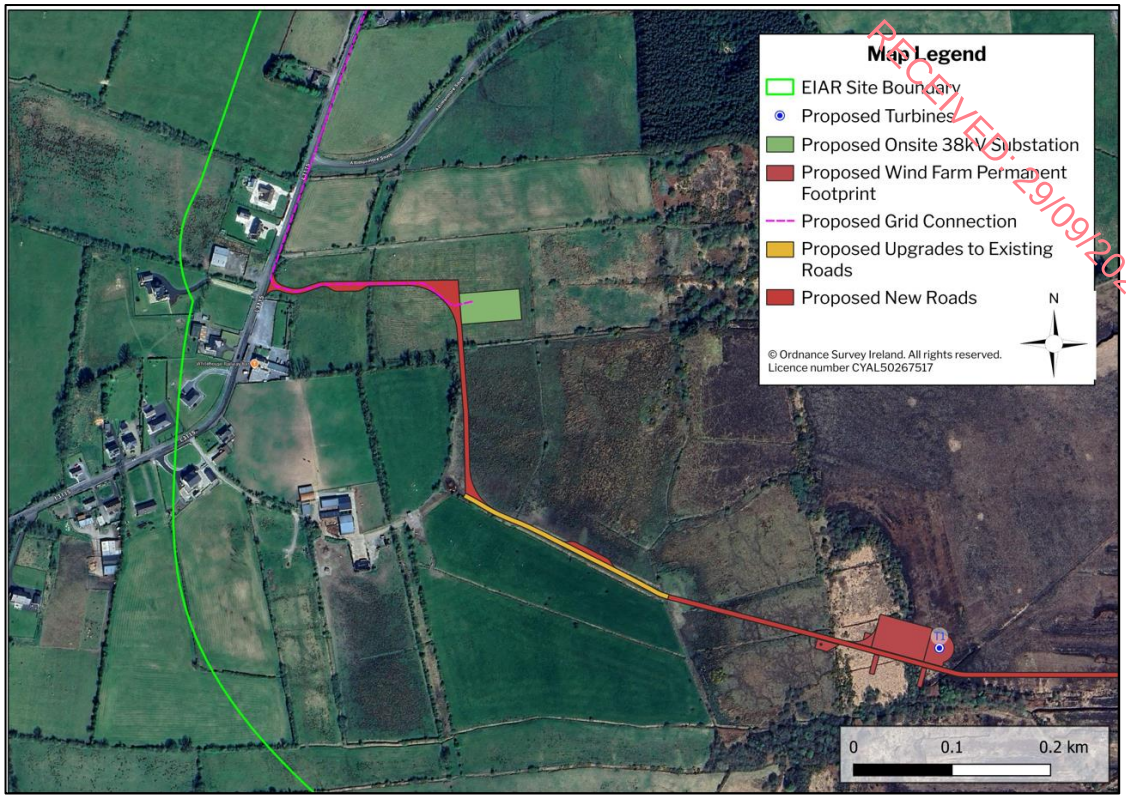


Figure 13-15: Land use and landcover of the Proposed Onsite 38kv Substation location

Figure 13-16: Land use and landcover of the Proposed Grid Connection route

13.4.4 Landscape Sensitivity of the Proposed Wind Farm Site

To determine the landscape 'Sensitivity' of the Proposed Wind Farm site, the landscape 'Value' and 'Susceptibility to Change' were assessed to determine the capacity of the immediate landscape in which the Proposed Wind Farm will be built, as is prescribed by best practise guidance (GLVIA3, LI & IEMA, 2013, p.80):

> *'...as part of the baseline description the value of the potentially affected landscape should be established'.*

Comprehension of the landscape value and susceptibility to change (to wind farm development) enables determination of the sensitivity of the landscape at a micro-level (meaning, the landscape of the Proposed Wind Farm site) and its capacity to absorb the infrastructure of a wind farm development.

Table 13-4 below considers the collective appraisal of seven indicators of landscape value in the LVIA guidance (listed below). Landscape value and susceptibility to change are then combined to assign an overall Sensitivity rating of the Proposed Wind Farm site.

The determination of landscape value takes into consideration the scenic amenity designations and landscape sensitivity and value designations found in the local landscape policy, as well as other indications of landscape value attached to undesignated landscapes.

The overall Sensitivity is assigned as Very High, High, Medium or Low, following criteria outlined in the full detailed methodology in Appendix 13-1: LVIA Methodology.

Table 13-4: Analysis of Indicators of Landscape Value and Susceptibility to Change

Indicator	Description
Landscape Designations	Designations within the Proposed Wind Farm site include: LCU North Loughrea within LCT North Galway Complex, both within GCDP Landscape Sensitivity Class 'Low'; LARES wind energy zoning 'Open to Consideration' with one small area of 'Generally to be Discouraged' at the western-most edge of the site (note no proposed turbines are located in this area). All GCDP designations of landscape character indicate Low sensitivity and lower value of the Proposed Wind Farm site with respect to all locations of the proposed turbines.
Landscape Elements Quality/ Condition	Refers to the physical state of the landscape of the Proposed Wind Farm site and the condition of each of its individual elements. Within the wind farm site, the land comprises only human-modified elements including low-intensity agricultural fields bordered by mature scrub and vegetation, cutover bog and commercial forestry stands. The condition of these elements ranges from active use with livestock and harvesting of forestry stands to mixed-level growth of scrub and vegetation indicating older use, indicating that susceptibility to change from wind energy development is low.
Scenic/ Aesthetic Qualities	Along the northern and eastern edges of the Proposed Wind Farm site, some of the agricultural fields are bordered by stone walls which add to the aesthetic quality. In addition, the west and centre of the site comprise open areas of flat, cutover bogs with extensive sky views. Stone-walled fields and open-area views are considered key characteristics of the broader LCT and contribute to the site's value.

Indicator	Description
Rarity or Conservation Interests	No interests of rarity or conservation were identified within the Proposed Wind Farm site.
Wildness/ Naturalness	The present degree of wildness and naturalness within the Proposed Wind Farm site is very low owing to the landscape primarily comprising the human-modified elements described above. Some areas along local roads in the hilly terrain of the eastern edge of the site comprise stands of mixed natural forestry with commercial forestry.
Recreational Value	No recreational features were identified within the Proposed Wind Farm site.
Cultural Meaning/ Associations	No sites of popular cultural meaning or association are within the Proposed Wind Farm site. One cultural heritage site is within the footprint of the Proposed Wind Farm site. No direct effects on archaeological, architectural and cultural heritage resource are noted during the operational phase. A specific assessment of the Proposed Project on the Cultural Heritage value of the site and wider landscape setting is included in Chapter 14: Archaeology, Architectural and Cultural Heritage.

The Proposed Wind Farm site comprises a low-sensitivity landscape almost entirely of human-modified land use, some of which includes active farming, forestry and cutover bog, with no interests of rarity or conservation, no recreational features and no cultural associations. A low number of stone-walled fields in the north and east of the site, as well as open views across the flatlands contribute to the aesthetic qualities of the landscape character; these elements are considered in the landscape character assessment ratings presented in Appendix 14-2. The overall landscape sensitivity of the Proposed Wind Farm site is Low.

13.4.5 Landscape Character from Wind Energy Development Guidelines

This section considers the context of the Proposed Wind Farm site based on siting and design guidance in the Guidelines (DoEHLG, 2006) and cognisant of the Draft Guidelines (DoHPLG, 2019) with respect to landscape and visual effects. Here, we identify the appropriate landscape character type defined by the Guidelines (DoEHLG, 2006) and describe the landscape type of the Proposed Wind Farm site in that context.

Section 6.9 of the Guidelines (DoEHLG, 2006) and Section 6.10 of the Draft Guidelines (DoHPLG, 2019) is called *'Landscape Character Types as a Basis for Guidelines'* and offers guidance for the siting and design specifically of wind energy developments in multiple landscape contexts, defining six landscape character types representing most situations where wind turbines may be proposed. These are:

- 'Mountain Moorland'
- **'Hilly and Flat Farmland' – category selected by this assessment**
- 'Flat Peatland'
- 'Transitional Marginal Landscape'
- 'Urban/Industrial'
- 'Coastal'

The guidance is intended to be indicative and general and notes that it represents the 'best fit' solutions to likely situations. The guidance notes that, in the case where a wind energy development is located in one landscape character type but is visible from another, it will be necessary to decide which of the landscape types more strongly influences the approach adopted for the LVIA.

In the case of the Proposed Project, many of the proposed turbines are sited in areas of flat cutover peatland; however, the proposed turbines are predominantly viewed within what appears to be a farmland landscape. On balance, it is deemed most appropriate to consider the Proposed Wind Farm in mind of the siting and design guidance for the '**Hilly and Flat Farmland'** Landscape Character Type, which best reflects the landscape of the Proposed Wind Farm site and the visual unit(s) in which the proposed turbines are viewed. Therefore, the best practice siting and design strategies prescribed for this landscape character type (the Guidelines (DoEHLG, 2006) and cognisant of the Draft Guidelines (DoHPLG, 2019)) are presented below, which were considered during the design of the Proposed Project.

13.4.5.1 'Hilly and Flat Farmland'

The key characteristics of Hilly and Flat Farmland as stated in the Guidelines (DoEHLG, 2006) (p.52) and Draft Guidelines (DoHPLG, 2019) (p.104) are:

- *'Intensively managed farmland, whether flat, undulating or hilly;*
- *A patchwork of fields delineated by hedgerows varying in size;*
- *Farmsteads and houses are scattered throughout, as well as occasional villages and towns;*
- *Roads, and telegraph and power lines and poles are significant components; and*
- *A working and inhabited landscape type'.*

This LVIA considers the importance of the following design consideration for Hilly and Flat Farmland according to the Draft Guidelines (DoHPLG, 2019) (p.104):

> *'The essential key here is one of rational order and simplicity, as well as respect for scale and human activities. The predominance of field pattern introduces an organised patchwork landcover structure that not only prompts a similar response in the siting and design of wind energy developments, but also provides a spatial structure and rhythm. Although hilly and flat farmland type is usually not highly sensitive in terms of scenery, due regard must be given to houses, farmsteads and centres of population'.*

Design guidance for the siting of turbines in this landscape type according to the Guidelines (DoEHLG, 2006) and cognisant of the Draft Guidelines (DoHLPG, 2019) and with respect to the proposed turbines are outlined below: **location**, **spatial extent**, **spacing**, **layout**, **height** and **cumulative effect**. All relevant 'guidance' quotations shown below are taken from the Guidelines (DoEHLG, 2006) (p.52-55) and Draft Guidelines (DoHPLG, 2019) (p.104-107).

13.4.5.2 Location

> *'Location on ridges and plateaux is preferred, not only to maximise exposure, but also to ensure a reasonable distance from dwellings. Sufficient distance should be maintained from farmsteads, houses, and centres of population in order to ensure that wind energy developments do not visually dominate them. Elevated locations are also more likely to achieve optimum aesthetic effect. Turbines perceived as being in close proximity to or overlapping other landscape'.*

In terms of **location,** the proposed turbines have been sited in cutover bogs, commercial forestry stands and agricultural fields of active and non-active use, at the highest possible elevations within the Proposed Wind Farm site (note that the elevation change is very small, 18m). The proposed turbines

are well setback from population centres and well exceeds the recommended setback distance (500m) from residential dwellings set out in the Guidelines (DoELHG, 2006).

13.4.5.3 Spatial Extent

> *'This can be expected to be quite limited in response to the scale of fields and such topographic features as hills and knolls. Sufficient distance from buildings, most likely to be critical at lower elevations, must be established in order to avoid dominance by the wind energy development'.*

Further, the guidance provides three examples of imagery, of which *Examples 4(b)* and *4(c)* describe the appropriateness of irregular spacing/random layout and visual ambivalence between two landscape types:

> *'4(b) Wind energy development with irregular spacing and random layout - is more appropriate given the relative undulation of the setting.*
>
> *4(c) Large wind energy development straddling two landscape character types within the same visual unit – this creates a visual ambivalence and, thus, negative tension between the two character types involved'.*

In terms of **spatial extent**, the proposed turbines comprise a relatively wide extent on the landscape particularly when viewed from the north or the south due to the shape and configuration of the proposed turbine layout, as well as the slightly separate proposed turbine clusters (c. 1km between T03 and T04). The layout has irregular spacing and a non-grid (random) layout, with the proposed turbines sited on slightly higher-elevation undulations within multiple LCTs (i.e. cutover bog, commercial forestry and agricultural fields), thereby creating visual ambivalence.

13.4.5.4 Spacing

> *'The optimum spacing pattern is likely to be regular, responding to the underlying pattern field pattern. The fields comprising the site might provide the structure for spacing of turbines. However, this may not always be the case and a balance will have to be struck between adequate spacing to achieve operability and a correspondence to field pattern'.*

In terms of **spacing,** the Proposed Wind Farm shows open spacing between the proposed turbines due to the separation between the two turbine clusters and shows irregular spacing in the western cluster (T01, T02 and T03). However, as the fields comprising the Proposed Wind Farm site are of multiple landscape types (i.e. cutover bog, commercial forestry and agriculture), regular spacing is not entirely allowed for, thus the Proposed Project has struck a balance to achieve operability among the different LCTs. The underlying field patterns in the wider landscape setting is generally quite irregular, although many fields and commercial forestry stands surrounding the Proposed Wind Farm have an ordered and rectilinear structure.

13.4.5.5 Layout

> *'The optimum layout is linear and staggered linear on ridges (which are elongated) and hilltops (which are peaked), but a clustered layout would also be appropriate on a hilltop. Where a wind energy development is functionally possible on a flat landscape a grid layout would be aesthetically acceptable'.*

In terms of **layout**, the proposed turbines in general extend from west to east across the landscape in a slightly curved linear form. When viewed from distances greater than 3km, the proposed turbines generally appear as a linear arrangement in the landscape and do read coherently.

13.4.5.6 Height

'Turbines should relate in terms of scale to landscape elements and will therefore tend not to be tall. However, an exception to this would be where they are on a high ridge or hilltop of relatively large scale. The more undulating the topography the greater the acceptability of an uneven profile, provided it does not result in significant visual confusion and conflict'.

In terms of **height**, all proposed turbines have a similar base elevation, providing an even profile when the Proposed Wind Farm is viewed as a whole within the landscape. The scale of the proposed turbines is acceptable and can be adequately absorbed in this landscape. Photomontage and photowire visualisations demonstrate that the proposed turbines are generally viewed above the horizon, with few instances where visual conflict and visual confusion occurs. The only concern relating to turbine height is the potential for turbines to appear dominant when viewed from nearby residential receptors; this is an expected outcome of all wind energy developments.

13.4.5.7 Cumulative Effect

'It is important that the wind energy development is never perceived to visually dominate. However, given that these landscapes comprise hedgerows and often hills, and that views across the landscape will likely be intermittent and partially obscured, visibility of two or more wind energy developments is usually acceptable'.

In terms of **cumulative effect**, based on the currently available data of wind farms, one wind energy development is included in the assessment: the proposed Cooloo Wind Farm at 18.3km from the nearest proposed turbine (T03). There will be no cumulative landscape or visual impacts between known wind energy developments and the Proposed Project; refer to discussions in the cumulative sections below: Section 13.5, Section 13.7.3.3 and Section 13.7.3.4.

