

Environmental Impact Assessment Report (EIAR)

Cunlaghfadda Green
Energy Project, Co. Mayo

Chapter 13 – Landscape and Visual



13. LANDSCAPE AND VISUAL

13.1 Introduction

This chapter comprises a Landscape and Visual Impact Assessment (LVIA). The LVIA assesses the likely significant effects of the proposed Cunlaghfadda Wind Farm (the Proposed Project) on landscape and visual amenity. The LVIA reported in this chapter was informed by desktop studies and receptor mapping, site visits, verified photomontages, and an impact assessment methodology which follows best practice guidance for LVIA. The LVIA also includes assessment of cumulative landscape and visual effects. This chapter is accompanied by one volume and five appendices:

- *EIAR Volume 2: Photomontage Booklet*, A1 Banner Photomontage Booklet including verified photomontage visualisations from 19 No. representative viewpoints;
- *Appendix 13-1: LVIA Methodology*, outlining the detailed methodology and guidance used for the assessments reported in this Chapter;
- *Appendix 13-2: LCA Assessment Tables*, assessment of effects on designated Landscape Character Areas (LCAs);
- *Appendix 13-3: Photomontage Visual Impact Assessment Tables*, a visual impact assessment of the 19 No. representative viewpoints presented in the *Photomontage Booklet*;
- *Appendix 13-4: A0 LVIA Baseline Map*, an A0 scale map showing all baseline landscape and visual receptors, ZTV mapping and viewpoints;

13.1.1 Statement of Authority

MKO has developed extensive expertise and experience over the last 15 years in the Landscape and Visual Impact Assessment of a range of projects, including multiple large scale wind energy developments.

This LVIA was written by Dija Mazonaite with guidance and direction from Jack Workman, and oversight from Michael Watson.

Dija Mazonaite is a Project Environmental Scientist - LVIA Specialist at MKO. Dija has a BSc (Hons) in Geography & Geosystems, PGCert in Marine Spatial Planning, and was recognised as a University Scholar at the University of Galway. Dija's primary role at MKO is producing and reviewing the LVIA chapter of EIA reports for large-scale infrastructure developments. Since joining MKO, Dija has conducted and project managed all aspects of LVIA for a broad range of commercial infrastructure developments including wind and solar energy projects, grid infrastructure, extraction industry and Strategic Housing Developments. Dija's key strengths include proficiency in GIS tools such as ArcGIS and QGIS, conducting landscape and visual impact assessments and capturing image data through drone surveys and photomontages. Dija is an affiliate member with the Landscape Institute and is an active participant of the Irish National Landscape Forum. Dija also regularly delivers guest lectures for students on the topic of LVIA at top third level institutions in Ireland.

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, including large-scale wind energy 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 and 2024 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.

Michael Watson is the Environment Division Director in MKO, he 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 work environment and promote continuous professional development for employees. Michael also has a Bachelor of Arts Degree in Geography and Economics from NUI Maynooth, is a Member of IEMA, a Chartered Environmentalist (CEnv).

13.1.2 Proposed Project Description

A detailed description of the Proposed Project can be found in Chapter 4: 'Description of the Proposed Project' of this EIAR. Section 4.1 of Chapter 4 describes the Proposed Project and its component parts. The following references to the Proposed Project are used throughout this chapter, as per the definitions in Chapter 1.

- Where the '**Proposed Wind Farm**' is referred to, this refers to turbines and associated foundations and hardstanding areas, including access tracks, underground cabling, permanent meteorological mast, temporary construction compound, peat and spoil management, biodiversity enhancement, tree felling, site drainage, operational stage signage, turbine delivery route and junction accommodation works and all ancillary works and apparatus. The Proposed Wind Farm is described in detail in Chapter 4, Section 4.4.1 of this EIAR.
- Where the '**proposed turbines**' is referred to, this refers to the wind turbines described in detail in Chapter 4, Section 4.4.1.1 of this EIAR
- Where the '**Proposed Grid Connection**' is referred to, this refers to the proposed 110kV onsite substation, underground 110kV cabling and end masts connecting the proposed 110kV substation to the 110kV Castlebar to Cloon overhead line, access tracks and all ancillary works and apparatus. The Proposed Grid Connection Route is described in detail in Chapter 4, Section 4.4.2 of this EIAR.
- Where the '**Proposed Project**' is referred to, this encompasses the entirety of the project (Proposed Wind Farm and Proposed Grid Connection) for the purposes of this EIA in accordance with the EIA Directive. The Proposed Project is described in detail in Chapter 4 of this EIAR.
- Where '**the Site**' is referred to, this relates to the primary study area for the EIAR, as delineated by the EIAR Site Boundary in green as shown on Figure 1-2 of the EIAR and encompasses an area of approximately 165 hectares.

The Proposed Wind Farm comprises 7 no. wind turbines (tip height of 160m) and associated foundation and hardstand infrastructure, a meteorological mast (height 92m), site access tracks, and other associated temporary and ancillary infrastructure. The Proposed Grid Connection comprises an onsite 110kV loop in substation, underground electrical cabling between the substation and the 110kV Castlebar to Cloon overhead line and all associated infrastructure.

13.1.2.1 Essential Aspects of the Proposed Project from an LVIA Perspective

This LVIA follows ‘The Guidelines for Landscape and Visual Impact Assessment Third Edition’ (hereafter, GLVIA3) published by Landscape Institute (LI) & Institute of Environmental Management and Assessment (IEMA) (2013) as well as ‘Notes and Clarifications on Aspects of GLVIA3: Landscape Institute Technical Guidance Note 2024-01’ (hereafter, LI TGN 24-01) published by the Landscape Institute (LI) (2024). This guidance 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.”

For the Proposed Project assessed in this Chapter, it is deemed that 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. In this regard, the proposed turbines are deemed to be the ‘essential aspect’ of the development which will give rise to effects on the landscape and visual amenity and therefore are the primary focus of the LVIA.

The proposed 92m meteorological mast is also a tall vertical structure; therefore, it is included in the photomontage booklet and is fully considered throughout this chapter. However, it will be less visible than any of the proposed turbines given its slender lattice form and moderately shorter height.

Other components of the Proposed Project, such as the proposed 110kV substation, and end masts, are not deemed to be as visually prominent as the proposed turbines, however, they do have the potential to give rise to localised landscape and visual effects. These elements are given full consideration and assessment throughout this chapter.

13.1.3 Mitigation by Best Practice Wind Farm Design

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 Project 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 ‘**the Draft Guidelines (DoHPLG, 2019)**’.

Details of the various turbine layout iterations included as part of this design process are included in Chapter 3 Consideration of Reasonable Alternatives of this EIAR. Landscape and visual “mitigating” factors which were key to the site selection and design of the Proposed Project are established below, the factors are of key relevance to the LVIA.

The Proposed Wind Farm layout that is the subject of this LVIA, incorporates the following landscape and visual design considerations informed by relevant best practice guidance on wind farm siting and design and professional judgement with a particular focus on strategic site selection:

- **Appropriate Landscape Sensitivity in Local Planning Policy:** The Policy Area in which the proposed turbines are sited in (Policy Area 4) is identified as having the lowest sensitivity to wind farm development compared to the other Policy Areas in the County.
- **Favourable Wind Energy Zoning:** The proposed turbines are sited within an area 'Preferred' for wind energy infrastructure, within a landscape capable of effectively absorbing a wind energy development according to the 'Renewable Energy Strategy' of County Mayo.
- **Compliance with Wind Energy Development Guidelines:**
 - **Set-Back Distances:** Siting of the proposed turbines exceeds the minimum 500m set-back distance in the Guidelines (DoEHLG, 2006) and also the 4-times-tip-height set-back distance explicitly set out for residential amenity prescribed by the Draft Guidelines (DoHPLG, 2019) .
 - **Coherent Turbine Layout:** The turbine layout has been designed to create a coherent arrangement of turbines, contiguous and connected to each other visually and with consistent spacing in line with the guidance for design and siting of wind farms within the 'Hilly and Flat Farmland' Landscape Type.
- **Set-back distance and no Significant impacts from Designated Scenic Routes and Views:** The Proposed Wind Farm has been strategically sited in a location with at a large set-back distance from designated scenic routes and views identified in local planning policy (closest scenic route located approximately 10km from the proposed turbines).
- **No Significant impacts on Designated Landscape Receptors:** The Proposed Wind Farm has been strategically sited in a location set-back from sensitive landscape receptors (Vulnerable Features – Skylines, Ridgelines and Shorelines) and will therefore not alter the physical fabric of these sensitive landscape receptors.
- **Sparsely Settled & Highly Modified Landscape:** The infrastructure of the Proposed Wind Farm has been strategically sited within a landscape characterised by common agricultural land, forestry and cutover peatland. It is therefore a sparsely settled, modified working landscape deemed to be of Low landscape value, and a site capable of effectively absorbing the Proposed Wind Farm.
- **Limited Visual Exposure of the Proposed Turbines in the Undulating Drumlin Landscape:**
 - The gentle rolling, elongated hills and valleys formed by the drumlin landscape within the LVIA Study Area create extensive areas of no visibility, restricting visibility of the proposed turbines from the wider landscape (beyond 5km).
 - At a macro scale, the landscape surrounding the site is relatively flat, characterised by mature boundary vegetation and localised landform undulations (drumlins). Consequently, as reported throughout this LVIA, the visual exposure of the proposed turbines is generally very limited from receptors beyond 5km from the proposed turbines, therefore limiting potential for any landscape and visual effects in vast areas and from large numbers of sensitive receptors.
- **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.
- **Grid Connection:** The intended cabling connection to the national electricity grid is located underground, thereby reducing potential landscape and visual effects during the operational phase. The onsite 110kV substation and two end masts are the only above-ground components of the Proposed Grid Connection, and it is located within the Site. The 110kV substation is to be sited within an agricultural field.
 - **Mitigation Planting:** As detailed in Appendix 6-4 Biodiversity Management and Enhancement Plan; treeline/hedgerow planting and enhancement and woodland planting is proposed along the western and northern extents of the proposed onsite 110kV substation as part of the Proposed Project. This

planting will provide visual screening of the proposed 110kV substation from nearby residential receptors.

Scoping and Consultation

A scoping and consultation exercise was carried out by MKO in May 2023 and February 2026, as detailed in Section 2.7 of Chapter 2: Background of the Proposed Project of this EIAR. A copy of all responses can be found in Appendix 2-1. A pre-planning consultation meeting took place with Mayo County Council (MCC) in January 2024, and March 2026. Both meetings were attended by representatives of MCC, the Applicant and MKO. MKO presented an overview of the scope of the LVIA to be included in this chapter of the EIAR including ZTV mapping and photomontage locations and noted the key sensitive receptors which were to be assessed. MKO welcomed feedback on choice of viewpoints to be included in the EIAR from MCC at both meetings. No topics of note relating to LVIA were raised by MCC.

A pre-planning consultation meeting took place with An Coimisiún Pleanála (ACP) in relation to the Proposed Grid Connection in May 2024. No topics of note relating to LVIA were raised by ACP.

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 (e.g. ZTV mapping);
- Landscape Baseline;
- Visual Baseline;
- Cumulative Context with respect to other wind farm developments within the 20km LVIA Study Area;
- Likely Significant Landscape and Visual effects – summarising all landscape, visual and cumulative effects of the Proposed Project determined by this LVIA.

13.2.1 Guidelines

The legislation and general guidance on Environmental Impact Assessment is set out in Chapter 1 of this EIAR. The LVIA reported in this chapter was guided and informed by guidance documentation specifically pertaining to the Landscape and Visual Impact Assessment. Details of the guidance used to conduct this LVIA are outlined in Section 1.2 of the LVIA Methodology Appendix – *Appendix 13-1*.

13.2.2 Scope of the LVIA and Study Areas

The landscape and visual effects of the Proposed Project are assessed in this LVIA. However, the landscape baseline mapping, visual receptor mapping and viewpoint selection are based on wider study areas. Following best practice guidance, experience and professional judgement, two other study areas were defined for this LVIA:

- **‘LVIA Study Area’:** All of the landscape within **20km** from the proposed turbines for assessment of effects on landscape and visual receptors and is the search area for other wind energy developments included for cumulative assessment;
- **‘LCA Study Area’:** All of the landscape within **15km** from the proposed turbines for assessment of effects on designated Landscape Character Areas (LCAs).

The full justifications and rationales of the LVIA Study Area for assessment of effects on landscape and visual receptors and for the LCA Study Area for assessment of effects on designated LCAs are presented in detail in Section 1.6.6 of *Appendix 13-1: LVIA Methodology*. After defining the parameters for this LVIA, and on the basis of desk studies, survey work undertaken, professional judgement and experience of the assessment team, the following are scoped out of assessment in this LVIA:

- Effects on landscape and visual receptors with minimal or no theoretical visibility (as predicted by the ZTV mapping), and/or very distant visibility, and are therefore unlikely to be subject to significant effects;
- Effects on designated landscape receptors beyond 20km from the proposed turbines where it is judged that significant effects on key characteristics and/or special qualities are unlikely to occur;
- Effects on designated LCAs beyond 15km from the proposed turbines, where it is judged that significant effects on landscape character are unlikely to occur;
- Effects on visual receptors beyond 20km from the proposed turbines where it is judged that significant effects are unlikely to occur;
- Cumulative landscape and visual effects beyond 20km from the proposed turbines where it is judged that significant effects are unlikely to occur.
- Cumulative effects in combination with single turbines with a tip height lower than 50 metres beyond 3km from the proposed turbines, where it is judged that significant effects are unlikely to occur

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 and objectives contained in the relevant county development plan (County Mayo) pertaining to landscape and wind energy.
- Landscape designations in the LVIA Study Area (Designated Vulnerable Features; Scenic Routes and Views; Landscape Character Areas)
- Landscape characteristics of designated LCAs in the LCA Study Area
- Landscape character of the Site based on:
 - Site Surveys undertaken in 2023-2026
 - Characterisation of the proposed turbines as defined in relation to specific Landscape Character Types defined in the Guidelines (DoEHLG, 2006) and the Draft Guidelines (DoHPLG, 2019)

Visual Baseline

- Identification of visual receptors in the LVIA Study Area;
- Preliminary analysis of visibility of the Proposed Wind Farm from visual receptors using ZTV mapping and on-site visibility appraisals.
- Visibility in close proximity to the Proposed Wind Farm according to a Route Screening Analysis (RSA), a method developed by MKO to quantify visual screening relative to the proposed turbines.

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.

First, this LVIA considers landscape and visual ‘Sensitivity’ balanced with the ‘Magnitude of Change’ to determine the likely significance of effects. Second, mitigating factors are then considered to arrive at ‘Residual’ landscape and visual effects. Third, residual landscape and visual effects are graded upon an ‘impact assessment classification of significance’ scale, as defined by the Environmental Protection Agency’s (EPA) ‘*Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*’ (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 ZTV mapping (see below Section 13.3.1), 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 coming decades. The focus for visual impact assessment of wind energy developments is therefore 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 relative to the landscape as a result of setback distance;
- The number of proposed turbines visible;
- Full or partial visibility of partial turbines e.g. are they partially screened by features;
- The horizontal extent of the proposed turbines in the field of view;
- 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 the Proposed Project

13.3.1 ZTV Mapping: Theoretical Visibility of the Proposed turbines

ZTV mapping is an important step in the LVIA process, in that it clearly shows which areas of the LVIA Study Area will have theoretical visibility of the proposed turbines and which areas will have no theoretical visibility.

The ZTV mapping methodology is outlined in *Appendix 13-1*. This method was used to examine the theoretical visibility of the 7 No. proposed turbines from all landscape and visual receptors within the LVIA Study Area, using the half blade height of the wind turbines as points of reference. As noted in *Appendix 13-1*, actual visibility on the ground is significantly less than predicted by the ZTV mapping due to intervening factors such as on-site screening from natural and man-made features, atmospheric weather, and/or localised topography.

Generation of the ZTV utilises large scale topographical data (interpolation across 25m contour data) and does not account for topographical variation of smaller scale (e.g., < 10 metre). Therefore, in reality, small, localised undulating topographical landscapes are likely to inhibit further visibility of the proposed turbines that may not be represented in the ZTV map. Other features of the landscape such as vegetation and man-made elements are also likely to obscure the proposed turbines from view from many areas where the ZTV indicates there is full visibility. In this regard, the ZTV is a useful tool to indicate where there is definitely no visibility of the proposed turbines, therefore, receptors located in these areas can be scoped out from further assessment.

13.3.1.1 Half Blade ZTV of the Proposed Turbines

A Half Blade ZTV map is shown in Figure 13-1 below. The ZTV map is used within several mapping figures included in this chapter to enable assessment of theoretical visibility of the proposed turbines from landscape and visual receptors. Separate colour bands are used on each ZTV map to indicate the number of turbines of which the half blade will potentially be visible. The legend on each map shows the number of theoretically visible turbines for each corresponding colour, which are as follows:

- Orange: 1 - 3 turbines theoretically visible
- Teal: 4 - 5 turbines theoretically visible
- Navy: 6 - 7 turbines theoretically visible

Figure 13-2 (below) shows the landform features and elevation gradients existent within the landscape of the LVIA Study Area, the geography of these topographical characteristics define the distribution of theoretical visibility illustrated in Figure 13-1.

The proposed turbines are situated in the plains of County Mayo within a drumlin landscape, characterised by smooth, elongated hills formed by glacial activity. The majority of the LVIA Study Area is relatively low-lying, particularly to the south and west towards Lough Mask and Lough Carra. In reality, the visibility of the proposed turbines within this flat landscape interspersed with localised undulations will be far less than is indicated by the ZTV. Some notable topographical features exist within the wider LVIA Study Area, such as Cuillalea Hill and Treannagleragh to the north and the foothills of the Partry Mountains located to the far west. To the east of the proposed turbines, the landform rises to higher, more pronounced undulating landforms, which increase localised variations in topography.

As seen in Figure 13-1, a small section of County Galway and a very small section of County Roscommon are located to the south-east of the LVIA Study Area and have very limited theoretical

visibility. Given the distance from the proposed turbines, the limited extent of theoretical visibility, and the absence of highly sensitive landscape or visual receptors within this small area, it is unlikely that the proposed turbines will be visible or give rise to any Significant landscape or visual effects. As such, County Galway and County Roscommon have been scoped out from further assessment and are not considered further in this chapter.

The following discussion considers various topographical characteristics of the LVIA Study Area as they relate to the theoretical visibility as shown by the ZTV Map below.

Description of Theoretical Visibility within 5km of the Proposed turbines

As shown in the physical landscape features map (Figure 13-1) below, the proposed turbines are situated within a relatively low-lying landscape allowing for stretches of full theoretical visibility within 5km of the proposed turbines, excepting small pockets of no theoretical visibility from slight topographical undulations arising from the drumlin landscape.

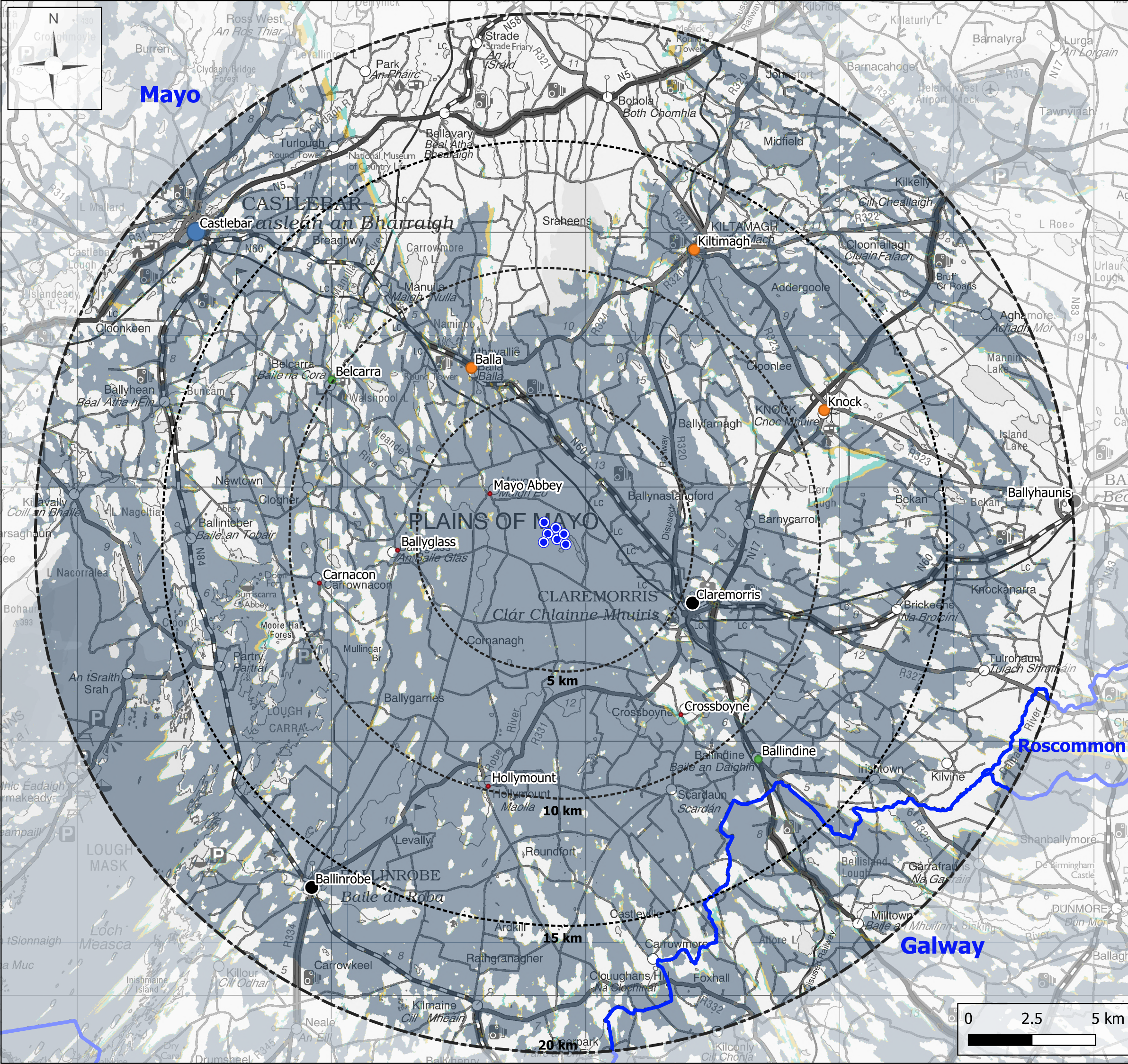
Description of Theoretical Visibility within the Wider Study Area

As shown in Figure 13-1 and Figure 13-2 below, the nature of the landscape is predominantly low-lying, characterised by gently rolling elongated hills and valleys, with more notable rises in elevation occurring to the east, north, and far west.

To the west and south, the flat, low-lying topography ranges from approximately 20m above ordnance datum (AOD) at its lowest point at Lough Mask and Lough Cara to approx. 300m AOD in the Partry Mountains. The relatively flat terrain allows for a vast spread of theoretical visibility with stretches of no theoretical visibility due to localised undulations. Approximately 20km west from the proposed turbines, the landform rises sharply to form the eastern extent of the Partry Mountains. The Partry Mountains have elevations above 300m and would result in extensive areas of no theoretical visibility beyond.

To the east and north, several small hills and undulations create areas of no theoretical visibility. Beyond 15km to the east, theoretical visibility becomes increasingly sparse due to the undulating landscape. To the north, the topography rises towards Cuillalea Hill. In this direction, visibility largely confined to the upper slopes and the summit, with minimal to no visibility beyond this landform across the surrounding landscape due to intervening topographical features.

In general, the ZTV indicates that the geographical distribution of theoretical visibility becomes limited beyond 10km of the proposed turbines, and is even more sparse beyond 15km of the proposed turbines, particularly to the north, east and south. The gentle peaks and undulations throughout the relatively flat landscape of the LVIA Study Area further restrict theoretical visibility of the proposed turbines from many locations within the LVIA Study Area.



Map Legend

- LVIA Study Area
- County Borders
- Proposed Turbines
- Co. Mayo Key Settlements**
 - Strategic Growth Towns
 - Self Sustaining Growth Towns
 - Self Sustaining Towns
 - Rural Settlements
 - Rural Villages
- Half-Blade Zone of Theoretical Visibility**
 - 1-2 Turbines Theoretically Visible
 - 3-4 Turbines Theoretically Visible
 - 5-7 Turbines Theoretically Visible

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Drawing No.

Figure 13-1

Drawing Title

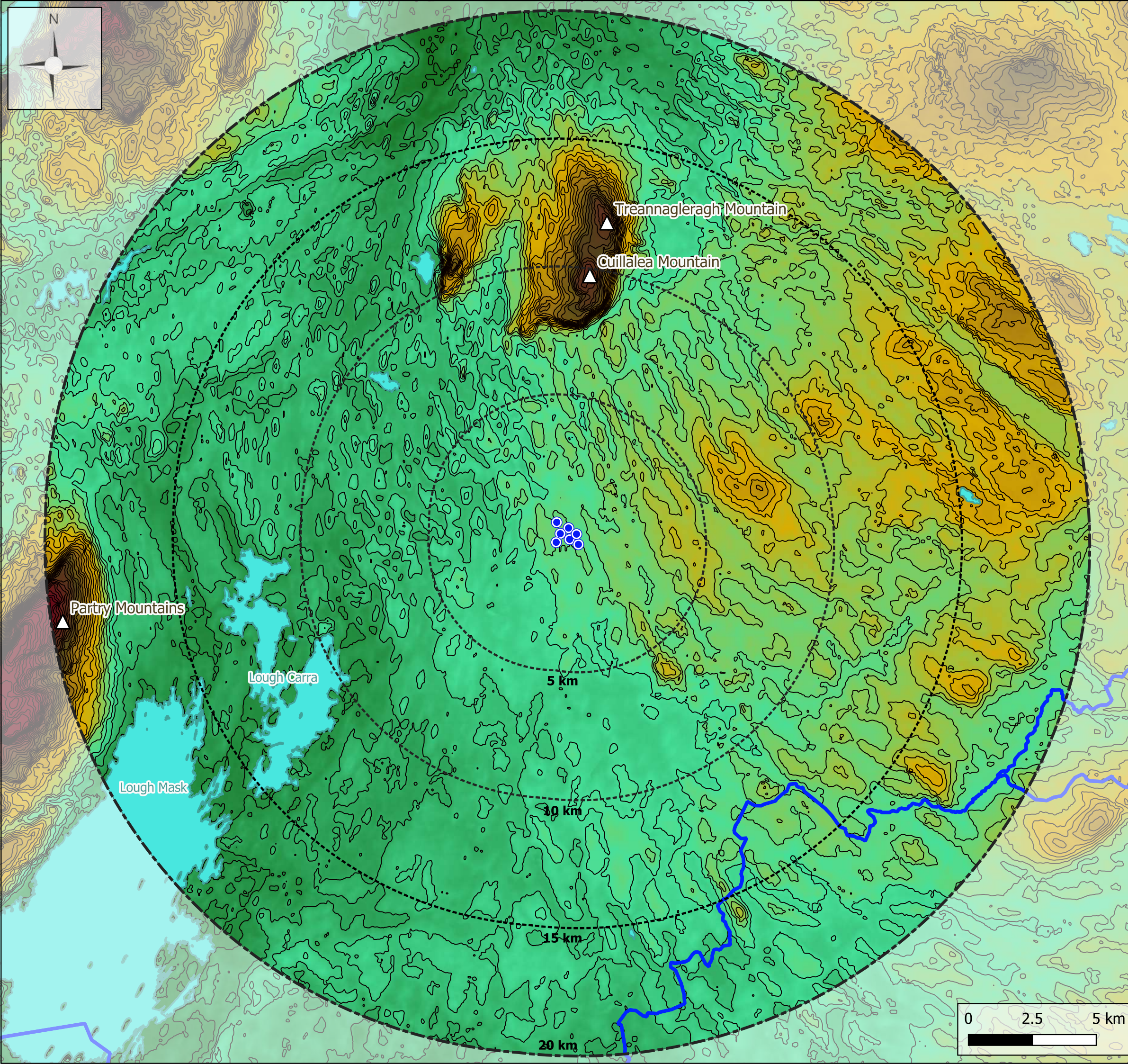
Zone of Theoretical Visibility Map

Project Title

Cunlaghfadda Green Energy Project

Scale	Project No.	Date	Drawn By	Checked By
1:140,820	220825	17.04.2026	GL	DM





Map Legend

- LVIA Study Area
- County Borders
- Proposed Turbines
- 10m Contours
- △ Key Topographical Features
- Key Lakes

Elevation Above Ordnance Datum (m)

0
50
100
150
200
250
300

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Drawing No.

Figure 13-2

Drawing Title

Physical Landscape Features

Project Title

Cunlaghfadda Green Energy Project

Scale	Project No.	Date	Drawn By	Checked By
1:140,000	220825	16.03.2026	GL	DM



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13.3.1.2 On-Site Appraisal of Actual Visibility During Field Surveys

As mentioned previously, the ZTV map is a useful tool to indicate areas where there will be no visibility of the proposed turbines. In practice, vast areas of the LVIA Study Area which have an indication of full theoretical visibility by the ZTV map (Figure 13-1) are likely to have no actual visibility of the proposed turbines due to other visual screening factors present within the landscape.

Multiple field surveys were conducted during 2023-2026 to determine the actual visibility from locations where the ZTV has indicated full theoretical visibility. These surveys determined that visual screening from localised undulations in topography, vegetation and man-made elements substantially reduce the likelihood of viewing turbines in vast areas of the LVIA Study Area.

In most instances, visual screening within the gently undulating and highly vegetated landscape beyond 5km from the proposed turbines did not permit open views in the direction of the proposed turbines. Visibility is only likely to occur in isolated, elevated vantage points where open, long-ranging landscape views in the direction of the proposed turbines were found. Representative photomontages were captured from elevated locations where open views towards the proposed turbines were found. Visual effects arising from such locations are assessed in Section 13.7 – *Likely Significant Landscape and Visual Effects*. The term ‘visual screening’ (discussed below) is used throughout this LVIA and is an important concept to understand with respect to the exceptionally flat landscape of the LVIA Study Area and how this relates to the reality of visibility on the ground in flat landscapes.

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.

