

Environmental Impact Assessment Report

Proposed Clonberne Wind
Farm Development, Co.
Galway

Chapter 14 – Landscape and Visual





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Prepared By: **MKO
Tuam Road
Galway
Ireland
H91 VW84**



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14. LANDSCAPE AND VISUAL

14.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) addresses the potential landscape and visual effects of the proposed Clonberne Wind Farm in County Galway. The emphasis in this chapter is on the likely significant direct and indirect effects of the Proposed Project upon the landscape and visual amenity. It covers the assessment methodology, a description of the Proposed Project and the existing landscape, as well as landscape policy and relevant guidance. It includes a description of the landscape policy of County Galway and bordering counties (Co. Roscommon and Co. Mayo) with specific reference to wind energy and the Landscape and Visual Impact Assessment (LVIA) Study Area in which the Proposed Project Site is located.

The landscape of the Proposed Project Site and wider landscape area is described in terms of its existing character, which includes a description of landscape values and the landscape's sensitivity to change. The landscape and visual impact assessment of the Proposed Project uses theoretical visibility mapping, representative viewpoints and photomontages. The potential impacts in both landscape and visual terms are then assessed, including cumulative impacts.

14.1.1 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 EIAR chapter was written by Jack Smith, MSc., PIEMA, a Landscape and Visual Impact Professional. Jack is an Environmental Scientist and Landscape and Visual Impact Assessment (LVIA) specialist with MKO. Jack is an Affiliate member of the British Landscape Institute and holds membership with the Landscape Research Group. Jack's primary role at MKO is producing the LVIA chapter of EIA reports. Jack specialises in preparing Landscape and Visual Impact Assessment Reports for large-scale renewable energy projects including wind farms, solar farms, quarry extraction and strategic housing schemes. Jack has additional experience in preparing landscape feasibility reports for large wind farm projects.

Jack Smith was also aided by Jack Workman MSc, TMLI. Jack is a chartered member of the British Landscape Institute as a Technician Member (TMLI) and he is the Landscape & Visual Project Director at MKO. He is an Environmental Scientist and Landscape and Visual Impact Assessment (LVIA) specialist. Jack Workman's primary role at MKO is producing the LVIA chapter of EIA reports for large infrastructure developments. Jack holds an MSc. in Coastal and Marine Environments and a BSc. in Psychology, he is a member of the Landscape Research Group, as well as holding a membership with the Chartered Institute of Water and Environmental Management.

14.1.2 Proposed Project Description

Clonberne Windfarm Limited intends to apply to an An Bord Pleanála for planning permission to construct a renewable energy development comprising of 11 wind turbines, and associated infrastructure located in the townland of Clonberne, and adjacent townlands in Co. Galway. A detailed description of the Proposed Project can be found in Chapter 1, Section 1.4 of this EIAR.

For the purposes of this EIAR:

- The '**Proposed Wind Farm**' refers to the 11 no. turbines and supporting infrastructure which is the subject of this Section 37E application.

- The ‘**Proposed Grid Connection**’ refers to the 110kV substation and supporting infrastructure which will be the subject of a separate Section 182A application.
- The ‘**Proposed Project**’ comprises the Proposed Wind Farm and the Proposed Grid Connection, all of which are located within the EIAR Study Boundary (the ‘Site’) and assessed together within this EIAR.

Please see Section 1.1.1 of this EIAR for further details. A detailed description of the Proposed Project is provided in Chapter 4 of this EIAR.

The Proposed Project will consist of the provision of the following:

1. *11 no. wind turbines with an overall turbine tip height of 180 metres; a rotor blade diameter of 162 metres; and hub height of 99 metres, and associated foundations, hard-standing and assembly areas;*
2. *Underground electrical cabling (33kV) and communications cabling;*
3. *Provision for the undergrounding of a section of 38kV overhead electrical cabling (as proposed under GCC Ref No. 24/60230), including the provision of 2 no. 38kV Line to Cable Interface End Masts up to a height of 16.2 metres and associated cable ducting to facilitate the undergrounding of the proposed 38kV cabling;*
4. *Upgrade of existing tracks/ roads and provision of new site access roads, junctions and hardstand areas;*
5. *Construction of 1 no. new gated site entrance off the R328 Regional Road to facilitate the delivery of the construction materials and turbine components to site;*
6. *Construction of 2 no. temporary construction compounds and associated ancillary infrastructure including temporary site offices, staff facilities and car-parking areas for staff and visitors, all to be removed at end of construction phase;*
7. *Development of 1 no. borrow pit;*
8. *Provision of 3 no. passing bays adjacent to the L22321 Local Road and an existing access track to facilitate the transport of stone material to the site;*
9. *Peat and spoil management including the provision of 4 no. peat repository areas and 1 no. spoil repository area;*
10. *Junction accommodation works including temporary accommodation areas adjacent to the N83 National Secondary Road, R328 Regional Road and L6466 Local Road to facilitate the delivery of turbine components to site;*
11. *Peatland Enhancement Area;*
12. *Construction of a permanent substation which will comprise of a 220kV Gas Insulated Switchgear (GIS) building, an Independent Power Producer (IPP) compound, a Battery Energy Storage System (BESS) compound, including 4 no. 18-metre high Lightning Monopoles, welfare facilities, car parking, wastewater holding tank, 36-metre-high Telecommunications Mast, 2.6-metre high palisade fencing, external lighting, underground cabling, and all associated infrastructure and apparatus;*
13. *All works associated with the connection of the proposed Clonberne Wind Farm to the national electricity grid, including the provision of underground electrical cabling (220kV) to the existing Flagford to Cashla 220kV overhead line, in the townland of Laughil;*
14. *The provision of 2 no. loop-in towers, 2 no. gantries within 2 no. cable compounds to facilitate the connection of the proposed substation to the existing Flagford to Cashla 220kV overhead line;*
15. *Construction of 2 no. gated permanent site entrances off the L6501 Local Road to facilitate access to the proposed Grid Connection and the proposed Clonberne Wind Farm;*

16. *Provision of 4 no. joint bays, communication chambers and earth sheath links along the underground electrical cabling route and temporary accommodation areas to facilitate underground cabling works;*
17. *Provision of a cable access track to facilitate the installation and maintenance of cabling and provide access to the proposed substation;*
18. *Reinstatement of the road or track surface above the proposed cabling trench along existing roads and tracks;*
19. *Operational access road to the Grid Connection and the proposed Clonberne Wind Farm;*
20. *Site Drainage;*
21. *Biodiversity Enhancement Measures (including the planting of woodland, linear habitat, grassland management and invasive species removal);*
22. *Tree felling and hedgerow removal to facilitate construction and operation of the proposed development;*
23. *Operational stage site signage; and*
24. *All ancillary works and apparatus.*

The application is seeking a ten-year planning permission and a 35-year operational life from the date of commissioning of the renewable energy development.

Essential Aspects of the Proposed Project from an LVIA Perspective

Guidance for LVIA (GLVIA3, LI & IEMA, 2013) states that

“it is important to make sure that the project description provides all the information needed to identify its effects 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 effects on the landscape and visual amenity”.

For the purposes of this chapter of the EIAR ‘the proposed turbines’ refers to the 11 no. turbines which form part of the Proposed Wind Farm. The tall, vertical nature of the proposed turbines make them the most prominent elements of the Proposed Project from a landscape and visual perspective and have 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 Proposed Project which will give rise to effects on the landscape and visual amenity and therefore a primary focus of the LVIA conducted in this chapter.

The proposed substation and interface towers (lattice type towers) are also tall structures which are considered in full throughout this chapter and are included in the photomontage booklet.

Other components of the Proposed Project are not deemed to be as visually prominent as the proposed turbines, however, they have the potential to give rise to localised landscape and visual effects. Although not the primary focus of the LVIA, these elements are given full consideration throughout this chapter.

14.1.3 Mitigation by Design

Through the iterative project design process, various best practice tools used for assessing the landscape and visual impact of a proposed wind farm development were used to bring forward the optimum design for the Proposed Project with respect to landscape and visual factors. These tools include, landscape modelling, ZTV mapping and preparation of photomontage visualisations. The final design of the Proposed Project and strategic siting of turbines in the landscape was informed by extensive early-stage analysis, including assessment of various turbine layouts and turbine models. The final design is also considered in the context of siting and design guidance stated in the ‘Wind Energy Development Guidelines for Planning Authorities’ Published by the Department of Environment, Heritage and Local Government in 2006 – Hereafter referred to as the WEDGs (DoEHLG, 2006). The

Proposed Project layout that is the subject of this LVIA, already incorporates the following landscape and visual design considerations for good wind farm design, with a particular focus on site selection:

- The turbine layout has been designed to create a coherent cluster 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 Hilly and Flat Farmland Landscape Types in the Wind Energy Development Guidelines (hereafter referred to as the WEDGs) for Planning Authorities (Department of the Environment, Heritage and Local Government (DoEHLG), 2006).
- Strategic siting of the proposed turbines on a flat site, reducing their visual prominence and visual effects in this relatively flat and heavily vegetated landscape, the proposed turbines are strategically sited within a modified working landscape where there is limited visibility (or large set back distances) from large population centres and designated landscape and visual receptors of high sensitivity.
- The turbines have been located within a landscape defined by agricultural fields bordered by mature hedgerows and treelines which provide substantial screening effects, particularly when the turbines are viewed from locations in medium to long distance from the Proposed Project. Impacts on the landscape and visual receptors are thus highly localised.
- Siting of proposed turbines adheres to the minimum 500 metre set back distance in the WEDGs (DoEHLG, 2006) and also the 4 times tip height set-back distance explicitly set out for residential visual amenity prescribed by the Draft Revised Wind Energy Development Guidelines (hereafter referred to as the draft WEDGs) (Department of Housing, Planning and Local Government (DoHPLG, 2019)).
- Siting of the Proposed Project in a landscape setting (The LVIA Study Area to 20km) which has limited numbers of designated sensitive landscape and visual receptors in local planning policy.

Ancillary Infrastructure – 220kV Substation, Grid Connection and Access Roads

- Aside from the interface towers located in the townland of Laughil, the intended connection to the national electricity grid is primarily located underground thereby eliminating potential landscape and visual effects during the operational phase from large parts of the underground cabling route.
- The proposed 220kV substation is sited within the Site with a large setback distance from the nearest visual receptors, with additional screening from the closest receptors provided by blocks of commercial forestry in the intervening space.
- The internal site road layout makes use of the existing tracks wherever possible (to be upgraded for construction and the delivery of wind turbine components), to minimise the requirement for new tracks within the Site.
- Felling of existing coniferous plantation is predominantly limited to keyhole felling in localised parts of the Site, in keeping with existing practices in the commercial forestry plantation on-site.

14.1.4 Assessment of Alternative Turbine Designs and Layout

The potential landscape and visual impacts of the Proposed Project were considered as part of the early-stage design process. Alternative turbine envelope specifications were generated for a series of preliminary ZTVs and photomontages in order to assess the extent to which alternative turbine designs and layout may give rise to visual effects. These early-stage analyses enabled the choice of suitable and appropriately scaled turbines and turbine layout for the Proposed Project in mind of mitigating landscape and visual effects. For more information on alternative designs, please see Chapter 3 of this EIAR – *Site Selection and Reasonable Alternatives*.

14.1.5 Scoping Replies / Pre-Planning Meeting

A scoping and consultation exercise has been carried out by MKO, as detailed in Chapter 2 of this EIAR. A pre-planning consultation meeting took place with Galway County Council (GCC) on the 19th November 2020, where with regards to landscape, the representative from GCC noted that the receiving landscape is flat in nature and this should be considered within the landscape assessment. GCC further requested that the LVIA cover the wider community. A further meeting with GCC occurred on 11th December 2023 where the representative from GCC noted that the Proposed Project is likely to be SID and require more visual assessments than they would usually require.

A pre-planning consultation meeting was conducted with An Bord Pleanála on the 22nd June 2020, although no matters related to LVIA were discussed. In addition to this pre-planning consultation, two further SID meetings under the provisions of Section 182E were held with the Board on the 13th December 2022 and 11th July 2023; no matters related to LVIA were discussed.

All feedback and communications outlined above and detailed in Chapter 2 have been taken on board when compiling the chapter and assessment.

14.2 Brief Methodology and Assessment Criteria

This section broadly outlines the methodology and the guidance used to undertake the landscape and visual impact assessment of the Proposed Project; a more detailed description of the methodology is outlined in Appendix 14-1 – *LVIA Methodology*. There are five main sections to this assessment:

- Visibility of the Proposed Project
- Landscape Baseline
- Visual Baseline
- Cumulative Context
- Likely and Significant Effects – outlining the assessment of landscape, visual and cumulative effects

14.2.1 Scope and Definition of the Landscape and Visual Impact (LVIA) Study Area

For the purposes of this chapter, where the ‘Proposed Project Site’ or ‘the Site’ is referred to, this relates to the immediate environment in which the Proposed Project is located. The Site is delineated by a green line labelled as the ‘EIAR Site Boundary’ in the A0 LVIA Baseline Map (Appendix 14-4) as well as other mapping figures shown throughout the chapter.