13.4.6 Landscape Character of the Wider Setting

The wider landscape setting from 5-20km surrounding the proposed turbines is almost entirely flat, comprising mainly the same mix of land uses within the Proposed Wind Farm site itself; that of agriculture, cutover bog and commercial forestry, amongst very small rural settlement clusters and scatter dwellings along local roads. Overall, the entire LVIA Study Area is **flat**, ranging from approx. 30-100m AOD elevation, with localised high peaks up to 130m or 230m AOD greater than 5km from the Proposed Wind Farm site; these comprise the low-elevation hilly areas of Knockroe to the northwest, Killooaun to the northeast, and Kilconnell and Doonaree to the east, as well as the higher-elevation Kilnadeema area and the hills south of Lough Rea situated at the south edge of the LVIA Study Area, greater than 15km from the Proposed Wind Farm site.

Map Legend

- LVIA Study Area
- County Borders
- EIAR Site Boundary
- Proposed Turbines
- Photomontage Viewpoints (VPs)

Co. Galway Settlement Hierarchy

- Metropolitan Area
- Strategic Potential
- Key Town
- Self-Sustaining Town
- Small Growth Town
- Small Growth Village
- Rural Settlement

Visual Receptors

- Co. Galway Protect Views Direction
- Co. Galway Protected Views
- Recreational Routes
- Way-Marked Walking Trails

Transport Routes

- Local Roads to 5km
- Regional Roads to 10km
- Motorways & National Roads to 20km
- Railway Network

Zone of Theoretical Visibility

- 1-3 Turbines Theoretically Visible
- 4-6 Turbines Theoretically Visible
- 7-8 Turbines Theoretically Visible

Drawing No.

Figure 13-17

Drawing Title

Visual Baseline Map & ZTV

Project Title

Gannow Renewable Energy Development, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	240323	2025/09/09	JC	JW

MKO

13.5 Visual Baseline

The 'Visual Baseline' exercise identifies the key visual receptors to be considered for assessment within the 20km LVIA Study Area, having utilised ZTV mapping, on-site visibility appraisals and desk study to scope receptors in/out of further assessment. The Visual Baseline map is shown above in Figure 13-17.

13.5.1 Scenic Routes and OSi Viewing Areas

No designated scenic routes or viewing areas from Ordnance Survey of Ireland (OSi) maps are existent within the LVIA Study Area, hence none have been scoped or assessed.

13.5.2 Designated Protected Views

There are no designated or protected views as set out in the GCDP 2022-2028 within 10km of the proposed turbines and none with any visibility of the proposed turbines within 20km. A total of 5 no. Designated Protected Views were identified within the LVIA Study Area; see previous Section 13.4.1.6. Baseline studies show there is no potential for visual effects at any of the protected views, thus all are scoped out of the assessment.

13.5.3 Settlements

There are no Metropolitan Areas, Key Towns, or Small Growth Towns as defined in the GCDP 2022-2028 within 20km of the proposed turbines. A total of 10 no. settlements were identified within the LVIA Study Area; 5 no. are scoped in for assessment: Athenry, Craughwell, Loughrea, Monivea and New Inn, and 5 no. were scoped out: Woodlawn, Menlough, Abbeyknockmoy, Moylough and Turloughmore, owing to the visibility appraisal showing no potential visibility at these settlement locations. Two rural areas within 5-10km to the east and northeast were scoped in to represent views from elevated vantage points with potential visibility of the proposed turbines: Kilconnell Hills and Shanballyeeshal..

13.5.4 Recreational Routes

For the purposes of meeting best-practice LVIA guidance (GLVIA3, LI & IEMA 2013), only recreational routes of county-level or national-level importance or those specifically designated in county-level policies were identified within the LVIA Study Area. 1 no. trail system (>15km from the proposed turbines) located in the high-sensitivity landscape of Slieve Aughty LCU as designated in the GCDP 2022-2028 was scoped in for assessment (see Section 13.5.5 below). No other trails were found to have potential visibility.

13.5.5 Recreational, Cultural and Tourism Destinations

There are no recreational, popular cultural heritage or tourism destinations located within 5km of the proposed turbines and none with the potential for visual effects within 10km. A detailed assessment of archaeological cultural heritage sites in relation to the Proposed Project is provided in this EIAR, Chapter 14: Archaeology, Architectural and Cultural Heritage. Woodlawn House (>10km from the proposed turbines) was scoped in to assess potential effects of the Proposed Wind Farm on the woodland and surrounding setting of the estate property.

13.5.6 Destinations of Local Importance

4 no. local destination sites within 5km of the proposed turbines were identified as having a higher sensitivity and potential of being affected by the Proposed Wind Farm in terms of visual effects:

- Attymon Railway Station;
- Killimordaly Church and Graveyard (St Iomar's Church);
- Killimordaly Community Centre and Playground;
- Killimordaly GAA Club.

13.5.7 Transport Routes

5 no. prominent transport routes within 10km of the proposed turbines were scoped in for assessment and are assessed in conjunction with the relevant visual receptors and residential visual amenity in later sections; the roads are: L3115 and L7152 local roads, R348 and R349 Regional Roads, and M6 Motorway. The visual baseline exercise determined that because of the primarily flat nature of the immediate and wider landscape, most visibility of the proposed turbines from transport routes will only occur within 1-3km of the proposed turbines.

13.5.8 Visual Receptors Scoped In

Table 13-5 below lists all visual receptors selected for assessment in this LVIA and indicates the Photomontage viewpoint (VP) images representing views for those receptors.

Table 13-5: Visual Receptors Scoped In for Assessment

Category	Visual Receptor Scoped in for Assessment	Viewpoint/ Photowire No.
Settlements	Athenry	VP07
	Craughwell	Photowire*
	Loughrea	Photowire*
	Monivea	VP08
	New Inn	VP13
	Elevated vantage points to the east and northeast between 5-10km of the proposed turbines.	VP03, VP04
Recreational Routes	Slieve Aughty Trails; trail system within higher sensitivity landscape designated by GCDP 2022-2028.	VP05
Popular Cultural Heritage Destination	Woodlawn House	Photowire*
Destinations of Local Importance	Attymon Railway Station	VP01
	Killimordaly Church and Graveyard	VP11

Category	Visual Receptor Scoped in for Assessment	Viewpoint/ Photowire No.
	Killimordaly GAA Club and Killimordaly Community Centre and Playground	VP02
Transport Routes	L3115 Local Road. Passes through the Site.	VP01, VP02, VP10
	L7152 Local Road. Passes within part of the Proposed Grid Connection.	VP01
	M6 Motorway. Passes within 5km of the proposed turbines.	VP06
	R348 Regional Road. Passes within 5km of the proposed turbines.	VP13
	R339 Regional Road (Galway Road). Within 5-10km of the proposed turbines, heavily trafficked road out of east Galway.	VP08

**Photowires are alternative viewpoint locations for which early-stage draft imagery were produced to aid the assessment discussions; please refer to Section 13.7.3.2.1 for details.*

13.5.9 Visual Receptors Scoped Out

ZTV mapping and visibility appraisals conducted on-site during 2023-2025 were used to inform the analysis and exclude visual receptors from further assessment. These visual receptors were excluded from further assessment because they had no theoretical visibility of the proposed turbines as shown by the ZTV, or due to having very limited visibility, as determined by the ZTV as well as onsite appraisals of each visual receptor location, or because none were identified in the LVIA Study Area. In some cases, the factor of distance to the Proposed Wind Farm site as well as the directional focus of views was included in the preliminary analysis and was a contributing factor in excluding these locations from being selected as viewpoints.

Table 13-6 Visual Receptors Scoped Out (Excluded from Assessment)

Category	Receptor Scoped Out
Protected Views	〉 G-V38 Kilchreest Church and Graveyard Ruins. 〉 G-V39 Summerville Lough. 〉 G-V41 Loughrea Swimming Area (The Long Point). 〉 G-V40 Corry's Field Walk. 〉 G-V43 Aughrim Church Spire.
Scenic Routes	None present.
OSi Viewing Areas	None present.
Settlements	〉 Abbyknockmoy, Rural Settlement. 〉 Menlough, Rural Settlement. 〉 Turloughmore, Rural Settlement. 〉 Woodlawn, Rural Settlement.
Recreational Routes	〉 Hymany Way, waymarked trail. 〉 Monivea Mass Track & Historical Trail.

	〉 Demesne Loop Walk at Mountbellew.
Recreational, Cultural and Tourism Destinations	〉 Athenry Castle. 〉 Dunsandle Castle and Woods. 〉 Kilconnell Friary.
Transport Routes	〉 R350 Regional Road. 〉 R359 Regional Road. 〉 N63 National Road. 〉 N65 National Road. 〉 M17 Motorway.

13.5.10 Viewpoint Selection: Photomontage Viewpoints (VPs)

Photomontage imagery was captured at 13 no. viewpoints for full assessment in this LVIA including the assessment of cumulative effects. Photomontages VP01-VP13 represent the most sensitive receptors where open visibility of the proposed turbines occurs and provide a good geographical spread of views surrounding the proposed turbines. The viewpoint selection methodology is detailed in Appendix 13-1 LVIA Methodology.

Table 13-7: Photomontage Viewpoint Locations (VP01-VP13)

Viewpoint No.	Description	Grid Ref.
VP01	**Attymon National School:** View from primary school and playground on L3115 Local Road in Attymon townland. Located approximately 970m north-west of the nearest proposed turbine (T01).	E: 559667 N: 730517
VP02	**Killimordaly GAA Club:** View from the local GAA club on L3115 Local Road in Killimordaly townland. Located approximately 2.1km south-east of the nearest proposed turbine (T01).	E: 558428 N: 728108
VP03	**L7176 Local Road at Shanballyeeshal:** View from L7176 Local Road at Shanballyeeshal townland. Located approximately 4.8km north of the nearest proposed turbine (T04).	E: 562574 N: 734549
VP04	**Kilconnell Hills at Hillswood:** View from Killconnell Hills on L7443 Local Road in Hillswood townland. Located approximately 8.5km east of the nearest proposed turbine (T07).	E: 571247 N: 731666
VP05	**Slieve Aughty Trails (higher elevations):** View from Sonnagh Old trail/Local Road. Located approximately 18.4km south of the nearest proposed turbine (T08).	E: 558932 N: 711041
VP06	**M6 Motorway at L7183 Overpass:** View from L7183 Local Road overpass on M6 motorway. Located approximately 4.7km south of the nearest proposed turbine (T08).	E: 561467 N: 724611
VP07	**Athenry New Cemetery at R347/R348:** View from Regional Roads R347/R348 junction at Athenry New Cemetery. Located approximately 10.0km west of the nearest proposed turbine (T01).	E: 550429 N: 726874

Viewpoint No.	Description	Grid Ref.
VP08	**Monivea Graveyard at Galway Road:** View from Galway Road/R339 at Monivea Graveyard. Located approximately 9.6km north-west of the nearest proposed turbine (T01).	E: 552500 N: 735634
VP09	**L3118 Local Road at Beech Hill:** View from L3118 Local Road at Beech Hill. Located approximately 1.8km east of the nearest turbine (T07).	E: 564804 N: 729133
VP10	**Cappanoole**. View from L3115 Local Road where it passes through EIAR Site Boundary at the north edge of the Wind Farm Site. Located approximately 760m north of the nearest proposed turbine (T04). Divided into two view directions: SE and SW.	E 561496 N 730466
VP11	**Killimordaly/St. Iomar's Church & Graveyard:** View from local church (also called St. Iomar's Church) and graveyard on L7169 Local Road in Killimordaly townland. Located approximately 695m south of the nearest proposed turbine (T02). Divided into two view directions: N and NE.	E: 560289 N: 728623
VP12	**Gannow:** View from L7176 Local Road immediately east outside Gannow townland. Located approximately 660m north-east of the nearest proposed turbine (T07).	E: 563579 N: 729958
VP13	**Ballyfa:** View from the junction of R348 and R350 Regional Roads at Ballyfa townland, west of New Inn rural settlement. Located approximately 3.7km south-east of the nearest proposed turbine (T07).	E: 565711 N: 726944

13.6 Cumulative Context: Other Wind Farms

Table 13-8 below lists 3 no. wind farm developments identified within the LVIA Study Area which are included in the cumulative assessment for this LVIA—of these, 2 no. developments are indicative locations only, as there is limited information currently available. The Cumulative Context map is provided in Figure 13-18.

One cumulative wind energy development and two indicative locations are mapped below along with all viewpoint photomontage locations (VP01-VP13) assessed in Appendix 13-3: Photomontage Visual Impact Assessment Tables. The following types of wind energy developments were searched in the LVIA Study Area for the cumulative assessment:

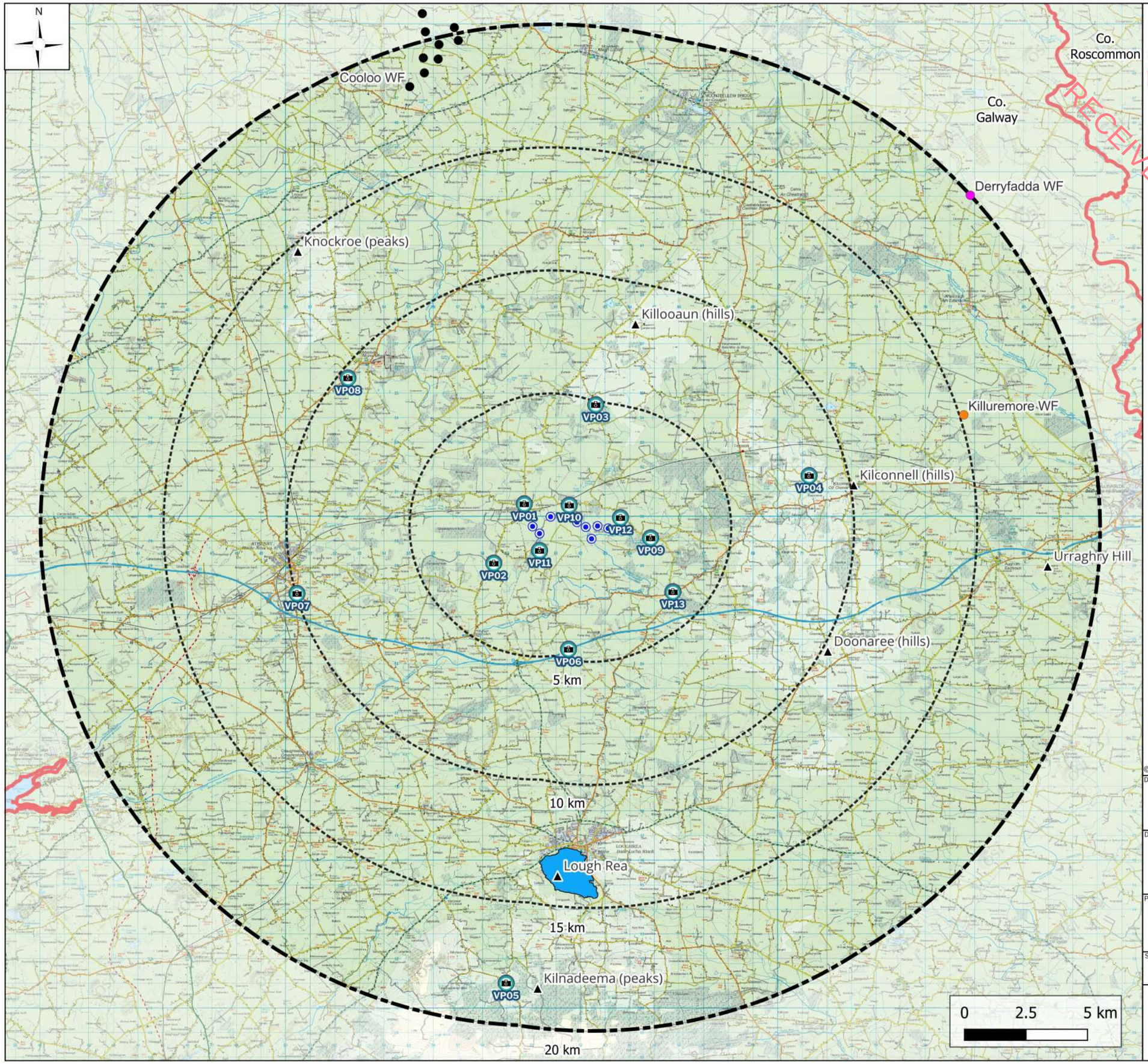
- **Existing:** Existing wind energy developments currently operational in the baseline landscape at the time of conducting this LVIA.
- **Permitted:** Wind energy developments either under construction or permitted (consented) at the time of conducting this LVIA; these developments have a high probability of being operational in a future receiving landscape.
- **Proposed:** All well-developed wind farm proposals with project specifications in the public domain at the time of conducting this LVIA. Cumulative effects between the Proposed Project and the development within this category are more uncertain and are reliant on an outcome of the planning and consenting system.