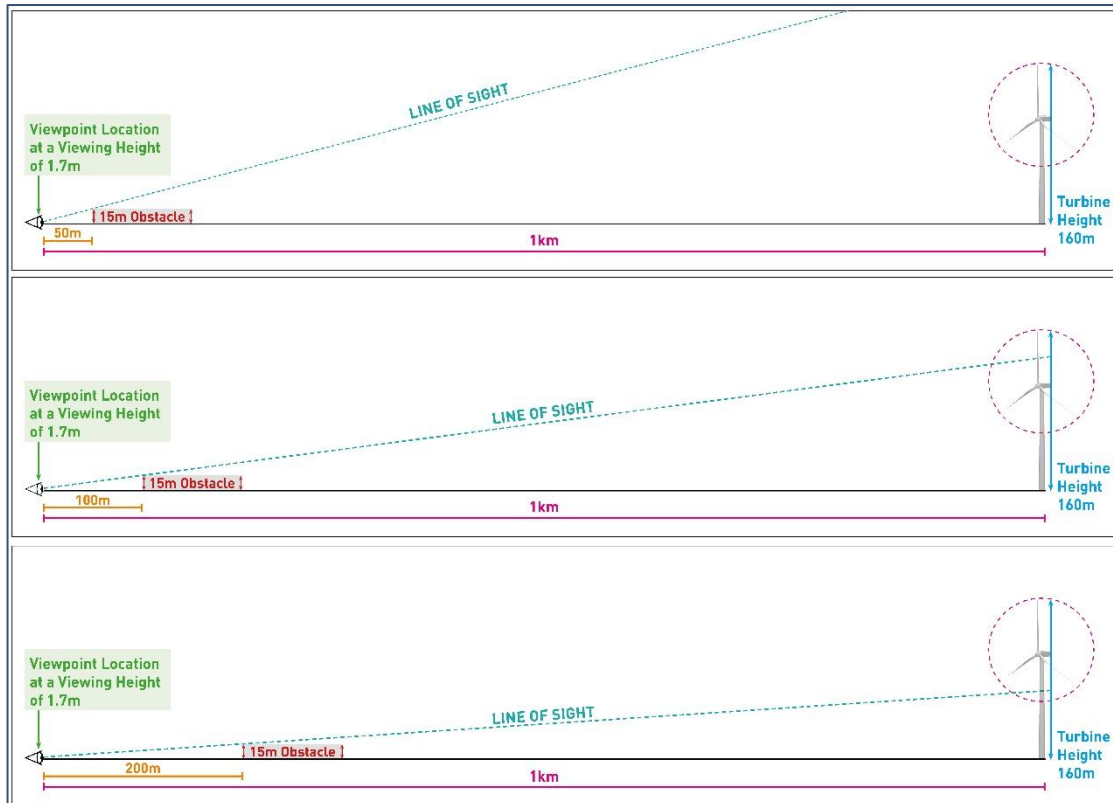


Figure 13-3 Disproportionate Visual Screening Effect

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 160-metre-tall wind turbine located one kilometre from a viewing location. The illustration in Figure 13-3 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 15-metre obstacle is shown at 50 metres, 100 metres and 200 metres from the viewing location, and the resultant line of sight is shown as a blue line running from the viewing location upwards over the top of the obstacle.

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

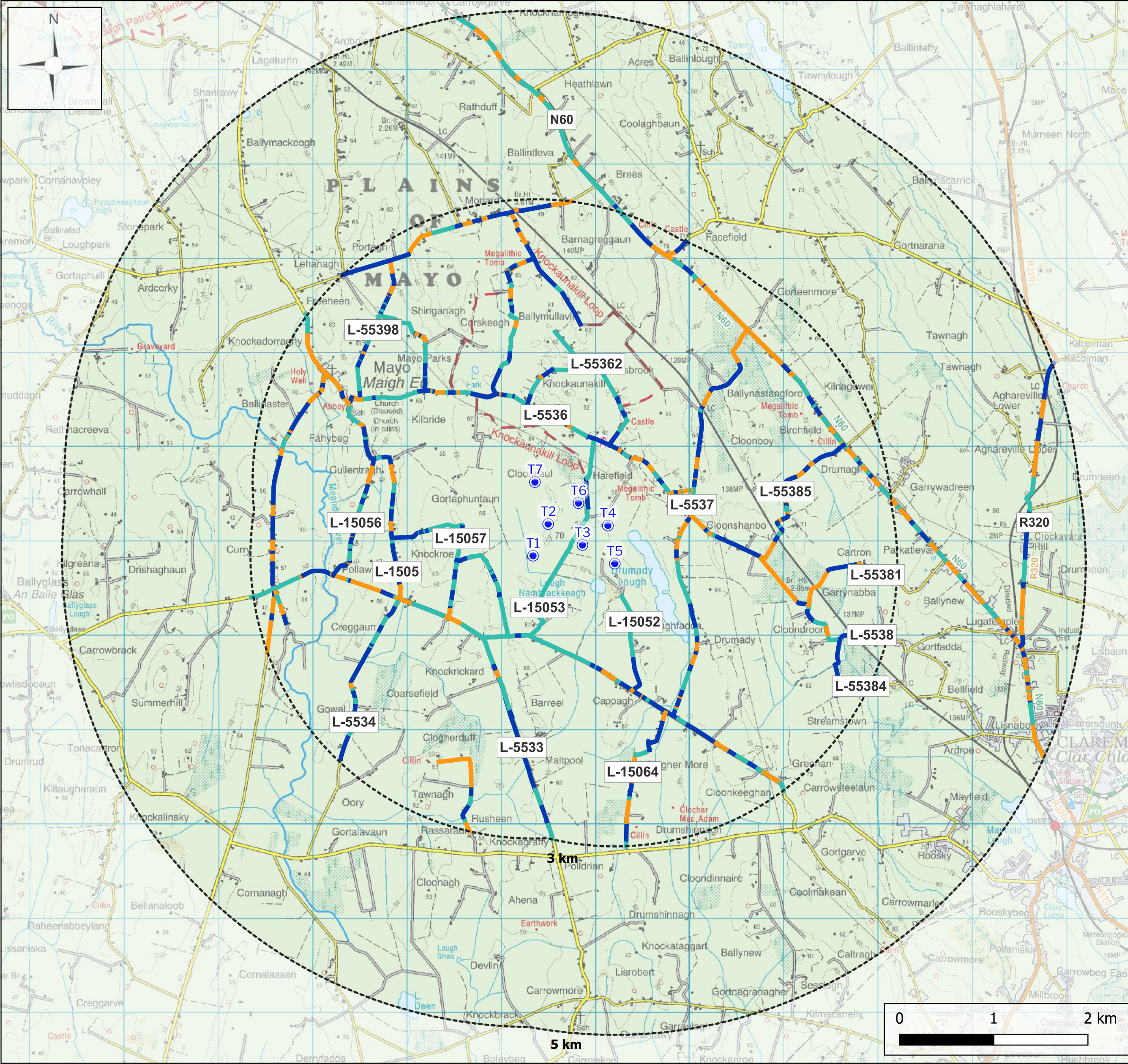
Route Screening Analysis (RSA) was conducted to comprehensively demonstrate the varying characteristics of the degree of visual screening existent along the local road network and to record the actual visibility of the proposed turbines in comparison to the theoretical visibility indicated by ZTV mapping. 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).

The results of RSA are mapped in Figure 13-4 below, showing the extent at which each visual screening classification is present on all public roads within 3km of the proposed turbines. Where roads continued beyond 3km from the proposed turbines, the RSA survey continued to record screening until reaching an appropriate termination point or junction.

RSA was conducted along the N60 National Road and the R320 Regional Road to a distance of 5km as these are considered relatively prominent and well-trafficked transport routes in close proximity to the Site. RSA was also conducted along all prominent local roads within 3km from the proposed turbines.



Map Legend

---- RSA Extent

● Proposed Turbines

Route Screening Analysis

— No / Very Little Visual Screening

— Partial / Intermittent Visual Screening

— Dense / Full Visual Screening

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Figure 13-4

Route Screening Analysis

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Plate 13-1 An example of 'Little / No Screening'



Plate 13-2 An Example of 'Intermittent / Partial Screening'



Plate 13-3 An Example of 'Full Screening'

N60 National Road

The N60 National Road runs in a south-east to north-west direction, covering a length of 10.1km within 5km of the proposed turbines. The road exhibits a varied screening profile, featuring predominantly 'Intermittent/Partial' Visual Screening or 'Dense/Full' Visual Screening within 3km of the proposed turbines, with longer stretches of 'Little/No' Visual Screening within 3-5km from the proposed turbines.

R320 Regional Road

A very small stretch of the R320 Regional Road is located within the 5km radius of the nearest proposed turbine (T5), covering a total length of approximately 2.8km within 5km. The road exhibits a varied screening profile, comprising stretches of 'Intermittent/Partial', 'Little/No' Visual Screening, and 'Dense/Full' Visual Screening.

Local Roads

The local road network exhibits a varied screening profile. The local bog road traversing the Site is primarily comprised of 'Little/No' Visual Screening. Immediately south of the proposed turbines, the L-1505 local road is also primarily comprised of 'Little/No' Visual Screening. As the L-1505 local road travels further east and west, screening becomes more varied along this route, and along the local roads emerging from it (including the L-5534, L-5533, and L-15064 local roads). These roads comprise stretches of 'Intermittent/Partial', 'Little/No', and 'Dense/Full' Visual Screening.

The local roads to the west (L-15057, L-1505, L-15056, and L-1517) and the local roads to the east (L-15052, L-5537, L-5538, L-55385, L-55381, and L-55384) also exhibit varied visual screening, primarily comprising 'Intermittent/Partial' or 'Dense/Full' Visual Screening, with occasional stretches of 'Little/No' Visual Screening.

The local road network to the north exhibits a similar screening profile. Immediately north of the proposed turbines, there are stretches of 'Little/No' Visual Screening along the L-5536 and L-55362 local roads. As the L-5536 travels westward, it merges with the L-1505 local road at Mayo Abbey Church and Ruins. As the L-1505 moves northward through Mayo Abbey Village, it becomes primarily characterised by 'Dense/Full' Visual Screening. The L-55398 local road travelling to the east of Mayo Abbey is primarily comprised of 'Little/No' Visual Screening, with pockets of 'Intermittent/Partial' Visual Screening. To the north-east, visibility is varied along the L-5537 and L-55385 local roads, which primarily comprise 'Intermittent/Partial' Visual Screening, with small stretches of 'Little/No' and 'Dense/Full' Visual Screening.

Summary of RSA Results

'Dense/Full' visual screening was recorded along 25% of the surveyed roads and was the least common class recorded. 'Intermittent/Partial' visual screening was recorded along 41% of the roads and was the most common class recorded. 'Little/No' visual screening was recorded for 34% of roads.

The RSA map depicted above in Figure 13-4 indicates a 'mosaic' pattern of visual screening evident along the major transport routes, suggesting primarily Intermittent/Partial visibility of the turbines within 3km. This means that, in a journey scenario along these routes, there will be glimpses of turbine visibility mixed with areas of open visibility which quickly transition into Intermittent/Partial or Dense/Full visual screening.

Given that there is at least some level of visual screening present along the majority (66% = Intermittent + Dense screening combined) of all public roads within 3km and those extending to 5km, this demonstrates that the widespread theoretical visibility indicated on the ZTV in close proximity to the

proposed turbines is not fully representative of the actual on-the-ground visibility of the proposed turbines. Site visits and the RSA determined that most open visibility of the proposed turbines occurs from L-15053, the local road that runs through the Site, and from the portion of L-1505 that runs directly to the south of the Site.

An overview of the visual screening recorded during the RSA along prominent transport routes within 3km of the proposed turbines is presented below in Table 13-1.

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

Screening Class	Length of Road Mapped in Figure 13-4	Percentage Distribution of Screening on the Surveyed Roads
Little/No Visual Screening	20.9km	34%
Partial/Intermittent Visual Screening	25.5km	41%
Dense/Full Visual Screening	15.3km	25%

13.4 Landscape Baseline

The Landscape Baseline provides baseline information about the receiving landscape of the Proposed Project and its wider setting.

13.4.1 Landscape Designations and Policy Context

This section provides an overview of local planning policy and identifies landscape and visual protections, designations and spatial zoning for wind energy development relevant to the LVIA of the Proposed Project. The Proposed Project is located in Co. Mayo, therefore the Mayo County Development Plan 2022–2028 (hereafter ‘MCDP’) was the primary document used to inform this exercise.

13.4.1.1 Mayo County Development Plan 2022 – 2028 (MCDP)

Volume 1 comprises the main policy material of the MCDP. Chapter 10 of Volume 1 is called ‘Natural Environment’ and outlines policies pertaining to the natural environment and landscape for County Mayo. Volume 4 comprises the Landscape Appraisal for County Mayo (hereafter referred to as the LACM).

13.4.1.1.1 General Landscape Policy

Chapter 10 of the MCDP contains the following general policies related to landscape:

“NEP 14 To protect, enhance and contribute to the physical, visual and scenic character of County Mayo and to preserve its unique landscape character.

“NEO 25 To consider applications for development, along Mayo’s’ Scenic routes, that can demonstrate a clear need to locate in the area concerned, whilst ensuring that it:

- *Does not impinge in any significant way on the character, integrity and distinctiveness of the area;*
- *Meets high standards in siting and design;*
- *Contributes to and enhances local landscape character;*
- *Satisfies all other criteria, with regard to, inter alia, servicing, public safety and environmental considerations.”*

“NEO 26 To consider applications for development, within Mayo’s Coastal Areas and Lakeshores and within areas along scenic routes with designated scenic views, that can demonstrate a long-standing social link to the area concerned, whilst ensuring that it:

- *Does not impinge in any significant way on the character, integrity and distinctiveness of the area;*
- *Cannot be considered at an alternative location;*
- *Meets high standards in siting and design;*
- *Contributes to and enhances local landscape character.*
- *Satisfies all other criteria, with regard to, inter alia, servicing, public safety and environmental considerations”*

“NEO 27 To ensure all development proposals are consistent with the Landscape Appraisal of County Mayo and the associated Landscape Sensitivity Matrix and future editions thereof.

NEO 28 To review the Landscape Appraisal for Mayo and update this plan as appropriate, following publication of the statutory guidelines for Planning Authorities on Local Landscape Character Assessments, as detailed in the National Landscape Strategy 2015-2025 and ensure consistency with the provisions of RPO 4.16 and RPO 5.2(b) of the RSES, 2020-2032.”

NEO 29 Require a Landscape/Visual Impact Assessment to accompany significant proposals, located within or adjacent to sensitive landscapes, where appropriate.”

The following subsections address the specific elements covered by this planning policy including the designations of the Landscape Character Assessment, the designated Views and Prospects, as well as the designated Vulnerable Features.

13.4.1.1.2 **County Mayo Landscape Character Assessment**

The Landscape Character Assessment for County Mayo is contained in the LACM and identifies 16 ‘Landscape Character Units’ (LCUs) within the county which are amalgamated into 4 generic ‘Principle Policy Areas’ based on “*similarity of landscape types, which for Mayo have been identified as:*

1. *Montaine Coastal*
2. *Lowland Coastal*
3. *Uplands, Moors, Heath or Bogs* (also includes sub-policy area 3a – Lakeland Sub-area)”
4. *Drumlins and Inland Lowlands* (also includes sub-policy area 4a – Lakeland Sub-area)”

The LCUs that are located within the 15km LCA Study Area, and are scoped in for assessment are as follows:

- LCU K: East-Central Drumlin Spine
- LCU L: South-East Mayo Plains
- LCU M: Lakeland Drumlins

All of the proposed turbines are located within **LCU L: South-East Mayo Plains**. The LACM of County Mayo notes the following in relation to this LCU:

“This area is a mosaic of high quality pasture with distinct paddocks divided by rock walls and well-maintained hedgerows. There are occasional pockets of transitional pasture and woodland scrub throughout the gently rolling drumlins.”

This LCU is located within **Policy Area 4 – Drumlins and Inland Lowlands**. The LACM of County Mayo notes the following in relation to this Policy Area:

“undulating areas of pasture, woodland and forest make up the remainder of the County and are considered to have a generally similar ability to absorb development. Many of these areas are underlain by glacial drumlins and incorporate low-lying lakelands”.

The LACM continues to state the following policies with regards to development in Policy Area 4:

Policy 21: *Recognise that these areas are made up of a variety of working landscapes and contain the vast proportion of the Counties population within principle towns and on rural holdings. These also incorporate all of the major national primary and regional roads, and railways.*

Policy 22: *Continue to permit development that can utilise existing infrastructure, whilst taking account of absorption opportunities provided by the landscape and prevailing vegetation.*

Policy 23: Encourage development that will not significantly interfere or detract from scenic Lakeland vistas, as identified in the Development Plan, when viewed from areas of the public realm.

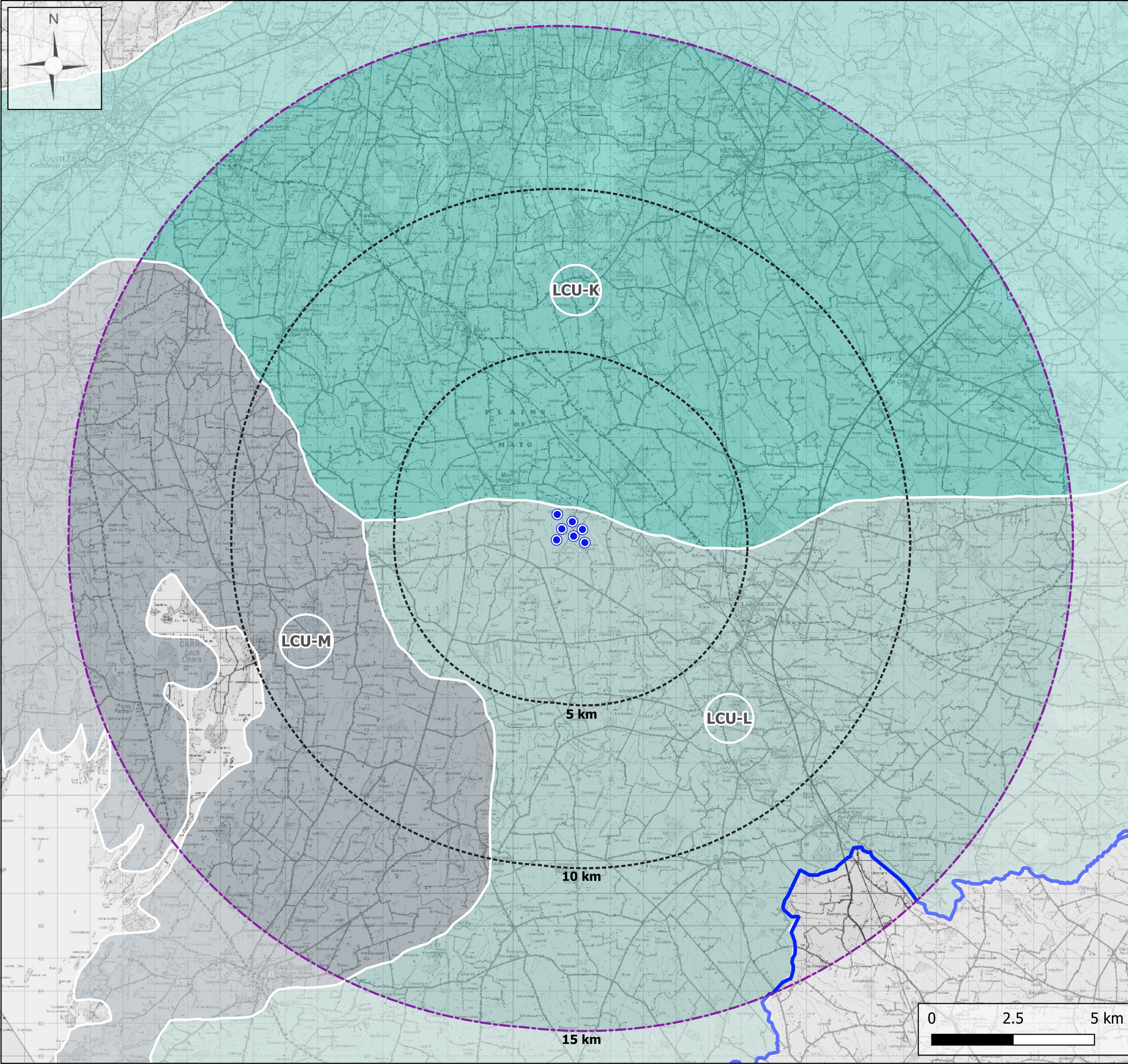
Policy 24: Encourage development that will not result in detrimental impacts (through excessive bulk, scale or inappropriate siting) on the landscape at a local or micro level as viewed from areas of the public realm.

The LACP also notes to apply Policy 14 and Policy 16 “as appropriate”:

“Policy 14: Encourage development that will not interrupt or penetrate distinct linear sections of primary ridge lines when viewed from areas of the public realm.

Policy 16: Preserve from development any areas that have not already been subject to development, which have retained a dominantly undisturbed upland/moorland character.”

A full description of the key characteristics of LCUs scoped in for further assessment are included in the LCA impact assessment tables comprising *Appendix 13-2*.



Map Legend

- LCA Study Area
- County Border
- Proposed Turbines

Co. Mayo Landscape Character Units

- LCU-K: East-Central Drumlin Spine
- LCU-L: South East Mayo Plains
- LCU-M: Lakeland Drumlins

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Drawing No.

Figure 13-5

Drawing Title

Landscape Character Units

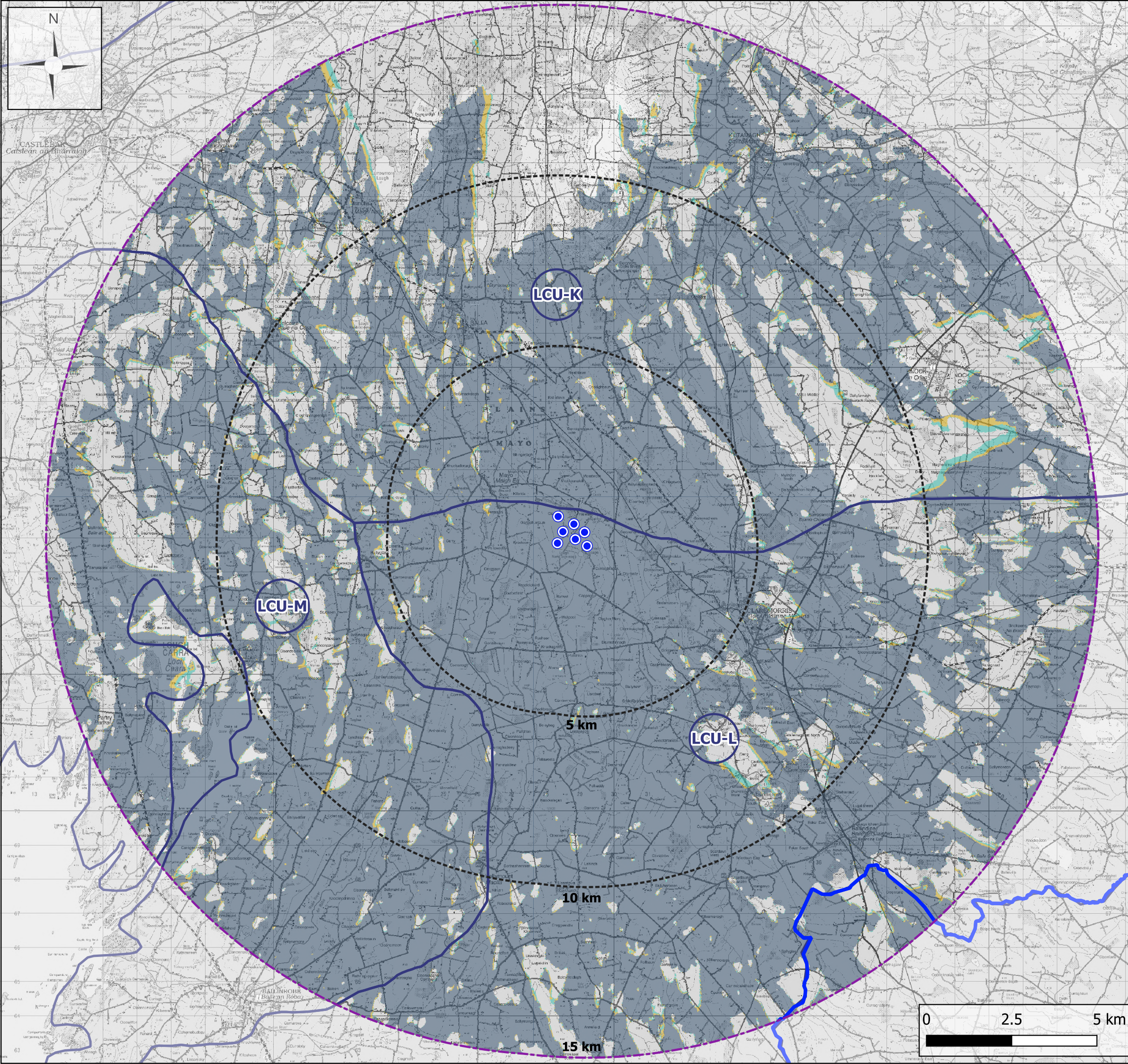
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Map Legend

- LCA Study Area
- County Border
- Proposed Turbines
- Co. Mayo Landscape Character Units
 - LCU-K: East-Central Drumlin Spine
 - LCU-L: South East Mayo Plains
 - LCU-M: Lakeland Drumlins

Half-Blade Zone of Theoretical Visibility

- 1-2 Turbines Theoretically Visible
- 3-4 Turbines Theoretically Visible
- 5-7 Turbines Theoretically Visible

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Figure 13-6

Drawing Title
Landscape Character Units with Zone of Theoretical Visibility

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13.4.1.1.3 Landscape Sensitivity Designations

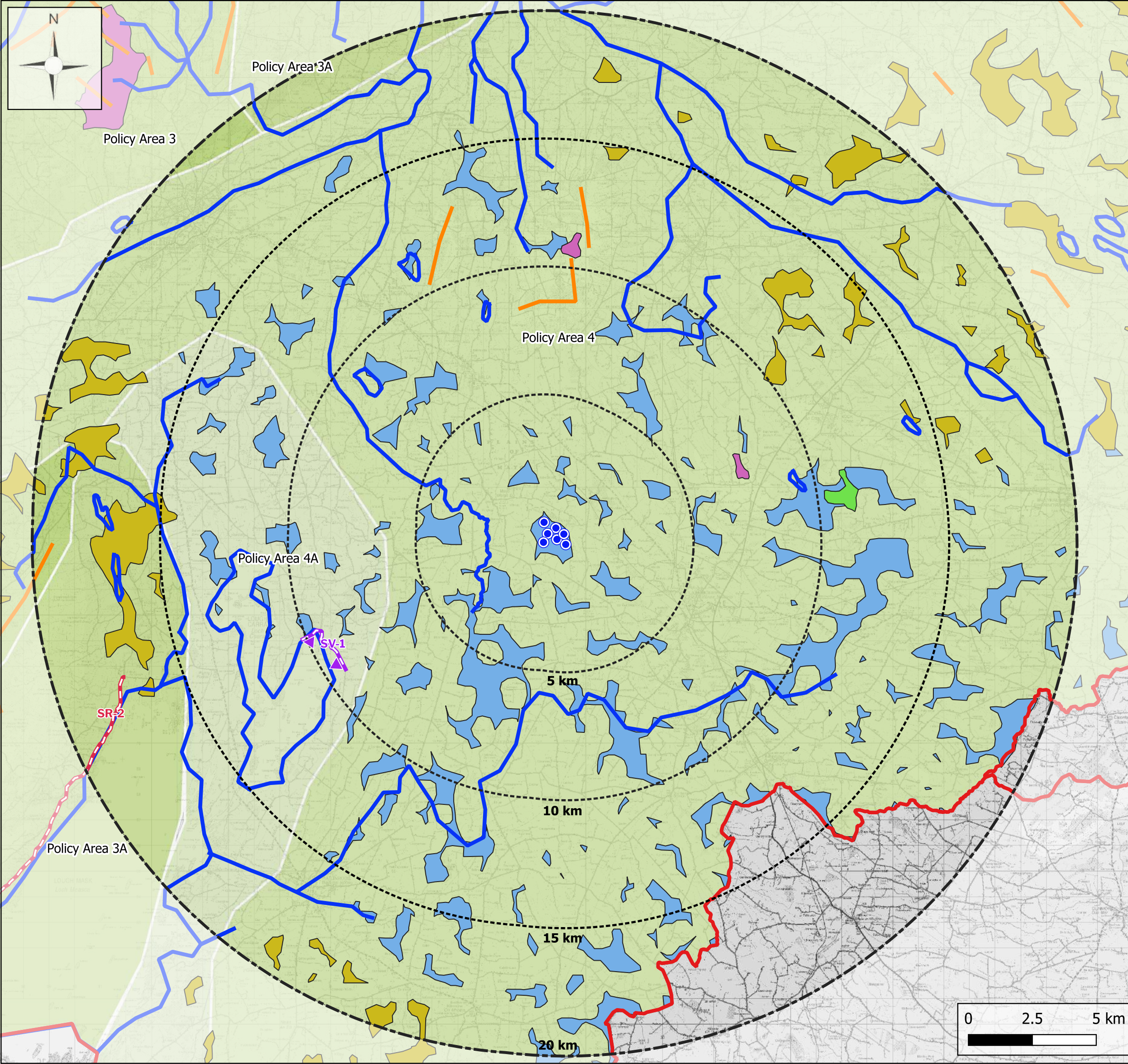
The Development Impact – Landscape Sensitivity Matrix outlined in the LACM as well as in Figure 10.1 of the MCDP (reproduced in Figure 13-6 below), provides a general indication of the likelihood of success of planning applications for each development type. Under the Landscape Appraisal of County Mayo, the Proposed Wind Farm is located within Policy Area 4, which is shown in Plate 13-4 as having the lowest potential for creating adverse impacts from wind farm developments when compared with the other Policy Areas, stating that it has:

“medium potential to create adverse impacts on the existing landscape character. Such developments are likely to be clearly discernible and distinctive, however with careful siting and good design, the significance and extent of impacts can be minimised to an acceptable level”

Development Impact - Landscape Sensitivity Matrix								
	Wind farms	Power lines	Quarrying/ Extraction	Forestry	Commun- -ication Masts	Industrial/ Commercial	Rural Dwellings	Road Projects
Policy Area 1								
Policy Area 2								
Policy Area 3								
Policy Area 4								
Key								
 = High potential to create adverse impacts on the existing landscape character. Having regard to the intrinsic physical and visual characteristics of the landscape area, it is unlikely that such impacts can be reduced to a widely acceptable level.  = Medium potential to create adverse impacts on the existing landscape character. Such developments are likely to be clearly discernible and distinctive, however with careful siting and good design, the significance and extent of impacts can be minimised to an acceptable level.  = Low potential to create adverse impacts on the existing landscape character. Such development is likely to be widely conceived as normal and appropriate unless siting and design are poor.								
ig								

Plate 13-4 MCDP Landscape Sensitivity Matrix

The Landscape Sensitivity Matrix suggests that all Policy Areas are sensitive to wind farm development, which is in some contradiction to the current MCDP wind energy strategy (RES 2011-2022) which designates areas as ‘Priority’, ‘Tier 1 – Preferred (Large Wind Farms)’, ‘Tier 1 – Preferred (Cluster of Turbines)’, and ‘Open to Consideration’ (as discussed in the following section) within landscape Policy Areas marked as having *“high potential to create adverse impacts”*. It is reiterated again that Policy Area 4 is identified as having the lowest sensitivity to wind farm development compared to the other Policy Areas.



Map Legend

- LVIA Study Area
- County Borders
- Proposed Turbines
- Co. Mayo Scenic Designations**
 - Scenic Routes
 - Scenic Routes with Views
- Co. Mayo Wind Energy Strategy (2011-2022)**
 - Consented Windfarm
 - Existing Windfarm
 - Tier 1 - Preferred (Cluster of Turbines)
 - Tier 2 - Open for Consideration
- Co. Mayo Vulnerable Areas**
 - Skylines
 - Coastline, River Banks, and Lake Shorelines
- Co. Mayo Policy Areas**
 - Policy Area 3
 - Policy Area 3A
 - Policy Area 4
 - Policy Area 4A

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Drawing No.

Figure 13-7

Drawing Title

Landscape Baseline

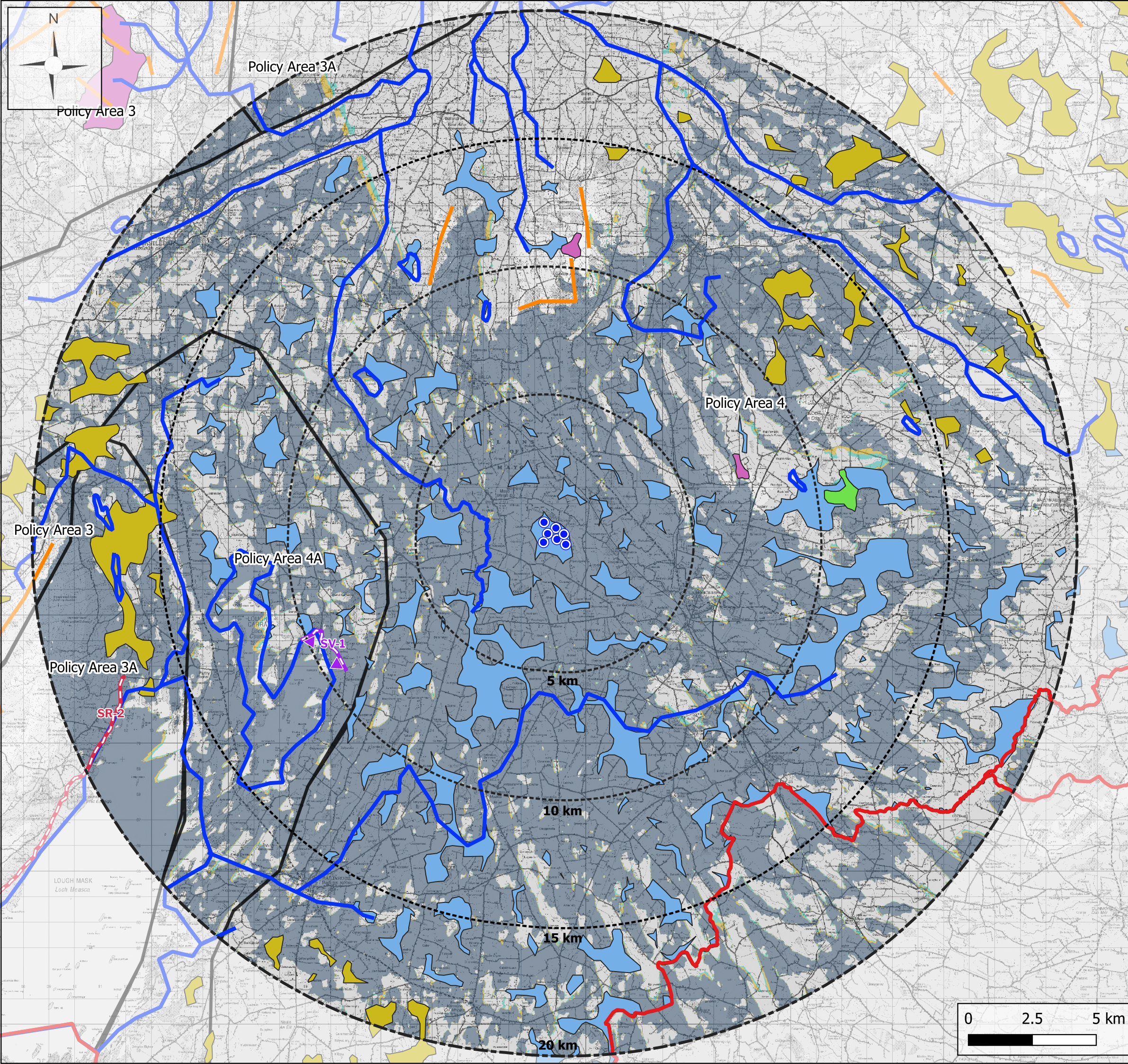
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Map Legend

- LVIA Study Area
- County Borders
- Proposed Turbines
- Co. Mayo Policy Areas
- Co. Mayo Scenic Designations**
 - Scenic Routes
 - Scenic Routes with Views
- Co. Mayo Wind Energy Strategy (2011-2022)**
 - Consented Windfarm
 - Existing Windfarm
 - Tier 1 - Preferred (Cluster of Turbines)
 - Tier 2 - Open for Consideration
- Co. Mayo Vulnerable Areas**
 - Skylines
 - Coastline, River Banks, and Lake Shorelines
- Half-Blade Zone of Theoretical Visibility**
 - 1-2 Turbines Theoretically Visible
 - 3-4 Turbines Theoretically Visible
 - 5-7 Turbines Theoretically Visible

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Figure 13-8

Drawing Title

Landscape Baseline with ZTV

Project Title

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13.4.1.1.4 County Mayo Renewable Energy Strategy

The MCDP refers to the Renewable Energy Strategy (RES) for County Mayo (2011-2020) and states that *“Mayo County Council will commence the review and update the Mayo Renewable Energy Strategy within one year of adopting this plan.”* The RES outlines the strong need for wind energy developments in the county and states:

“any proposals for on-shore wind farm developments will be determined in accordance with the Wind Energy Development Guidelines (DoEHLG) 2006 or any subsequent guidelines and the requirements set out in Section 6.5”.

Section 6.4.1 of the RES outlines areas within the county suitable for onshore wind energy development. These 4 classifications areas are as follows:

- **“Priority Areas:** are areas which have secured planning permission and where on shore wind farms can be developed immediately.
- **Tier 1 – Preferred (Large Wind Farms):** are areas in which the potential for large wind farms is greatest.
- **Tier 1 – Preferred (Cluster of Turbines):** are areas identified as being most suitable for smaller clusters of wind turbines (clusters of up to three to five turbines depending on site conditions and visual amenity).
- **Tier 2 – Open to Consideration:** identifies areas which may be considered for wind farms or small clusters of wind turbines but where the visual impact on sensitive or vulnerable landscapes, listed highly scenic routes, scenic routes, scenic viewing points and scenic routes will be the principal consideration. The Tier 2 classification will be reviewed by the Council following a determination by EirGrid of grid infrastructure for the County.”

The proposed turbines are located within the classification area ‘Tier 1- Preferred (Cluster of Turbines)’ as set out in the RES for County Mayo and seen in County Mayo Renewable Energy Strategy.

Section 6.5.14 of the Renewable Energy Strategy continues to give guidance relating to landscape, stating that:

“Renewable energy developments shall avoid sensitive and vulnerable landscapes, listed highly scenic views, scenic views, scenic viewing points and scenic routes where detailed visual analysis demonstrates that the development will have an adverse effect on those landscapes.

Renewable energy developments shall be sited and designed to minimise the visual amenity of the surrounding area.”

As detailed throughout this LVIA, the Proposed Project complies with good siting and design for the landscape type and avoids materially altering any sensitive and vulnerable landscapes or scenic views/routes.

The review of the Draft Variation No. 2 (‘the variation’) of the MCDP (as varied) was published on 28 April, 2026 seeking to update the Mayo RES. This is currently out to consultation. In absence of this update and / or adoption of a finalised RES, the RES (2011 – 2020) is referred to in relation to policy relevant to landscape and visual effects in the LVIA Study Area.

Draft Variation No. 2 of the MCDP Renewable Energy Strategy (RES)

A new Proposed Draft Variation No. 2 ('the variation') of the MCDP (as varied) was published on 28 April, 2026 seeking to update the Mayo RES.

While the Mayo RES remains the relevant renewable energy strategy in force for County Mayo at the time of submission, this Draft Mayo RES has been reviewed and taken into consideration for the purposes of this Chapter and the overall EIAR. Within the Draft Mayo RES, there are three essential categories for suitability of wind energy development:

- Open for Consideration: where *'applications for utility scale wind farms in these areas will be assessed on a case-by-case basis, subject to viable wind speeds, environmental resources and constraints and cumulative impacts in compliance with Article 6 of the Habitats and EIA Directives'*
- Repowering Potential: where, subject to reassessment, there is potential with regard to existing wind farms to *'replace some or all [of] the existing turbines, thereby extending the site's operational life'*
- Unsuitable: ~~However,~~ where the twenty-five categories of constraints designated in the Draft RES have indicated that wind energy developments are unsuitable

The Proposed Project is within the newly designated 'Open for Consideration' category under the Draft Mayo RES. In relation to landscape, the Draft Mayo RES includes policy RPO 5.2, which has three subsections, two of which are relevant to the Proposed Project:

- a) *"Protect manage and conserve the quality, character and distinctiveness of our Landscapes and seascapes."*
- b) *"The Assembly supports co-operation and co-ordination between Local Authorities in determining landscape character along their borders. A targeted review should be undertaken to ensure consistency in classification and policy in adjoining areas of similar character."*

The Proposed Project does not intrude on any distinctive landscape of any local, national, or international renown, nor do the bordering regions with Counties Galway and Roscommon have any contradictory landscape classifications or sensitivities.

Section 5.8.2 of the Draft Mayo RES also states:

"Preservation of landscape character and visual amenity should be considered when planning renewable energy developments, as specified in the Planning and Development Act 2000. The Landscape Appraisal for County Mayo [LACM] includes detailed recommendations for the management, protection and conservation of its unique landscapes."

As discussed throughout the chapter and its appendices, this LVIA has been prepared in full accordance with the LACM. A summary map of potential landscape impacts derived from the LACM was included in the Draft RES and is reproduced as Plate 13-5 below. The Proposed Project is within an area determined to be 'Medium Potential to Create Adverse Impacts' – the lower of two categories.

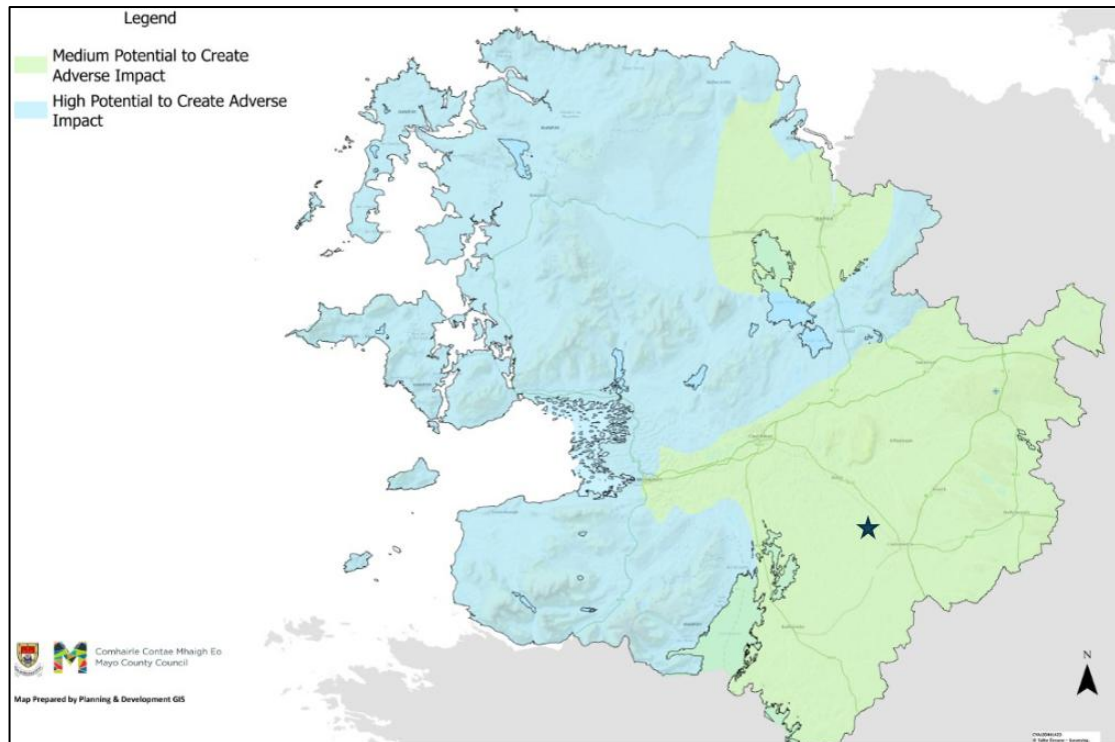


Plate 13-5 Map 5.5 from the Draft RES indicating potential of wind energy developments to create adverse landscape effects with the approximate location of the Proposed Project indicated with a star.

13.4.1.1.5 Designated Vulnerable Features

Section 3 of the LACM designates a number of areas within the county as vulnerable. These areas include:

- “The coastline
- The banks of the Rivers
- The shoreline of all lakes
- The skylines of upland areas
- All headlands and promontories”

These are shown on Map 2 of the LACM (reproduced below in Plate 13-6) and in Section 13.4 – Landscape Baseline.

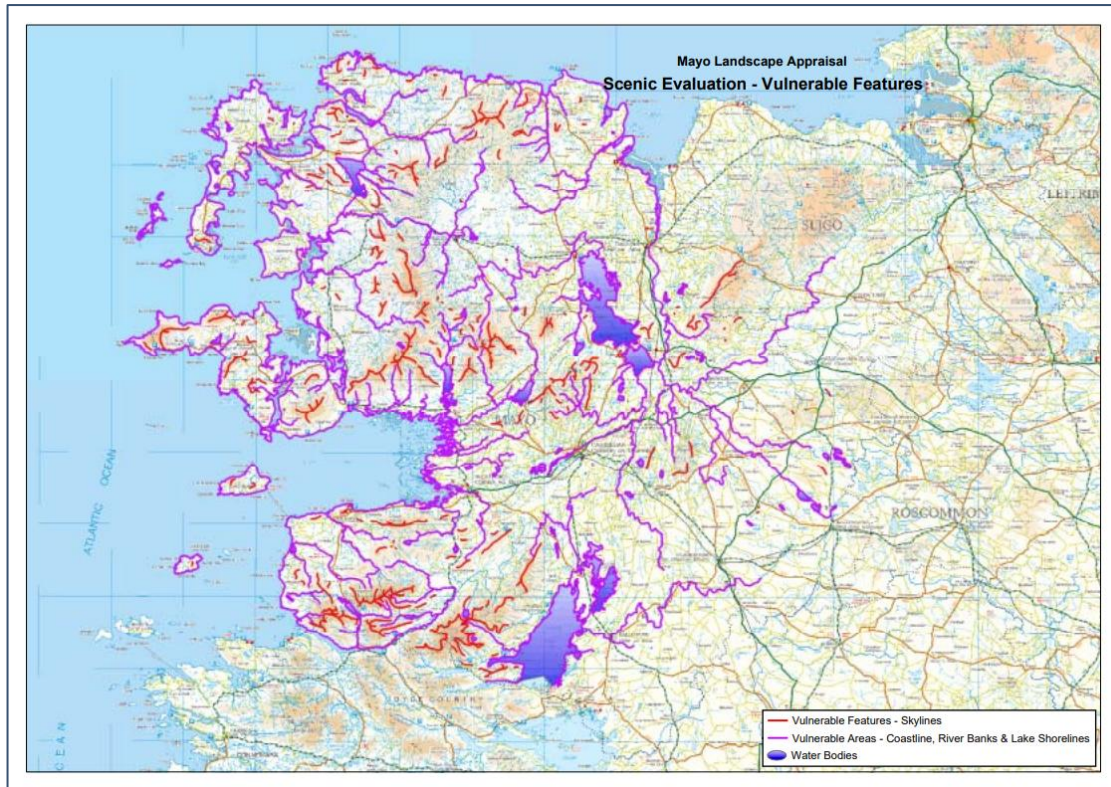


Plate 13-6 County Mayo LACM Map of Vulnerable Features

Skylines and Ridges

As seen in Figure 13-8 Landscape Baseline map with Zone of Theoretical Visibility, there are 4 'ridgelines' in the LACM designated as vulnerable located within the LVIA Study Area. These include:

- The ridgeline along the western side of the Partry Mountains approx. 20km west of the proposed turbines.
- Cruccpullagadaun (Rush Hill/Fox Hill), located approx. 10.8km north-west of the proposed turbines.
- The ridgelines of Cuillalea Hill, approx. 9km north of the proposed turbines.*
- The Sraheens Ridgeline on the west-facing side of Treannagleragh Mountain (north of Cuillalea Hill) approx. 11km north of the proposed turbines

**These ridgelines are identified as vulnerable features in 'Map 10.2: Scenic Evaluation – Vulnerable Features' of the LACM and have been mapped on Figure 13-8 Landscape Baseline map with Zone of Theoretical Visibility of this document, but have no corresponding name on the list of vulnerable skylines and ridges in Section 3.1(a) of the LACM. MKO referred to them as the ridgelines of Cuillalea Hill as this is the widely identifiable associated landform.*

According to Section 3.1(b) of the LACM, the following policy applies to these features:

“These areas or features designated as vulnerable represent the principal features which create and sustain the character and distinctiveness of the surrounding landscape. To be considered for permission, development in the environs of these vulnerable areas must be shown not to impinge in any significant way upon its character, integrity or uniformity when viewed from the surroundings. Particular attention should be given to the preservation of the character and distinctiveness of these areas as viewed from scenic routes and the environs of archaeological and historic sites.”

These landscape receptors are assessed and discussed in Section 13.7.4.2.1.

The Shorelines of Lakes, Rivers, and Estuaries

There are a number of banks of rivers and shorelines of lakes that have been listed in the LACM that are located within the LVIA Study Area. The listed designations that are located within the LVIA Study Area are:

- > Meander River
- > Washpool Lough
- > Lough Naminnoo
- > Carrowmore Lough
- > Little River
- > Cloonlee River
- > Geestaun River
- > Glore River
- > Cullentragh Lough
- > Derry Lough
- > Robe River
- > Lough Carra
- > Aille River
- > Laureen River
- > Cloon River
- > Lough Mask
- > Lough Nacorra
- > Lough Nageltia
- > Castlebar River
- > Clydagh River
- > Strade River
- > Gweeston River
- > Mannin River
- > Mannin Lake
- > Bunnadober River
- > Toormore River
- > Pollagh River

The policy from *Section 3.1(b)* of the LACM quoted above in relation to skylines and ridgelines is also applicable to the shoreline designations listed above in this section.

In order to identify the likely landscape effects of greatest significance on these designations, the assessment of landscape effects concentrates on riverbanks and lakeshores that are in close proximity to the proposed turbines (within 5km). The ZTV map (Figure 13-8 Landscape Baseline map with Zone of Theoretical Visibility) was used to determine potential locations where there will likely be visibility of the proposed turbines within views of the riverbanks and lakeshores noted above, including consideration of the distance between the proposed turbines and the riverbanks and lakeshores. It was determined that potential likely significant landscape effects on the character, integrity or uniformity of these features is only potentially likely to occur for those features located in close proximity (approx. 5km) to the proposed turbines.

In addition, prominent lakes within the wider landscape (i.e. the LVIA Study Area), which function as important locations for recreational activity and visual receptors (see Section 13.5 Visual Baseline), are also considered in relation to potential visual effects experienced by users and visitors in Section 13.7.5.

The following landscape features are therefore scoped in for further assessment:

- Meander River (within 5km)
- Lough Carra (prominent lake with recreational and visual amenity value – discussed in Visual Effects, within 10km at closest point)
- Lough Mask (prominent lake with recreational and visual amenity value – discussed in Visual Effects, within 15km at closest point)

13.4.1.1.6 Scenic Routes and Scenic Routes with Views

The LACM designates Scenic Routes and Scenic Routes with Views on Map 2 – Scenic routes and Protected Views. These are described in Chapter 3 as follows:

- **“Scenic Routes:** *These are public roads passing through or close to areas of outstanding natural beauty, or places of interest, showcasing the unique landscape character and natural environment of Mayo, which would have a low capacity to absorb new development.*
- **Scenic Routes with Scenic Views:** *These are locations along Mayo’s Scenic Routes that offer the most advantageous locations to view to and from areas of outstanding natural beauty and /or places of interests, which would have an extremely low capacity to absorb new development.*
- **Lakeshores:** *These are areas along Mayo’s coastline and larger lakeshores that tend to be open in character, highly visible with intrinsic scenic qualities which have an extremely low capacity to absorb new development.”**

**Lakeshores are addressed previously in the previous section, The Shorelines of Lakes, Rivers, and Estuaries.*

Scenic Routes

The MCDP contains the following objective in relation to “Mayo’s Scenic Routes”:

- **“NEO 25:** *To consider applications for development, along Mayo’s’ Scenic routes, that can demonstrate a clear need to locate in the area concerned, whilst ensuring that it:*
 - *Does not impinge in any significant way on the character, integrity and distinctiveness of the area.*
 - *Meets high standards in siting and design.*
 - *Contributes to and enhances local landscape character.*
 - *Satisfies all other criteria, with regard to, inter alia, servicing, public safety and environmental considerations.”*

Section 3.6 (b) of the LACM notes the following policy in relation to Scenic Routes:

“Scenic routes indicate public roads from which views and prospects of areas of natural beauty and interest can be enjoyed. Sightseeing visitors are more likely to be concentrated along these routes.

The onus should be on the applicant when applying for permission to develop in the environs of a scenic route, to demonstrate that there will be no obstruction or degradation of the views towards visually vulnerable features nor significant alterations to the appearance or character of sensitive areas.”

Scenic Routes and Views

Section 3.7 (b) of the LACM notes the following policy in relation to Protected Views:

“Highly scenic views or vistas indicate areas along public roads from which views and prospects of areas of high natural beauty and interest can be enjoyed. Sightseeing visitors are more likely to be concentrated along these areas.

Development located between the public road and the seashore, lakeshore or riverside should be subject to strict visual criteria. New development should only be considered where it can be demonstrated that it does not obstruct or degrade of designated highly scenic vistas nor alters or degrades the character of the surrounding landscape.”

The two classes of scenic routes are shown on Map 4 of the LACM, reproduced here as Plate 13-7. As ‘Scenic Routes’ and ‘Scenic Routes with Views’ identified in the LVIA Study Area, seen in Figure 13-13, are of a visual nature, and are comprehensively addressed in Section 13.5 of this Chapter – Visual Baseline, where ZTV mapping and on-site appraisals determine the likely visibility of the proposed turbines from the different routes.

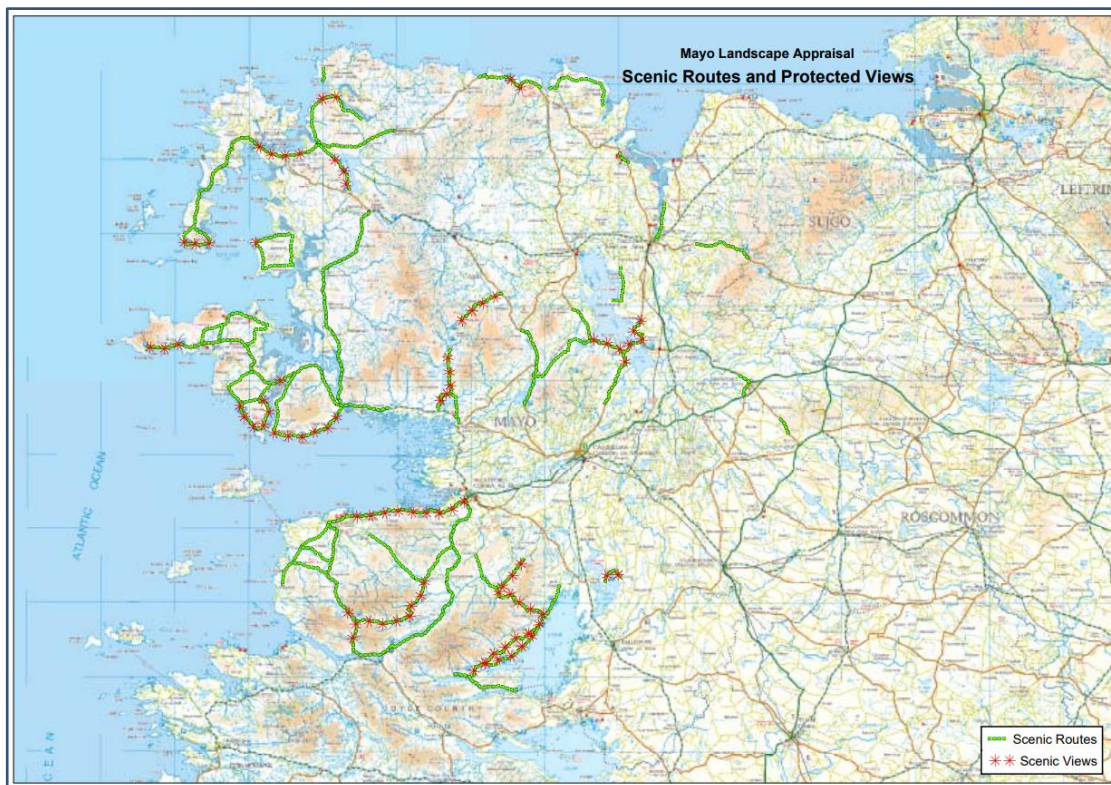


Plate 13-7 Scenic Routes and Protected Views from Map 4 of the LACM.

13.4.2 Landscape Character of the Site

The Proposed Wind Farm is located in a rural and undulating lowland landscape, characterised by areas of open peatland and agricultural fields within the Plains of Mayo. The landscape character is defined by a gently rolling lowland landform interspersed with low-lying elongated drumlin hills. The character of the wider landscape surrounding the Proposed Wind Farm is defined by a patchwork of rural agricultural land, peatlands, tracts of forestry and scattered rural settlements, as depicted in Plate 13-8 below.



Plate 13-8 Drone Photo: Views south overlooking the Proposed Wind Farm and wider landscape, from the townland of Knockaunakill

The landcover of the Site comprises a modified rural landscape, characterised by a mix of agricultural fields, cutover peatlands with shrubs, and wetlands areas, creating a patchwork of land uses, as shown in Plate 13-9 below.

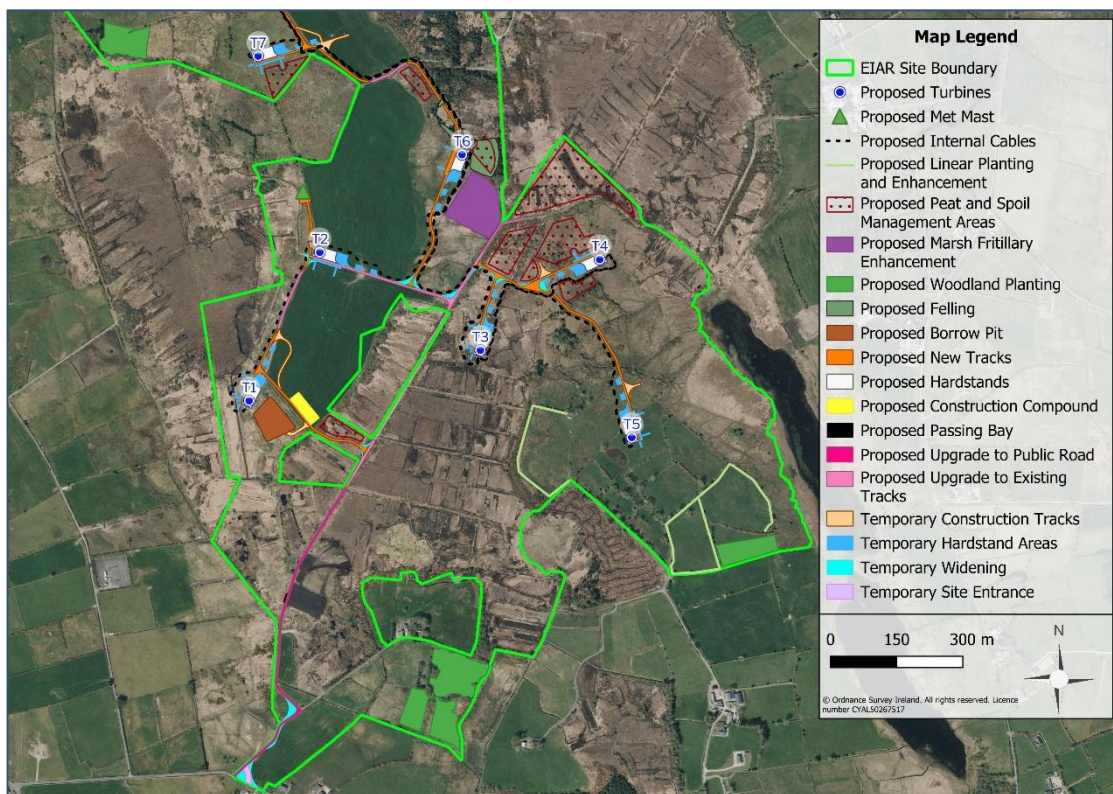


Figure 13-9 Aerial View of the Proposed Wind Farm

A narrow bog road (L15053) bisects the Site, running in a south-north direction. A section of this road is proposed for upgrade, as indicated by Figure 13-9. The low-lying terrain and presence of drainage channels indicate historical peat extraction, which has strongly influenced the landscape's character.



Plate 13-9 Drone Photo: Views north overlooking the Site and wider landscape, from the townland of Knockroe



Plate 13-10 Views north overlooking the local bog road (L15053) bisecting the Site

The agricultural fields (as can be seen in Plate 13-11), that cover the majority of the Site are primarily delineated by mature hedgerows and treelines. Some areas consist of a more degraded landscape (see Plate 13-12 below), featuring rough grassland and dense shrubland. Peatlands are also prominent feature within the landscape, as seen in Plate 13-13, exhibiting a highly degraded condition with extensive areas of exposed peat.



Plate 13-11 Views towards the agricultural field where proposed turbine T3 is located



Plate 13-12 Views north-west towards the Site from the local road (L15053), approx. 380m south of turbine T4



Plate 13-13 Views west towards the peatlands, approximately 65m east from proposed turbine T4

The presence of existing infrastructure across the Site, including overhead power lines as seen in the images above, further emphasises the extent of human influence within the landscape. However, despite these localised modifications, the landscape remains predominantly rural and largely undeveloped.

At the scale of the Site, the landscape is relatively flat. Within the Site, elevation varies only by 10 metres, ranging from approx. 60m AOD to 70m AOD. These minor changes in elevation within the Site are indicative of features within the wider landscape. The wider landscape is characterised by low-

relief, elongated ridges as part of the gently rolling, undulating drumlin landscape as can be seen below in Figure 13-10. Drumady Lough is located to the east of the proposed turbines.