All relevant cumulative wind farms are included within the photomontage imagery presented in the EIAR Volume 2: Photomontage Booklet and assessed in Appendix 13-3. The detailed methodology of the rationale for the search process of identifying cumulative wind farms, as well as the rationale of cumulative assessment and the details of how cumulative wind farms are visually presented within the booklet, are provided in Appendix 13-1: LVIA Methodology.

The indicative locations (general point features) of two wind energy developments in the LVIA Study Area are mapped below—the proposed Derryfadda Wind Farm is known to potentially comprise 14 no. turbines but has no associated layout that can be used for assessment, the proposed Killuremore Wind Farm has no known number of turbines or layout that can be used for assessment.

Table 13-8: Cumulative Wind Farms Identified in the LVIA Study Area

Wind Energy Development Name	County	Status	No. of Turbines	Distance from Nearest Proposed Turbine
Up to 15km				
	None.			
15 to 20km				
Cooloo Wind Farm	Galway	Proposed	9	18.3km
Derryfadda Wind Farm	Galway	Proposed	n/a	20km (indicative location only)
Killuremore Wind Farm	Galway	Proposed	14	15.1km (indicative location only)



Map Legend

- LVIA Study Area (20km)
- County Borders
- Proposed Turbines
- Photomontage Viewpoints (VPs)

Other Wind Farms within the LVIA Study Area

- Proposed Cooloo Wind Farm (9 Turbines)
- Proposed Derryfadda Wind Farm (Indicative Location)
- Proposed Killuremore Wind Farm (Indicative Location - 14 Turbines)

Drawing No.

Figure 13-18

Drawing Title

Cumulative Context Map

Project Title

Gannow Renewable Energy Development, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	240323	2025.09.09	JC	JW

13.7 Likely 'Significant' Landscape and Visual Effects

Based on the analysis of landscape and visual baseline information reported above in this chapter, combined with considerations of the cumulative effects with other wind farms, this section reports the landscape and visual effects likely to occur during all three phases of the Proposed Project: Construction Phase, Operational Phase and Decommissioning Phase.

In addition, this section summarises the outcomes of LCA and photomontage visual impact assessments (refer to Appendix 13-2 and Appendix 13-3, respectively). A comprehensive description of the guidance and methodology used for the assessment of landscape and visual effects are included in Appendix 13-1: LVIA Methodology, along with information about the photomontages as a tool used to inform the impact assessment, including the limitations of this approach (Appendix 13-1, Section 13.6.3 Limitations of Photomontage Visualisation).

13.7.1 'Do Nothing' Scenario

As reported in Chapter 3 of this EIAR, the 'Do-Nothing' scenario land-use option to developing a renewable energy project at the Site would be to leave the Site as it is, with no changes made to the current landcover of low intensity agriculture, commercial forestry, and cutover bog on the Proposed Wind Farm site, or to the public road corridors, private tracks, and private land principally used by agriculture along the Proposed Grid Connection route. The established trends in respect of land use/landcover and the baseline landscape and visual context are likely to remain largely consistent with the scenario described in the preceding baseline sections of this chapter.

In terms of landscape and visual effects, in this alternative scenario the principal visual components, i.e. the proposed turbines, would not be materially introduced into the landscape, nor would their associated infrastructure or ancillary components be introduced, and the temporary effects of the underground Proposed Grid Connection would not occur.

It is considered that there would likely be future interest in developing this landscape for wind energy production, which is demonstrated given the level of existing, permitted and proposed wind farms outlined in the previous Section 13.5 Cumulative Context: Other Wind Farms a(these wind farms are considered to form part of the 'Do-Nothing' scenario). Characteristic commercial forestry operations across the Proposed Wind Farm site and adjoining areas are expected to continue, along with the current land uses of low intensity agriculture and peat cutting activities. Should the 'Do-Nothing' scenario occur, the residual landscape and visual effects would be None and the impact would be Neutral in the context of this EIAR.

By implementing this 'Do-Nothing' alternative, however, the opportunity to capture the available renewable energy resource would be lost, as would the opportunity to contribute to meeting Government and EU targets for the production and consumption of electricity from renewable resources and the reduction of greenhouse gas emissions.

The opportunity to generate local employment, local authority development contributions, rates and investment in the local area would also be lost. Furthermore, the opportunity to implement the measures outlined in the Biodiversity Management and Enhancement Plan (BMEP) would also be lost. Please see Appendix 6-4 BMEP for details.

13.7.2 Construction Phase Effects

It is estimated that the construction phase of the Proposed Project will last between 18 and 24 months. Construction of the development will involve the installation of the 8 no. turbines with a maximum blade-tip height of 185m and all associated works, as well as the construction of the proposed onsite 38kV substation and associated works including underground cabling.

Construction phase effects will also include the associated effects resulting from the movement of construction and turbine transport vehicles into and out of the Site, to allow for construction of all Proposed Project elements.

13.7.2.1 Landscape Effects during Construction

Proposed Wind Farm

Associated earthworks, such as the cut and fill required to facilitate construction of the Proposed Project, have the greatest potential for landscape effects. Where excavation is required, the existing landcover, vegetation and spoil will be removed during the construction phase. In most instances, groundworks and excavation trenches will be re-instated upon completion of the construction. Where peat and spoil arising from construction activities is managed within the Proposed Wind Farm site, the vegetative top-soil layer will be removed and re-instated following spoil management taking place. The construction activities may potentially cause temporary impacts on the landscape such as the introduction of temporary structures, dust, minor soil erosion and minor alterations to drainage. It is considered that this is a 'Slight', 'Short-term', 'Negative' effect in terms of landscape effects.

Proposed Grid Connection

The Proposed Grid Connection underground electrical cabling route is to be located underground; therefore, the greatest effects attributed to this element of the Proposed Project will occur during the construction phase. The majority of underground electrical cabling works are to be carried out along existing public road corridors. The construction phase of the proposed underground cabling will be temporary, localised, and transient in nature, as the works move along the Proposed Grid Connection. The works will include soil stripping, excavation, and other associated construction activities. These activities will cause temporary change to the physical landscape along the Proposed Grid Connection; however, these changes will be localised to the immediate environment surrounding the route and will not affect the character of the landscape setting or visual amenity of the wider area. The Proposed Grid Connection works are likely to cause 'Slight', 'Short-term', 'Negative' landscape effects, which is not significant.

Mitigation Measures for Landscape Effects during Construction

The above predicted landscape effects during construction assume the implementation of the following mitigation measures for the Proposed Wind Farm and Proposed Grid Connection. All construction activities will follow best practice methods to reduce impacts upon the environment and landscape of the Site. Further details are presented in the Construction and Environmental Management Plan (CEMP) contained in Appendix 4-5 of this EIAR. The following measures should be implemented to mitigate landscape effects during the construction phase of the Proposed Project:

- In all circumstances, excavation depths and volumes will be minimised, and excavated material will be re-used where possible;
- For the proposed Grid Connection, where the cable trench is to be located in the road verge, subsoil will be piled on-site and re-used after cabling works. Should any medium planting be removed, it should be replaced with the same or similar species whenever it is not possible to salvage and reinstate;

- Any areas of bare soil remaining after the landscaping phase will be seeded as soon as possible with a grass-seed mix to minimise sediment run-off.

13.7.2.2 Visual Effects during Construction

Proposed Wind Farm

The most substantial visual effects will arise from requisite construction activities on the Proposed Wind Farm site itself, such as assembling tower sections and erecting the proposed turbines. There shall be temporary scenarios during the construction phase in which the proposed turbines will be partially constructed and may be seen as either stand-alone tower sections, or incomplete turbines where only one or two blades are visible. The equipment and vehicles required to transport and erect the Proposed Wind Farm components include large cranes and large haulage vehicles. These construction activities will cause 'Slight', 'Short-term', 'Negative' visual effects, which are not significant. General housekeeping measures, necessary for Health & Safety requirements, will ensure that the active construction areas will be kept tidy, mitigating localised visual impacts during the construction phase.

Site Access Roads and Hardstand Areas. The proposed access roads and hardstand areas are flat features and will be most visible within their immediate surroundings, within the Proposed Wind Farm where there are no sensitive visual receptors. Every use will be made of the existing access tracks within the Site. Some tracks will be upgraded appropriately whilst several stretches of new internal roads will need to be constructed. The visual impact of the construction of these flat and hard surfaces will be very localised to the Proposed Wind Farm itself. The visual effects arising from the construction of access roads and hardstand areas are likely to be 'Negative', 'Short-term' and 'Slight', which is not significant.

Meteorological (Met) Mast. One permanent met mast is proposed as a part of the Proposed Wind Farm, to be erected approximately 0.4km north of proposed turbine T04 within the footprint of a proposed temporary construction compound. This is a slender structure, 30m in height, and will not be an imposing structure in terms of visual impact. The visual effects of the construction of the proposed met mast will be localised, considering that construction activities related to this will be most visible within their immediate surroundings. Within the Proposed Wind Farm site and its immediate landscape setting, the visual effects arising from the construction of the proposed met mast and associated temporary construction compound are likely to be highly localised 'Negative', 'Short-term', 'Slight' effects, which is not significant.

Proposed Onsite 38kV Substation. During the construction phase, visual effects will occur as the proposed onsite 38kV substation and its associated temporary construction compound is built due to the earthworks and requisite construction activities; these will cause a substantial but localised change to views in the immediate area. As established in the baseline investigations, the proposed onsite 38kV substation is located approximately 0.1km east of the L3115 local road, northwest of proposed turbine T01. During construction works, the proposed onsite 38kV substation and adjacent temporary construction compound will be temporarily visible from along the road. Visual effects of the proposed substation are likely to be highly localised, 'Negative', 'Short-Term' and 'Slight', which are not significant.

Proposed Grid Connection

As reported above, the greatest effects attributed to the underground Proposed Grid Connection will occur during the construction phase and are largely related to landscape changes. As the Proposed Grid Connection shall be located underground, changes of a visual nature will not affect the visual amenity of the wider area. The Proposed Grid Connection underground cabling works are likely to cause 'Negative', 'Short-term', 'Slight' visual effects, which are not significant.

Turbine Delivery Route (TDR)

Works such as road widening will be required along the turbine delivery route to accommodate the large vehicles used to transport turbine components to Proposed Wind Farm site (see Section 4.5.3 in Chapter 4 for specific details). In some instances, minor temporary alterations will be required to the existing streetscape and roundabout islands, temporary local road widening, overruns of roundabout island and temporary relocation of some signs and street furniture. Full details of the assessment are included as part of the traffic impact assessment set out in Chapter 15: Material Assets, Section 15.1 of this EIAR. The landscape value and sensitivity of these temporary works areas are deemed to be 'Low' and the change to occur will be highly localised. These works are likely to cause 'Negative', 'Short-term', 'Slight' visual effects, which is not significant.

13.7.3 Operational Phase Effects

Planning permission is being sought for a 35-year operational life of the proposed turbines from the date of full commissioning of the wind farm and subsequent decommissioning which will involve the removal of the proposed turbines from the Site. Potential impacts of the Proposed Project during the operational phase are defined as 'Long-Term' as per the definition for duration in EPA, 2022. The proposed turbines would be removed from the Site at the end of the operational phase. Therefore, potential landscape and visual impacts effects on receptors caused by the proposed turbines are not permanent and are reversible.

13.7.3.1 Landscape Effects during Operation

13.7.3.1.1 *LCA Assessment Outcomes*

This section reports the results of the assessment of effects on designated LCAs (in the case of the Proposed Project, designated LCUs for Co. Galway) detailed in Appendix 13-2 LCA Assessment Tables for the 4 no. LCUs identified within the (15km) LCA Study Area; the LCUs are mapped above in Figure 13-10 and Figure 13-11.

The individual assessments for each LCA are summarised in Table 13-9 below. The assessment criteria and grading scales which aided the assessment of landscape character effects are detailed in Appendix 13-1: LVIA Methodology (Section 1.7 Assessing Landscape Effects).

Table 13-9: LCA Assessment Summary

LCA Ref.	Name	LCU Sensitivity	Magnitude of Change in LCU	Significance of Effect
G-LCU-5e	Northern River Clare Basin	Low	Slight	**Not Significant**
G-LCU-5f	North Loughrea Unit	Low	Moderate	**Slight**
G-LCU-6b	Southern River Clare Basin	Low	Negligible	**Imperceptible**
G-LCU-6e	South Loughrea	Low	Negligible	**Imperceptible**

'Slight' Landscape Effects: G-LCU-5f. The greatest landscape effects will occur within LCU-5f North Loughrea Unit where all 8 no. proposed turbines are located, owing to the material alteration of the physical fabric of the landscape where the proposed turbines are to be introduced. LCU-5f is designated in the GCDP 2022-28 as a 'Low' sensitivity landscape. The direct physical changes to the landscape will be highly localised to within the Proposed Wind Farm site with no physical changes to the landscape beyond. The altered land area within the Proposed Wind Farm site will remain as a

'long-occupied working landscape', which is listed as a key characteristic of the LCA. In terms of visibility of the proposed turbines, most of the local high points with potential panoramic views are in the northern part of the LCU greater than 5km from the proposed turbines and trafficked local roads in the southern part are heavily vegetated and visually screened. The magnitude of change is reported as 'Moderate'. The overall landscape effects on LCU-5f North Loughrea Unit are likely to be 'Long-term' and 'Slight', which is not significant.

'Not Significant' Landscape Effects: G-LCU-5e. At its closest point, LCU-5e Northern River Clare Basin is located 0.7km west of the nearest proposed turbine (T01). LCU-5e is designated as a 'Low' sensitivity landscape in the GCDP 2022-28. A large portion of the underground Proposed Grid Connection (8.7km) passes through LCU-5e, extending westward from the western edge of the Site. The route consists of underground cabling along the local road network, thus the greatest landscape effects to LCU-5e will occur during the construction phase owing to the associated physical changes along the roads, such as cut and fill. During the operational phase, there will be no physical landscape changes to the LCU from the Proposed Grid Connection. In addition, the proposed turbines will be visible from within LCU-5e in the closest areas along its southeastern-most border, due to the close proximity of this part of the LCU to the Proposed Wind Farm site. The altered land area along the Proposed Grid Connection will remain as a 'long-settled working landscape', which is listed as a key characteristic of the LCU. The magnitude of change is reported as 'Slight'. The overall landscape effects on LCU-5e Northern River Clare Basin are likely to be 'Long-term' and 'Not Significant'.