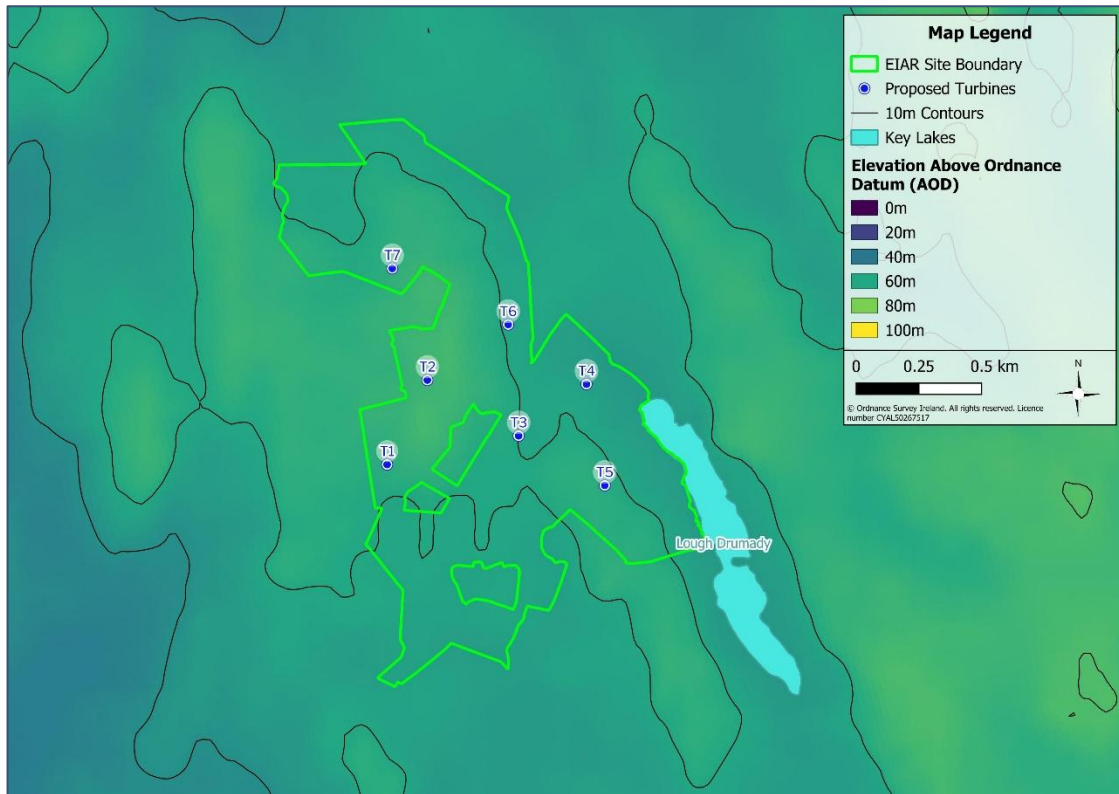


Figure 13-10 DEM of the surrounding area, indicating the low-relief elongated ridges of the drumlin landscape.

Due to the low-relief undulating nature of the Site, long-range views are limited, with visibility largely contained within the Site itself (see Plate 13-14). However, there are some distant views of sensitive receptors seen on the gently undulating landform in the distance, as can be seen in Plate 13-15 below.



Plate 13-14 Views north-west from within the Site, approx. 120m east of turbine T7



Plate 13-15 Views east towards the existing Mace Upper and Magheramore wind farms, approx. 20m from turbine T3

While views from within the Site are primarily of surrounding agricultural fields, some distant undulating mountainous landforms of the Patry Mountains and Croagh Patrick (situated approximately 37.8 km west of proposed turbine, T7) which can be seen as a faint outline on a clear day (see Plate 13-16 below).



Plate 13-16 Zoomed in picture westward towards Croagh Patrick, approx. 37.8km west of nearest turbine (T7).

Landscape of the Proposed Grid Connection

As outlined in Chapter 4, it is intended to connect the Proposed Wind Farm to the national grid via a new onsite 'loop-in' 110kV substation connected to the nearby Cloon to Castlebar 110kV overhead transmission line via approximately 982 metres (m) of underground cabling route which will run in a north-eastward direction from the proposed onsite 110kV substation through agricultural land to the existing overhead line. The existing overhead line will be broken by 2 no. end masts (lattice type towers) to facilitate the connection to the Proposed Wind Farm. (Figure 13-11). The 2 no. new end masts will be located along the same linear path as the existing Castlebar-Cloon OHL.

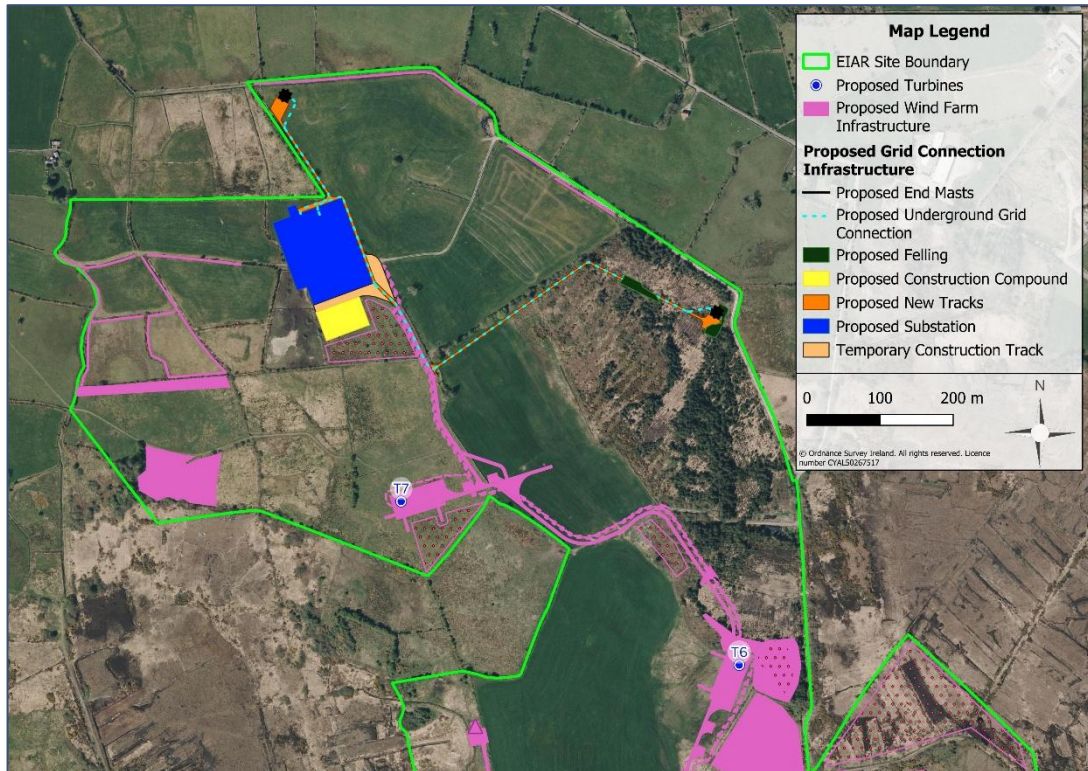


Figure 13-11 Aerial view of the Proposed Grid Connection.

The proposed onsite 110kV substation is located on a relative flat area of land within the undulating drumlin landscape approximately 295m north from the nearest proposed turbine, T7. The land cover of the field in which the proposed 110kV substation is proposed is a degraded agricultural field comprising dense shrub and tree vegetation (Plate 13-17). Sensitive receptors are seen in the distant background on elevated terrain. Woodland and treeline/ hedgerow planting and bolstering are proposed along the western and north-eastern boundary of the proposed onsite 110kV substation as part of the Biodiversity Management and Enhancement Plan (BMEP) (Appendix 6-4), which will provide some visual screening. Visual effects arising as a result of this element of the Proposed Project are discussed in full in Section 13.7.5.4 below.



Plate 13-17 Views west towards the proposed 110kV substation location

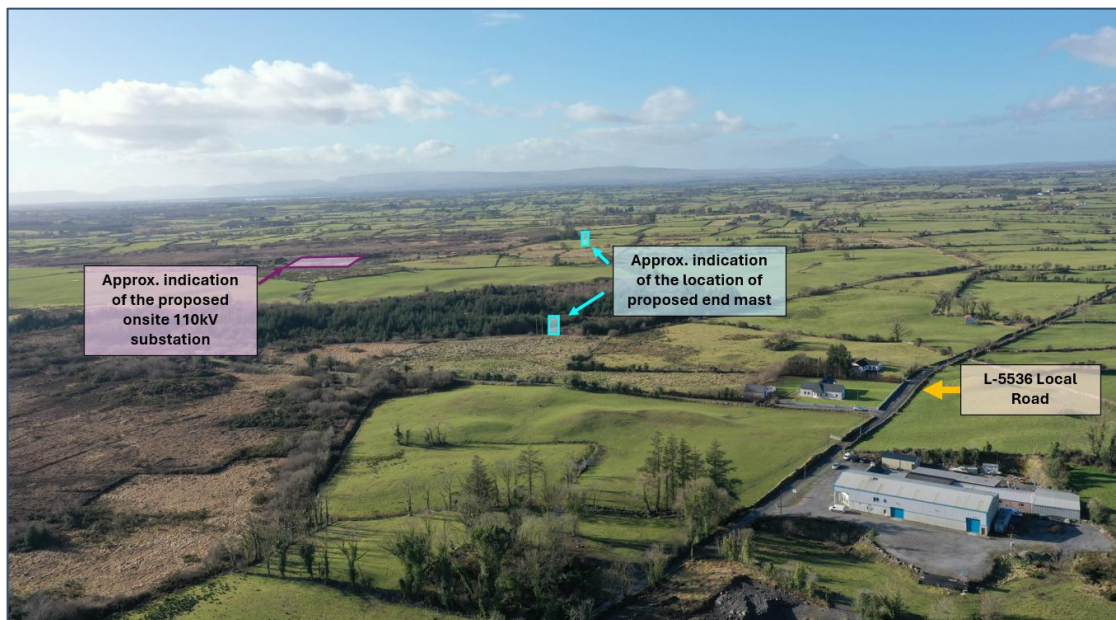


Figure 13-12 Approximate locations of the proposed 110kV substation and 2 no. new end-masts.

2 no. new end-masts will be constructed to facilitate the connection of the proposed onsite 110kV substation via underground cabling to the existing Castlebar-Cloon OHL (approx. locations in Figure 13-12). 3 no. wooden poles that are located underneath the existing Castlebar-Cloon OHL will be removed following construction (see Appendix 4-2: *Grid Connection Infrastructure* for further detail). The western-most proposed end-mast will be located to the north of the proposed onsite 110kV substation within an agricultural field (see Plate 13-18). The eastern-most end mast will be located to the northeast of the proposed onsite 110kV substation adjacent to existing confiner trees (see Plate 13-19).



Plate 13-18 Location of the western-most end mast at the north-west of the Site in an agricultural field lined with vegetation.



Plate 13-19 View of the shrubby vegetation at the location of the second eastern- most end-mast.

13.4.3

Sensitivity of the Site: Landscape Value & Susceptibility to Change

Landscape ‘Value’ was assessed in order to determine the landscape ‘Sensitivity’ of the Proposed Project to establish the capacity of the immediate landscape in which the Proposed Project will be built, as is prescribed by best practice guidance (GLVIA3, p.80):

‘...as part of the baseline description the value of the potentially affected landscape should be established’.

The landscape sensitivity of the Site is determined by combining assessments of landscape value and susceptibility to change. Landscape value considers designations, landscape quality, scenic qualities, and other indicators of how the landscape is valued by society. Susceptibility considers the ability of the landscape to accommodate the proposed type of development without undue consequences for its character. Table 13-2 below assesses indicators of landscape value for the Site. The Site’s susceptibility to change and overall sensitivity rating are then determined based on this assessment of value, the existing landscape character, and the nature of the Proposed Project.

The ratings of Value and Susceptibility range from High, Medium, or Low, while the overall Sensitivity is assigned as **Very High**, **High**, **Medium** or **Low**, following criteria outlined in the full detailed methodology, presented in *Appendix 13-1: LVIA Methodology* (Section 1.7: Assessing Landscape Effects).

Table 13-2 Indicators of Landscape Value and Susceptibility to Change

Indicator	Description
Landscape Designations	The Site is located within Policy Area 4 – Drumlins and Inland Lowlands, which has the lowest sensitivity (medium) to wind farm development compared to the other Policy Areas in County Mayo. No designated ‘Vulnerable Features’, designated ‘Scenic Routes’, or ‘Designated Scenic Routes with Views’ fall within the Site itself. The Site is located within an area classified as ‘Tier 1- Preferred (cluster of turbines)’ as set out in the RES for County Mayo.
Landscape Elements Quality / Condition	This refers to the physical state of the landscape and the condition of individual elements. The Site is a modified rural landscape, characterised by a mix of agricultural pastures, peatlands with shrubs, and wetlands creating a patchwork of land uses. The condition of the landscape is degraded in several locations within the Site due to high levels of human modification and alteration.
Scenic / Aesthetic Qualities	While the Site retains some rural aesthetic quality due to its remote location, the human influence arising from agricultural land-use and historical peat activities detracts from the rural aesthetic qualities of the Site itself.
Rarity or Conservation Interests	There are no designated areas of conservation within the Site itself. The vast majority of the Site comprises of cutover or open cutaway peat, improved agricultural grassland and forestry. Small tracts of forestry and other boundary vegetation around the site are valuable biodiversity corridors. A comprehensive description and assessment of the biodiversity within the Site is contained in Chapter 6 – <i>Biodiversity</i> .

Perceptual Qualities (Tranquillity / Wilderness / Naturalness)	The extensive modifications resulting from human activities has led the landscape being primarily characterised as a degraded agricultural landscape. Such views of agricultural and peatland activity as seen within the Site are common throughout the local area, proving it to be a common land-use activity within the landscape. As a result, the landscape exhibits limited naturalness and a diminished sense of wilderness, despite its rural setting.
Recreational Value	The Knockaunakill Loop follows a local road along the northern extent of the Site. This section of the route extends for approximately 2km of the overall 8km loop.
Cultural Meaning / Associations	There are no recorded archaeological sites, or groups of sites, within the Proposed Wind Farm as detailed in Chater 14 – <i>Archaeological, Architectural and Cultural Heritage</i> .

In consideration of the factors detailed in the table above, and the designations outlined in the MCDP, the landscape value of the Site is deemed to be **‘Low’**. Excepting for a small section of the Knockaunakill Loop which passes through to the north of the Site, there is little to no recreational value to the Site itself, and it is a landscape which has undergone a degree of human modification due to current and historic land uses such as peatland activity and agricultural fields. All of the proposed turbines are located within an area designated as “*Tier 1- Preferred (Cluster of Turbines)*” for wind energy development, and are located within Policy Area 4, which has the lowest designated sensitivity (medium) to wind farm development compared to the other Policy Areas in County Mayo. In consideration of these factors the susceptibility of the Site to the proposed change is considered **‘Medium’**. On balance, the landscape sensitivity of the Proposed Project is deemed **‘Low’**.

13.4.3.1 Landscape Characterisation in the Guidelines (DoEHLG, 2006) and the Draft Guidelines (DoHPLG, 2019)

This section considers the context of the Proposed Project based on siting and design guidance in the Guidelines (DoEHLG, 2006) and 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 Site in that context.

Section 6.9 of the Guidelines (DoEHLG, 2006) and Section 6.10 of the Draft Guidelines (DoHPLG, 2019) are titled *‘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 Guidelines (DoEHLG, 2006) and the Draft Guidelines (DoHPLG, 2019) note 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. Based on information gathered during site visits (see previous section) and visualisations presented in the *EIAR Volume 2: Photomontage Booklet*, as well as

from other mapping and imagery present in this Chapter, the Proposed Wind Farm was considered to be a cross between either 'Hilly and Flat Farmland' Landscape Character Type and/or 'Flat Peatland' Landscape Character Type.

Site visits determined that while individual turbines may be located within areas exhibiting characteristics of both 'Flat Peatland' and 'Hilly and Flat Farmland' landscapes, the entire visual unit(s) in which the proposed turbines are viewed in should be taken into consideration (the Guidelines (DoEHLG, 2006), page 47; the Draft Guidelines (DoHPLG, 2019), page 100). The wider landscape context of the undulating agricultural farmland landscape strongly influences the approach to siting and design of the proposed turbines. Therefore, the siting and design guidance for the '**Hilly and Flat Farmland**' Landscape Character Type has been applied, which best reflects the landscape of the Proposed Wind Farm and the visual unit(s) in which the proposed turbines are viewed in.

'Hilly and Flat Farmland'

The key characteristics of Hilly and Flat Farmland as stated in the Guidelines (DoEHLG, 2006) (p.52) and the 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'.

All relevant siting and design guidance (including **Location, Spatial Extent, Spacing, Layout, Height and Cumulative Effect**) given for 'Hilly and Flat Farmland' in the Guidelines (DoEHLG, 2006) and the Draft Guidelines (DoHPLG, 2019) are set out below:

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 elements, such as buildings, roads and power or telegraph poles and lines may result in visual clutter and confusion. While in practice this can be tolerated, in highly sensitive landscapes every attempt should be made to avoid it."

In terms of **location**, the proposed turbines are sited in cutover bogs, forestry and agricultural fields. As such, the Proposed Wind Farm site and immediate surrounds are not highly sensitive landscapes.

One rationale for the recommendation (cited above) to site turbines on elevated ridgelines within this landscape type, is to ensure a reasonable distance from dwellings and population centres, whilst avoiding visual dominance. In this regard, the proposed turbines are set back a reasonable distance from dwellings, exceeding the 500m set-back distance as outlined in the Guidelines (DoEHLG, 2006), and also adhere to the recommended 4 x tip height set-back distance in accordance with the Draft Guidelines (DoHPLG, 2019).

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.”

In terms of **spatial extent**, as noted above, the sufficient distance from buildings, critical at lower elevations is achieved through the spatial extent of the Proposed Wind Farm site, with the proposed turbines adhering to the 500m set-back distance as outlined in the Guidelines (DoEHLG, 2006) as well as the recommended 4 x tip height set-back distance (for third party Sensitive Properties) in accordance with the Draft Guidelines (DoHPLG, 2019) .

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 turbines generally follow a regular spacing pattern that broadly corresponds with the underlying field pattern. As the Wind Farm site comprises multiple landscape types (i.e. cutover bog, forestry and agricultural land), strict regular spacing is not entirely allowed for. Accordingly, the proposed turbines have adopted a balanced approach, whereby turbine spacing responds where possible to the varied land cover while striking a balance across the different landscape types.

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 generally follow rough grid layout with a relatively flat landscape. The turbines are evenly spaced in lines that give a sense of order to the layout when viewed from multiple orientations in the immediate surrounds.

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**, the proposed turbines will be tall features within the landscape. Overall, the proposed turbines retain a relatively even profile; when viewing the turbines, the nacelles are positioned

at relatively even heights, improving visual coherence when viewed from areas within the wider landscape.

Cumulative Effect

“It is important that 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**, there are no existing wind farms within 5km of the Proposed Wind Farm. Cumulative landscape and visual effects are discussed in Section 13.7.5.5.

13.4.4 Landscape Character of the Wider Landscape Setting

The landscape surrounding the Proposed Wind Farm is of a rural agricultural landscape. It is a working, settled landscape with clusters and linear arrays of residential receptors scattered along the surrounding agricultural field system. These agricultural fields dominate visually, providing a sense of order to the landscape. These fields are defined by visible boundaries comprised of hedgerows and treelines (as seen in Plate 13-20 below). Whilst at a macro-scale, the wider landscape is a relatively flat agricultural landscape, it is interspersed by localised undulations formed from the drumlin landscape, restricting visibility in these directions.



Plate 13-20 Drone Image: Views south-west from the townland of Knockaunakill

Agricultural land, bogs and peatlands constitute a large portion of the landcover in the wider area. These areas have a cultural history of turf-cutting activities. Due to the historic peatland activity in the LVIA Study Area, large tracts of shrub vegetation and forestry are also prominent throughout the landscape, forming a notable element of the character of the landscape.



Plate 13-21 Drone Image: Views northwest of the landscape, in the townland of Knockroe

Overall, the drumlin landscape within the LVIA Study Area is predominantly flat with localised hills, gradually ascending in a north-easterly direction. The terrain rises sharply to the north towards Cuillalea Hill. To the west, the landscape is primarily flat and low-lying where Lough Carra and Lough Mask are located in and contain the only scenic routes in the entire LVIA Study Area.

The linear arrays of residential receptors are aligned along the local road network that surround the agricultural fields. These roads connect with the major transport routes within the LVIA Study Area such as the N60 National Road, which links the primary settlements within the LVIA Study Area, such as Claremorris, located approximately 5.4km east from the nearest proposed turbine, and Castlebar, located approximately 17.8km away from the nearest proposed turbine. The closest settlement is the historic town of Mayo Abbey, located approx. 2.5km from the nearest proposed turbine. The Irish Rail network, which connects major towns such as Castlebar, Claremorris, and Ballyhaunis passes within the LVIA Study Area, coming within 1.5km of the nearest proposed turbine, T4.

The impact assessments detailed later in this chapter (Section 13.7) provide a comprehensive evaluation of the likely significant landscape and visual effects from key receptors where theoretical visibility on the ZTV is present.

13.5 Visual Baseline

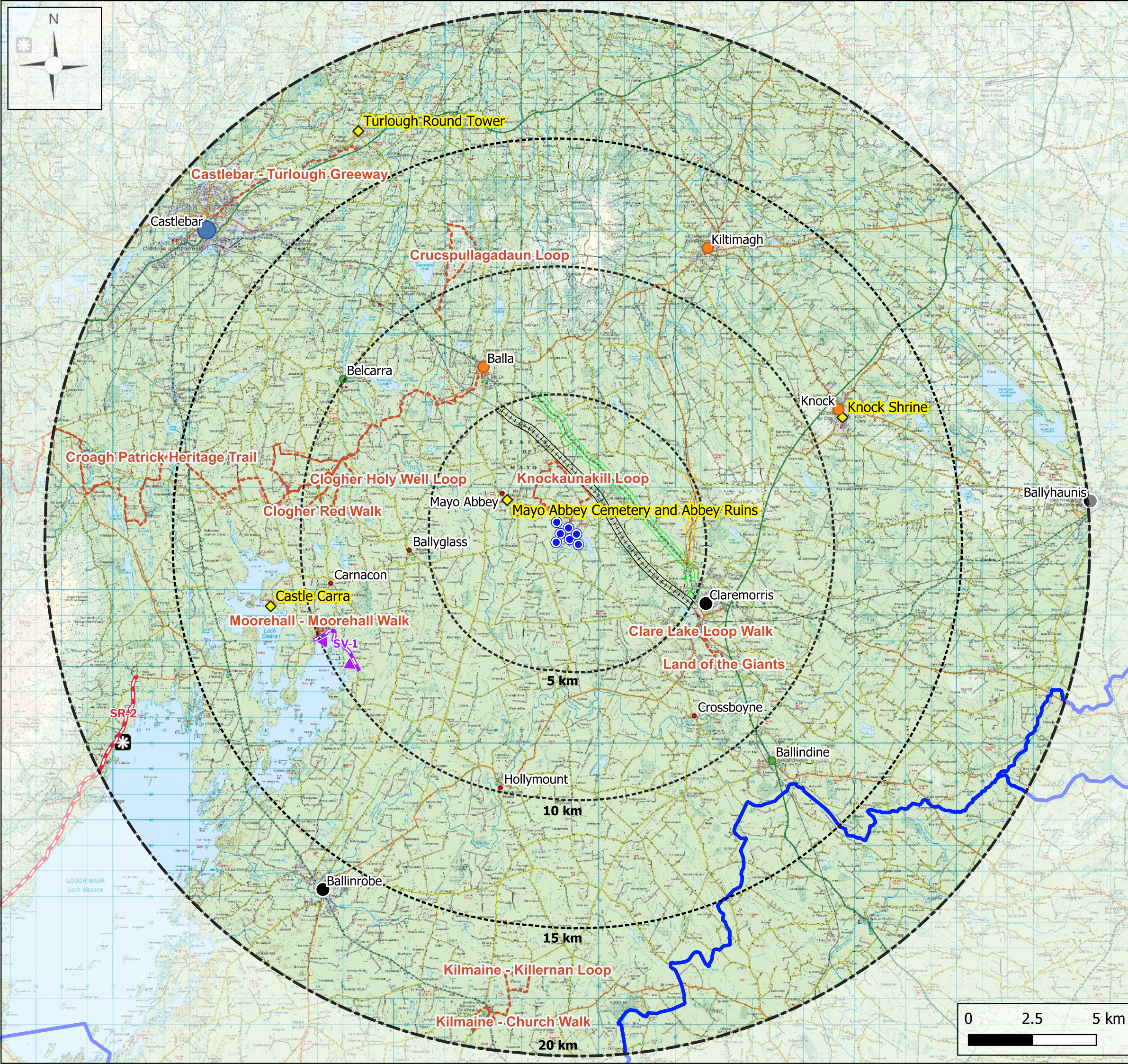
13.5.1 Visual Receptors

The main purpose of establishing the visual baseline is to identify the key visual receptors that should be considered for viewpoint selection. Viewpoints are locations from which visual effects are assessed using photomontages (See *Appendix 13-1 – LVIA Methodology*). To this end the following have been identified:

- > Designated Scenic Routes and Scenic Views
- > Settlements
- > Recreational Routes and Tourist Designations
 - Waymarked Walking Routes
 - Cycle Routes
 - Scenic Drives
 - Tourist Routes (e.g. Wild Atlantic Way)
- > Viewing Points (e.g. marked on OS Maps)
- > Transport Routes

All visual receptors identified in the visual baseline are shown on Figure 13-13 below. These visual receptors are listed in tables in the following sections along with theoretical visibility at those locations indicated by the Visual Baseline and Half-Blade ZTV map – Figure 13-14 below.

During site visits conducted during 2023, 2024, and 2025 the likely visibility of the Proposed Project was appraised from receptors where the ZTV has indicated theoretical visibility. Visual receptors are scoped out from further assessment when there is either no theoretical visibility of the proposed turbines or where on-site appraisal determined visibility of the proposed turbines to be very unlikely or very limited.



Map Legend

- LVIA Study Area
- County Borders
- Proposed Turbines

Co. Mayo Settlements

- Strategic Growth Towns
- Self Sustaining Growth Towns
- Self Sustaining Towns
- Rural Settlements
- Rural Villages

Visual Receptors

- Tailte Eireann Viewing Points
- Co. Mayo Tourism Designations
- Co. Mayo Recreational Routes

Co. Mayo Scenic Designations

- Scenic Routes
- Scenic Routes with Views

Key Transport Routes within 5km

- Regional roads
- National roads
- Railways

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Drawing No.

Figure 13-13

Drawing Title

Visual Baseline

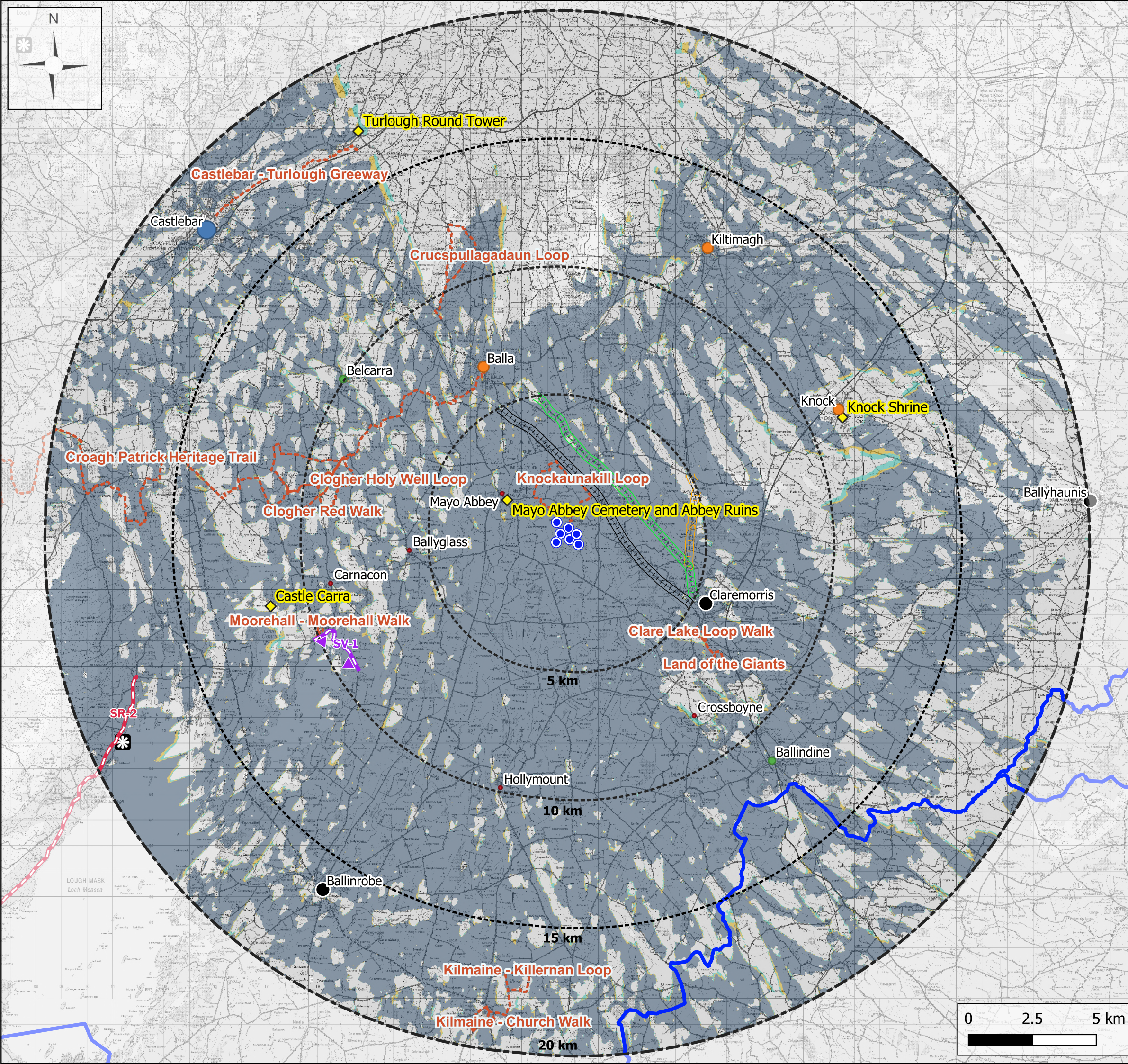
Project Title

Cunlaghfadda Green Energy Project

Scale	Project No.	Date	Drawn By	Checked By
1:140,000	220825	15.04.2026	GL	DM



Planning and Environmental Consultants



Map Legend

- LVIA Study Area
- County Borders
- Proposed Turbines
- Co. Mayo Settlements**
 - Strategic Growth Towns
 - Self Sustaining Growth Towns
 - Self Sustaining Towns
 - Rural Settlements
 - Rural Villages
- Visual Receptors**
 - Tailte Eireann Viewing Points
 - Co. Mayo Tourism Designations
 - Co. Mayo Recreational Routes
- Co. Mayo Scenic Designations**
 - Scenic Routes
 - Scenic Routes with Views
- Key Transport Routes within 5km**
 - Regional roads
 - National roads
 - Railways
- Half-Blade Zone of Theoretical Visibility**
 - 1-2 Turbines Theoretically Visible
 - 3-4 Turbines Theoretically Visible
 - 5-7 Turbines Theoretically Visible

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Drawing No.

Figure 13-14

Drawing Title

Visual Baseline with Zone of
Theoretical Visibility

Project Title

Cunlaghfadda Green Energy Project

Scale	Project No.	Date	Drawn By	Checked By
1:140,000	220825	16.03.2026	GL	DM

13.5.1.1 Designated Scenic Routes and Views

As reported previously in Section 13.4.1.1.6, and shown in Figure 13-13, there are 2 No. designated scenic routes and scenic routes with views within the LVIA Study Area. Of these, 1 no. (SV-1) is located within 10km of the proposed turbines and 1 no. (SR-2) is located within 20km of the proposed turbines. See the scoping of all the following receptors in Section 13.5.2.

13.5.1.2 Tailte Éireann Viewpoints

There is 1 no. Tailte Éireann Viewing Area located within the LVIA Study Area, located within 20km of the proposed turbines, as seen in Figure 13-13 and Figure 13-14.

13.5.1.3 Settlements

The settlement hierarchy reported in the MCDP was consulted to identify the settlements within the LVIA Study Area. This LVIA focuses on key settlements and population centres within the LVIA Study Area such as large towns and villages within 20km and smaller rural settlements of local importance within 10km.

13.5.1.4 Recreational Routes

Recreational routes are sensitive receptors as people are likely to be using them in a recreational capacity where value is likely to be placed upon views and the scenic amenities of the landscape. The term 'recreational routes' encompasses the following:

- Waymarked walking routes;
- Cycle routes;
- Scenic drives and tourist routes (e.g., the Wild Atlantic Way).

According to sources including such as Tailte Éireann maps and Sport Ireland Designated Cycle Routes and Trails, 16 no. designated routes were identified in County Mayo within the LVIA Study Area. In general, many such routes exist of differing scale and prominence, thus only the recreational routes of county- or national-level importance which are featured on the available websites or are designated in county-level policies were included in this LVIA.

13.5.1.5 Recreational, Cultural Heritage and Tourist Destinations

Popular recreational, cultural heritage and tourist destinations in the LVIA Study Area were investigated through a desktop exploration of localised tourism plans as well as considering the most popular tourism destinations in County Mayo posted on [Tripadvisor.ie](https://www.tripadvisor.ie). Note that 'cultural heritage' destinations in this section refers to those of popular renown in the sense of general tourism; a detailed assessment of archaeological cultural heritage sites in relation to the Proposed Project is provided in this EIAR, Chapter 13: Archaeological, Architectural and Cultural Heritage. A full scoping exercise on these receptors is provided in Section 13.5.2.

13.5.1.6 Transport Routes

Onsite visibility appraisal determined that most visibility of the proposed turbines will occur within 3-5km of the Proposed Wind Farm from the local road network surrounding the proposed turbines, and there is also potential for visibility to occur for users of N60 National, R320, Regional Road and the Railway where they pass within 5km of the Site. These are considered in the preliminary analysis.

13.5.2 Preliminary Analysis: Visual Receptors

13.5.2.1 Visual Receptors Scoped In for Further Assessment

The receptors in Table 13-3 identified in the LVIA Study Area were scoped in for assessment in the LVIA and are mapped above in Figure 13-13 and Figure 13-14; see the full detailed methodology in *Appendix 13-1: LVIA Methodology* for the analysis of scoping receptors in and out of assessment.

Table 13-3 Visual Receptors Scoped in for Further Assessment

Receptor	Description	Direction of View	Directed to Turbines	Theoretical Visibility	Photomontage Viewpoint No.
Up to 5km					
Settlements	Mayo Abbey (Tier 5 – Rural Village)	N/A	N/A	Full Theoretical Visibility	VP08, VP09
Recreational, Cultural Heritage and Tourist Destinations	Mayo Abbey Cemetery and Abbey Ruins	N/A	N/A	Full Theoretical Visibility	VP08, VP09
Recreational Routes	Knockaunakill Loop: an 8km loop walk	N/A	N/A	Full Theoretical Visibility	VP02
Road Network	N60 National Road Railway R320 Regional Road	N/A	N/A	Primarily full Theoretical Visibility	VP01, VP13, VP15
5-10km					
Scenic Route and Views	SV-1¹: “Local road north-east of Lough Carra, from Carrownacon to north of Ballygarries (looking towards Lough Carra)”	South/south-west	No	Primarily full Theoretical Visibility	VP05
Settlements	Claremorris (Tier 2 – Self-Sustaining Growth Town)	N/A	N/A	Full Theoretical Visibility	VP13, VP17

¹ As the Mayo County Development Plan (MCDP) 2022–2028 does not assign reference numbers to designated scenic routes, this report applies a numbering system to facilitate clarity in mapping, labelling, and cross-referencing.

	Balla (Tier 3 – Self-Sustaining Town)				
Recreational Routes	Croagh Patrick Heritage Trail: <i>“The Croagh Patrick Heritage Trail, a National Waymarked Way, extends from the town of Knock, 20km south of Knock International Airport, in east Mayo, to the village of Murrisk at the base of Mayo’s holy mountain, Croagh Patrick. The trail is 85km in length and mainly at low level, but the walker should note that the trail does reach a high point of 315 metres around the foothills of Croagh Patrick. There is an alternative coastal road route from Prospect to Murrisk.”</i> (MayoCountyCouncil.ie) (also includes Clogher Bog Loop, Clogher Holy Well Loop, and Clogher Red Walk with disconnect from the main trail and loop back rejoin it)	N/A	N/A	Mix of Full Theoretical Visibility and no Theoretical Visibility along the extent of the trail. On-site appraisals determined that visibility may occur from elevated vantage points along the trail.	VP19
10-15km					
Recreational Routes	Crucspullagadaun Loop: <i>“This pleasant walk brings the walker on very quiet minor road by a mixture of agricultural land and stretches of forestry with a section through one of these on forest track and a path through the trees, while being treated to fine views of the surrounding countryside and beyond a great vista of Lough Conn, Croagh Patrick, Clare Island, Achill Island the Nephin Mountains.”</i>	N/A	N/A	Sections of Full Theoretical Visibility. On-site appraisals determined that visibility likely to occur along elevated vantage points along the loop	VP11

	(Mayo.ie)				
Settlements	Kiltimagh (Tier 3 – Self-Sustaining Town) Ballindine (Tier 4 – Rural Settlement)	N/A	N/A	Full theoretical visibility	Photowire Images in Section 13.7.5.2.4
15-20km					
Scenic Route	SR-2: “Local road from Maumtrasna to Srah (west of Lough Mask)”	Primarily south-east, wide view	Yes	Full theoretical visibility	VP12
Taillte Ireland	Lough Mask Viewing Point	South-east	Partially	Yes	VP12
Recreational Route	Killmaine - Loop / Nature Walk Kilmaine - Church Walk	N/A	Partially	Mix of Full Theoretical Visibility and no Theoretical Visibility along the extent of the trail. On-site appraisals determined that some distant views may occur from elevated vantage points.	VP10

13.5.2.2 Visual Receptors Scoped Out for Further Assessment

In some cases, specific receptors are scoped out where there is no potential for significant visual effects to occur on account of combination of factors such as distance, visual screening, direction of views and the nature and sensitivity of the receptors at a particular location (see Section 1.4.3 of *Appendix 13-1 Methodology* for further information). Please see Table 13-4 for list of receptors which have been scoped out for further assessment.

Table 13-4 Visual Receptors Scoped out From Further Assessment

Receptor	Description	Rationale for Scoping Out
Up to 10km		
Settlements	Crossboyne (Tier 5 – Rural Village) Hollymount (Tier 5 - Rural Village) Carnacon (Tier 5 - Rural Village) Ballyglass (Tier 5 - Rural Village) Belcarra (Tier 4 – Rural Settlement)	No theoretical visibility (e.g. large portions of Crossboyne) and/or further visual screening will occur from the built environment of the settlement and vegetation on intervening elevated ridges. Significant visual effects are not likely to occur.
Recreational Routes	Clare Lake Loop Walk Land of the Giants Trail Moorehall Walk	Visibility is likely to be very limited, as the routes are either located within settlements (where the built environment provides substantial visual screening), within areas of dense forest cover, or views are oriented in opposing directions to the proposed turbines (e.g. towards Lough Carra). Significant visual effects are not likely to occur.
10-15km		
Settlements	Knock (Tier 3 – Self-Sustaining Town)	No Theoretical Visibility
Recreational, Cultural Heritage and Tourist Destinations	Knock Shrine Castle Carra	No Theoretical Visibility
15-20km		
Settlements	Castlebar (Tier 1 – Strategic Growth Town) Ballinrobe (Tier 2 – Self-Sustaining Growth Town) Ballyhaunis (Tier 2 – Self-Sustaining Growth Town)	At these distances beyond 15km, within these low-lying settlements, visibility is likely to be very limited (e.g. Ballinrobe), have very little theoretical visibility (e.g. Castlebar) or have no theoretical visibility (e.g. Ballyhaunis), with further visual screening provided by the built environment and vegetation

Receptor	Description	Rationale for Scoping Out
		on intervening ridgelines. Where visibility does occur, the proposed turbines will be seen as small-scale elements relative to the landscape in the distant background. Significant visual effects are not likely to occur.
Recreational Routes	Castlebar - Turlough Greenway	Primarily no theoretical visibility occurs along the Castlebar-Turlough Greenway. At these distances beyond 15km, the two very small areas where visibility could occur is likely to be very limited due to distance and intervening above-ground features (built environment and vegetation). Where visibility does occur, the proposed turbines will be seen as small-scale elements relative to the landscape in the distant background. Significant visual effects are not likely to occur.
Recreational, Cultural Heritage and Tourist Destinations	Turlough Round Tower	Some partial theoretical visibility may occur, although at this distance beyond 15km, visibility is likely to be very limited due to distance and intervening above-ground features (built environment and vegetation). Where visibility does occur, the proposed turbines will be seen as small-scale elements relative to the landscape in the distant background. Significant visual effects are not likely to occur.

13.5.3 Residential Receptors

During site visits conducted in 2023, 2024 and 2025, visibility appraisals determined that most visibility of the proposed turbines will occur within 5km. It is a settled landscape, with residential housing being organised along the local road network as well as in small settlement clusters around local crossroads and junctions. Some residential receptors located in close proximity to the Site will likely have views of the proposed turbines and are likely to have the greatest visual effects arising as a result of the Proposed Project.

In light of this, several photomontage viewpoint locations representing residential properties located in close proximity to the Proposed Wind Farm were selected for inclusion in the *Photomontage Booklet* and are assessed in *Appendix 13-3: Photomontage Visual Impact Assessment Tables*, as well as discussed later in this Chapter.

The following representative viewpoints (VPs) are located in proximity to residential receptors and settlement centres within 5km from the Site:

- VP01: Townland of Brees, approx. 2.9km north of proposed turbines;
- VP02: Knockaunakill, approx. 690m north of proposed turbines;
- VP03: Townland of Ahena, approx. 3.2km south of proposed turbines;

- > VP04: Townland of Knockrickard, approx. 1km south of proposed turbines;
- > VP06: Townland of Oory, 4km south-west of proposed turbines;
- > VP07: Townland of Knockroe, 700m west of proposed turbines;
- > VP08: Townland of Lehanagh, 2km north-west from proposed turbines;
- > VP13: Townland of Claremount, 4.7km east from proposed turbines;
- > VP14: Townland of Clogher Beg, 1.4km south-east of proposed turbines;
- > VP15: Townland of Birchfield, 2.5km north-east of proposed turbines;
- > VP18: Townland of Drumady, 660m east of proposed turbines;

The impact of the proposed turbines on residential receptors is discussed in detail in Section 13.7.5.3.

13.5.4

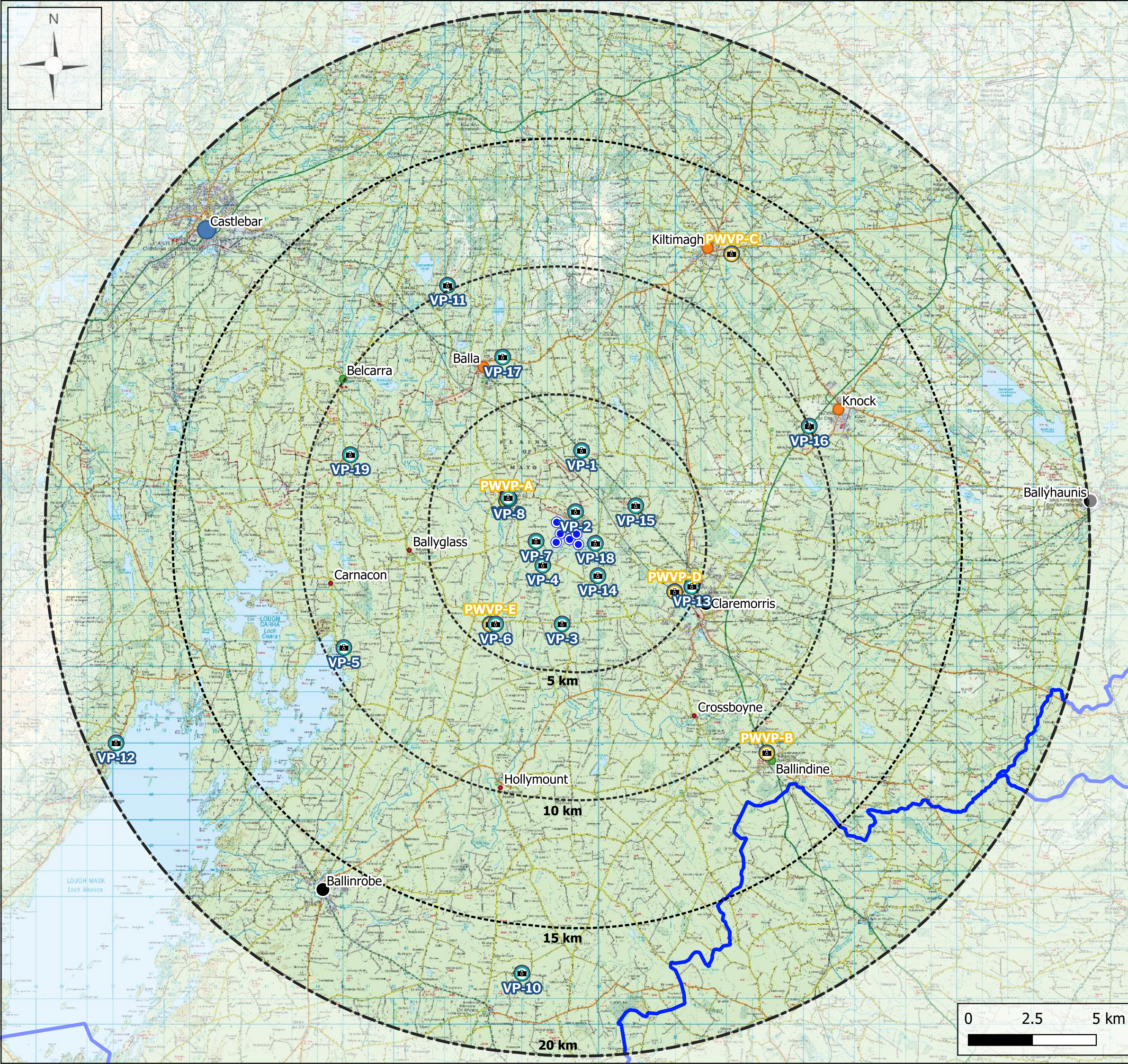
Viewpoint Selection: Photomontage and Photowire Locations

Selection of Main Photomontage Viewpoints

Photomontage imagery was captured from multiple viewpoint locations in the LVIA Study Area; from these, a total of 19 no. photomontage viewpoints were selected for full assessment (named VP01–VP19). These are mapped below in Figure 13-15 (marked as white/blue icons) and presented in the *ELAR Volume 2: Photomontage Booklet* accompanying this report. All VPs are comprehensively assessed in Section 13.7.5.1.2.

Imagery captured from each viewpoint was used to assess the significance of visual effects arising from the proposed turbines from each viewpoint location. The viewpoint locations are representative of all visual receptors; in some instances, imagery was not captured directly at a visual receptor but from another location in close proximity to the receptor, from which there was a superior line of sight towards the proposed turbines (e.g. a point of higher elevation or a position with less visual screening).

The likely visual effects of the proposed turbines arising from each viewpoint location are reported below in Section 13.7.5.1. The comprehensive and detailed assessment is presented within the viewpoint (photomontage) impact assessment tables in *Appendix 13-3: Photomontage Visual Impact Assessment Tables*.



Map Legend

- LVIA Study Area
- County Borders
- Proposed Turbines
- Photomontage Viewpoint Locations
- Photowire Viewpoint Locations

Co. Mayo Settlements

- Strategic Growth Towns
- Self Sustaining Growth Towns
- Self Sustaining Towns
- Rural Settlements
- Rural Villages

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Drawing No.

Figure 13-15

Drawing Title

Photomontage Viewpoint Locations

Project Title

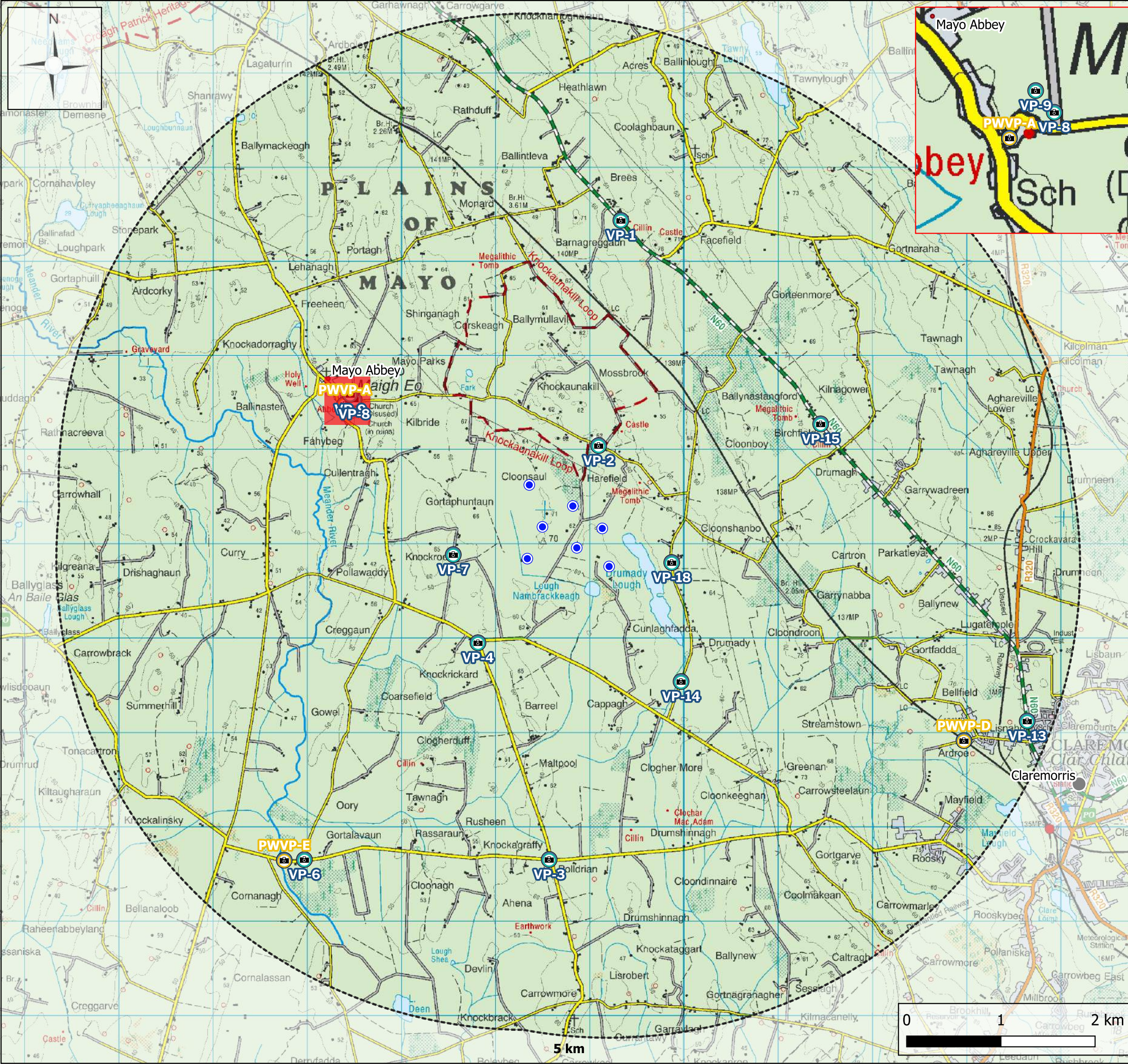
Cunlaghfadda Green Energy Project

Scale	Project No.	Date	Drawn By	Checked By
1:140,000	220825	08.05.2026	GL	DM



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02.55 km



Map Legend

- 5km buffer
 - Proposed Turbines
 - Photomontage Viewpoint Locations
 - Photowire Viewpoint Locations
- Co. Mayo Settlements**
- Rural Villages

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Drawing No.

Figure 13-16

Drawing Title

Zoom on Photomontage Viewpoint
Locations

Project Title

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1:38,000	220825	08.05.2026	GL	DM

Supplementary Photomontage Viewpoints: Photowires

Before selection of the final viewpoints, early-stage photomontages, draft-overlaid wireframes known as ‘photowires,’ were produced. In some instances, these photowires indicated limited visibility of the proposed turbines and were therefore excluded from assessment in the final *Photomontage Booklet*.

To aid discussions, a total of 5 no. supplementary photowires representing additional locations of visual receptors are presented in and discussed in this Chapter in Section 13.7.5 to illustrate certain points relating to visual effects on specific receptors. These photowires are classified as ‘Type 3’ Visualisations in the LI TGN (2019) and do not form part of the assessment of visual effects included in *Appendix 13-3*.

A detailed description of the viewpoint selection process and photomontage/photowire assessment methodology is provided in *Appendix 13-1: LVIA Methodology*.

13.6 Cumulative Context: Other Wind Farms

This LVIA Chapter assesses the likely landscape and visual impacts of the Proposed Project, both independently, as well as in combination with all other existing wind farm developments in the LVIA Study Area. In this section, all wind farm developments in the LVIA Study Area which potentially contribute to assessment of cumulative and in-combination landscape and visual effects are identified.

13.6.1 Cumulative Developments Identified in LVIA Study Area

There are only ‘Existing’ wind farm developments in the LVIA Study Area, which are defined as wind energy developments that are currently operational in the baseline landscape at the time of conducting this LVIA. There are no ‘Permitted’ (wind energy developments that are permitted (consented) at the time of conducting this LVIA) or ‘Proposed’ (well-developed wind farm proposals with project specifications in the public domain at the time of conducting this LVIA) wind farm developments within the LVIA Study Area.

The effects reported both in this Chapter and within the assessment appendices (*Appendix 13-2: LCA Assessment Tables* and *Appendix 13-3: Photomontage Visual Impact Assessment Tables*) uses appropriate and logical narrative to discuss cumulative interactions between the Proposed Wind Farm and all other wind energy developments. Discussion of cumulative interactions on specific landscape and visual receptors is relative to the effects on each receptor and is proportionate to the likelihood of significant landscape and visual effects occurring on that receptor.

In terms of cumulative landscape and visual effects, only other wind energy projects have been considered, as only these development types can be described as having very tall, vertical elements in the landscape (i.e. turbines) and therefore have the most potential to give rise to ‘Significant’ cumulative landscape and visual effects. These other wind energy developments within 20km of the proposed turbines were identified by searching past planning applications lodged through the online planning portals of relevant planning authorities (i.e. An Coimisiún Pleanála (ACP), and Mayo County Councils).

The information identified in the initial planning search was then used to verify, by means of a desk-based study and ground-truthing, whether the permitted wind energy developments had been constructed. No permitted or proposed wind turbines were present within the LVIA Study Area, and the list of existing wind turbines are listed below in Table 13-5.

Table 13-5: Cumulative Wind Farms Identified in the LVIA Study Area

Other Wind Farms	County	Status	No. of Turbines	Distance from Nearest Proposed Turbine
5-10km				
Mace Upper Wind Farm	Mayo	Existing	3	7.3km
Cloontooa Wind Farm	Mayo	Existing	6	9.1km
Ballykinava Wind Farm	Mayo	Existing	6	10.1km
Cuillalea Wind Farm	Mayo	Existing	6	10.5km
Magheramore Wind Farm	Mayo	Existing	6	10.8km

Within the LVIA Study Area (20km radius), 5 no. existing wind farms, no permitted wind farms and no proposed wind farms have been identified. The locations of these wind farms and corresponding wind turbines are mapped in the following section.

In cases where turbines of these wind farms are theoretically visible from the selected 19 no. photomontage viewpoints selected for this LVIA, the proposed turbines are included within the proposed photomontage imagery in the *Photomontage Booklet*.

13.6.2 Cumulative Context and Theoretical Visibility

Figure 13-17 below compares the cumulative theoretical visibility of all other existing wind farms, as well as visibility of the proposed turbines of the Proposed Wind Farm. The subsequent Figure 13-18 shows the same map overlain with a newly calculated ZTV for cumulative effects.

The legend of Figure 13-18 shows the theoretical visibility of the proposed turbines and cumulative turbines for each corresponding colour, as follows:

- Teal: Only turbines of the Proposed Wind Farm are theoretically visible;
- Yellow: Only turbines from other, existing wind farms are theoretically visible;
- Grey: All cumulative turbines are theoretically visible, including the Proposed Wind Farm and all other existing wind farms.

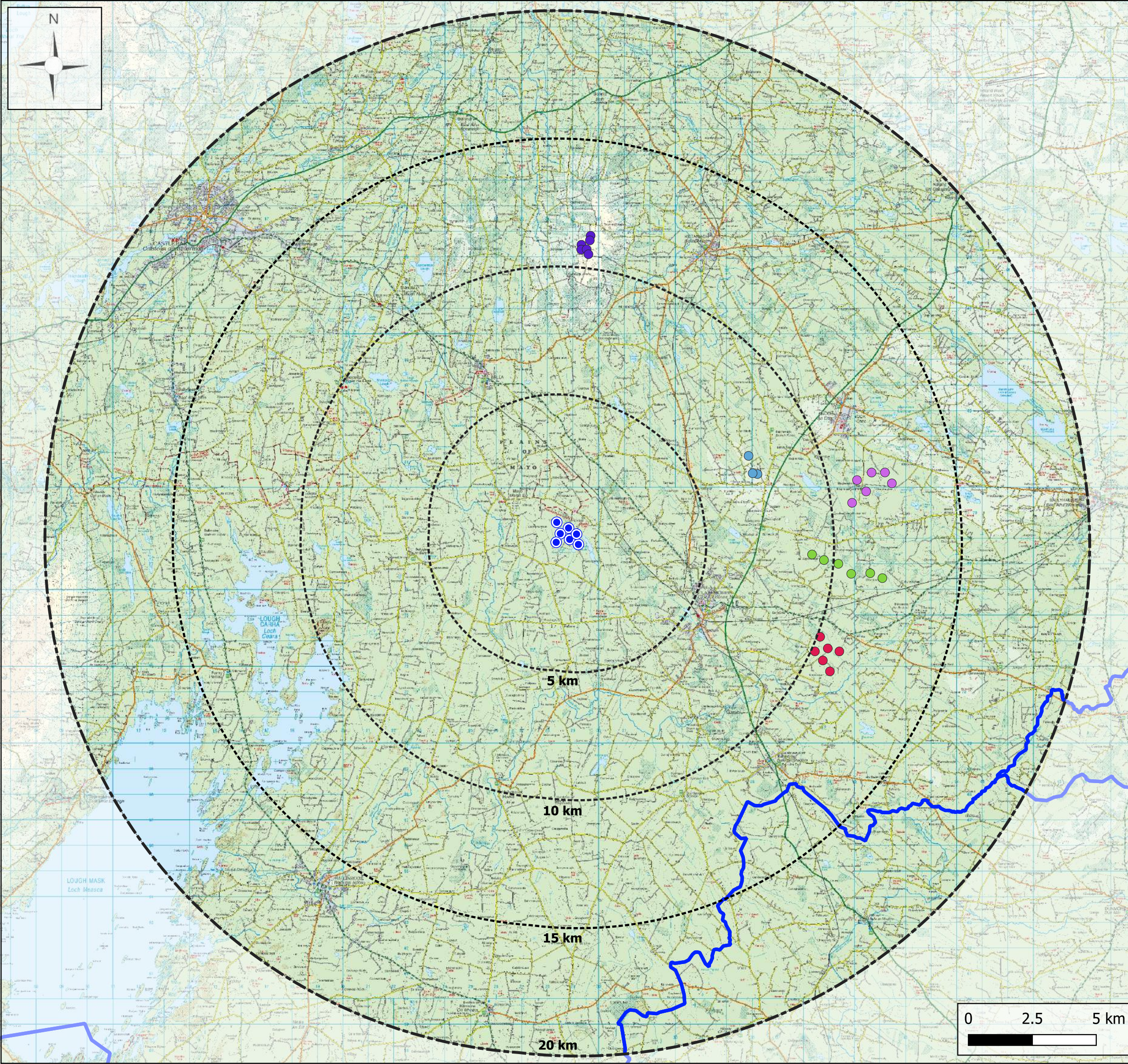
On Figure 13-18, the small pockets of teal colour on the ZTV map illustrate that the Proposed Wind Farm, on its own, introduces very little additional theoretical turbine visibility across the landscape within the LVIA Study Area. The majority of the LVIA Study Area comprises large areas where both the proposed turbines and cumulative wind farms are theoretically visible together, with smaller patches of cumulative-only theoretical visibility occurring to the north and east.

As noted previously, the ZTV does not account for localised undulations in topography or other screening factors; as such, the actual visibility from areas of lowland vegetated landscape is likely to be far less than is indicated by the ZTV. Whilst the cumulative ZTV is a useful tool to aid assessment of cumulative effects and identify areas of non-visibility where certain cumulative impacts will not occur, its utility is limited.

It should be emphasised that, in general, photomontages are a more informative tool than the Cumulative ZTV for assessing the potential cumulative landscape and visual impacts of the Proposed Wind Farm (refer to GLVIA3, LI & IEMA, 2013, p.129, para.7.30); the likely cumulative visual effects as shown in photomontages are comprehensively assessed in *Appendix 13-3: Photomontage Visual Impact Assessment Tables*.

Detailed discussions of cumulative landscape and visual effects are included below in Section 13.7 below. The likely cumulative landscape effects are assessed in the landscape character assessment tables in *Appendix 13-2: LCA Assessment Tables*, and the likely cumulative visual effects are assessed in the photomontage assessment tables in *Appendix 13-3: Photomontage Visual Impact Assessment Tables*.