'Imperceptible' Landscape Effects: G-LCU-6b, G-LCU-6e. LCU-6b Southern River Clare Basin is designated as a 'Low' sensitivity landscape in the GDCP 2022-28. A smaller portion (6.9km) of the underground Proposed Grid Connection is located within this LCU, extending westward from the southwestern edge of LCU-5e towards the existing Cashla 220kV substation outside the LCA Study Area boundary. As with the previous LCU-5e, the greatest landscape effects to LCU-6b will occur during the construction phase owing to the associated physical changes to the local road network and there will be no physical changes during the operational phase. In addition, there is very limited on-ground visibility of the proposed turbines from all areas within this LCU, owing to the distance from the proposed turbines and the nature of the mostly flat, undulating topography. The magnitude of change is reported as 'Negligible'. The overall landscape effects on LCU-6b Southern River Clare Basin are likely to be 'Long-term' and 'Imperceptible', which is not significant.

LCU-6e South Loughrea was scoped in for assessment due to its potential visibility from areas of the LCU in closest proximity (within 2.5km) to the proposed turbines, along the northern-most edge of the land area situated south of the proposed turbines within 5km. LCU-6e is designated as a 'Low' sensitivity landscape in the GDCP 2022-28. There will be no physical changes to the key landscape characteristics of this LCU, consisting of 'large areas of bog and forestry', arising as a result of the Proposed Project. In addition, there is little to no visibility of the proposed turbines from within this LCU beyond 2.5km of the proposed turbines; those parts of the LCU closer in, have only intermittent visibility, and the proposed turbines will appear as very small background features. The magnitude of change is reported as 'Negligible'. The overall landscape effects on LCU-6e South Loughrea are likely to be 'Long-Term' and 'Imperceptible'.

The key mitigation factors for effects on landscape character of designated LCAs in the LCA Study Area are:

- All proposed turbines are located within LCU-5f, designated as 'Low' sensitivity in the GDCP 2022-28 and corresponding to land area classified as 'Open to Consideration' for wind energy development in the LARES;
- For LCU-5e and LCU-5f, most of the local high points with potential panoramic views are in the northern part of the LCU, such that the proposed turbines will be seen as very small background features from distances >5km. For LCU-6b and LCU-6e, the high points with panoramic views are >5-10km from the proposed turbines, with even less potential visibility;

- In LCU-5e and LCU-5f, the local road networks in close proximity to the Proposed Wind Farm site are heavily vegetated with mature forestry and tall scrub, such that open views towards the proposed turbines are typically visually screened along trafficked roads, thereby minimising impact to the key sensitivity of the landscape;
- In LCU-5f, the Proposed Wind Farm site is located within a large area comprising mostly cutover bog, with smaller areas of agricultural fields and commercial forestry, thereby providing separation from sensitive landscape features (e.g. Raford Rover Bog to the east of the Proposed Wind Farm site). In the overall LCU, the areas of cutover bogland are the least sensitive parts of the LCU in relation to wind farm development, thus the proposed turbines are sited within the least sensitive part of the overall LCU;
- In most areas of LCU-5e, the proposed turbines will be seen as very small background features, so the highest effects on landscape character (i.e. views of open countryside) will be localised to the southern part of the LCU in close proximity to the site (i.e. within 5km of the proposed turbines);
- For LCU-5e, key landscape characteristics of the LCU including views of its stone-walled fields and open areas around bogs with no light pollution will not be affected by the Proposed Project;
- The Proposed Grid Connection is to be underground, thus changes to the physical fabric of the landscape will be short-term and localised along low-trafficked local road networks only during the construction phase;
- Considering the currently available data on cumulative wind farms in the study area, no significant cumulative effects are deemed to arise on any of the LCUs;
- See further mitigation measures for effects on LCAs in the tables of Appendix 13-2.

13.7.3.1.2 Landscape of the Proposed Wind Farm Site

The physical landscape of the Proposed Wind Farm site will undergo substantial changes by the introduction of the proposed turbines as vertical, man-made structures within the material area of the Proposed Wind Farm site. As a result, there will be a 'Substantial' magnitude of change to the landscape in localised areas within the Proposed Wind Farm site where the landscape is materially altered (infrastructure footprint).

As reported in this chapter, the Proposed Wind Farm is located in a modified working landscape designated as a 'Open to Consideration' for wind energy development in the GCDP 2022-28. Cutover peatlands, commercial forestry and agricultural fields are the dominant landcover and land use. The landscape value and sensitivity of the Proposed Wind Farm site is reported as Low. Given these ratings, a 'Low' sensitivity balanced with 'Substantial' magnitude of change amounts to long-term landscape effects of 'Moderate' significance upon the physical fabric of the landscape of the Proposed Wind Farm site (see Section 13.7 of Appendix 13-1: LVIA Methodology); these direct landscape effects shall be highly localised to the footprint of the Proposed Wind Farm. In addition, landscape effects on the perceptual and aesthetic character of the Proposed Wind Farm site are deemed to be 'Long term', 'Negative' and of 'Moderate' significance, which is not significant.

13.7.3.1.3 Landscape of the Proposed Grid Connection

As the Proposed Grid Connection Route cabling is located underground, landscape effects during the operational phase will be 'Imperceptible' once vegetation has re-established along the roadway following earthworks during the construction phase. The landscape effects occurring during the construction phase of the Proposed Grid Connection Route are reported previously in Section 13.7.2 Construction Phase Effects.

13.7.3.1.4 Mitigation Measures for Landscape Effects during Operation

13.7.3.1.4 *Mitigation Measures for Landscape Effects during Operation*

The Biodiversity Management and Enhancement Plan (BMEP) which has been prepared as part of this EIAR (see Appendix 6-4) will have the dual effect of providing ecological enhancement to the landscape area of the Proposed Wind Farm site as well as potential screening of some lower lying infrastructure of the Proposed Wind Farm, thereby ultimately mitigating effects on landscape character during the operational phase.

The following measures from the BMEP which have been included in the Proposed Wind Farm design are deemed to have the effect of avoiding or reducing direct effects on landscape receptors, meaning individual landscape features and the landscape character of the Proposed Wind Farm site as a whole:

- Areas of forestry around T04 and T05 are to be converted to wet grassland to create habitat.
- Planting of local willow around grassland boundaries.
- Management to eradicate self-seeding conifers.
- Enhancement of existing grasslands to improve habitat and reduce nutrient input.
- Creation of patchwork of short and long vegetation to connect grassland networks.
- Enhancement of cutover peatlands to block drainage and rewet bogs.
- Hedgerow planting along agricultural field cells and riparian planting along waterways, to be managed in future.
- 2.6ha of native woodland planting, to be managed in future.

13.7.3.2 Visual Effects during Operation

13.7.3.2.1 *Photomontage Viewpoint Impact Assessment Outcomes*

Residual visual effects arising as a result of the Proposed Project during its operational phase are reported and discussed in detail in the sections below, including residual effects on visual receptors and residential receptors, as well as visual effects arising from ancillary elements of the project. Figure 13-19 below maps all viewpoints VP01-VP13 with all visual receptors included in the assessment as well as the ZTV showing theoretical visibility for all assessed visual receptors.

The determination of residual visual effects was informed by the photomontage viewpoint impact assessment of viewpoints VP01-VP13 as reported in Appendix 13-3, which includes cumulative assessment. The impact assessment outcomes are summarised in the Table 13-10 below. This table and Appendix 13-3 should be read in conjunction with the EIAR Volume 2: Photomontage Booklet. The assessment criteria and grading scales which aided the assessment of visual impact are detailed in Appendix 13-1: LVIA Methodology.

It is to be anticipated that wind farms inevitably cause 'Significant' visual effects on proximate sensitive visual receptors due to the prominence of turbines within landscape views and the 'Substantial' magnitude of change which will arise in close proximity to a wind farm development. A key focus in this LVIA is identifying the scenarios where the greatest likelihood of 'Significant' effects occurs. It is key to note that the residual significant impacts only occur for a small number of receptors and is not representative of effects on receptors in a vast proportion of the LVIA Study Area

1 no. viewpoint, VP11 Killimordaly/St. Iomar's Church & Graveyard was found to have 'Significant' residual visual effects; a comprehensive discussion of these effects is incorporated into the following subsections, including the mitigation factors considered in determining this residual effect rating.

Importantly, this report notes that, regarding the proposed turbines, whether a visual effect is deemed to be positive, negative or neutral, involves a degree of subjectivity; this approach is based on discussion set out in the GLVIA3 (p.113, para.6.29) which outlines the general subjectivity of describing visual effects in an LVIA context. The approach can be explained in that what appears to be a positive effect

to one viewer could be deemed to be a negative effect by another viewer. All predicted visual effects of the viewpoints below are 'Long-Term' and 'Direct' effects.

Alternative Photowire Viewpoint Locations

7 no. alternative photowire viewpoint locations (PW-A to PW-G) classified as Type 3 Visualisations in the LI TGN 06/18 are presented in this LVIA to aid discussions of visual effects in the subsequent sections; these images constitute early-stage draft photomontage imagery which were not brought forward for the production of photomontages but have been used to inform the assessment of visual receptors in the LVIA. The images are compiled in Appendix 13-5: Photowire Visualisation Booklet and the full methodology of viewpoint selection is provided in Appendix 13-1: LVIA Methodology. The images are draft and do not include modelling of cumulative permitted and proposed developments in the LVIA Study Area. The photowires are not assessed in Appendix 13-3, which assesses photomontage viewpoints (VPs) only. All photowire locations (PW-A to PW-G) are mapped below in Figure 13-19.

- PW-A: Cloonsheecahill. View from L7171 Local Road near Cloonsheecahill townland. Located approximately 1.7km south of the nearest turbine (T8). Grid Ref: E 562019, N 727490.
- PW-B: Kiltullagh. View from L3115 Local Road at Kiltullagh townland. Located approximately 4.3km south-west of the nearest turbine (T2). Grid Ref: E 557723, N 725805.
- PW-C: R339 West of Menlough. View from R339 west of Menlough rural settlement. Located approximately 11.6km north of the nearest turbine (T3). Grid Ref: E 560205, N 741626.
- PW-D: Woodlawn House. View of Woodlawn House estate setting on R359 Regional Road. Located approximately 5.9km east of the nearest turbine (T7). Grid Ref: E 568745, N 731294.
- PW-E: R446 outside Craughwell. View from R446 Regional Road outside Craughwell. Located approximately 12.9km south-west of the nearest turbine (T2). Grid Ref: E 553142, N 718496.
- PW-F: Loughrea at L4213 Baunoge. View from Loughrea eastern hill on L4213 Local Road at Baunoge. Located approximately 13.2km south-east of the nearest turbine (T08). Grid Ref: E 563445, N 715929.
- PW-G: Attymon Railway Station Building. View from Attymon Railway Station building and carpark. Located approximately 770m north-west of the nearest turbine (T01). Grid Ref: E 559577, N 730240.

N

Co. Roscommon

Co. Galway

N63

Knockroe (peaks)

PW-C

R339

Killooaun (hills)

Monivea

VP08

VP03

M17 Motorway

R359

L7152

VP01

PW-G

VP10

VP12

VP09

PW-D

VP04

Kilconnell (hills)

R348

Athenry

New Inn

Urraghry Hill

VP02

VP11

PW-A

VP13

L3115

VP07

R348

PW-B

M6 Motorway

Doonaree (hills)

VP06

5 km

R350

R349

Craughwell

10 km

PW-E

N65

Loughrea

Lough Rea

PW-F

15 km

Slieve Aughty Trails

Kilnadeema (peaks)

VP05

0 2.5 5 km

20 km

Map Legend

- LVIA Study Area
- County Borders
- EIAR Site Boundary
- Proposed Turbines
- Photomontage Viewpoints
- Photowire Viewpoints

Co. Galway Settlement Hierarchy

- Metropolitan Area
- Strategic Potential
- Key Town
- Self-Sustaining Town
- Small Growth Town
- Small Growth Village
- Rural Settlement

Visual Receptors

- Co. Galway Protect Views Direction
- Co. Galway Protected Views
- Slieve Aughty Trails

Transport Routes

- Local Roads to 5km
- Regional Roads to 10km
- Motorways & National Roads to 20km
- Railway Network

Zone of Theoretical Visibility

- 1-3 Turbines Theoretically Visible
- 4-6 Turbines Theoretically Visible
- 7-8 Turbines Theoretically Visible

Drawing No.

Figure 13-19

Drawing Title

Visual Receptors, Viewpoint Locations & ZTV

Project Title

Gannow Renewable Energy Development, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	240323	2025/09/09	JC	JW

MKO

Table 13-10 Summary of Viewpoint Impact Assessment Results

VP No.	Description	Grid Ref.	Visual Sensitivity of Receptors	Magnitude of Visual Change	Significance of Residual Visual Effect
VP01	**Attymon National School:** View from primary school and playground on L3115 Local Road in Attymon townland. Located approximately 970m north-west of the nearest turbine (T1).	E: 559667 N: 730517	High.	Moderate.	**Moderate.**
VP02	**Killimordaly GAA Club:** View from the local GAA club on L3115 Local Road in Killimordaly townland. Located approximately 2.1km south-east of the nearest turbine (T1).	E: 558428 N: 728108	Medium.	Slight.	**Slight.**
VP03	**L7176 Local Road at Shanballyeeshal:** View from L7176 Local Road at Shanballyeeshal townland. Located approximately 4.8km north of the nearest turbine (T4).	E: 562574 N: 734549	Medium.	Slight.	**Slight.**
VP04	**Kilconnell Hills at Hillswood:** View from Killconnell Hills on L7443 Local Road in Hillswood townland. Located approximately 8.5km east of the nearest turbine (T7).	E: 571247 N: 731666	Low.	Negligible.	**Not Significant.**
VP05	**Slieve Aughty Trails (higher elevations):** View from Sonnagh Old trail/Local Road. Located approximately 18.4km south of the nearest turbine (T8).	E: 558932 N: 711041	Medium.	Negligible.	**Not Significant.**
VP06	**M6 Motorway at L7183 Overpass:** View from L7183 Local Road overpass on M6 motorway. Located approximately 4.7km south of the nearest turbine (T8).	E: 561467 N: 724611	Low.	Slight.	**Not Significant.**
VP07	**Athenry New Cemetery at R347/R348:** View from Regional Roads R347/R348 junction at Athenry New Cemetery. Located approximately 10.0km west of the nearest turbine (T1).	E: 550429 N: 726874	Medium.	Negligible.	**Not Significant.**

VP08	**Monivea Graveyard at Galway Road:** View from Galway Road/R339 at Monivea Graveyard. Located approximately 9.6km north-west of the nearest turbine (T1).	E: 552500 N: 735634	Medium.	Negligible.	**Not Significant.**
VP09	**L3118 Local Road at Beech Hill:** View from L3118 Local Road at Beech Hill. Located approximately 1.8km east of the nearest turbine (T7).	E: 564804 N: 729133	Medium.	Slight.	**Slight.**
VP10	**Cappanoole**. View from L3115 Local Road where it passes through EIAR Site Boundary at the north edge of the Wind Farm Site. Located approximately 760m north of the nearest turbine (T4). Divided into two view directions: SE and SW.	E 561496 N 730466	High.	Substantial.	**Moderate.**
VP11	**Killimordaly/St. Iomar's Church & Graveyard:** View from local church (also called St. Iomar's Church) and graveyard on L7169 Local Road in Killimordaly townland. Located approximately 695m south of the nearest turbine (T2). Divided into two view directions: N and NE.	E: 560289 N: 728623	High.	Substantial.	**Significant.**
VP12	**Gannow:** View from L7176 Local Road immediately east outside Gannow townland. Located approximately 660m north-east of the nearest turbine (T7).	E: 563579 N: 729958	High.	Moderate.	**Moderate.**
VP13	**Ballyfa:** View from the junction of R348 and R350 Regional Roads at Ballyfa townland, west of New Inn rural settlement. Located approximately 3.7km south-east of the nearest turbine (T7).	E: 565711 N: 726944	Medium.	Slight.	**Slight.**

13.7.3.2.2 Visual Effects on Settlements and Higher-Elevation Rural Areas

Athenry. VP07 was captured on the outskirts of Athenry town to the south. The viewpoint is reported as Medium sensitivity on account of Athenry Town being a one of the larger population centres in the LVIA Study Area. The magnitude of change was deemed to be Negligible. The likely residual visual effects to arise on Athenry Town is 'Long-term', 'Negative' and 'Not Significant'.

Craughwell. Photowire PW-E was captured 2.8km east of the rural settlement Craughwell. Considering the proximity of Craughwell at approximately 13km from the nearest proposed turbines (T03), the sensitivity is deemed to be Low. As seen in Plate 13-6 below showing photowire PW-E, the proposed turbines are located in the background of the view with only T01, T02 and T03 visible as very small features. The remaining proposed turbines are visually screened by vegetation and existing buildings. The magnitude of change is deemed to be Slight. The overall residual visual effects on Craughwell are deemed to be 'Long-term', 'Negative' and 'Not Significant'.

Plate 13-6 Photowire PW-E taken from Appendix 13-5 Photowire Booklet

Loughrea. Photowire PW-F was captured on the L4213 Local Road on the eastern outskirts of Loughrea. Considering Loughrea is located approximately 13km from the nearest proposed turbine (T03), the sensitivity is deemed to be Medium. The proposed turbines are seen as small features located in the background of the view, as shown in Plate 13-7, with proposed turbines T05 to T08 partially visible and the lower parts of their towers visually screened by vegetation and slightly ascending topography.

Plate 13-7 Photowire PW-F taken from Appendix 13-5 Photowire Booklet

As shown in the imagery, proposed turbines T03 and T04 are entirely visually screened by mature vegetation. Proposed turbines T01 and T02 have only the blades visible owing to visual screening from built structures in the distance. Photowire PW-F, located on an elevated vantage point to the southeast of Loughrea, represents one of the very few locations with visibility of the proposed turbines from

Loughrea. There is no visibility of the proposed turbines from within the town itself. The magnitude of change is deemed to be Slight for the town of Loughrea. The overall residual visual effects are deemed to be 'Long-term', 'Negative' and 'Not Significant'.

Monivea. VP08 was captured at the graveyard on the southern outskirts of the rural settlement Monivea along the high-trafficked Galway Rd (R339 Regional Rd) connecting Galway City towards central-eastern Galway County. The sensitivity of the viewpoint is reported as Medium on account of the rural settlement Monivea and the high number of regional road users. The magnitude of change was deemed to be Negligible as the proposed turbines are of a distance that they appear as very small background features and are difficult to see. The overall residual visual effects are likely to be 'Long-term', 'Negative' and 'Not Significant'.

New Inn. VP13 taken in Ballyfa townland represents open views from the rural settlement New Inn; VP13 is located 2km west of the settlement. The viewpoint is reported as Medium sensitivity and a Slight magnitude of change on account of rural residential receptors in relatively close proximity to the viewpoint with open views towards the proposed turbines. However, considering that New Inn is located 4.6km from the nearest proposed turbine (T07) with very limited visibility owing to flat topography and intervening mature woodland and forestry, the residual effects are deemed to be 'Long-term', 'Negative' and 'Slight'.

Shanballyeeshal and Kilconnell Hills. Two rural areas were selected for assessment to represent views for rural residential receptors at higher elevated vantage points at medium distance from the Proposed Wind Farm (5-10km). VP03 Shanballyeeshal located 4.8km north of the proposed turbines represents sparse receptors of Medium sensitivity at slightly more elevated vantage points which have potential for open views in the direction of the proposed turbines. Views from the vicinity of VP03 are predicted to experience a Slight magnitude of change, as the proposed turbines may be partially visible but are well setback behind screening factors and hilly terrain, within a modified working landscape setting, equating to "Slight" residual visual effects. Similarly, VP04 Kilconnell Hills located 8.5km to the east of the proposed turbines represents sparse receptors of Medium sensitivity at slightly more elevated vantage points which have potential for moderately long-distance open views towards the proposed turbines. Views from the vicinity of VP04 are likely to experience Negligible magnitude of change, as the proposed turbines will be viewed as distant background features in a modified working landscape with no views of county, regional or national renown, equating to a predicted residual effect of "Not Significant."

13.7.3.2.3 *Visual Effects on Destinations of Local Importance*

Killimordaly Church and Graveyard. VP11 was captured at the grounds of Killimordaly Church and Graveyard, located approximately 680m from the nearest proposed turbine (T02). The viewpoint is reported as High sensitivity on account of the proximity of the historic graveyard and church building to the proposed turbines, as well as the nearby residential receptors. The magnitude of change was deemed to be Substantial, considering the size and scale of the proposed turbines from this view, and because proposed turbine T02 is located within an open view and appears large, overlooking the graveyard. Only proposed turbines T01 to T03 are visible from this view within the graveyard. The imagery of VP11 is shown and discussed below in Section 13.7.3.2.6 Visual Effects on Local Residential Receptors, owing to its close proximity to the proposed turbines and being representatiyive of residential receptors southwest of the Proposed Wind Farm site. The overall residual visual effects are deemed to be 'Long-term', 'Negative' and 'Significant'.

Killimordaly GAA Club. VP02 was captured within the spectator's stand of Killimordaly GAA Club, representing the common view of receptors using the club. The viewpoint is reported to have a Medium sensitivity considering the residential receptors located beyond 1.5km from the proposed turbines in close proximity to the viewpoint and the recreational value of the GAA club itself. The magnitude of change was deemed to be Slight, due to the majority of the proposed turbines being visually screened by vegetation in the background of the view. From this vantage point, the proposed turbines appear as a coherent linear layout which assimilates well with the vegetation and tall floodlights

along the mid-ground to background of the view. The overall residual visual effects are deemed to be 'Long-term', 'Negative' and 'Slight', which is not significant.

Killimordaly Community Centre and Playground. The Killimordaly Community Centre and Playground is an active gathering place for the community of Killimordaly and will have similar views of the proposed turbines to that of VP02 at the Killmordaly GAA Club. This locally sensitive destination is located approximately 1.8km from the nearest proposed turbine (T02). From this vantage point, the spacing and scale of the proposed turbines will appear similar to that seen at the GAA Club, and the proposed turbines are likely to be visually screened to some degree by the elevated topography and intermittent to dense roadside screening. The overall residual visual effects are deemed to be 'Long-term', 'Negative' and 'Slight', which is not significant.

Attymon Railway Station. Photowire PW-G represents views from receptors nearby the Attymon Railway Station; the photowire was captured immediately outside the station platform. The viewpoint is considered to be of Medium sensitivity on account of users of the active railway network. The magnitude of change is deemed to be Slight, considering that the majority of the proposed turbines are visually screened behind dense vegetation. The imagery of PW-G is shown and discussed below in Section 13.7.3.2.6 Visual Effects on Local Residential Receptors, owing to its close proximity to the proposed turbines and good representation of the views of residential receptors west of the Proposed Wind Farm site. The overall residual visual effects are deemed to be 'Long-term', 'Negative' and 'Not Significant'.

13.7.3.2.4 Visual Effects on Recreational Settings

Slieve Aughty Trails. VP05, located 18.3km from the nearest proposed turbine (T02), was captured on the Slieve Aughty Trail network in the high-sensitivity (Class 3 – Special) Slieve Aughty Landscape of Co. Galway designated in the GCDP 2022-28. The sensitivity was considered to be Medium on account of the recreational route. The magnitude of change was deemed to be Negligible as the proposed turbines can be seen as very small features in the background without obstructing any views. VP05 is one of the very few locations where there is some visibility of the proposed turbines in the Slieve Aughty LCU and Slieve Aughty Trail system, owing to localised roadside vegetation screening and the foothills of the mountainous terrain. No key scenic amenity of the high-sensitivity landscape or trail system is obscured from the proposed turbines. The overall residual visual effects are deemed to be 'Long-term', 'Negative' and 'Not Significant'.

Woodlawn House. Photowire PW-D was captured directly east of the Woodlawn House estate, outside the Woodlawn Parish Church, representing the common view of Woodlawn House within its historical setting as seen from local road users and residents in the area of Woodlawn. As shown by photowire PW-D, the setting is not noticeably affected.

Plate 13-8: Photowire PW-D modified from Appendix 13-5 Photowire Booklet

Woodlawn House is considered a High sensitivity receptor on account of its historic setting and influence. The magnitude of change is deemed to be Negligible considering that only the blade tips of

proposed turbines T04 to T08 are visible above the tree line in the background of the image. This LVIA considers the potential change in the historic setting of Woodlawn House and its surrounding property. Moreover, the primary view of Woodlawn House within its historic setting occurs mainly for users of L74462 Local Road specifically while travelling SE to NW with the direction of view looking away from the Proposed Wind Farm (see Plate 13-9 below). The overall residual visual effects are deemed to be 'Long-term', 'Negative' and 'Imperceptible', which is not significant.

Plate 13-9: Primary view of Woodlawn House from L74462 looking away from Proposed Wind Farm site (image: Google Earth 2025)

13.7.3.2.5 Visual Effects on Transport Routes

L3115 Local Road. Multiple viewpoints were captured along and in close proximity to the L3115 Local Road: VP01, VP02, VP10 and PW-G giving a comprehensive representation of different views along this local road. L3115 traverses in a north-south direction west of the Proposed Wind Farm site and also travels in a west to east orientation running through the northern section of the Proposed Wind Farm site; the L3115 also forms part of the Proposed Grid Connection =. The sensitivity of the road is considered to be Medium on account of the road being a commuter route for local residents to Attymon National School and Killimordaly GAA Club. The magnitude of change is deemed to be Moderate considering the proposed turbines appear as large infrastructure with primarily intermittent visibility. The Route Screening Analysis Map shown previously illustrates that there is a mix of visual screening along the local road, from dense to none. The overall residual visual effects are deemed to be 'Long-term', 'Negative' and 'Moderate', which is not significant.

L7152 Local Road. At its closest point, L7152 is located 1km from the nearest proposed turbine (T01) and constitutes part of the road corridor pathway for the Proposed Grid Connection. As the Proposed Grid Connection will be underground, the greatest visual change will occur during the construction phase while the Proposed Grid Connection is being emplaced below the roadway. During the Operational Phase, the Proposed Grid Connection will not be visible. The overall residual visual effects are deemed to be 'Long-term', 'Negative' and 'Not Significant'.

M6 Motorway. At its closest point, M6 is located 3.9km from the nearest proposed turbine (T08). VP06 was captured on an overpass on the L7183 Local Road, representing one of the only locations with potential views from the elevated parts of the motorway. As most of M6 lies topographically below this point, following undulations in the hilly and flat landscape, VP06 can be taken to represent the theoretical precautionary scenario view from the motorway in a journey scenario. The M6 is reported to have Medium sensitivity, on account of the high volume of daily traffic. The magnitude of change of VP06 was considered to be Slight. The overall residual visual effects are deemed to be 'Long-term', 'Negative' and 'Not Significant'.

R348 Regional Road. R348 is located southeast of the proposed turbines traversing the landscape in an E-W orientation, passing with 2.5km of the proposed turbines at its closest point (near the townland of Cloonshecahill). VP13 was captured on R348 at Ballyfa, representing typical views experienced during

a journey scenario and for rural residential receptors in that area. The viewpoint is reported as High sensitivity on account of its proximity to the rural settlement New Inn and due to regional road users. The sensitivity of R348 is deemed to be Medium considering the setback distance from the proposed turbines and because there are no designated scenic routes or views along the road. The magnitude of change was considered to be Slight. VP13 is one of very few locations along the R348 with open views towards the proposed turbines. The overall residual visual effects are deemed to be 'Long-term', 'Negative' and 'Slight', which is not significant.

R339 Regional Road. R339 (Galway Rd) is located northwest of the proposed turbines, traversing the landscape from SW to NE, passing within approximately 9.5km of the proposed turbines at its closest point. R339 traverses from the NE through rural settlements, including Menlough and Monivea, into Galway City. VP08 was captured on the regional road in close proximity to Monivea. The viewpoint was considered to have a Medium sensitivity and a Negligible magnitude of change owing to the proposed turbines being seen as very small features on the distant horizon. The overall residual visual effects are deemed to be 'Long-term', 'Negative' and 'Not Significant'.

13.7.3.2.6 *Visual Effects on Local Residential Receptors*

The Proposed Wind Farm site is located in a sparsely populated flat landscape, well set-back from sensitive landscape and visual receptors, large population centres and receptors protected in local planning policy. During the site selection process, early stage LVIA appraisals identified local residential receptors as having potential to be adversely impacted by the proposed turbines with regard to visual impacts. Consequently, visual impact assessment on local residential receptors was considered during site selection and throughout the iterative design process for the Proposed Project.

This LVIA has determined that receptors beyond 2km of the proposed turbines will have very limited visibility of the proposed turbines. Therefore, this section focuses on local residential receptors within 2km of the proposed turbines, providing an overview of the geographic arrangement of residential dwellings and the different fields of view from areas around the Proposed Wind Farm site. The predicted visual effects of each area are reported for receptors to the west, north, east, south/southeast and southwest. The assessment uses analysis of aerial maps, photomontages and photowire visualisations with the intention of identifying the theoretical precautionary scenario for potential visual effects on residential receptors. As detailed in Chapter 5: Population and Human Health, the landscape surrounding the Proposed Wind Farm site has a significantly low population density (see Table 5.2 in Chapter 5); therefore, the predicted visual effects discussed below would be experienced by a very low number of receptors.

The Proposed Project exceeds the 500m setback distance from the proposed turbines recommended in the Guidelines (DoEHLG, 2006), thereby adhering to good wind farm design; no dwellings are within 500m of the proposed turbines. Due to the flat nature of the Proposed Wind Farm site and its surrounding topography, the elevation of higher vantage points within 2km of the proposed turbines, where greater visibility might be expected, does not exceed 100m AOD.

Viewpoints VP01, VP09, VP10, VP11 and VP12 are located within 2km of the proposed turbines, along with photowires PW-A and PW-G. These viewpoints were specifically selected to assess the visual effects on local receptors in close proximity to the proposed turbines. The viewpoints selected for the LVIA are sufficient to represent the residential receptors within the LVIA Study Area, including the *"distribution of population"* (para 6.18, GLVIA3).