The assessment of cumulative landscape and visual effects must be proportional, meaning that the focus of the assessment is on the extent to which the Proposed Wind Farm contributes toward cumulative effects on the particular receptors under assessment; these contributions are clearly explained in the narrative on cumulative impact assessment included in this Chapter (Section 13.7.5.5) as well as in the impact assessment Appendices (*Appendix 13-2* and *Appendix 13-3*).



Map Legend

- LVIA Study Area
- County Borders
- Proposed Turbines

Wind Farms within 20km

- Ballykinava Wind Farm (existing)
- Cloontooa Wind Farm (existing)
- Cuillalea Wind Farm (existing)
- Mace Upper Wind Farm (existing)
- Magheramore Wind Farm (existing)

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Drawing No.

Figure 13-17

Drawing Title

Cumulative Context

Project Title

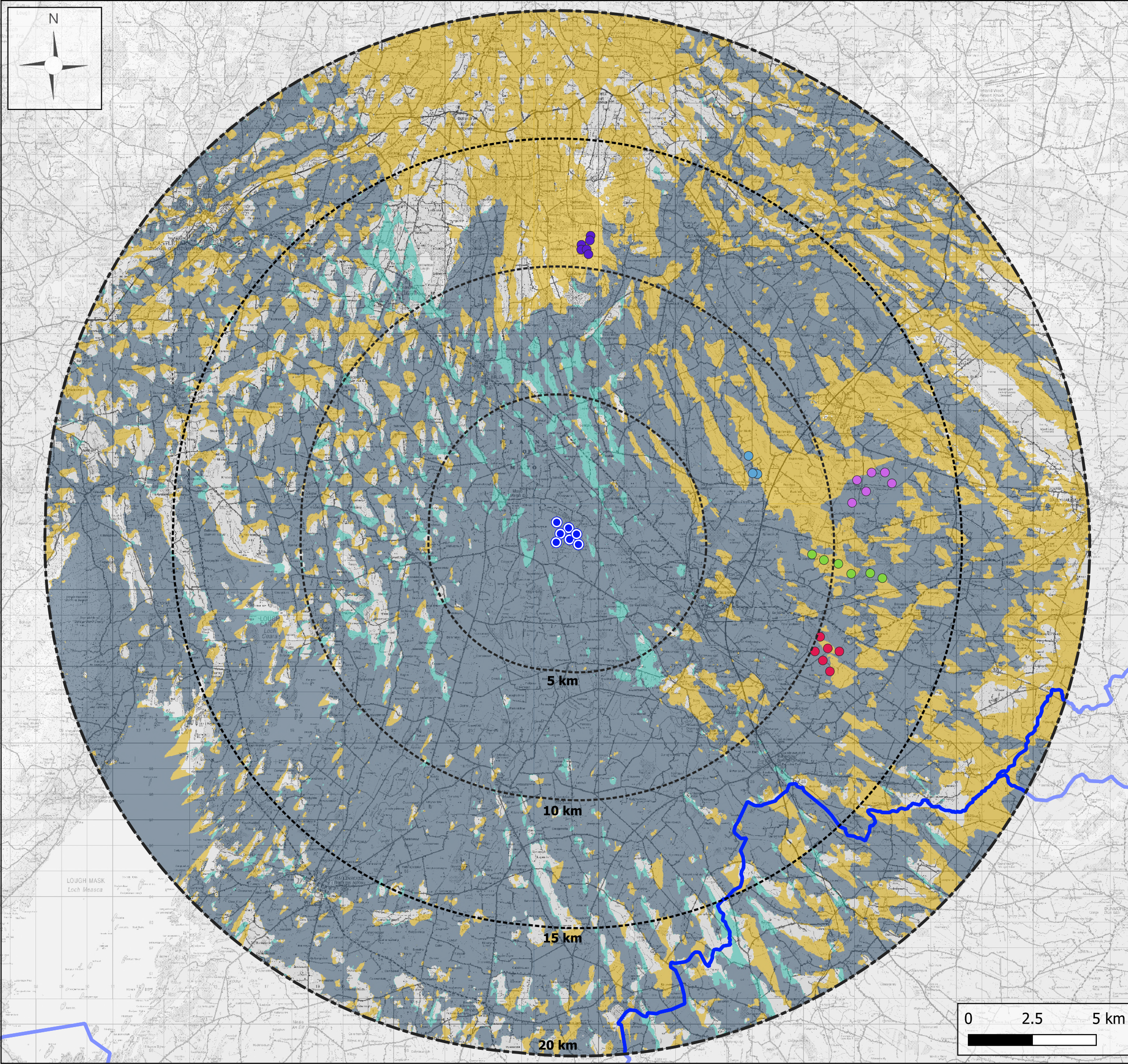
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02.55 km



Map Legend

- LVIA Study Area
- County Borders
- Proposed Turbines

Wind Farms within 20km

- Ballykinava Wind Farm (existing)
- Cloontooa Wind Farm (existing)
- Cuillalea Wind Farm (existing)
- Mace Upper Wind Farm (existing)
- Magheramore Wind Farm (existing)

Cumulative Comparative ZTV

- Only Proposed Turbines Theoretically Visible
- Only Cumulative Wind Farms Theoretically Visible
- Both Proposed Turbines and Cumulative Wind Farms Theoretically Visible

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Drawing No.

Figure 13-18

Drawing Title

Cumulative Comparative

Project Title

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1:140,000	220825	15.04.2026	GL	DM



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13.7 Likely Significant Landscape and Visual Effects

13.7.1 'Do-Nothing' Scenario

If the Proposed Project were not to proceed, the Site will continue to function as it does at present, with no changes made to the existing land use of agriculture and pasture, and potential for Landscape and Visual impacts through the construction, operation and decommissioning of the Proposed Project would not occur.

The opportunity to capture part of Co. Mayo's valuable renewable energy resource from a highly suitable landscape for wind energy 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.

Furthermore, as this application includes a Biodiversity Management and Enhancement Plan (Appendix 6-4) to be implemented during the development's operation, the opportunity to enhance the site for biodiversity, at a local scale, would also be lost.

13.7.2 Construction Phase Effects

It is estimated that the construction phase of the Proposed Wind Farm will last between 12-18 months. Construction of the development will involve the installation of the 7 No. turbines with a blade-tip height of 160m and all associated works, as well as the 110kV substation and associated works.

Construction phase effects will also include the associated impacts resulting from the movement of construction and turbine transport vehicles into and out of the Site, to allow for construction of the turbines, access tracks and associated elements.

13.7.2.1 Landscape Effects during the Construction Phase of the Proposed Project

Associated earthworks, such as the cut and fill, and the provision of borrow pits required to facilitate construction of the Proposed Wind Farm, as well as the proposed 110kV onsite substation and end masts, 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. It is considered that this is a 'Moderate', 'Short-term', 'Negative' effect in terms of landscape effects. On balance, these effects are not considered significant.

Proposed Grid Connection – Underground Cabling

The proposed onsite 110kV substation will be connected to the existing Cloon – Castlebar 110kV overhead line (OHL) by an underground cabling route c. 982m in length. The greatest effects attributed to this element of the Proposed Project (under-ground cabling) will occur during the construction phase only, as the landscape is materially altered to allow the underground installation. The construction phase of the proposed underground cabling will be temporary, localised to the Proposed Wind Farm itself, and transient in nature, as the works move along the cable route. The works will include vegetation removal, 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 c. 982m cabling route and will not affect the character of the landscape setting or visual amenity of the wider area. The construction works will be short-term in nature and completed as soon as practically possible.

The Proposed Grid Connection construction works are likely to result in 'Slight', 'Short-term', 'Negative' landscape effects. On balance, these effects are not considered significant.

13.7.2.1.2 **Mitigation Measures for Landscape Effects during Construction**

All construction activities will follow best practice methods to reduce impacts upon the environment and landscape of the Proposed Project. 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.
- Where spoil arising from construction activities is managed within the Site, the vegetative top-soil layer will be removed and re-instated following spoil management taking place. New topsoil should be provided should the existing topsoil not be of sufficient standard. Further details are presented in the *Peat and Spoil Management Plan (PSMP)* contained in *Appendix 4-3* of this EIAR.
- 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 the Construction Phase**

13.7.2.2.1 **Proposed Wind Farm**

The most substantial visual effects will arise from requisite construction activities of the Proposed Wind Farm, such as building tower sections, hardstands, access tracks, and the erection of the proposed turbines and proposed met mast. There will 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 wind farm components include large cranes and large haulage vehicles. The visual effects arising from the construction of the proposed turbines and the ancillary infrastructure such as access tracks and hardstands to service and build turbines T1 to T7 will be experienced by a range of visual receptors (primarily residential receptors and local road users) in the landscape surrounding the Proposed Wind Farm, with most visibility occurring within 5km of the proposed turbines. These construction activities will cause 'Slight', 'Short-term', 'Negative' visual effects. On balance, these effects are not considered significant.

General housekeeping measures, necessary for Health and Safety requirements, will ensure that the active construction areas will be kept tidy, mitigating localised visual impacts during the construction phase. A detailed description of these is included in the CEMP (Appendix 4-5).

The following sections assess the visual effects associated with the construction phase of the other (non-turbine) components of the Proposed Project.

Turbine Delivery Route (TDR) Accommodation Works

Works such as road widening are sometimes required along proposed turbine transport routes to accommodate the large vehicles used to transport turbine components to the Site. In the case of the Proposed Project, there will be minor accommodation works located at several locations along the TDR (detailed in Chapter 4 Description). Minor accommodation works will include temporary alterations to the existing streetscape, as well as temporary local road widening, and temporary relocation of some road signs. The comprehensive traffic impact assessment of the Proposed Project is set out in Section

15.1 Traffic and Transport of Chapter 15 Material Assets. The areas of accommodation works are deemed to have a 'Slight' sensitivity and the change to occur will be concentrated along the road network. These works are likely to be 'Temporary', 'Slight', 'Negative' visual effects. On balance, these effects are not considered significant.

Borrow Pits and Spoil Management Areas

It is proposed to construct a borrow pit c.30m to the south-east of proposed turbine T1. The extraction of material from the borrow pits is a construction phase activity only, done through means of rock breaking and blasting (as appropriate). The proposed borrow pit will be located within an area of dry meadows, grassy verges, and scrub, therefore the borrow pit will be visible. However, any visibility would be limited and primarily confined to the residential receptors and local road users in the immediate vicinity of the Site. The location of the proposed borrow pit within the Site is of 'Low' landscape sensitivity, as detailed in Section 13.4.3. The visual effects that will arise from the excavation at the borrow pit will be very localised, 'Slight', 'Short-Term,' and 'Negative' visual effects. Several rehabilitation measures will be implemented post-construction phase. For example, the borrow pit will be backfilled with spoil on top of which a layer of living peat will be placed to encourage growth. Following rehabilitation, the visual effects will be 'Not Significant' during the operational phase. On balance, these effects are not considered significant.

To manage any excess overburden generated through construction activities, peat and spoil management areas have been selected within the Site. The effects of peat and spoil management areas will be localised within the Site. Therefore, the creation of peat and spoil management areas will have a 'Short-term', 'Slight' and localised 'Negative' effect on the landscape during the construction phase. Following regrading and re-establishment of vegetation of these areas following completion of the construction phase, effects will be 'Not Significant' during the operational phase. On balance, these effects are not considered significant.

Proposed Grid Connection – Construction Phase Effects

Underground Cabling

The underground cabling of the Proposed Grid Connection works will consist of the installation of ducts in an excavated trench to accommodate electrical and fibre communications cables to facilitate a connection between the proposed 110kV on-site substation to the 110kV Castlebar to Cloon Overhead Line. The Proposed Grid Connection cabling route c.982m in length will be located underground, therefore the greatest effects attributed to this element of the Proposed Project will occur during the construction phase. The underground cabling will be laid predominantly beneath the surface of a private agricultural land. The construction phase of all underground cabling will be 'Short-term'. However, due to the localised, and transient nature of the works moving along the cabling route, impacts on any visual receptors will be 'Temporary'. Any areas of bare soil remaining after the landscaping phase will be seeded as soon as possible with a grass seed mix. Regarding the underground cabling, changes will be localised to the immediate environment surrounding the cabling route and will not permanently affect the character of the landscape setting or visual amenity of the wider area.

The underground cabling works are likely to cause 'Slight' 'Temporary', 'Negative' visual effects. On balance, these effects are not considered significant. The underground cabling will only cause perceptible effects on the visual amenity during the construction phase. No landscape and visual effects will occur during the operational phase.

Proposed 110kV Onsite Substation and End Masts

Visual effects will occur as the proposed 110kV onsite substation, 2 no. new end-masts, and temporary construction compound are built as a result of the earthworks and requisite construction activities;

which will result in short-term, localised change to views in the immediate vicinity of the works. As established in the baseline investigations, the proposed 110kV substation is located within an agricultural field of 'Low' sensitivity. Visual effects arising from the construction of the proposed 110kV substation, 2 no. new end-masts, and associated temporary construction compound, as experienced by visual receptors in the immediate vicinity of the Site are considered to be localised, 'Negative', 'Short-Term', 'Not Significant' effects. On balance, these effects are not considered significant.

Visual effects that will arise once the proposed 110kV onsite substation is operational is addressed separately in Section 13.7.5.4 below.

13.7.3 Operational Phase Effects

This section reports the landscape and visual effects anticipated during the operational lifetime of the Proposed Project. This section is organised as follows:

- **Landscape Effects:** Reporting landscape effects for the Proposed Wind Farm and Proposed Grid Connection;
- **LCA Assessment Outcomes:** A summary of the landscape impact assessment outcomes for each LCA in the (15km) LCA Study Area as is comprehensively reported in *Appendix 13-2: LCA Assessment Tables*;
- **Photomontage Viewpoint Assessment Outcomes:** A summary of the visual impact assessment outcomes in the (20km) LVIA Study Area for each photomontage as is comprehensively reported in *Appendix 13-3: Photomontage Visual Impact Assessment Tables*;
- **Visual Effects - Receptors:** Discussion of visual effects on the specific visual receptors selected for assessment within the visual baseline exercise (recall Section 13.5.2: Preliminary Analysis: Visual Receptors) with reference to photomontages and photowires;
- **Residential Visual Amenity:** Discussion of visual effects on residential receptors within close proximity to the Proposed Wind Farm;
- **Visual Effects -Ancillary Project Elements:** Discussion of visual effects of the non-turbine infrastructure of the Proposed Project;
- **Cumulative Effects:** Discussion of landscape and visual effects expected to occur in combination with the Proposed Wind Farm and all identified existing wind farms identified in the LVIA Study Area.

13.7.4 Landscape Effects (Operational Phase)

13.7.4.1 Landscape of the Site

The landscape character of the Site will undergo major changes in the landscape by the introduction of vertical man-made structures and ancillary infrastructure. There will be a 'Substantial' magnitude of change to the landscape in the localised areas within the Site where the landscape is materially altered (infrastructure footprint).

In a local context, the Site is located in a remote upland, marginal landscape. Forestry, agricultural fields and peatlands are the dominant landcover within the Site itself. As outlined in Section 13.4.3 above, the landscape value and sensitivity of the Site is deemed to be 'Low.' Low sensitivity balanced with a 'Substantial' magnitude of change amounts to long-term landscape effects of 'Moderate' upon the physical fabric of the landscape of the Site (See LVIA Methodology, *Appendix 13-1*). These direct landscape effects will be highly localised to the footprint of the Proposed Project. Effects on the perceptual and aesthetic character of the Site are also deemed to be 'Moderate'.

13.7.4.1.1 **Mitigation of Landscape Effects within the Proposed Wind Farm**

The following measures have been included in the Proposed Wind Farm design in order to avoid or reduce direct effects on landscape receptors (individual landscape features and the landscape character of the Proposed Wind Farm as a whole) on the Proposed Wind Farm:

- The internal site access track layout makes use of the existing tracks wherever possible, to minimise the requirement for new tracks within the Site.
- To minimise cut and fill activities required to construct the Proposed Wind Farm, the proposed access tracks, and other infrastructure such as hardstands have been designed to align with the existing terrain within the landscape of the Site.
- In all circumstances, excavation depths and volumes will be minimised, and excavated material will be re-used where possible.
- During initial vegetation stripping, all topsoil material will be temporarily stored on the Site and used for 'landscaping' the edges of the development infrastructure during reinstatement/regrading, including that of the peat and spoil management areas and proposed borrow pit. This will be particularly important in areas of cut and fill. The stripped topsoil will contain a natural seed source of local provenance and result in the re-establishment of baseline vegetation.
- The layout and design of the Proposed Wind Farm has been designed to ensure minimal loss of valuable landscape receptors and biodiversity corridors such as woodland and hedgerows along field boundaries.
- A *Biodiversity Management and Enhancement Plan* (BMEP) has been prepared as part of this EIAR and is included as *Appendix 6-4* to this EIAR. Mitigation measures included in the BMEP will have a dual effect of providing ecological enhancement to the area as well as screening of some Proposed Wind Farm infrastructure, thereby providing a mitigating effect on landscape. Mitigation measures proposed in the BMEP that will also have a mitigating effect on landscape areas as follows:
 - Avoidance of high-value peatland habitats within the Proposed Wind Farm;
 - Proposed planting of native broadleaf trees to increase woodland habitat and bolster wildlife corridors;
 - Proposed planting and bolstering of linear vegetation (treeline and hedgerow) to increase hedgerow and treeline habitat and bolster wildlife corridors, as well as provide visual screening of the proposed on-site 110 kV substation.

13.7.4.1.2 **Proposed Grid Connection – Under-Ground Cabling**

As the connection for the Proposed Grid Connection to the existing OHL is located underground, landscape and visual effects during the operational phase will be 'Imperceptible' once vegetation has re-established along the roadway following earthworks during the construction phase. The landscape and visual effects occurring during the construction phase of the Proposed Grid Connection are reported previously in Section 13.7.2: Construction Phase Effects. Visual effects arising from the above-ground features of the Proposed Grid Connection are discussed in Section 13.7.5.4.

13.7.4.2 **LCA Assessment Outcomes**

An assessment of the effects on landscape character based on designated LCAs was undertaken for the 3 no. LCUs within the LCA Study Area selected for assessment; these were mapped previously in Section 13.4.1.1.2. The individual assessments for each LCA are summarised below in Table 13-6 and presented in detail in *Appendix 13-2: LCA Assessment Tables*. 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 13.6 LCA Assessment Summary

LCA Ref.	Name	LCA Sensitivity	Magnitude of Change in LCA	Residual Significance of Effect
LCU L	South East Mayo Plains	Low	Moderate	Slight
LCU K	East Central Drumlin Spine	Low	Moderate	Slight
LCU M	Lakeland Drumlins	Medium	Slight	Not Significant

The largest magnitude of Change (Moderate) will occur within LCU L and LCU K, as the infrastructure of the Proposed Project will materially alter the landscape of these LCUs. Both of these LCUs are located within Policy Area 4, which has the lowest sensitivity (medium) to wind farm development compared to other Policy Areas in Co. Mayo.

The Proposed Project is consistent with the policies set out for Policy Area 4 outlined in Section 13.4.1 previously. As discussed later in the Visual Effects in Section 13.7.4.2.1, the Proposed Project will not “*significantly interfere or detract from scenic Lakeland vistas*”, in accordance with **Policy 23**. Furthermore, the proposed turbines are not located on any sensitive ridgelines and will not “*interrupt or penetrate distinct linear sections of primary ridge lines when viewed from areas of the public realm*”, thereby complying with **Policy 14**. Furthermore, having regard to the factors listed out previously in Section 13.1.3 Mitigation by Best Practice Wind Farm Design, and noting that the Proposed Project follows the appropriate siting and design principles for Hilly and Flat Farmlands as set out in the Guidelines (DoEHLG, 2006) and the Draft Guidelines (DoHLPG, 2019), the Proposed Project will not result in “*detrimental impacts*” on the “*landscape at a local or micro level as viewed from areas of the public realm*”, in accordance with **Policy 24**.

As discussed in *Appendix 13-2*, LCU L and LCU M are flat landscapes on a macro-scale with localised undulations arising from the drumlin landscape. Both of these LCUs are characterised as settled, working landscapes comprising agricultural - pasture fields, forestry and cutover peatland forming the predominant land use, which are not landscapes of high sensitivity. Furthermore, it is noted that all of the proposed turbines are located within an area classified as ‘*Tier 1 – Preferred*’ in these LCUs, with additional areas within these LCUs designated as ‘*Tier 2 – Open for Consideration*’, as well as areas identified as ‘*Existing Wind Farms*’. Overall, the proposed turbines will have a ‘Long-term’, ‘Negative’, ‘Slight’ residual effect on LCU L and LCU K. On balance, these effects are not considered significant.

The proposed turbines will not materially alter any of the other LCUs in the LCA Study Area, resulting in ‘Long-term’, ‘Negative’, ‘Not Significant’ residual landscape effects on LCU M. On balance, these effects are not considered significant.

13.7.4.2.1 Designated Landscape Features (Vulnerable Features)

A number of designated Vulnerable Features were identified in the Landscape Baseline – Section 13.4.1.1.5 within the LVIA Study Area and have been scoped in for further assessment. These include ‘Skylines and Ridgelines’ and ‘Shorelines of Lakes, Rivers and Estuaries’.

Skylines and Ridges

As detailed previously in Section 13.4.1.1.5, four ridgelines within the LVIA Study Area are designated as LACM Vulnerable Features, comprising of the following:

- the western side of the Partry Mountains

- > Cruccpullagadaun (Rush Hill/Fox Hill)
- > Cuillalea Hill
- > Sraheens Ridgeline on the west-facing side of Treannagleragh Mountain (north of Cuillalea Hill).

The closest of these vulnerable features (Cuillalea Hill) is located approximately 8.4km from the nearest proposed turbine, with all designated ridgelines and skylines situated beyond 9km from the nearest proposed turbine. The proposed turbines and associated infrastructure are not located on or along any of these sensitive ridgelines, and therefore the Proposed Project will not alter the physical fabric or landform structure of these landforms.

Only perceptual effects on the character of these skylines and ridgelines have potential to occur, which may arise where the proposed turbines are visible from these ridgelines (e.g. VP11 – ‘Slight’ residual visual effects), or where the ridgelines form part of the distant landscape context in views towards the proposed turbines (e.g. VP14 – ‘Moderate’ residual visual effects).

While the proposed turbines will introduce new, distant elements within some views (when viewed from or towards these landforms), they will not materially alter the defining characteristics, integrity, or uniformity of these ridgelines. Accordingly, given the set-back, the Proposed Project is considered to be consistent with the policy framework for Vulnerable Features set out in **Section 3.1(b)** of the LACM and will not give rise to any significant landscape effects on these features.

Shorelines of Lakes, Rivers, and Estuaries

As detailed previously in Section 13.4.1.1.5, the Meander River (as designated on page 54 of the LACM) was scoped in for assessment given the proximity of the designated portion of this watercourse to the proposed turbines (approx. 2.13km west from the nearest proposed turbine). The proposed turbines are not located on the part of the Meander River designated within the LACM (see Plate 13-23 below) and therefore the Proposed Project will not alter the physical fabric, structure or physical characteristics of this designated ‘Vulnerable Feature’. Whilst the proposed turbines may be visible in the background of views from the river, they will not materially alter the defining characteristics of the river, and will therefore will not give rise to any significant landscape effects on this landscape feature. The wider Meander River corridor, including its tributaries and areas outside the designated Vulnerable Feature, are considered separately in Chapter 9 Water of this EIAR.

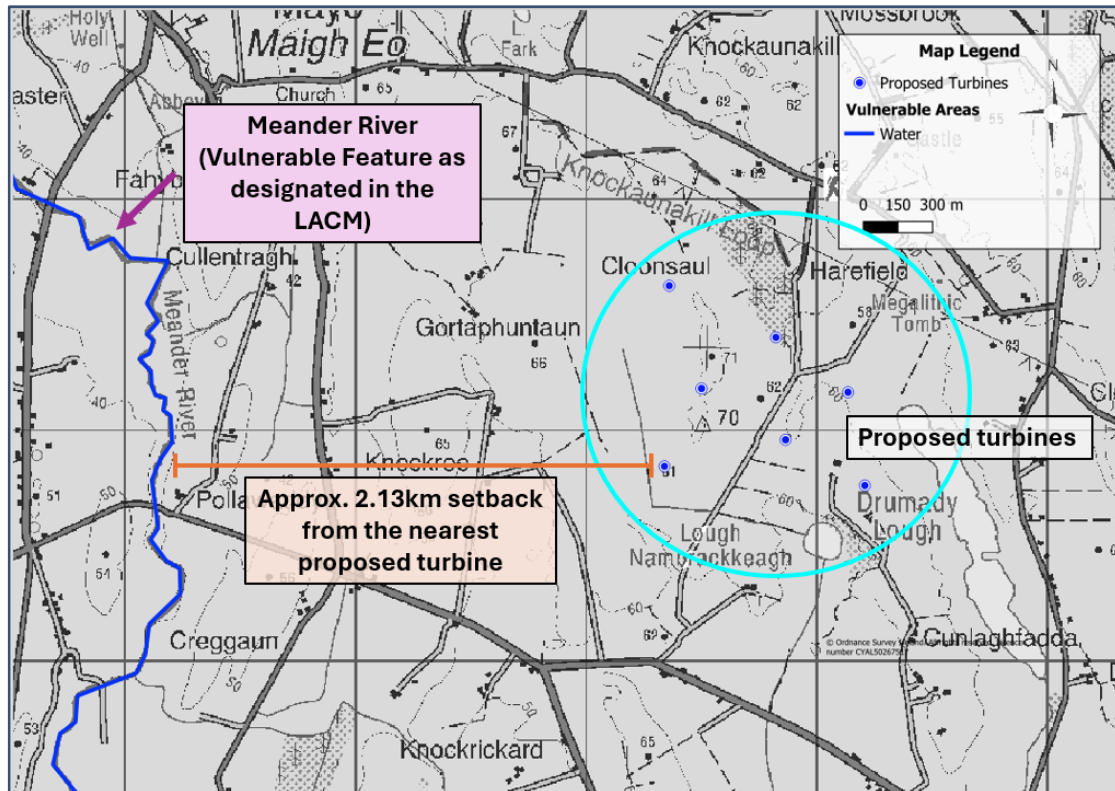


Plate 13-22 Close-up of Meander River (Vulnerable Feature)

Lough Carra and Lough Mask, considered in relation to potential visual effects as experienced by users and visitors is discussed in detail in Section 13.7.2.2 Visual Effects.

13.7.4.2.2 Cumulative Landscape Effects

The Proposed Wind Farm will contribute to cumulative effects on the landscape of this area of County Mayo where there are a number of other existing wind energy developments. This section describes the cumulative effects on the wider landscape, as well as relevant landscape receptors (i.e. Vulnerable Features).

The wider landscape of the LVIA Study Area includes several other existing wind energy developments that contribute to the cumulative baseline. These other developments are listed and mapped previously in Section 13.6, and are primarily located within the eastern uplands of the Study Area and to the north upon Cuillalea Hill.

Uplands to the East

A collection of wind farms is located within the uplands to the east, east of Claremorris. This collection of wind farms form part of the wider cumulative wind energy context, physically separated by undulating landforms and ridgelines. The proposed turbines are likely to be seen in succession or in combination with these other wind farms from occasional remote elevated vantage point and contribute to cumulative landscape effects on overall change in landscape character but do not cumulatively affect the character of the eastern uplands themselves. Any potential cumulative effects on landscape character with these other windfarms to the east is likely to be very intermittent and only perceived from isolated locations as a result of the elevated topography which provides topographical screening of the proposed turbines from the east (as seen in VP 16) and the nature of the undulating drumlin landscape in this direction.

Cuillalea Hill to the North

Cuillalea Wind Farm (incl. the extension) is located within uplands to the north in a different landscape type. This Wind Farm forms part of the wider cumulative wind energy context as experienced from locations across the LVIA Study Area and is located approx. 10.5km north at its closest point.

The proposed turbines may be experienced with this other windfarm from locations between the Proposed Wind Farm and the lands to the north, whether in succession (where the proposed turbines and cumulative wind farms are experienced in opposite directions) or in combination - the proposed turbines would become a noticeable component of the distant landscape and would therefore contribute to cumulative perceptual change in overall landscape character of the area. Given the separation and different landscape types, the proposed turbines will not impact the key characteristics and sensitivities of Cuillalea Hill to the north.

13.7.5 Visual Effects (Operational Phase)

13.7.5.1 Selection of Photomontage Viewpoints

Photomontages were used to assess the visual effects arising as a result of the proposed turbines from 19 no. viewpoint locations, which are presented in EIAR Volume 2: Photomontage Booklet. These 19 no. viewpoint locations are depicted in Appendix 13-4 *LVIA Baseline Map* and on Figure 13-15. The locations chosen for photomontages follow a detailed and extensive process including review of baseline information and site visits. High-quality photos are then taken at multiple locations within the LVIA Study Area. Many locations, which based on a desktop review had the potential for views of the proposed turbines, had complete intervening visual screening or were screened to such an extent that the development of photomontages was not considered useful in terms of the assessment process i.e., little or no visibility towards the proposed turbines.

On-site surveys and visibility appraisals conducted throughout the years 2023, 2024, and 2025 determined that visibility of the proposed turbines is greatest from the locations in close proximity to the Site due to the characteristics of the surrounding landscape. Due to this, viewpoint selection was particularly focused on locations proximate to the proposed turbines. In this regard, it is important to note that the visual impact of the proposed turbines shown in the photomontages selected for the EIAR Volume 2: Photomontage Booklet is not entirely representative of visual effects in the wider landscape of the 20km LVIA Study Area, where in reality very little visibility occurs.

Alternative Photomontage Viewpoints – Photowires

Photomontage imagery was captured from many locations in the LVIA Study Area other than the 19 no. Photomontage viewpoints that were selected for the EIAR Volume 2: Photomontage Booklet. Photowires are early-stage photomontage visualisations comprising panoramic photos with overlaid wirelines (Classified as Type 3 Visualisations in the Landscape Institute Technical Guidance Note, 2019). Photowires were produced from five other viewpoint locations in the LVIA Study Area. These viewpoints were not selected for inclusion in the EIAR Volume 2: Photomontage Booklet due to limited visibility of the proposed turbines or a more appropriate nearby location being included in Volume 2 instead. These Photowires do not form part of the assessment of visual effects included in Appendix 14-3. However, the 5 no. Photowires are presented and are discussed in this section of the Chapter to illustrate certain points. The location of Photowire viewpoints used in this section of the Chapter are marked as orange icons in Figure 13-16, and are discussed throughout the chapter as Photowire Viewpoint Locations (referred to as PWVPs (e.g., PWVP-A, etc.))