Figure 13-20 below maps all residential dwellings within 2km of the proposed turbines and indicates the minimum setback distances according to the Guidelines (DoEHLG, 2006). The map overlays the Route Screening Analysis results previously presented, to show the visual screening classes recorded on site. It can be seen that most dwellings within 2km are located on roads with "Dense/Full" or "Intermittent/ Partial" roadside screening, indicating the reduced potential for visibility from these areas, notably to the southwest, south and southeast, as well as those in the northwest.

Map Legend

- Proposed Turbines
- Residential Dwellings within 2km
- Photomontage Viewpoints (VPs)
- Supplementary Photowire Viewpoints (PWs)

Wind Energy Development Guideline Buffer

- 500m Buffer (Guidelines, DoEHLG, 2006)

Route Screening Analysis

- 'Little/No' Visual Screening
- 'Intermittent/Partial' Visual Screening
- 'Dense/Full' Visual Screening

Drawing No.

Figure 13-20

Drawing Title

Local Residential Assessment

Project Title

Gannow Renewable Energy Development, Co. Galway

Scale	Project No.	Date	Drawn By	Checked By
1:24,000	240323	2025/09/09	JC	JW

Receptors to the West

From this vantage point, the proposed turbines will comprise a narrow field of view (see Figure 13-21 below) with the proposed turbines appearing in two clusters—one to the west (T01, T02) and one to the east (T03-T08). From this angle, T01, T02 and T03 in the foreground will be perceived at greater scale (i.e. will look larger) and the remaining turbines will be perceived to diminish in scale with distance.

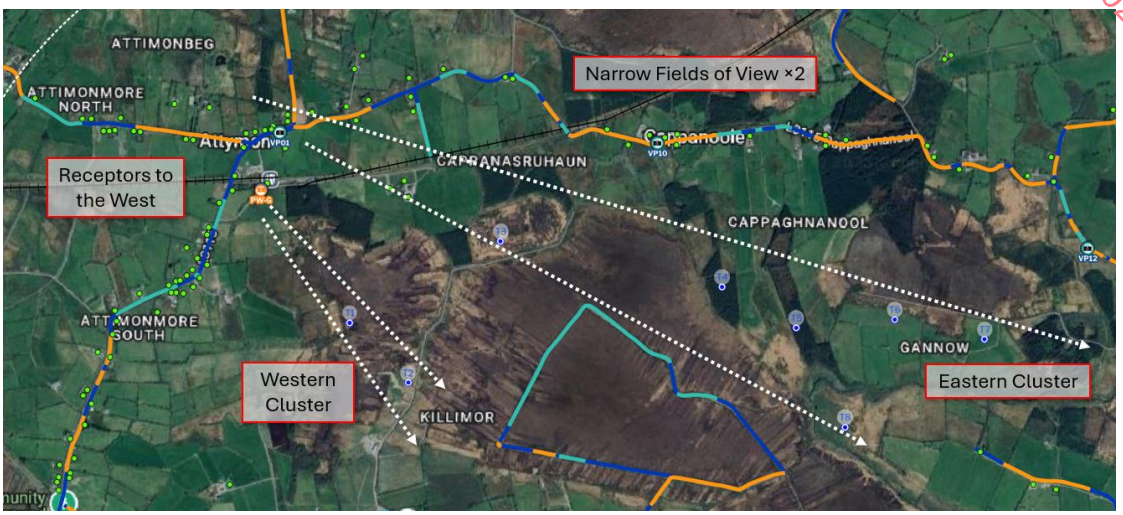


Figure 13-21 Two narrow fields of view for residential receptors to the west of the Proposed Wind Farm site

The effect of diminishing perceived scale with distance is demonstrated in Plate 13-10 below from Photowire PW-G which indicates the positioning of proposed turbines visually screened behind the forestry stand, with the closer proposed turbines appearing at greater scale and the farther proposed turbines appearing at modest scale. The separation is also evident in photomontage imagery of viewpoint VP01 Attymon National School as can be viewed in the *Photomontage Booklet* (see booklet).

Plate 13-10: Photowire image PW-G modified from Appendix 13-5

VP01 is located on L3115 adjacent to the Attymon National School and the closest residential receptors to the proposed turbines in the west. The viewpoint represents High-sensitivity receptors on account of the close proximity to the proposed turbines. The magnitude of change for VP01 was deemed Substantial, considering the perceived scale of the closest proposed turbines in the view. The effects are mitigated by visual screening by hedgerows and mature boundary vegetation along agricultural fields between receptors and the proposed turbines, as well as by visual screening from localised undulations in the low hilly terrain. Considering all mitigation factors, a residual visual effect of 'Moderate' was deemed to arise in relation to the receptors located adjacent to VP01. As seen on the map above, the roadside screening along this stretch of road is a mixture of 'Intermittent/Partial Screening' and stretches of 'Little/No Screening', with partial screening of the proposed turbines also likely to occur from residences along this part of the road.

Figure 13-22 below shows enlarged views of the western end of the Proposed Wind Farm site, with hedgerows and mature boundary vegetation between the dwellings and cutover bogland; the vegetation plays a role in screening the visual effects. This is the common situation for most dwellings within 2km of the proposed turbines. In some cases, the hilly terrain also limits visibility in the direction of the proposed turbines. These visual screening factors are also demonstrated in Plate 13-11 below showing of one existing streetscape in Attimonmore South, looking in the direction of the proposed turbines from the local road.

Figure 13-22 Hedgerows and mature boundary vegetation between receptors and the Proposed Wind Farm site

Plate 13-11: Hilly terrain and mature tree stands in the view direction of the Proposed Wind Farm site from the local road

Receptors to the North

From this vantage point approx. 740m setback, the proposed turbines will comprise a wide horizontal extent of the field of view with visual effects occurring in two directions from the stationary viewpoint—one field of view looking southwest and one looking southeast (see Figure 13-23 below). In each direction, the perceived scale (i.e. height and breadth) of the proposed turbines diminishes quickly with increasing distance owing to the flat, planar nature of the Proposed Wind Farm site and surrounding landscape, thereby reducing the scale of visual impact from this vantage point. In addition, most of the blades of the proposed turbines are seen primarily above the horizon, thereby minimising visual clutter with the existing treelines and visible topography.

In the southeast field of view, proposed turbines T04 to T07 are relatively spread out. Looking to the southwest, proposed turbines T01-T03 appear clustered. In a journey scenario along L3115 at the top of the Site in an E-W orientation, the proposed turbines will be visible in succession, with T03 and T04 appearing at the greatest perceived scale as they are closest to the receptors. These visual effects are demonstrated in the photomontage imagery of VP10 Cappanoole as viewed in the *Photomontage Booklet*, which shows both fields of view; see booklet.

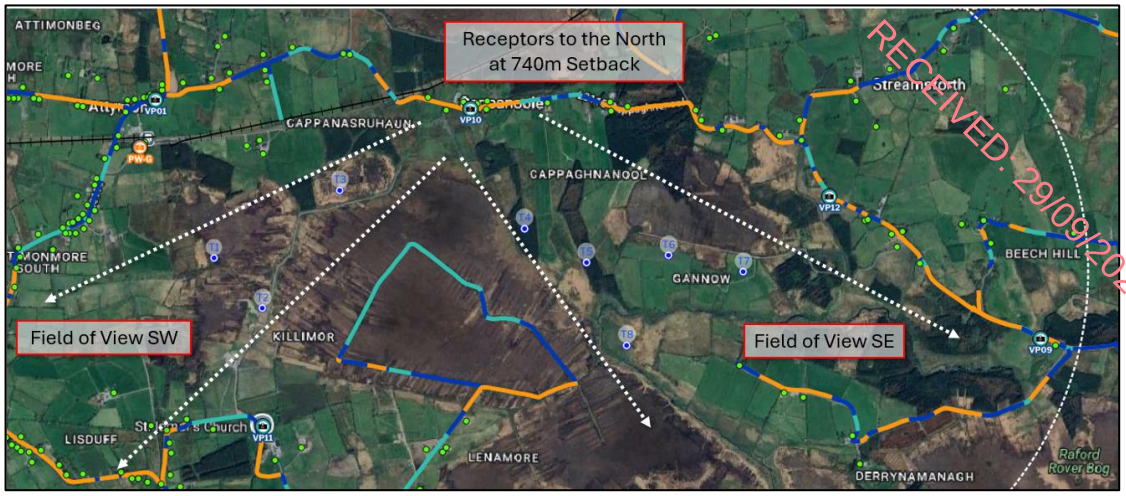


Figure 13-23 Two fields of view for residential receptors to the north of the Proposed Wind Farm site

Plate 13-12 below shows the existing open view from the road directly north of the location of proposed turbine T03, indicating the existing view looking towards the location of the Proposed Wind Farm at c.740m setback distance.

Plate 13-12: Existing streetscape view at 740m buffer in Cappanasruhaun

VP10 is located adjacent to the closest residential receptors to the proposed turbine in the north, along the L3115 local road. This viewpoint was considered to be a High sensitivity viewpoint, on account of the residential receptors represented that are located in close proximity to the proposed turbines. The magnitude of change for this viewpoint was deemed to be Substantial, owing to the proposed turbines being seen in two directions. A residual visual effect of "Moderate" was deemed to arise in relation to the receptors located adjacent to the viewpoint, considering the variable range in scale of the proposed turbines in the view, the degree of visual screening by mature trees and vegetation in the foreground and mid-ground, and the nature of separation.

As can be seen in VP10 in the *Photomontage Booklet*, the long-ranging views towards Slieve Aughty Mountains in the far south of the LVIA Study Area are within the centre field-of-view, with the proposed turbines being viewed at the periphery on either side, thereby not obstructing the long-ranging views. There is small number of additional receptors located further east along L3115 towards the hilly terrain to the north. As seen on the map above, the roadside screening along this stretch of road is primarily "Dense/Full" with small pockets of more open views, which aids in mitigating the visual effects. As a result, there is a low number of receptors which may experience visual effects similar to those shown in VP10; most of the residences in this immediate area are likely to have far less visibility than what is shown in VP10 and therefore experience a lesser degree of visual impact.

Receptors to the East

From this vantage point, the proposed turbines will visually comprise one relatively narrow field of view (see Figure 13-24 below) in which all proposed turbines appear positioned relatively close to each other. The terrain of rolling hills with low-intensity agriculture and land use of extensive forestry stands extensively limits visibility of full turbines.

Figure 13-24 Narrow field of view for residential receptors to the east of the Proposed Wind Farm site

In most cases, only blades can be seen above the top of the horizon; this effect is demonstrated in photomontage imagery of VP09 L3118 at Beech Hill (see Plate 13-13 below), which represents views of most receptors in the east. VP09 is located nearly 2km from the proposed turbines. This viewpoint was given a Medium sensitivity, on account of the greater distance from the proposed turbines than other receptors within 2km. The magnitude of change was deemed to be Slight, considering the degree of visual screening as previously described. A residual visual effect of "Slight" was deemed to arise in relation to the receptors located adjacent to the viewpoint. This view is representative of most views for receptors located in the hilly and wooded terrain east of the proposed turbines within 2km.

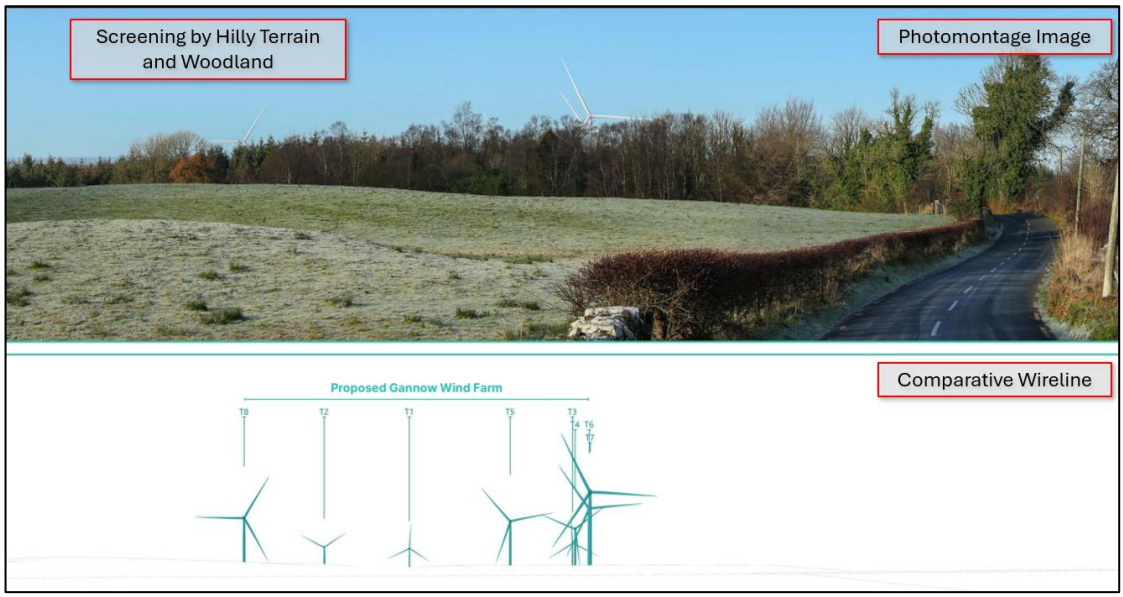


Plate 13-13: Photomontage VP09 modified from Photomontage Booklet

Another viewpoint from the east, VP12 Gannow, was captured approximately 660m from proposed turbine T07 and represents one of the only locations with open views of all proposed turbines, demonstrating the effect of seeing all proposed turbines at once with the greatest degree of visual

exposure (see Plate 13-14 below). The visual effects shown in VP12 represent a theoretical precautionary scenario and will only be experienced by a very small number of localised receptors; most receptors are likely to have a lesser degree of visual impact than what is shown in the image.

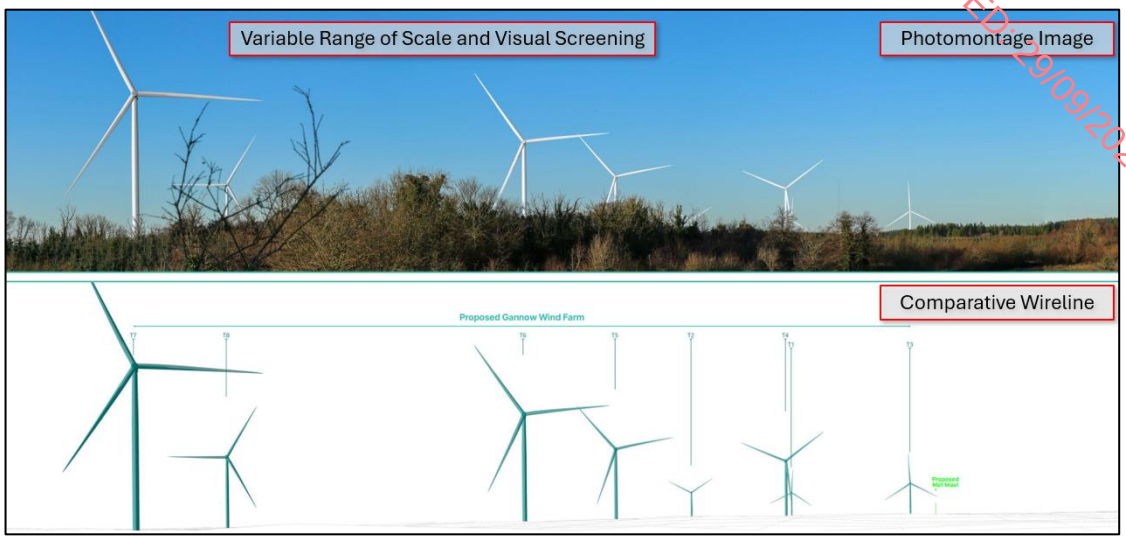


Plate 13-14: Photomontage VP12 modified from Photomontage Booklet

This viewpoint was given a High sensitivity, on account of the residential receptors represented that are located in close proximity to the proposed turbines. The magnitude of change was deemed to be "Moderate," considering the degree of visual screening, the variable range in scale and relatively narrow extent of the view. The proposed turbines are spaced appropriately in a curved linear array, such that they read coherently within the landscape and are of acceptable layout according to the recommended siting and design of turbines for Hilly and Flat Farmland in the Guidelines (DoEHLG, 2006) and cognisant of the Draft Guidelines (DoHLPG, 2019). A residual visual effect of "Moderate" was deemed to arise in relation to the receptors located adjacent to the viewpoint.