13.7.5.1.2 **Photomontage Viewpoint Assessment Outcomes**

Visual Effects were assessed using the assessment methodology described in *Appendix 13-1*. Each Viewpoint location is shown in Figure 13-15 above. The individual, comprehensive and detailed assessment from the 19 no. viewpoints are presented in *Appendix 13-3* of this EIAR – *Photomontage Assessment Tables* and summarised in Table 13-7 below. *Appendix 13-3* should be read in conjunction with the photomontage booklet forming Volume 2 of the EIAR.

The visual effect of the proposed turbines was assessed from each viewpoint in terms of the sensitivity of the visual receptors, along with the magnitude of change, as recommended in GLVIA3. This, in conjunction with a detailed review of the photomontages themselves as well as the likely visibility of the proposed turbines within the LVIA Study Area informed the assessment of visual effects.

Visualisations such as photomontages are tools that can represent the likely effect of a development and are used to inform the reader's prediction of how that development will appear in the landscape. In terms of the predicted visual quality of the proposed turbines, however, whether a visual effect is deemed to be positive, negative, or neutral, this involves a degree of subjectivity. 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 effect.

Table 13-7 Summary of Viewpoint Impact Assessment Results

VP No.	Description	Grid Ref.	Sensitivity of Receptor(s) (at Viewpoint)	Magnitude of Change	Significance of Residual Visual Effect
VP01	View from the N60 National Road, in the townland of Brees. Located approximately 2.9km north from the nearest turbine (T7).	E: 529,299 N: 781,449	Medium	Slight	Slight
VP02	View from the L5536 Local Road in the townland of Knockaunakill. Located approximately 690m north from the nearest turbine (T6).	E: 529,063 N: 779,060	High	Moderate	Moderate
VP03	View from the L1506 Local Road in the townland of Ahena. Located approximately 3.2km south from the nearest turbine (T5).	E: 528,538 N: 774,669	Medium	Slight	Not Significant
VP04	View from the L1505 Local Road in the townland of Knockrickard. Located approximately 1km south from the nearest turbine (T1).	E: 527,782 N: 776,968	High	Moderate	Moderate
VP05	View from the L5636 Local Road along Lough Carra. View also from Co. Mayo Scenic Route 1. Located approximately 9.2km south-west from the nearest turbine (T1).	E: 520,002 N: 773,747	High	Negligible	Not Significant
VP06	View located along the L1506 Local Road in the townland of Oory. Located approximately 4km southwest from the nearest turbine (T1).	E: 525,939 N: 774,668	Medium	Slight	Not Significant

VP07	View from the L15057 Local Road in the townland of Knockroe. Located approximately 700m west from the nearest turbine (T1).	E: 527,520 N: 777,903	High	Moderate	Moderate
VP08	View from the L55398 Local Road in the townland of Lehanagh. Located just outside Mayo Abbey Church and Ruins. Located approximately 2km northwest from the nearest turbine (T7).	E: 526,467 N: 779,553	High	Slight	Slight
VP09	View from Mayo Abbey, located approximaely 2.1km north-west from the nearest turbine (T7).	E: 526,425 N: 779,602	High	Slight	Slight
VP10	View from the L5653 Local Road in the townland of Caherwicloun. Located approximately 16.9km south from the nearest turbine (T5).	E: 526,966 N: 761,022	Medium	Negligible	Not Significant
VP11	View from the L5766 Local Road in the townland of Carrowkeel. Approx. 10km north. Representative of long-ranging views towards the turbines from an elevated vantage point.	E: 524,056 N: 787,906	High	Slight	Slight
VP12	View from the R300 Regional Road along Lough Mask. View also located on Co. Mayo Scenic Route 2. Located approximately 18.9km south-east from the nearest turbine (T1).	E: 511,092 N: 770,018	High	Negligible	Slight
VP13	View from the N60 National Road in the townland of Claremount, exiting Claremorris. Located approximately 4.7km east from the nearest turbine (T5).	E: 533,613 N: 776,138	Medium	Slight	Slight

VP14	View from the L5537 Local Road in the townland Clogher Beg. Located approximately 1.4km south-east from the nearest turbine (T5).	E: 529,938 N: 776,557	High	Moderate	Moderate
VP15	View from the N60 National Road in the townland of Birchfield. Located approximately 2.5km from the nearest turbine (T4).	E: 531,420 N: 779,290	High	Slight	Slight
VP16	View from the N17 National Road in the townland of Ballyhowly. Located approximately 10km east from the nearest turbine (T4).	E: 538,207 N: 782,403	Medium	Negligible	Not Significant
VP17	View from the R324 Regional Road, in the townland of Ballymacloughlin. Located approximately 6.8km from the nearest turbine (T7).	E: 526,212 N: 785,102	Medium	Slight	Slight
VP18	View from the L5537 Local Road in the townland of Drumady. Located approximately 660m east of the nearest turbine (T5).	E: 529,839 N: 777,819	High	Moderate	Moderate
VP19	View from the L1706 Local Road in the townland of Doonnamona. View also on the Croagh Patrick Heritage Trail. Located approximately 8.5km north-west from the nearest turbine (T7).	E: 520,256 N: 781,286	Medium	Negligible	Imperceptible

The significance of the residual visual effect was not considered to be Profound or Very Significant, at any of the 19 viewpoint locations. The residual effects were found to be Moderate (5), Slight (8), Not Significant (5), and Imperceptible (1). The viewpoint assessment results (see *Appendix 13-3*) will be summarised and discussed in more detail in the following sections.

13.7.5.2 Discussion of Visibility and Visual Effects of Specific Receptors in the LVIA Study Area

The assessment of visual effects uses photomontages shown in the Volume 2 Photomontage Booklet, and discussion of these effects is aided by the photowires. ZTV mapping is also a useful tool for scoping receptors in and out (based on bare-ground topography) and selection of photomontage viewpoints. The ZTV indicates vast areas of the LVIA Study Area where the proposed turbines will not be visible, as comprehensively discussed in Section 13.3. The following section discusses the visual effects arising at key sensitive visual receptors within the zone of theoretical visibility and scoped in for assessment previously in Section 13.5 – Visual Baseline.

13.7.5.2.1 Designated Scenic Route and View (SV1) / Lough Carra

This scenic route is described as the “*local road north-east of Lough Carra, from Carrownacon to north of Ballygarries*”, with views “*looking towards Lough Carra*” in the LACM. The ZTV analysis shows that this scenic route, located approx. 10km west from the nearest proposed turbine has primarily full theoretical visibility of the proposed turbines. VP05 was captured from along this scenic route. As discussed in *Appendix 13-3*, at this distance, the proposed turbines are seen in the distant background, largely screened by intervening vegetation. This viewpoint has been assigned a ‘High’ sensitivity, with a ‘Negligible’ magnitude of change, with an overall ‘Not Significant’ residual visual effect. It is noted that the key focus of this scenic route are the views “*towards Lough Carra*”, which are directed to the west, in the opposing direction of the proposed turbines and the view shown in the photomontage. Therefore, the proposed turbines do not impact the key sensitivities relating to this designated scenic route. An overall residual ‘Long-Term’, ‘Negative’ and a ‘Not Significant’ visual effect was deemed to arise for this scenic route. On balance, these effects are not considered significant.

13.7.5.2.2 Designated Scenic Route (SR2) / Lough Mask Viewing Point / Lough Mask

This scenic route is described as the “*local road from Maumtrasna to Srah, west of Lough Mask*” in the LACM, and is located approx. 17.3km west from the nearest proposed turbine. VP12 was captured from along this scenic route where the most open views towards the proposed turbines occur. This viewpoint has been assigned a ‘High’ sensitivity, with a ‘Negligible’ magnitude of change in *Appendix 13-3*. As discussed in *Appendix 13-3*, the proposed turbines are seen as small features relative to the landscape in the distant background of the view, occupying a very small horizontal extent. Given the large setback distance from this viewpoint, the proposed turbines, while visible, do not affect the sensitivity of the view derived from the lake’s amenity value nor the character of its surrounding environment. The proposed turbines only form a very minor component within a single view of the wider lake setting. An overall residual ‘Long-Term’, ‘Negative’ and ‘Slight’ visual effect was deemed to arise at this viewpoint.

In a journey scenario, receptors travelling on the scenic route are likely to have less visual impact than what is shown in the viewpoint owing to intermittent visual screening from roadside vegetation and the undulating nature of the hilly terrain, which restricts visibility of the proposed turbines.

Furthermore, as noted in *Appendix 13-3*, this viewpoint does not represent the only available view of the lake. There are numerous locations from which the lake can be seen without any visibility of the proposed turbines. An example of this occurs at the nearby car park where visitors typically stop to

experience panoramic views of Lough Mask. On-site visibility appraisals confirmed that visibility of the proposed turbines will not occur from the car park itself due to dense, mature vegetative screening in the direction of the proposed turbines, as illustrated in Figure 13-19 below.



Figure 13-19 Aerial View of Scenic Route SR26 and visibility towards the proposed turbines

Overall, considering the points made above, and what is discussed in *Appendix 13-3*, visual effects on SR2, and the on the lake itself ranges from 'Long-Term', 'Negative' 'Imperceptible' (where the proposed turbines can't be seen) to 'Slight'. On balance, these effects are not considered significant.

13.7.5.2.3 Mayo Abbey Cemetery and Church Ruins

Mayo Abbey Cemetery and Church Ruins is a cultural heritage receptor of high sensitivity and is located approx. 2km northwest from the nearest proposed turbine (T7).

VP09 was captured from within the cemetery itself, and VP08 was captured further set-back on the L55398 local road to the west of the cemetery to show the visual impact on the landscape setting of Mayo Abbey Cemetery and Church Ruins. As discussed in *Appendix 13-3*, the proposed turbines are largely screened from view by features such as mature vegetation in the intervening landscape and the undulating landforms resulting from the drumlin landscape, reducing their visual prominence in this view. The visible turbine components are viewed beyond the horizon within a visual setting that is already characterised by a degree of human modification, as seen through the agricultural fields, as well as overhead lines and utility poles.

These viewpoints (VP08 and VP09) were captured where the most visibility occurs in the direction of the proposed turbines, because, in other locations the turbines are largely screened from view by intervening vegetation, as seen in the PWVP-A below (Plate 13-23 Photowire visualisation PWVP-A from within the graveyard at Mayo Abbey Church and Ruins in the direction of the proposed turbines.). This viewpoint was captured at one of the more elevated vantage points with clear views in the direction of the proposed turbines to show a worst-case scenario. Many locations from within Mayo

Abbey itself have no visibility of the proposed turbines. Visual receptors visiting the Abbey will experience reduced visibility of the proposed turbines in and around the Abbey itself – which is the key focal point and sensitivity of the area.



Plate 13-23 Photowire visualisation PWVP-A from within the graveyard at Mayo Abbey Church and Ruins in the direction of the proposed turbines.

While the turbines will introduce new elements into the wider landscape that will be visible from within the cemetery, their location is consistent with established planning policy (they are located within an area deemed suitable for wind energy development, and they are located in Policy Area 4, the LPA with the lowest sensitivity classification compared to all other policy areas – as discussed in Section 13.4.1.1.3 previously). Given the nature of views, the setback distance, and existing vegetative screening, the proposed turbines will not materially alter the key characteristics of this receptor. The proposed turbines are not situated within the immediate visual context of the abbey or the cemetery, as they are seen beyond the ridgeline.

Visual impacts on the setting of Mayo Abbey Church and Ruins are considered reversible, given the proposed turbines have an operational life span of 35 years, with potential for decommissioning after that. The magnitude of change for both VP08 and VP09 was deemed to be 'Slight', with a residual visual effect of 'Slight'. An overall residual visual effect of 'Long-Term', 'Negative' and 'Slight' was therefore deemed to arise for Mayo Abbey Cemetery and Church Ruins. On balance, these effects are not considered significant.

13.7.5.2.4 Settlements

Mayo Abbey

Mayo Abbey is a small village located approximately 2.4km north-west from the nearest proposed turbine (T7). ZTV analysis indicates primarily full theoretical visibility of the proposed turbines within the settlement. However, on-site appraisals determined that actual visibility is less, due to the visual screening provided by the built environment and surrounding vegetation within this low-lying settlement. Figure 13-4 within the Route Screening Analysis shows that the majority of roads within the village of Mayo Abbey are classified as having either 'Full/Dense' Visual Screening or 'Partial/Intermittent' Visual Screening. As a result, visibility of the proposed turbines within the low-lying streetscapes of Mayo Abbey will be limited.

Visibility of the proposed turbines is primarily confined to the outskirts of the village, where the density of the built environment reduces and receptors experience more open, longer-ranging views across the wider landscape. VP08 and VP09 discussed above were captured on the outskirts of Mayo Abbey village, within the ruins of Mayo Abbey and the church, where, as discussed previously, residual visual effects were deemed to be 'Slight'. An overall 'Long-Term', 'Negative' and 'Slight' residual effect was therefore deemed to arise for the settlement of Mayo Abbey. On balance, these effects are not considered significant.

Claremorris

Claremorris town is located approx. 5.6km south-east from the nearest proposed turbine, T5, and has full theoretical visibility of the proposed turbines. VP13, captured from a more open and proximal location from within the same geographic area but not in the settlement of Claremorris, is representative of the open views from this part of the landscape where visibility does occasionally occur. As discussed in *Appendix 13-3*, the proposed turbines are seen beyond the forestry, occupying a short horizontal extent. An overall 'Slight' residual visual effect was deemed to arise for this viewpoint. As Claremorris itself is further set-back and has considerable screening from the built environment, visibility of the proposed turbines from Claremorris will therefore be much reduced in comparison to this viewpoint. An overall 'Long-Term', 'Negative' and 'Slight' residual effect was therefore deemed to arise for the settlement of Claremorris. On balance, these effects are not considered significant.

Balla

Balla town is located approx. 6.7km north-west of the nearest proposed turbine, T7, and has full theoretical visibility of the proposed turbines. VP17, captured 6.8km from the nearest proposed turbine is representative of the views from Balla. As discussed in *Appendix 13-3*, the proposed turbines are seen in the distant background, occupying a short horizontal extent. The lower sections of the turbine towers are partially screened by intervening topography within the landscape, reducing their visual prominence. Within the settlement itself, visibility will be further mitigated due to the visual screening from the built form. An overall 'Long-Term', 'Negative', 'Slight' residual visual effect is deemed to arise for this settlement. On balance, these effects are not considered significant.

Ballindine

Ballindine town is located approximately 11.2km north-east of the nearest proposed turbine (T5), and has full theoretical visibility of the proposed turbines. Photowire PWVP-B (Plate 13-24) was captured from the outskirts of Ballindine, and is representative of the typical views from outside this settlement. As seen in the photowire below, at this distance in this flat landscape, the proposed turbines are screened from view by intervening vegetation. Within the settlement itself, visibility will be further mitigated due to the visual screening from the built form. An overall 'Long-Term', 'Negative', 'Imperceptible' residual visual effect is deemed to arise for the settlement of Ballindine. On balance, these effects are not considered significant.



Plate 13-24 Photowire visualisation PWVP-B from the outskirts of Ballindine.

Kiltimagh

Kiltimagh town is located approximately 12.3km north-east of the nearest proposed turbine (T7), and has full theoretical visibility of the proposed turbines. Photowire PWVP-C was captured from the R232 Regional Road, on the outskirts of Kiltimagh, and is representative of the typical views from outside this settlement. As seen in photowire PWVP-C below (Plate 13-25), at this distance in this flat landscape, the proposed turbines are screened from view by intervening vegetation. Within the settlement itself, visibility will be further mitigated due to the visual screening from the built environment. An overall 'Long-Term', 'Negative', 'Imperceptible' residual visual effect is deemed to arise for the settlement of Kiltimagh. On balance, these effects are not considered significant.



Plate 13-25 Photowire visualisation PWVP-C from the outskirts of Kiltimagh.

13.7.5.2.5 Recreational Routes

Knockaunakill Loop

The Knockaunakill Loop is an 8km looped recreational route and is the closest recreational trail to the Proposed Wind Farm, passing approximately 260m north of the nearest proposed turbine, T6. The route follows the local road network and ZTV analysis indicates primarily full theoretical visibility of the proposed turbines along sections of the route. However, on-site appraisals determined that visibility would vary due to intermittent visual screening provided by roadside vegetation, as illustrated in the Route Screening Analysis map (Figure 13-4).

VP02 was captured along this loop in close proximity to the proposed turbines where, as discussed in *Appendix 13-3*, the proposed turbines would appear as moderately scaled elements within the landscape, occupying a moderate horizontal extent within the view. The magnitude of change at this location was deemed to be 'Moderate', resulting in an overall 'Moderate' residual visual effect.

In a journey scenario, receptors travelling along the loop will experience varying levels of visibility, with turbines intermittently screened by roadside vegetation and occasionally appearing behind the direction of travel. As such, visibility of the proposed turbines on visual receptors as experienced along the route will vary. Overall, residual visual effects on this recreational route are deemed to be 'Long-Term', 'Negative', and 'Moderate.' On balance, these effects are not considered significant.

Croagh Patrick Heritage Trail (Incl. Clogher Bog Loop, Clogher Holy Well Loop, and Clogher Red Walk)

Croagh Patrick Heritage Trail (and its adjoining loops) is located approximately 6.2 km north-west of the nearest proposed turbine (T7) at its closest point. The route primarily traverses relatively low-lying landscapes enclosed by localised landforms and dense vegetation, which limits visibility towards the proposed turbines. Large sections of the trail within the LVIA Study Area experience no theoretical visibility, as shown on the ZTV map (Figure 13-14).

VP19 was captured along this route to represent a location where visibility of the proposed turbines does occur. As discussed in *Appendix 13-3*, only two blades of two proposed turbines are just discernible beyond the distant ridgeline and intervening mature boundary vegetation, while all other turbines are screened from view. A residual visual effect of 'Imperceptible' was deemed to arise at this viewpoint. Such views are representative of the typical visibility along this route, where vegetation is generally well established and limits visibility in the direction of the proposed turbines.

Overall, visibility of the proposed turbines along this walking trail will be intermittent, with views generally brief and limited while travelling along the route. Where visibility does occur, the visibility of the proposed turbines will be further mitigated by distance and vegetative screening within the surrounding landscape. Residual visual effects on this recreational are therefore deemed to be 'Long-Term', 'Negative', and 'Imperceptible'. On balance, these effects are not considered significant.

Crucspullagadaun Loop

Crucspullagadaun Loop is a short, looped walking trail along Crucspullagadaun/Fox Hill/Rush Hill. VP11 was captured along this loop. As discussed in *Appendix 13-3*, the proposed turbines are seen in the distant background, arranged in a staggered, coherent, linear array, occupying a limited horizontal extent within the view. The turbines occupy a very small portion of the expansive, open, and flat panoramic landscape, which has the capacity to effectively accommodate both the proposed turbines and other cumulative wind energy developments within this lowland midland setting. The residual visual effect for this viewpoint was deemed to be 'Slight.' Residual visual effects on this recreational are therefore deemed to be 'Long-Term', 'Negative', and 'Slight' residual visual effect was deemed to occur. On balance, these effects are not considered significant.

Kilmaine Loop Trails

A series of various Kilmaine Loop Trails are located 16.9km south from the nearest proposed turbine. VP10 was captured along one of these loops, where most visibility in the direction of the proposed turbines occurs. As discussed in *Appendix 13-3*, the proposed turbines are set-back beyond the mature vegetation along the horizon, seen in the distant background of views, largely screened by intervening vegetation. The residual visual effect for this viewpoint was deemed to be 'Not Significant.' An overall 'Long-Term', 'Negative' and 'Not Significant' residual visual effect was deemed to occur for these recreational routes. On balance, these effects are not considered significant.

13.7.5.2.6 Transport Network

N60 National Road

The N60 National Road traverses through the LVIA Study Area, first running north-west to south-east before turning east-west in the eastern portion, and connects the settlements of Ballyhaunis, Claremorris, Balla, and Castlebar. While the ZTV map indicates full theoretical visibility along large portions of the route, as discussed throughout the entirety of this chapter, visibility beyond 5km will be limited, due to above-ground vegetation and the intervening landform arising from the undulating drumlin landscape. As outlined in the Route Screening Analysis, within 3km of the proposed turbines, the majority of the route is characterised by 'Dense/Full' Visual Screening and 'Partial/Intermittent' Visual Screening, with 'Little/No' Visual Screening occurring mostly outside 3km. VP01, VP13, and VP15 were captured along different section of this route with various set-back distances. As discussed in *Appendix 13-3*, where the proposed turbines are visible, they occupy relatively small horizontal extents. Residual visual effects of 'Slight' were deemed to occur for all of these viewpoints. In general, where visibility does occur within 3km along this route, views will be brief and intermittent, with visibility further reducing beyond 3km. An overall 'Long-Term,' 'Negative,' and 'Slight' residual effect was deemed to arise for the N60 National Road. On balance, these effects are not considered significant.

R320 Regional Road

The R320 Regional Road runs approximately north-south along the eastern portion of the LVIA Study Area, ultimately connecting Claremorris and Swinford, passing through Kiltimagh within the LVIA Study Area. An approximately 4.2km stretch of the R320 is within 5km of the proposed turbines. While the ZTV map indicates most of the section has full theoretical visibility, the RSA indicates the route has primarily 'Dense/Full' Visual Screening or 'Partial/Intermittent' Visual Screening, with only small stretches of 'Little/No' Visual Screening within 5km. As discussed throughout the entirety of this chapter, visibility beyond 5km will be limited, due to above-ground vegetation and the intervening landform arising from the undulating drumlin landscape. VP13 was captured along the portion of this route shared with the N60. Where the turbines were visible, they occupied relatively small horizontal extents, and residual visual effects of 'Slight' are deemed to occur at this viewpoint. In general, where visibility does occur between 3km and 5km along this route, views will be brief and intermittent, with visibility further reducing beyond 5km. An overall 'Long-Term,' 'Negative,' and 'Slight' residual effect

was deemed to arise for the R320 Regional Road. On balance, these effects are not considered significant.

Railway

The connecting line between Claremorris and Castlebar of the Irish Rail Network traverses through the LVIA Study Area in a north-west to south-east direction, and is representative of the views as experienced from the N60 National Road as they run approximate parallel to each other, although more visibility from the rail line may be experienced from the railway due to its relatively higher elevation. The ZTV map indicates full theoretical visibility along the route. Route screening analysis was not possible along the rail line, however, as discussed throughout the entirety of this chapter, visibility will be limited due to above-ground vegetation and the undulating drumlin landscape. VP01, VP13, and VP15 were captured along the N60. Where the turbines were visible, they occupied relatively small horizontal extents. Residual visual effects were deemed to be 'Slight' at these viewpoints. In general, where visibility does occur within 5km along this route, views will be brief and intermittent, with visibility further reducing beyond 5km. There are locations along the rail line where no visibility occurs, as seen in Photowire PWVP-D (Plate 13-26), which was taken at a bridge overlooking the railway. An overall 'Long-Term,' 'Negative,' and 'Slight' residual effect was deemed to arise for the Claremorris-Castlebar Railway Line. On balance, these effects are not considered significant.

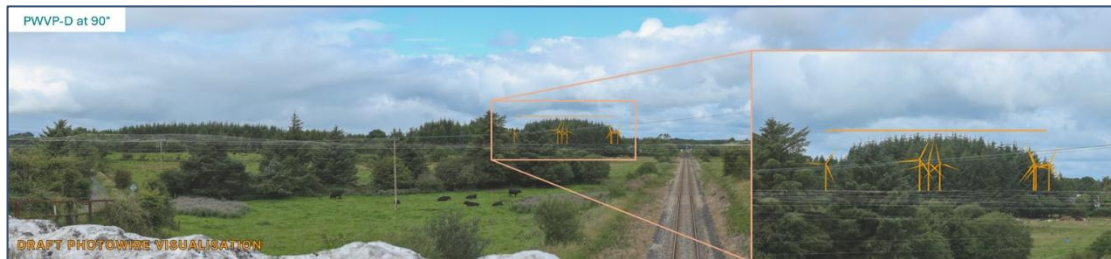


Plate 13-26 Photowire visualisation PWVP-D representing views from the Irish Rail Network within the LVIA Study Area.

13.7.5.3 Residential Receptors

During the iterative design process, early stage LVIA appraisals identified local residential receptors as some of the most locally sensitive receptors with the greatest potential to be impacted by the proposed turbines with regard to visual impacts. Consequently, effects on residential receptors was of key consideration throughout the iterative design process for the Proposed Project. This section of the LVIA firstly states how design measures have been used to mitigate the potential for significant visual effects on some areas of residential amenity, then gives an overview of the residential context in terms of population density in the surrounding area and the geographic arrangement of residential receptors in close proximity to the Proposed Wind Farm. Finally, a visual impact assessment of each cluster of residential receptors is reported, these assessments use analysis of aerial maps, photomontages and photowire visualisations with the intention of identifying the worst-case scenario for potential visual effects on these residential receptors in close proximity to the Proposed Wind Farm.

The design of the Proposed Wind Farm has been informed by industry best practice set-back distances, with regard to the siting of the proposed turbines relative to residential receptors, including the following measures:

- All proposed turbines exceed the mandatory 500m set-back distance from residential receptors set out in the Guidelines (DoEHLG, 2006).
- All proposed turbines adhere to the recommended 4-times-tip-height set-back distance from third-party receptors for residential visual amenity as prescribed by the Draft Guidelines (DoHPLG, 2019).

Residential Context: Population Density and Arrangement of Dwellings

As previously reported in the landscape baseline (see previous Section 13.4.2, Landscape Character of the Proposed Wind Farm), the Proposed Wind Farm itself is located within a sparsely populated agricultural landscape, as seen in Plate 13-27. It is not a densely populated area, with residential receptors primarily situated along the local road network, with localised undulations and varying levels of vegetation providing visual screening of the proposed turbines.



Plate 13-27 Drone Image for Landscape Context: Views west towards the rural landscape

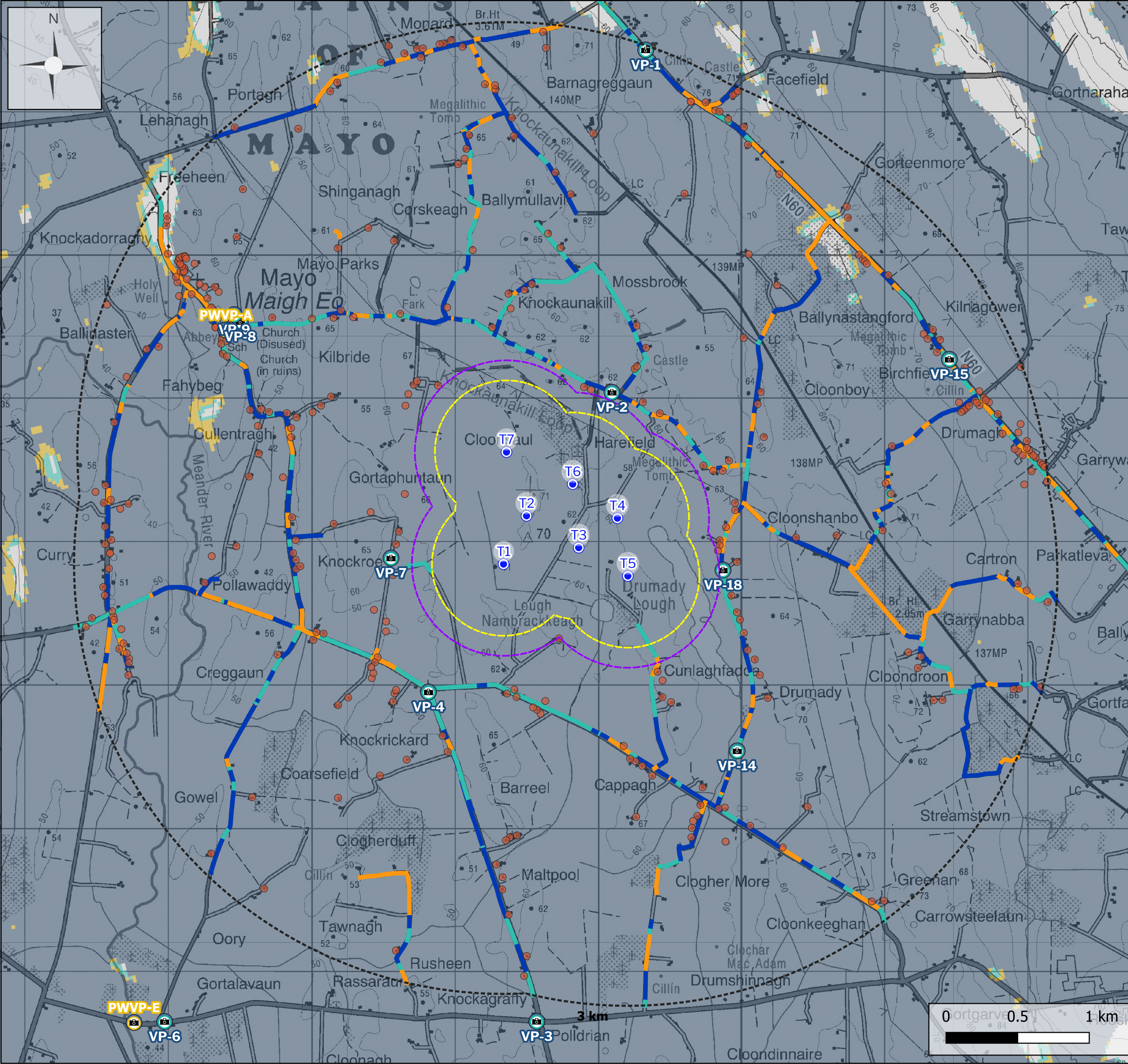
The Residential Receptors Map (See Figure 13-20 below) illustrates how the proposed turbines are set-back from residential receptors in the surrounding landscape with respect to distances compliant with guidance in the Guidelines (DoEHLG, 2006) and the Draft Guidelines (DoHPLG, 2019). There are 51 residential receptors located within 1 km of the proposed turbine locations. The closest residential receptor is located approximately 643m from the nearest proposed turbine (T1) i.e. greater than the minimum recommended setback as identified in the Draft Guidelines (DoHPLG, 2019).

Assessment of Residential Amenity – Photomontages

8 no. photomontage viewpoints were taken within 3km of the proposed turbines to represent the residential receptors in close proximity to the Proposed Wind Farm.

Photomontages are just one of the tools employed during the LVIA that was conducted in order to inform the assessment of landscape and visual effects. The visual impact assessment is strongly informed by site visits and the reading of the landscape on the ground. It would be a disproportionate measure to include an individual photomontage from every residential receptor and this is not required to conduct a thorough and robust assessment of landscape and visual effects. In line with the guidance laid out in GLVIA3, the viewpoints selected for the LVIA conducted were informed by a range of factors including the “ZTV analysis, by fieldwork, and by desk research” (para 6.18, GLVIA3). Furthermore, GLVIA3 states that representative viewpoints are “selected to represent the experience of different types of visual receptor, where larger numbers of viewpoints cannot all be included individually and where the significant effects are unlikely to differ” (para 6.19 GLVIA3). The large number of viewpoints used in the conduct of the LVIA particularly in very close proximity to the proposed turbines are sufficient

to represent the residential receptors within the LVIA Study Area, including the “*distribution of population*” (para 6.18, GLVIA3).