Receptors to the South and Southeast

Figure 13-25 Wider field of view for residential receptors to the south and southeast of the Proposed Wind Farm site

From this vantage point at nearly 2km from the proposed turbines, the proposed turbines will comprise a wide extent of the view (see Figure 13-25 above) with all proposed turbines relatively evenly spaced and primarily visually screened by intervening boundary vegetation and mature deciduous tree stands, as well as to some extent by undulations of the rolling hills terrain.

A very small number of receptors in Lenamore are closer to the proposed turbines and would likely experience two fields of view in succession, one looking westward at proposed turbines T01-T03 and one looking eastward at proposed turbines T04-T08. From the southeast angle of Cloonshecahill, proposed turbine T08 is in the closest position but the distance is such that all the proposed turbine are perceived with an even height profile and no one proposed turbine appears prominent. This effect is demonstrated in Photowire PW-A (Plate 13-15 below) which indicates that all proposed turbines in the view would be partially or entirely visually screened by vegetation and hilly terrain.

Plate 13-15: Photowire image PW-A modified from Appendix 13-5 showing even height profile and visual screening

Receptors to the Southwest

From this vantage point, the proposed turbines will comprise a wide field of view with clusters of turbines in two directions, one view looking towards the western cluster T1-T3 and one looking towards the eastern cluster proposed turbines T04-T08 (see Figure 13-26 below).

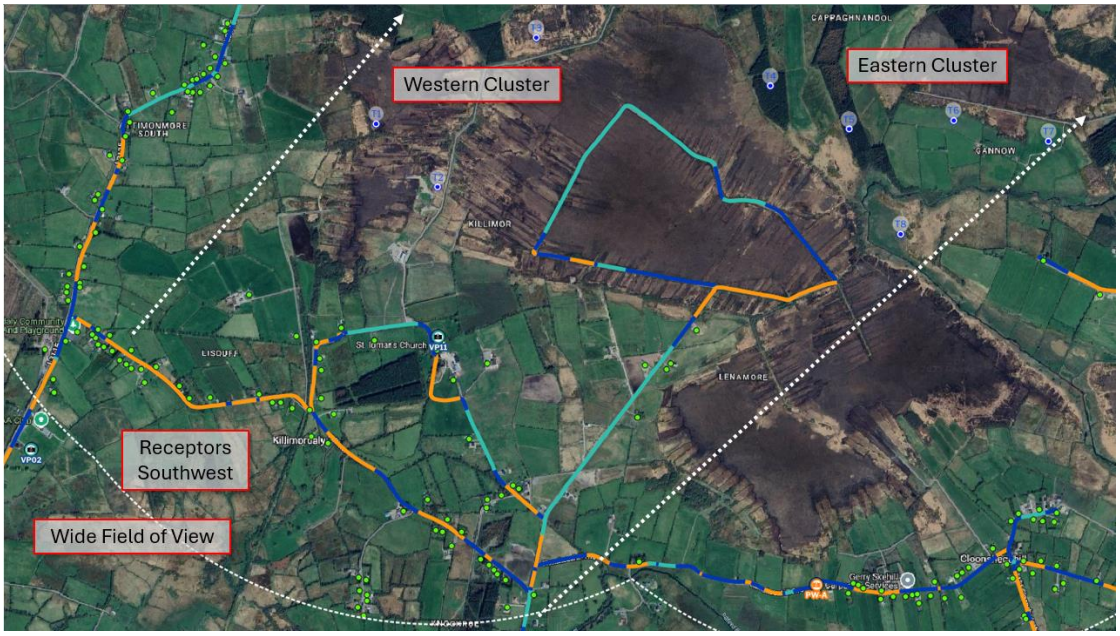


Figure 13-26 Wider field of view for residential receptors to the south and southwest of the Proposed Wind Farm site

In most cases, mature deciduous tree stands and boundary vegetation along the agricultural fields visually screen views of the proposed turbines. To the north, proposed turbines T01, T02 and T03 are closest to the viewer, appearing separate from each other and with the greatest perceived scale. To the northeast, proposed turbines T04-T08 are farther away and partially visually screened by the intervening terrain with localised undulations, also with the proposed turbines appearing separate from each other. These visual effects are demonstrated in photomontage imagery for VP11 Killimordaly/St.

Iomar's Church and Graveyard, see Plate 13-16 below. The visual effects shown in VP11 represent a theoretical precautionary scenario and will only be experienced by a very small number of localised receptors; most receptors are likely to have a greater degree of visual screening than what is shown in the image.

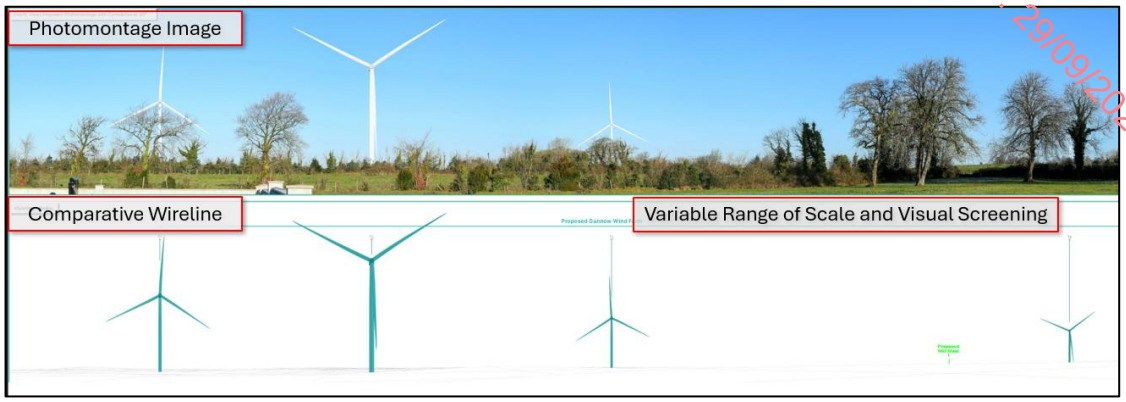


Plate 13-16: Photomontage VP11 – North View modified from Photomontage Booklet

VP11 is located adjacent to St. Iomar's Church and residential receptors in the southwest, along the local road network connecting Lisduff, Killimordaly and Knockroe. This viewpoint represents High-sensitivity receptors, on account of the close proximity to the proposed turbines. The magnitude of change for this viewpoint was deemed to be "Moderate," considering the variable range in scale of the visible turbines and the degree of intervening visual screening (see Plate 13-16 and Plate 13-17).

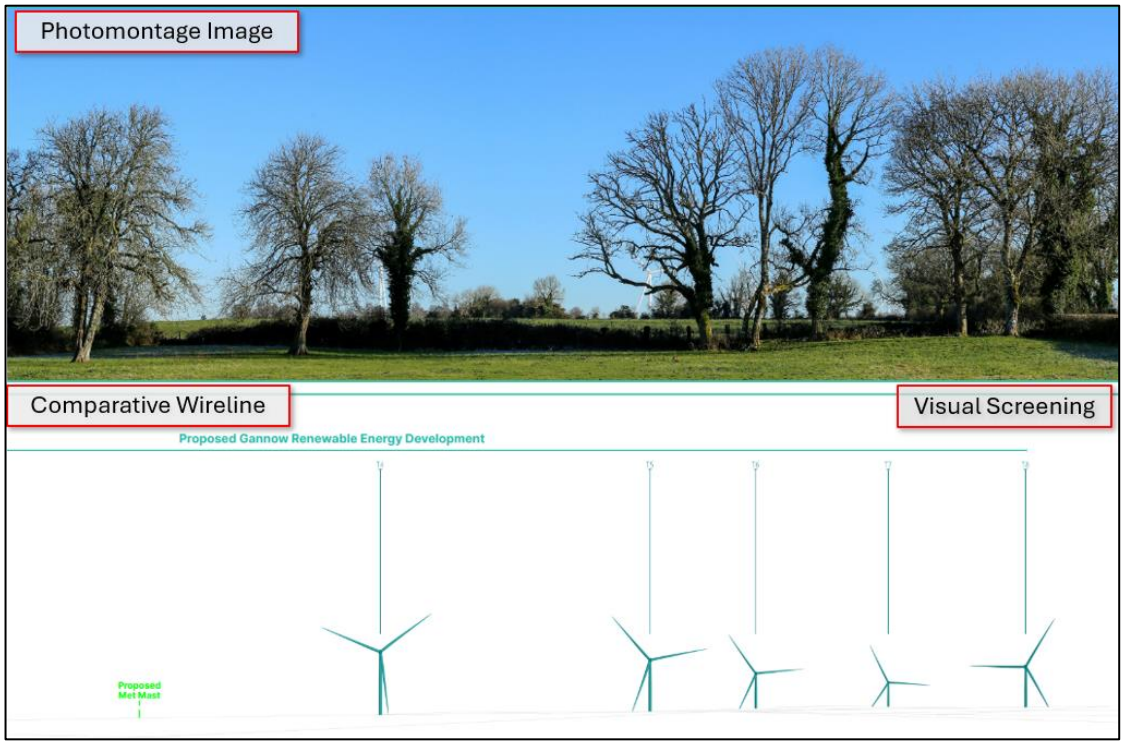


Plate 13-17 Photomontage VP11 – Northeast View modified from Photomontage Booklet

A residual visual effect of "Significant" is predicted for the receptors located adjacent to the viewpoint; it is emphasised that the predicted visual effects shown in VP11 represent a theoretical precautionary scenario and will only be experienced by a very small number of localised receptors; most receptors are likely to have a greater degree of visual screening than what is shown in the image. As seen on the map above, the roadside screening along the local road network is primarily "Dense/Full," which aids in mitigating visual effects for receptors in this area. In addition, from this vantage point, the proposed

turbines are seen beyond the ridgeline of the short-range horizon, with intervening mature scrub and deciduous vegetation providing partial or complete visual screening for most of the proposed turbines.

13.7.3.2.7 Visual Effects: Ancillary Project Elements (Non-Turbine Components)

For the purposes of this LVIA, a number of individual elements of the Proposed Project ancillary to the proposed turbines, have been grouped together for discussion of visual effects. These operational project elements that are part of the Proposed Project, include the access roads, turbine hardstand areas, met mast components, and proposed onsite 38kV substation. The Proposed Grid Connection may give rise to potentially similar visual effects. Details of these components of the Proposed Project and the required works to construct them are contained in Chapter 4 of this EIAR. Visual effects arising from these ancillary elements have been factored into the assessment of specific receptors discussed previously and the impact assessments from specific viewpoints as reported in Appendix 13-3.

Due to the visual screening by local hedgerows and treelines among the agricultural fields and hilly terrain in the east of the Proposed Wind Farm, most visibility of the lower (shorter/surface level), less visually prominent Proposed Project components will occur only in their immediate surroundings; hence, the visual effects will be localised and are predominantly confined to within the Proposed Wind Farm itself.

Proposed Onsite 38kV Substation

The proposed onsite 38kV substation and its associated components including the control building and storage containers located within the footprint of the proposed onsite 38kV substation constitute one of the larger and potentially more visually prominent elements of the ancillary infrastructure. The footprint of the proposed onsite 38kV substation compound measures approximately 1,783m^2 in area and is located at the west end of the Proposed Wind Farm site approx. 560m northwest of proposed turbine T01 and 230m east of L3115 local road. The maximum height of buildings associated with the proposed onsite 38kV substation is the control building at 21m and the temporary construction compound is likely to be visible from parts of L3115, which has 'Intermittent/Partial' and 'Little/No' visual screening along the local road at its closest points (see Figure 13-27 below). Intervening hedgerows and boundary vegetation around the agricultural fields aid in mitigating any visual effects associated with the proposed onsite 38kV substation.

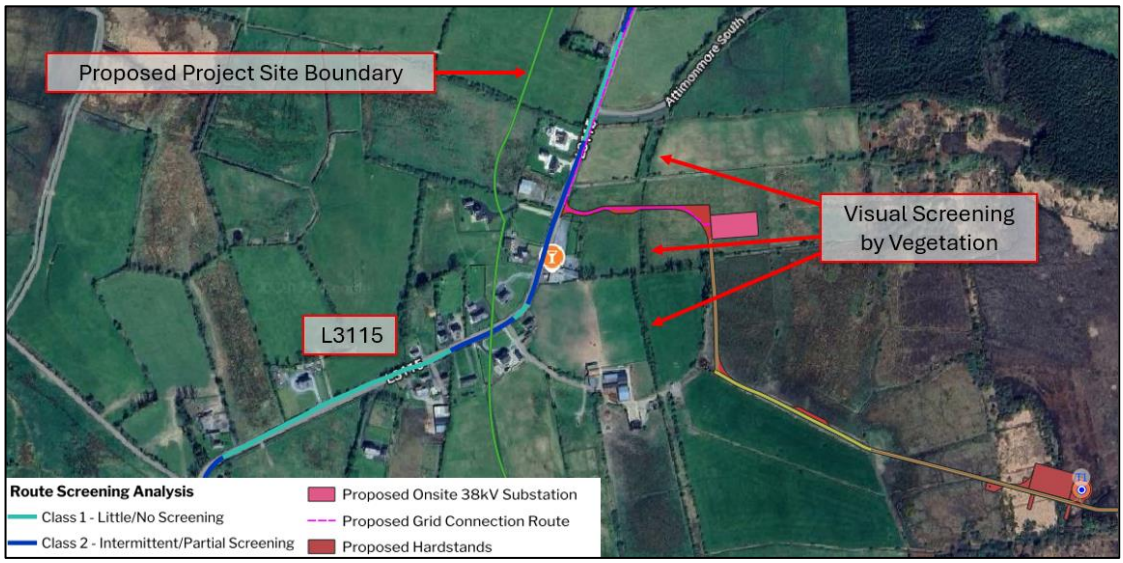


Figure 13-27 Visual screening along L3115 adjacent to Proposed Onsite 38kV Substation

Meteorological (Met) Mast

One proposed met mast is proposed as a part of the Proposed Wind Farm. This will be a slender structure, 30m in height, and will not be an imposing structure in terms of visual impact. The landscape and visual effects of the proposed met mast will be localised, considering that it will be significantly less visible than any proposed turbine given its shorter and slender lattice form. As shown in the *EIAR Volume 2: Photomontage Booklet*, the met mast is fully screened from view in all VPs which it can be noted on the comparative wirelines: VP10, VP11, VP12 and VP13. As shown in the imagery, due to visual screening from vegetation and hilly terrain, views of the met mast are limited.

Site Access Roads and Hardstand Areas

The proposed access roads and hardstand areas are flat features. They will be most visible within their immediate surroundings; therefore, any landscape and visual effects will be very localised. Every use will be made of the existing tracks within the Site. Some tracks will be upgraded appropriately and the construction of new roads will also be required to connect all components of the Proposed Project. In time, following establishment and maturity of planting proposed as part of the BMEP (Appendix 6-4), the site access road will be mostly visually screened from view, mitigating visual effects.

13.7.3.2.8 *Assessment of Turbine Range Envelope*

The photomontage impact assessment tables in Appendix 13-3 include an additional section for viewpoints VP12 Gannow and VP13 Ballyfa – '*Turbine Envelope Range*'. This section includes an analysis of the photomontages and the difference in the visual effects due to the different turbine models used: Scenario , Scenario 3, and Scenario 4. For both viewpoints, the visual difference can only be discerned with the aid of the comparative wireline; please refer to Appendix 13-1 LVIA Methodology for the specific measurements of the scenarios which were assessed.

The difference arising from the range is most evident from VP12 which is located in close proximity (660m) to the nearest proposed turbine (T07). The visual difference arising between the scenarios is hardly discernible from the medium-range view in VP13, even with the use of the comparative wireline. For both viewpoints VP12 and VP13, the difference in magnitude of change arising from the use of different turbine models is negligible. Irrespective of which model in the range is used, the determination of likely significant residual visual effects will not be altered for either viewpoint.

As demonstrated by the turbine ranges presented in the *Photomontage Booklet*, irrespective of which combination of tip height, hub height and rotor diameter within the proposed range outlined in this application is installed on site, the significance of residual landscape and visual effects will not be altered.

13.7.3.3 Cumulative Landscape Effects during Operation

As reported and mapped earlier in Section 13.5, there are no other existing, permitted or proposed turbines within LCU-5f North Loughrea Unit. Overall, it was found that the Proposed Project is likely to have no contribution or limited contribution to cumulative landscape effects on designated character areas, explained as follows.

In terms of cumulative effects on the physical fabric of the landscape, it is noted that no other wind farm developments were identified in the same localised landscape as the Proposed Project, therefore there is no potential for localised cumulative landscape effects to occur in this regard.

In terms of cumulative effects on the character of landscapes in the LCA Study Area, we consider the extent to which two or more wind energy developments are introduced into the landscape, thus potentially affecting the overall character by way of changing key LCA characteristics. The key characteristics across the study area (noted in Appendix 13-2) include long-occupied working landscapes with relatively high concentrations of settlements and/or infrastructure, extensive low-lying

plains, extensive bog areas, and stone-walled fields, and all character areas are deemed Low sensitivity on account of these characteristics (refer to Appendix 13-2). General characteristics of the broader LCT Central Galway Complex Landscape include areas of local sensitivity based on local amenities and historic sites and open countryside with frequent panoramic views.

Based on the currently available data of other wind energy developments, in-combination cumulative landscape effects with the Proposed Project are not predicted to accumulate considering first, that there is almost no visual connection between the known development (proposed Cooloo Wind Farm, 9 no. turbines) and the Proposed Project and second, the setback distance between the known development and the Proposed Project is >18km. The key landscape characteristics of low-sensitivity features listed above will not be affected.

13.7.3.4 Cumulative Visual Effects during Operation

The potential contribution of the Proposed Project to cumulative visual effects with existing, permitted and proposed wind energy developments in the 20km LVIA Study area are discussed in the tables of Appendix 13-3: Photomontage Viewpoint Impact Assessment Tables and summarised in this section. The discussions of potential contribution were used to inform the residual visual effect ratings reported both in Appendix 13-3 and above in the previous sections.

As a reminder, only the indicative locations (general point features) for 2 out of 3 no. wind energy developments in the LVIA Study Area are available as public data at the time of writing this LVIA; the proposed Derryfadda Wind Farm is known to potentially comprise 14 no. turbines but has no associated layout that can be used for assessment, the proposed Killuremore Wind Farm has no known number of turbines or layout that can be used for assessment. The indicative location points of Derryfadda and Killuremore are mapped previously in the Cumulative Context Map. The remaining cumulative development is the proposed Cooloo Wind Farm (9 no. turbines) located at 18.3km from the proposed turbines.

Overall, based on the currently available data on cumulative wind farms in the LVIA Study Area, it was found at all 13 no. viewpoints that the Proposed Project will have no contribution to cumulative visual effects. In a future receiving environment, no cumulative visual effects are predicted to arise between the proposed Cooloo Wind Farm and the Proposed Project.

In a future receiving environment, the indicative locations of proposed Killuremore Wind Farm and proposed Derryfadda Wind Farm would be located approx. 15km and 20km (respectively) from the proposed turbines, constituting some potential for 'successional in-combination' or 'sequential in-combination' effects in an 'uncertain' scenario, meaning that views may occur when a receptor turns their head or travels from one location to another in a journey scenario. Given the distance of the indicative locations to proposed turbines and the nature of the flat landscape with hilly undulations and roadside visual screening, the potential for cumulative visual effects in both cases is likely to be very limited; however, based on currently available data on cumulative wind farms in the LVIA Study Area, it is not possible to assess or predict these effects.

13.7.4 Decommissioning Phase Effects

The landscape and visual effects during the decommissioning phase are anticipated to be of a similar nature as those occurring during the construction phase.

The important element of decommissioning from an LVIA perspective is the dismantling and removal of the proposed turbines. This will occur for a limited period of time and will predominately involve cranes adjacent to the proposed turbines during the dismantling process. Upon decommissioning of the Proposed Wind Farm, the proposed turbines will be disassembled in reverse order to how they were erected. The proposed turbines will be disassembled with a similar model of crane that was used for

their erection. The proposed turbines will likely be removed from the Proposed Wind Farm site using the same transport methodology adopted initially for delivery.

Turbine foundations/handstand would remain in place underground and would be covered with earth and reseeded as appropriate. This naturalisation process shall revert the landscape of the Proposed Wind Farm back to a condition similar to the current landscape baseline.

Removal of the proposed turbines and ancillary infrastructure (except the proposed onsite 38kV substation and access roads) from the Proposed Wind Farm during decommissioning will result in 'Short-Term', 'Slight', 'Negative' visual effects, which is not significant. The operational phase visual effects of the proposed onsite 38kV substation as permanent fixtures in the landscape are previously described in Section 13.7.3.2 above. The residual landscape and visual effects associated with the underground Proposed Grid Connection are reported above as 'Imperceptible' owing to the connection route being underground. A 'Decommissioning Plan' has been prepared (Appendix 4-6 of this EIAR), the details of which will be agreed upon with the Local Authority prior to any decommissioning. The Decommissioning Plan will be updated prior to the end of the operational period in line with decommissioning methodologies that may exist at the time and will be agreed upon with the competent authority at that time.

13.8 Conclusion

The Proposed Project is an appropriately designed development, sited in a rural, modified working landscape of significantly low population density deemed capable of accommodating wind energy development. This LVIA assessed the likely significant effects of the Proposed Project on key sensitive landscape and visual receptors, as well as visual effects on local residential receptors in close proximity to the proposed turbines, including cumulative effects with other wind energy developments within 20km of the proposed turbines. The Proposed Wind Farm adheres to good wind farm design with respect to the location, spatial extent, spacing, layout, height and cumulative effect of the proposed turbines in Hilly and Flat Farmland landscape type prescribed by the Guidelines (DoEHLG, 2006). The LVIA was informed by desk study, field surveys, on-site visibility appraisals, GIS analysis including Zone of Theoretical Visibility (ZTV) and Route Screening Analysis (i.e. on-the-ground visibility appraisal within 3-5km), as well as the production of verified photomontages.

The LVIA (Chapter 13 of the EIAR) is accompanied by one volume booklet and five appendices as follows:

- *EIAR Volume 2: Photomontage Booklet*, presenting photomontage visualisations of the proposed turbines from 13 no. representative viewpoints VP01-VP13, including modelling of other existing, permitted and proposed wind energy developments;
- *Appendix 13-1: LVIA Methodology*, outlining the guidance and detailed methodology used for the assessments conducted in the LVIA;
- *Appendix 13-2: Landscape Character Area (LCA) Assessment Tables*, assessing landscape and cumulative effects of 4 no. designated LCAs scoped in for assessment;
- *Appendix 13-3: Photomontage Visual Impact Assessment Tables*, assessing visual and cumulative visual effects at viewpoints VP01-VP13 presented in the *Volume 2 Photomontage Booklet*;
- *Appendix 13-4: LVIA Baseline Map*, an A0-size map showing all baseline landscape features, viewpoints, and visual receptors;
- *Appendix 13-5: Photowire Visualisation Booklet*, presenting photowires (early-stage draft photomontages) from 7 no. alternative viewpoint locations throughout the LVIA Study Area that were not included in the *Volume 2 Photomontage Booklet*; photowires do not include modelling of cumulative developments and are not assessed as part of the LVIA process.

All 8 no. proposed turbines and Proposed Wind Farm infrastructure are sited within landscape of Co. Galway designated as "Low" sensitivity in the Galway County Development Plan (GCDP) 2022-2028 defined as *"Unlikely to be adversely affected by change"*. The proposed Grid Connection underground electrical cabling route is sited within the same.

Considering the 20km LVIA Study Area, no residual Significant effects will occur on designated landscape and visual receptors or scenic sensitivities of county, regional or national renown. There are no designated or protected views as set out in the GCDP 2022-2028 within 10km of the proposed turbines and none with any visibility of the proposed turbines within 20km. There are no Metropolitan Areas, Key Towns, or Small Growth Towns as defined in the GCDP 2022-2028 within 20km of the proposed turbines. There are no recreational, popular cultural heritage or tourism destinations located within 5km of the proposed turbines and none with the potential for visual effects within 10km.

Within the Proposed Wind Farm site, all proposed turbines T01-T08 are sited within land area zoned as *Open to Consideration* to wind energy development in the GCDP Local Authority Renewable Energy Strategy (LARES). The landscape type and character of the area where the proposed turbines are sited comprises modified working landscape types of low sensitivity and can effectively accommodate wind energy development, i.e. agricultural fields, cutover peatlands, and commercial forestry.

The proposed turbines at 185m tip height, deemed the essential aspect of the Proposed Project from an LVIA perspective, are sited in primarily flat terrain with localised undulations and mature boundary vegetation that provide visual screening from most receptors beyond 2km of the proposed turbines. A range of turbine model scenarios was assessed in the LVIA, with a tip height ranging from 178-185m, a hub height ranging from 101-104m and a rotor diameter ranging from 149-163m. For the avoidance of doubt, the turbine model scenario with the greatest potential to result in landscape and visual effects (Scenario 1) was assessed in all visualisations, and additional representative visualisations of the Scenario 2, Scenario 3, and Scenario 4 were also produced for assessment. Irrespective of which turbine scenario is used, the determination of residual visual effects in the visual impact assessment tables will not be altered.

13 No. photomontage viewpoints were selected and assessed to represent a good geographic spread of views from within the 20km LVIA Study Area, focussed in the direction of the proposed turbines. The LVIA determined the potential for visual effects ranging from "Not Significant" and "Slight" at all viewpoints greater than 1.8km from the proposed turbines, and visual effects of "Moderate" at viewpoints within 1km. Regarding the potential for visual effects on local residential receptors within 2km of the proposed turbines, the LVIA determined that, in general, when viewing the proposed turbines from the east or west, the narrow field of view of the proposed turbines in a curved, linear array causes the perceived scale (height and breadth) of turbines to diminish quickly with distance, thereby mitigating visual impacts. The potential for "Significant" residual visual effects was predicted for one viewpoint captured at a destination of local importance located approximately 695m south of the nearest proposed turbine (T02), mainly owing to the greater perceived scale of 3 no. of the proposed turbines visible from that vantage point. The viewpoint imagery was captured from the only location in that vicinity with unobstructed views of as many of the proposed turbines as possible, thereby representing the greatest degree of visual effects. The actual number of receptors likely to experience these effects is very low as the landscape surrounding the Proposed Wind Farm site has a significantly low population density, and other factors such as roadside screening from dense, mature vegetation and undulations in local topography would allow for most receptors in the vicinity to experience visual effects of a lesser degree.

Other factors contributing to the mitigation of visual impacts include the heavy degree of "Dense/Full" visual screening by mature forestry and boundary vegetation along the local road networks within 3-5km of the proposed turbines, as well as visual screening by localised undulations in topography which allow a sense of set-back from most receptors in cases where the proposed turbines are partially visible. In addition, from a distance, the layout of the proposed turbines ensures a relatively even height profile and even spacing between turbines, with the blades typically viewed above the horizon, slightly

staggered among localised low hills, thereby meeting good aesthetic design as recommended in best practice guidance for LVIA and wind energy development.

4 no. designated Landscape Character Units (LCUs) were assessed for effects on landscape character within 15km of the proposed turbines, including cumulative effects. All LCUs were deemed to be "Low" sensitivity and no "Significant" landscape effects are predicted to occur. Factors contributing to the mitigation of effects on landscape character included the vast areas of the LCUs where no existing, permitted or proposed wind farms are sited, and the long distance between the proposed turbines and other developments which ensures that material alteration of the landscape is confined to individual areas and that visual connection between developments is minimised. No key sensitivities of the LCUs are predicted to be affected as a result of the Proposed Project.

1 no. recreational trail system (Slieve Aughty Trails) located in a High-sensitivity landscape as designated in the GCDP 2022-2028, situated 18.4km south of the proposed turbines, was scoped in for assessment and had a determined residual visual effect of "Not Significant." 5 no. settlements, 5 no. transport routes, 1 no. popular cultural heritage site, 2 no. elevated vantage points located between 5-10km from the proposed turbines, and 4 no. destinations of local importance located within approx. 2km of the proposed turbines were scoped in for assessment. No "Significant" residual visual effects are predicted for any receptors located greater than 1km from the proposed turbines; the predicted visual effects for receptors within 1km were reported previously in this conclusion section in relation to the photomontage viewpoint assessment. The LVIA focussed on assessing the visual impact on local residential receptors (those within 2km of the proposed turbines) considered high-sensitivity owing to their close proximity and determined that most receptors within 2km—those to the west, north, east, south and southeast of the Proposed Wind Farm site—are predicted to experience "Slight" to "Moderate" visual effects, which are not significant.

The presence of wind turbines in the rural landscape of Ireland is consistent with evolving national climate policy and the changing character of Ireland's working landscapes. The focus for the LVIA of the Proposed Project was on a combination of distance, arrangement, location and potential disruption to key scenic sensitivities, rather than simply on whether turbines are visible or not from a particular vantage point. The outcome of the LVIA, with regards to the EPA, 2022 definition of significance, is calibrated in the overall context of LVIA of wind energy developments in Ireland as well as what is acceptable in the context of emerging baseline trends and the acceptability of wind turbines within views as a result of national policy. The Proposed Project is therefore considered acceptable in this context and is in alignment with emerging baseline trends.