Map Legend

- 3km buffer
- 500m Buffer (DoEHLG, 2006)
- 4x Tip-Height Setback Distance (DoHPLG, 2019)
- Proposed Turbines
- Residences within 3km
- Photomontage Viewpoint Locations
- Photowire Viewpoint Locations

Route Screening Analysis

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

Half-Blade Zone of Theoretical Visibility

- 1-2 Turbines Theoretically Visible
- 3-4 Turbines Theoretically Visible
- 5-7 Turbines Theoretically Visible

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Drawing No.

Figure 13-20

Residential Receptors

Cunlaghfadda Green Energy Project

Scale	Project No.	Date	Drawn By	Checked By
1:25,000	220825	15.04.2026	GL	DM



Planning and Environmental Consultants

Assessment of Residential Receptors to the West

To the west of the proposed turbines, the character of the landscape is primarily defined by agricultural fields enclosed by treelines and shrub vegetation. Where residential receptors are present, they are typically located along the local road network. The Route Screening Analysis (See Section 13.3.2 previously) notes that the road network to the west of the proposed turbines is classified as a mix of 'Partial/Intermittent' Visual Screening and 'No/Very Little' Visual Screening, with some smaller sections of 'Dense/Full' Visual Screening, especially around the settlement of Mayo Abbey.

VP07 is located along the L15057 local road, within the townland of Knockroe and is representative of typical views towards the proposed turbines experienced by residential receptors to the west in close proximity. This image was taken from a local road adjacent the Proposed Wind Farm and illustrates a relatively open view towards the proposed turbines. Due to the proximity (700m from the nearest proposed turbine (T1)), the proposed turbines occupy a relatively wide horizontal extent. The closest turbines (T1 and T2) appear as tall vertical features within the view, while the remaining turbines appear as moderately scaled features, set-back beyond multiple agricultural fields. Majority of the proposed turbines form a coherent cluster of turbines, with one turbine, T7, appearing set-back to the left. The arrangement and spacing of the proposed turbines give an orderly and visually coherent appearance within the view, with limited overlap of turbine components, avoiding visual confusion and supporting their assimilation into the landscape. As seen in VP07, many of the turbines are seen set-back beyond multiple agricultural fields, giving a sense of set back and spatial separation from the viewpoint. Residential visual amenity effects are mitigated by strategic siting, greater than 4x tip height separation and appropriate scaling. As discussed in *Appendix 13-3*, a 'Moderate' magnitude of change was deemed to arise at VP07 with an overall 'Moderate' residual effect. On balance, these effects are not considered significant.

VP08 was captured further set-back from VP07, along the L55398 Local Road within the townland of Lehanagh, approximately 2km from the nearest proposed turbine (T7). VP08 was captured within an area of 'Little/No' Visual Screening and is representative of the typical views experienced by residential receptors on the outskirts of Mayo Abbey. This viewpoint demonstrates a notable reduction in visibility compared to VP07, owing to the increased set-back distance within the undulating drumlin-like landscape, with visual exposure further reduced by screening from intervening vegetation and landform. As discussed in *Appendix 13-3*, all proposed turbines are partially visible beyond the ridge, occupying a relatively short horizontal extent relative to the landscape. Turbines T1, T2, and T7 are the most prominent, whilst the remaining turbines are largely screened from view, with only the blades visible. Residential visual amenity effects are mitigated by predominate visual screening by landform and vegetation. As detailed in *Appendix 13-3*, a 'Slight' magnitude of change was assigned to this viewpoint, with an overall 'Slight' residual visual effect. On balance, these effects are not considered significant.

VP06 was captured along the L1506 Local Road within the townland of Oory, approximately 4km from the nearest proposed turbine (T1) and is representative of views from the west/south-west with a larger set-back distance. As discussed in *Appendix 13-3*, only three proposed turbines are visible to their full extent, set-back beyond the ridgeline. The proposed turbines occupy a relatively short horizontal extent. As VP06 clearly demonstrates, with increased set back distance the proposed turbines reduce in scale and are more visually screened by the intervening vegetation within the relatively flat landscape. A 'Slight' magnitude of change was determined for this viewpoint, with a 'Not Significant' residual visual effect. There are instances in this general direction where no visibility occurs due to dense forestry screening visibility toward the proposed turbines, as can be seen in Photowire PWVP-E below (Plate 13-28), also from nearby in the townland of Oory. Visual effects are 'Imperceptible' from this location. On balance, these effects are not considered significant.



Plate 13-28 Photowire visualisation PWVPE from the townland of Oory.

Assessment of Residential Receptors to the East

Similar as the west, the rural character of the landscape to the east is primarily defined by agricultural fields often bordered by dense shrub and tree vegetation, although to the east the elevation eventually begins to increase. Where residential receptors are present, they are typically arranged in along the local road network. As outlined in the Route Screening Analysis (see Section 13.3.2), the road network to the east of the proposed turbines is predominantly classified as a mix of 'Partial/Intermittent' and 'Dense/Full' Visual Screening with some short stretches of 'No/Very Little' Visual Screening, particularly in areas within 3km of the proposed turbines.

VP18 was captured along the L5537 Local Road in the townland of Drumady, approximately 660m from the nearest proposed turbine (T5). This viewpoint is representative of residential receptors in very close proximity to the proposed turbines and is representative of the worst-case scenario for residential receptors to the east of the proposed turbines. As discussed in *Appendix 13-3*, the proposed turbines are set-back beyond the ridge of the hilly terrain, with some of the proposed turbines partially visually screened by terrain and vegetation. As shown by the Route Screening Analysis in Section 13.3.2 previously, this viewpoint was captured along one of the few locations in this area to the east of the Site with open visibility towards the proposed turbines. Other sections of the road are primarily characterised as having dense roadside screening from mature vegetation, thereby limiting visibility towards the proposed turbines from other sections of the road. Residential visual amenity effects are mitigated by strategic siting, greater than 4x tip height, and location within a rural, working landscape. A 'Moderate' magnitude of change was determined for this viewpoint, with a 'Moderate' residual visual effect. On balance, these effects are not considered significant.

VP15 was captured along the N60 National Road in the townland of Birchfield, approximately 2.5km east from the nearest proposed turbine (T4) and is representative of residential receptors along the N60 with the most open views toward the proposed turbines. As discussed in *Appendix 13-3*, all the proposed turbines are visible from this viewpoint, across a relatively short horizontal extent in the centre of the view, beyond the intervening tract of forestry which partially screens the proposed turbines. Furthermore, the upward-sloping agricultural field and roadside shrub vegetation provide further screening of the lower sections of the turbines, creating a sense that the turbines are visually set back from the viewpoint. This reduces the overall visual prominence of the proposed turbines for residential receptors in this general direction. Residential visual amenity effects are mitigated by visual screening from vegetation and sense of set back from the proposed turbines. Many residential properties in the area have mature boundary vegetation, further reducing visibility of the proposed turbines. A 'Slight' magnitude of change was determined for this viewpoint, with an overall 'Slight' residual effect. On balance, these effects are not considered significant.

Assessment of Residential Receptors to the North

Similar to both east and west of the proposed turbines, the rural character of the landscape to the north is primarily defined by agricultural fields often bordered by dense shrub and tree vegetation. There are increasingly amounts of localised undulations in the terrain from the drumlin landscape. Where residential receptors are present, they are typically arranged along the local road network. As outlined in the Route Screening Analysis (see Section 13.3.2), the road network to the north of the proposed turbines is predominantly classified as a mix of 'No/Very Little' and 'Partial/Intermittent' Visual Screening with some short stretches of 'Dense/Full' Visual Screening.

VP02 was captured along the L5536 Local Road in the townland of Knockaunakill, approximately 690m from the nearest proposed turbine (T6) and is representative of residential receptors in very close proximity. As discussed in *Appendix 13-3*, the closest turbine, T6 appears as a tall vertical feature within the view, while the remaining turbines are perceived as moderately scaled elements in the background, partially screened by intervening vegetation. Some visual overlap occurs with turbines T5 and T4, as well as turbines T3 and T2. The proposed turbines appear visually set-back from this viewpoint, beyond the ridgeline and treelines, giving a sense of set back and spatial separation from the viewpoint. Furthermore, the visual effects shown in this photomontage represent the worst-case scenario for this area immediately north of the Proposed Wind Farm and will only be experienced by a very low number of receptors. Many residential receptors in the surrounding area will not experience comparable levels of visibility due to further set-back distance and mature boundary vegetation surrounding their properties, which will further reduce visibility of the proposed turbines and effects on the perceived visual amenity. Residential visual amenity effects are mitigated by greater than 4x tip height and a sense of set-back and separation behind localised terrain undulations and mature vegetation. A 'Moderate' magnitude of change was determined for this viewpoint, with a 'Moderate' residual visual effect. On balance, these effects are not considered significant.

VP01 was captured along the N60 National Road in the townland of Brees, approximately 2.9km from the nearest proposed turbine (T7). This viewpoint is representative of residential receptors within 3km with relatively open views of the proposed turbines. As discussed in *Appendix 13-3*, all proposed turbines are visible from this viewpoint. 4 no. turbines (T5, T4, T2, and T7) are largely screened by mature vegetation and the intervening rise in terrain. The proposed turbines form a coherent, linear array of turbines, visually set-back beyond the ridgeline and occupy a relatively small horizontal extent. Residential visual amenity effects are mitigated by set back and visual screening behind localised terrain undulations and mature boundary vegetation. A 'Slight' magnitude of change was determined for this viewpoint, with a 'Slight' residual visual effect. On balance, these effects are not considered significant.

Assessment of Residential Receptors to the South

As with most of the area within 3km of the proposed turbines, the rural character of the landscape to the south is primarily defined by agricultural fields and cutover bog. Where residential receptors are present, they are typically arranged along the local road network. As outlined in the Route Screening Analysis (see Section 13.3.2), the road network to the south of the proposed turbines is predominantly classified as a mix of 'No/Very Little' Visual Screening, with some stretches of 'Partial/Intermittent' Visual Screening and some occasional sections of 'Dense/Full' Visual Screening.

VP04 was captured on the L1505 Local Road in the townland of Knockrickard, approximately 1km from the nearest proposed turbine (T1). This viewpoint is representative of residential receptors in close proximity with open views toward the proposed turbines. This area close to the Proposed Wind Farm overall has the least visual roadside screening, being classified as predominantly 'No/Very Little' Visual screening. As discussed in *Appendix 13-3*, the proposed turbines are seen beyond rising terrain, and occupy a moderate horizontal extent. Some visual overlap occurs with turbines T2 and T1, as well as T3 and T4. Turbines T7 and T5 appear partially set-back from the remaining turbines. Residential visual amenity effects are mitigated by greater than 4x tip height and a sense of set-back and separation behind localised terrain and mature vegetation. A 'Moderate' magnitude of change was determined for this viewpoint, with a 'Moderate' residual visual effect. On balance, these effects are not considered significant.

VP14 was captured along the L5537 Local Road, approximately 1.4km from the nearest proposed turbine (T5) and is representative of views from the south with a greater proportion of visual screening. As discussed in *Appendix 13-3*, all of the proposed turbines are seen centrally from this viewpoint, set-back beyond multiple agricultural fields, and occupy a relatively moderate horizontal extent. Turbine T3 appears slightly separated from the other proposed turbines. Some visual overlap occurs with turbines T3 and T7, as well as T5 and T6. Residential visual amenity effects are mitigated by greater than 4x tip height and the landscape buffer of the various hedgerows and mature trees in the area. A 'Moderate' magnitude of change was determined for this viewpoint, with a 'Moderate' residual visual effect. On balance, these effects are not considered significant.

VP03 was captured along the L1506 Local Road from the townland of Ahena, approximately 3.2km from the nearest proposed turbine (T5) and is representative of views from the south with a larger set-back distance. As discussed in *Appendix 13-3*, most of the proposed turbines are seen viewpoint, set-back beyond the ridgeline and largely screened by roadside and residential vegetation. The proposed turbines occupy a relatively short horizontal extent. Residential visual amenity effects are mitigated by partial visual screening, set-back from the proposed turbines, and intervening vegetation and the built environment. A 'Slight' magnitude of change was determined for this viewpoint, with a 'Not Significant' residual visual effect. On balance, these effects are not considered significant.

Summary of Visual Effects on Residential Receptors

Within the LVIA Study Area, the visual impact on residential receptors ranges from 'Imperceptible' to 'Moderate'. Given the adherence to the 4x tip height set-back distance to protect visual amenity, on balance, effects on residential receptors are mitigated and are therefore not significant.

13.7.5.4 Visual Effects of the Proposed Grid Connection and Met Mast

Proposed Met Mast

This will be a slender structure, 92m 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.

Proposed 110kV Onsite Substation

The proposed onsite 110kV substation and its associated components including the control buildings and storage containers is one of the larger and potentially more visually prominent elements of the non-turbine infrastructure of the Proposed Project. As shown previously in Figure 13-11, the proposed onsite 110kV substation is located to the north-east of the proposed turbines. As shown previously in Plate 13-17, the proposed onsite 110kV substation is sited in a location partially enclosed by existing vegetation (as can be seen in Figure 13-21 and Plate 13-29 below), which would provide some visual screening for residential receptors in the surrounding landscape. Furthermore, as discussed in Appendix 6-4 and shown in Figure 13-21 and Plate 13-29 below, woodland and treeline/ hedgerow planting and enhancement is proposed along the west and north-east of the proposed onsite 110kV substation, providing further visual screening for nearby residential receptors. The nearest residential receptor is located approx. 300m west of the proposed 110kV substation location. Due to setback distance and screening from both existing vegetation within the intervening fields, in addition to the proposed planting proposals as discussed in the BMEP (Appendix 6-4) (and shown below), visibility of the proposed 110kV substation, once constructed and once the vegetation has reached maturity, whilst still visible, will be largely be limited to the residential receptors immediately to the west. Users of the L5536 local road will have momentary views through roadside screening (Figure 13-21), however, the proposed woodland and treeline/hedgerow planting and enhancement in addition to the line of mature boundary vegetation along the road will largely visually screen the proposed onsite 110kV substation from these road users and residences to the north and east (Plate 13-29). Any visual effects are likely to be highly localised, 'Long-term', 'Negative' and will be 'Slight'. On balance, these effects are not considered significant.

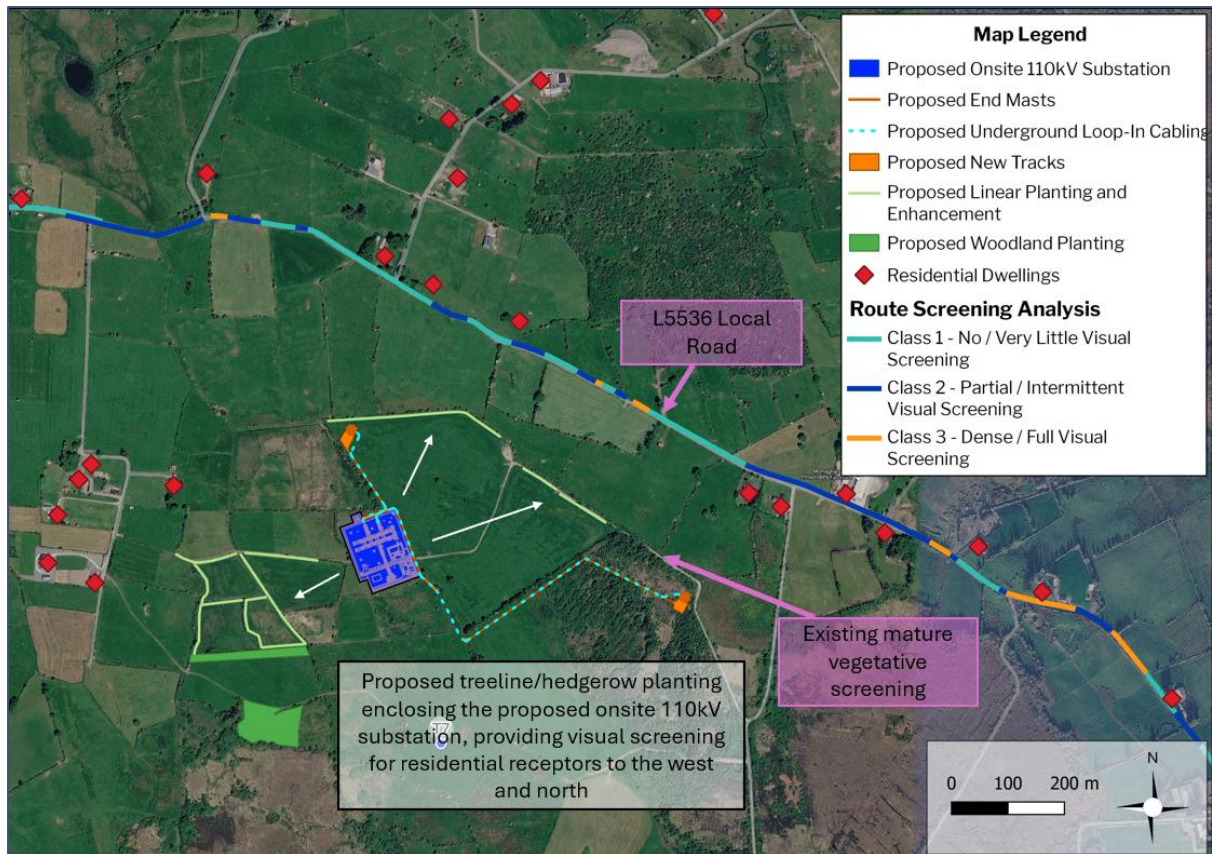


Figure 13-21 Location of proposed onsite 110kV substation, the proposed treeline/hedgerow and woodland planting locations, and locations of local receptors.

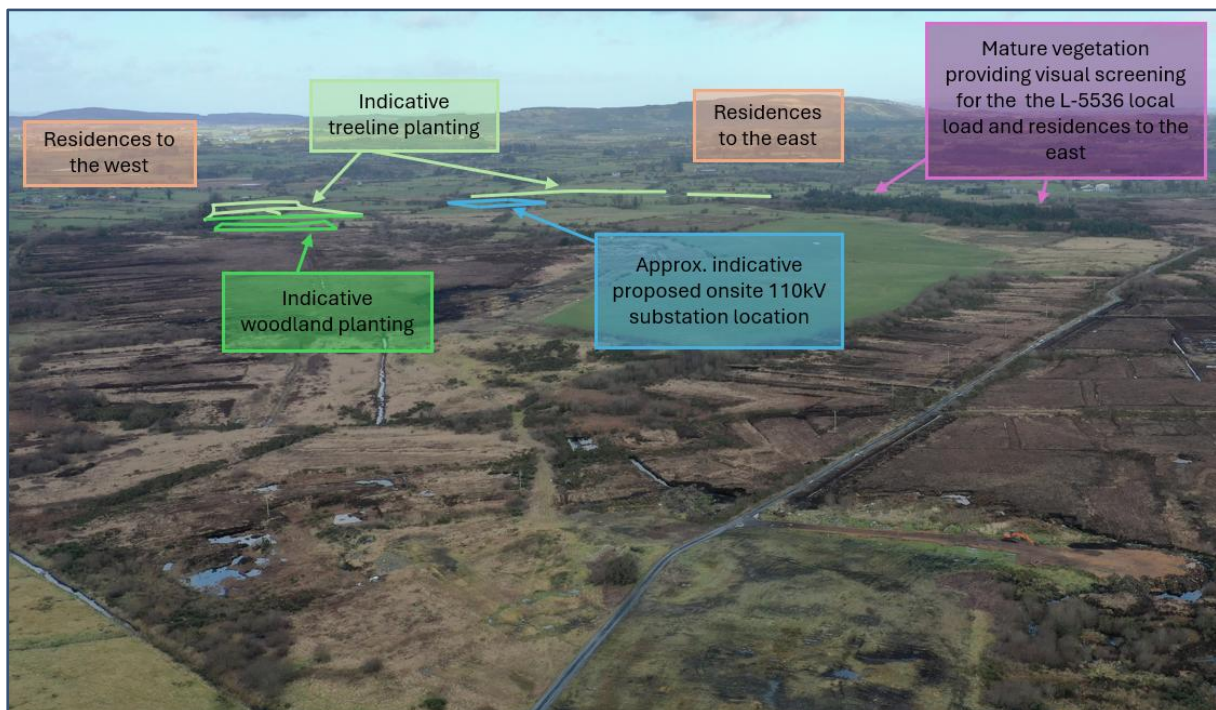


Plate 13-29 Drone imagery showing approximately locations of the proposed onsite 110kV substation, residences, existing mature vegetation, and proposed treeline/hedgerow planting.

Connection to the Existing Overhead Line

As discussed previously in Section 13.4.2, the existing overhead line will be broken by 2 no. end masts (lattice type towers) to facilitate the connection to the Proposed Wind Farm. Visual effects will occur as three existing 23m wooden poles and a section of the OHL will be removed and two new 16m lattice-type end-masts and underground cabling will be constructed to facilitate connection to the national grid. Due to the undulating, rural, and vegetated landscape of the Site, visibility of these towers will be localised, with greatest visual effects experienced by nearby residential receptors in the townlands of Cloonbaul and Knockaunakill, as well as local road users on the L5536. Any visual effects are likely to be localised, 'Long-term', 'Negative' and will be 'Not Significant'. On balance, these effects are not considered significant.

13.7.5.5 Discussion of Cumulative Visual Effects

There are many potential scenarios and interactions where cumulative visual effects may occur. These scenarios can include interactions between the Proposed Project, other energy developments (wind farms or grid infrastructure), as well as other man-made landscape features (quarries, transport networks, overhead telecommunication lines). Guidance for assessment of cumulative effects of onshore wind farms (SNH,2012) & (NatureScott, 2021) clearly states the following:

“At every stage in the process the focus should be on the key cumulative effects which are likely to influence decision making, rather than an assessment of every potential cumulative effect.”

“The level of information generated can distract attention from the most significant cumulative effects which are likely to influence the consenting decision. Assessments should therefore focus on the most significant cumulative effects and conclude with a clear assessment of those which are likely to influence decision making.”

Following this guidance, a primary focus is given to the cumulative effects likely to occur as a result of other wind turbines identified in the LVIA Study Area. The discussion of cumulative visual effects in this section uses the following terminology:

- **'In combination'** where the proposed turbines will be seen with other turbines from a particular vantage point representing visual receptors.
- **In combination 'simultaneous'** visual effects occur where the proposed turbines are seen with other cumulative turbines within the same or similar field of view.
- **In combination 'successional'** visual effects occur where the proposed turbines are seen with other turbines from the same viewpoint but in an alternative field of view where the receptor will need to turn to face a different direction to experience cumulative effects.

Within the LVIA Study Area, all other wind energy developments are located beyond 5km from the proposed turbines. Cumulative visual effects as experienced by visual receptors, including residential receptors, local road users, and users of recreational walking trails and designated scenic routes are primarily confirmed to occasional, elevated vantage points within the wider LVIA Study Area. In these instances, the proposed turbines would be visible in the distant background, where they would be perceived as small-scale elements relative to the receiving landscape, largely screened by intervening vegetation and the undulating drumlin landscape. This is illustrated in the photomontages presented in the Photomontage Booklet, discussed in detail in *Appendix 13-3*, and a summary is provided below:

- **VP11:** Visual receptors, including walkers on the Cruispullagadaun Loop Trail, will experience some in combination 'Simultaneous' cumulative visual effects as the existing Ballykinava, Cloontooa, Mace Upper, and Magheramore wind farms are seen in the same field of view as the proposed turbines. The view of the landscape from the trail is large scale and expansive, capable of absorbing the proposed and existing turbines.
- **VP16:** Visual receptors, including commuters on the N17 National Road, would experience in combination 'Simultaneous' visual effects as the Mace Upper Wind Farm is seen in combination

with the proposed turbines and would be visible as they travel along the route. The existing Mace Upper turbines and the proposed turbines are at different set back distances, with the proposed turbines barely visible in comparison to the more prominent Mace Upper Wind Farm.

13.7.6 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 elements of decommissioning from an LVIA perspective are the dismantling and removal of the wind turbines and mast components. This will occur for a limited period of time and will predominately involve cranes adjacent to the turbines during the dismantling process. Upon decommissioning of the Proposed Project, the turbines will be disassembled in reverse order to how they were erected. The turbines will be disassembled with a similar model of crane that was used for their erection. The turbines will likely be removed from the Proposed Wind Farm using the same transport methodology adopted initially for delivery to the Site.

Turbine foundations 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 Project back to a condition similar to the landscape baseline.

The Proposed Grid Connection underground electrical cabling and proposed 110kV substation will remain in place as it will be part of the Electricity Grid under the ownership and control of ESB Networks and Eirgrid.

Removal of the turbines and ancillary infrastructure (except the proposed 110kV substation, access tracks and hardstanding areas) from the Site during decommissioning will result in 'Short-Term', 'Slight', 'Negative' visual effects. On balance, these effects are not considered significant. 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.

13.7.7 EIA Classification Summary

Please see the below table for a summary of all identified impacts for the Proposed Project relating to LVIA.

Table 13-8 Impact Assessment Classification Summary

Topic	Impact Assessment Discussion Section Reference	Residual Effect	Significance
Construction Phase			
Proposed Project	Section 13.7.2.1	Short-Term, Negative, Moderate	not significant
Nearby Visual Receptors	Section 13.7.2.2	Temporary to Short-Term, Negative effects within the following range: Not Significant, Slight	not significant
Operational Phase – Landscape Effects			
Proposed Project	Section 13.7.3.1.1	Long-Term, Negative effects	not significant

		Imperceptible, Moderate	
LCA's	Section 13.7.3.1.2	Long-Term, Negative effects, within the following range: Not Significant, Slight	not significant
Other Landscape Receptors (Vulnerable Features)	Section 13.7.3.1.3	Long-Term, Negative effects, within the following range: Not Significant, Slight, Moderate	not significant
Operational Phase – Visual Effects			
Designated Scenic Routes and Scenic Routes with Views	Section 13.7.4.2.1 Section 13.7.4.2.2	Long-Term, Negative effects, within the following range: Not Significant, Slight	not significant
Settlements	Section 13.7.4.2.4	Long-Term, Negative effects, within the following range: Imperceptible, Slight	not significant
Recreational Routes	Section 13.7.4.2.5	Long-Term, Negative effects, within the following range: Imperceptible, Not Significant, Slight, Moderate	not significant
Recreational Destinations, Cultural Heritage and Tourism Destinations	Section 13.7.4.2.3	Long-Term, Negative effects, within the following range: Moderate, Slight, Not Significant, Imperceptible	not significant
Major Transport Routes	Section 13.7.4.2.6	Long-Term, Slight, Negative	not significant
Residential Receptors	Section 13.7.4.3	Long-Term, Negative effects, within the following range: Imperceptible, Not Significant, Slight, Moderate	not significant
Decommissioning Phase			
Proposed Project	Section 13.7.5	(same as construction phase effects)	not significant

13.8 Conclusion

This chapter assesses the likely significant landscape and visual impacts arising as a result of the Proposed Project. Although all elements of the Proposed Project are assessed, this chapter focusses upon the proposed turbines, as they are deemed to be the primary essential aspects of the proposal under assessment from a landscape and visual perspective. This chapter also assesses the proposed onsite 110kV substation that forms part of the Proposed Grid Connection. This chapter describes the baseline landscape and assesses the direct effects on the landscape of the Proposed Wind Farm, as well as effects on landscape character and the impact on sensitive landscape receptors (i.e. designated Vulnerable Features). Visibility of the proposed turbines was assessed from receptors within an LVIA Study Area extending 20km from the proposed turbines; and visual effects were determined from information gathered during multiple site visits as well as other tools such as ZTV mapping, photomontages and photowires.

The Proposed Project site is located within the sparsely populated, undulating landscape within the plains of County Mayo, characterised by a network of agricultural fields, cutover bogs, and commercial forestry. It is a landscape which has undergone a degree of human modification. The proposed turbines are located within Policy Area 4, designated as Medium sensitivity to wind in the Landscape Appraisal for County Mayo (LACM), which is the lowest sensitivity classification for this development type. The proposed turbines are not located within any protected landscapes within any local landscape policy, and no sensitive landscape designations (designated Vulnerable Features) fall on the proposed turbines. Furthermore, the Proposed Project is located with an area classified as *'Tier 1 – Preferred'* for wind farm developments within the MCDP RES 2011-2020. The landscape sensitivity of the Proposed Project is deemed 'Low'.

In terms of location, spatial extent, spacing and layout, the siting and design of the Proposed Project adheres to the guidance for the siting of wind farms in 'Hilly and Flat Farmland' as set out in the Guidelines (DoEHLG, 2006) and the Draft Guidelines (DoHPLG, 2019). As discussed in Section 13.7.4 of this chapter, residual effects upon the landscape in which the proposed turbines are located is deemed to be 'Long-term', 'Negative' and 'Moderate'. On balance, these effects are not considered significant.

On-site visibility appraisals, ZTV mapping, a Route Screening Analysis and photomontage viewpoint locations determined that visibility of the proposed turbines will be very limited from locations beyond 5 km from the Proposed Project site. Siting of the proposed turbines within a relatively flat landscape with localised undulations (arising from the drumlin landscape) largely restricts visual exposure in the wider landscape. Visibility of the proposed turbines beyond the immediate landscape setting of the Proposed Project site is limited to localised areas of high elevation where open views across the flat and highly vegetated landscape are available from elevated vantage points.

Photomontages were used to assess the visual effects arising as a result of the Proposed Project from 19 no. viewpoint locations. The assessment concluded that no 'Significant', 'Very Significant', or 'Profound' effects occurred at any of the 19 photomontage viewpoints. In all instances, the Proposed Project exceeds the recommended 500m set back distance in the Guidelines (DoEHLG, 2006) and also is in line with the 4 times tip height set-back distance set out for residential visual amenity prescribed by the Draft Guidelines (DoHPLG, 2019). Residual 'Moderate' effects occurred at 5 of the 19 No. viewpoints. All other viewpoints were assessed as resulting in 'Imperceptible' (1), 'Not Significant' (5), and 'Slight' (8) residual effects. Cumulative visual effects have greatest potential to arise with other existing developments. However, given the setting of the Proposed Project and limited visibility with the extensive flat landscape, cumulative effects are only mostly limited to elevated vantage points within the LVIA Study Area.

Mayo Abbey Church and Ruins is located 2km northwest from the nearest proposed turbine, however, as discussed throughout this chapter and the accompanying appendices, the Proposed Project will not alter the physical fabric or key features of the monuments, and any change will be limited to the wider landscape setting, where the proposed turbines will be seen beyond the immediate visual context of the Mayo Abbey Church and Ruins.

Overall, this chapter determined that no significant landscape and visual effects were identified. Overall, the Proposed Project is effectively accommodated within the landscape without any Significant effects on the key scenic or landscape sensitivities of receptors identified in the 20km LVIA Study Area. The Proposed Project is appropriately designed and suitably scaled, and it has been demonstrated that no significant landscape and visual effects are likely to arise.