The Guidelines for Landscape and Visual Impact Assessment 3rd Edition - GLVIA3 (LI & IEMA, 2013) guidance refers to the identification of the area of landscape that is to be covered while assessing landscape and visual effects. The guidelines state:

“The study areas should include the site itself and the full extent of the wider landscape around it which the proposed development may influence in a significant manner.”

Landscape and visual baseline mapping and viewpoint selection are based on a wider study area referred to as the ‘LVIA Study Area’. The geographical parameters for this LVIA were determined by desktop studies, survey work undertaken, the professional judgement of the assessment team, experience from other relevant projects and policy guidance or standards, such as:

- *Appendix 3, WEDGs– DoEHLG, 2006 (including reference to the draft WEDGs DoHPLG, 2019)*

- The Guidelines for Landscape and Visual Impact Assessment 3rd Edition– GLVIA3, (Landscape Institute & IEMA, 2013).

The distance at which a ZTV is set from a proposed wind farm development usually defines the parameters of the LVIA Study Area. The LVIA Study Area was chosen as 20 kilometres for landscape and visual effects as is suggested by guidance;

‘For blade tips in excess of 100m, a Zone of Theoretical Visibility radius of 20km would be adequate’ (WEDGs Page 94, DoEHLG, 2006; draft WEDGs Page 152, DoHPLG, 2019).

Through experience conducting LVIA for other wind energy development projects, the assessment team determined that no significant effects on landscape character are likely to arise beyond distances of 15km from the proposed turbines. Therefore, a study area of 15km, hereafter referred to as the LCA Study Area, is deemed appropriate for effects on landscape character in relation to the assessment of effects upon designated Landscape Character Areas.

Furthermore, as prescribed by best practice guidance, the professional judgement of the assessment team, the following topic areas have been screened out of the assessment:

- Effects on landscape and visual receptors that have minimal or no theoretical visibility (as predicted by the ZTV) and/or very distant visibility, and are therefore unlikely to be subject to significant effects;
- Effects on designated landscape receptors beyond a 20 km radius from the proposed turbines, from where it is judged that potential significant effects on key characteristics and/or special qualities, or views are judged unlikely to occur;
- Effects on designated Landscape Character Areas beyond a 15 km radius from the proposed turbines, where it is judged that potential significant effects on landscape character are unlikely to occur;
- Effects on visual receptors beyond a 20 km radius from the proposed turbines, where it is judged that potential significant effects are unlikely to occur;
- Cumulative landscape and visual effects beyond a 20 km radius from the proposed turbines, where it is judged that potential significant cumulative effects are unlikely to occur;

14.2.2 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 14-1.

14.2.3 Baseline Landscape and Visual Information

In order to carry out this assessment, an initial desk study of baseline information was undertaken that has informed the LVIA, and this included the following:

Landscape

- Policies and objectives contained in the relevant county development plans (Counties Galway, Roscommon and Mayo) pertaining to landscape and wind energy.
- Landscape designations in the LVIA Study Area (Amenity Areas; Views and Prospects; Landscape Character Areas).
- Landscape character of the LVIA Study Area.
- Landscape character of the Site based on
 - Site Surveys undertaken in 2020, 2021, 2022, 2023, and 2024.

- Landscape Character Types identified in Landscape Character Types as a basis for Guidelines: 2006 WEDGs and also cognisant of the 2019 WEDGs.

Visual

- Identification of Visual Receptors in the LVIA Study Area;
- Preliminary assessments of visibility of the Proposed Project from visual receptors using ZTV mapping and on-site appraisals.
- Route Screening Analysis

14.2.4 Assessment of Potential Impacts

The landscape and visual assessment methodology used in this chapter (outlined in Appendix 14-1) includes clearly documented methods based on the GLVIA guidelines (LI & IEMA, 2013). This includes consideration of landscape and visual sensitivity balanced with the magnitude of the effect to determine the significance of effects. Mitigating factors are then taken into consideration to arrive at residual landscape and visual effects. Residual landscape and visual effects are graded upon an 'Impact Assessment Classification of Significance' scale, as defined by the Environmental Protection Agency of Ireland (EPA, 2022), included in Section 1.7.1 of Chapter 1 of this EIAR.

Photomontages are used to aid the assessment of potential impacts, whereby the potential effects arising as a result of the Proposed Project 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, this is based on Zone of Theoretical Visibility (ZTV) mapping which is addressed in the following section of this chapter. Further details of the methods used to produce ZTVs and Photomontages, as well as the landscape and visual impact assessment process are presented in the methodology appendix - *Appendix 14-1*.

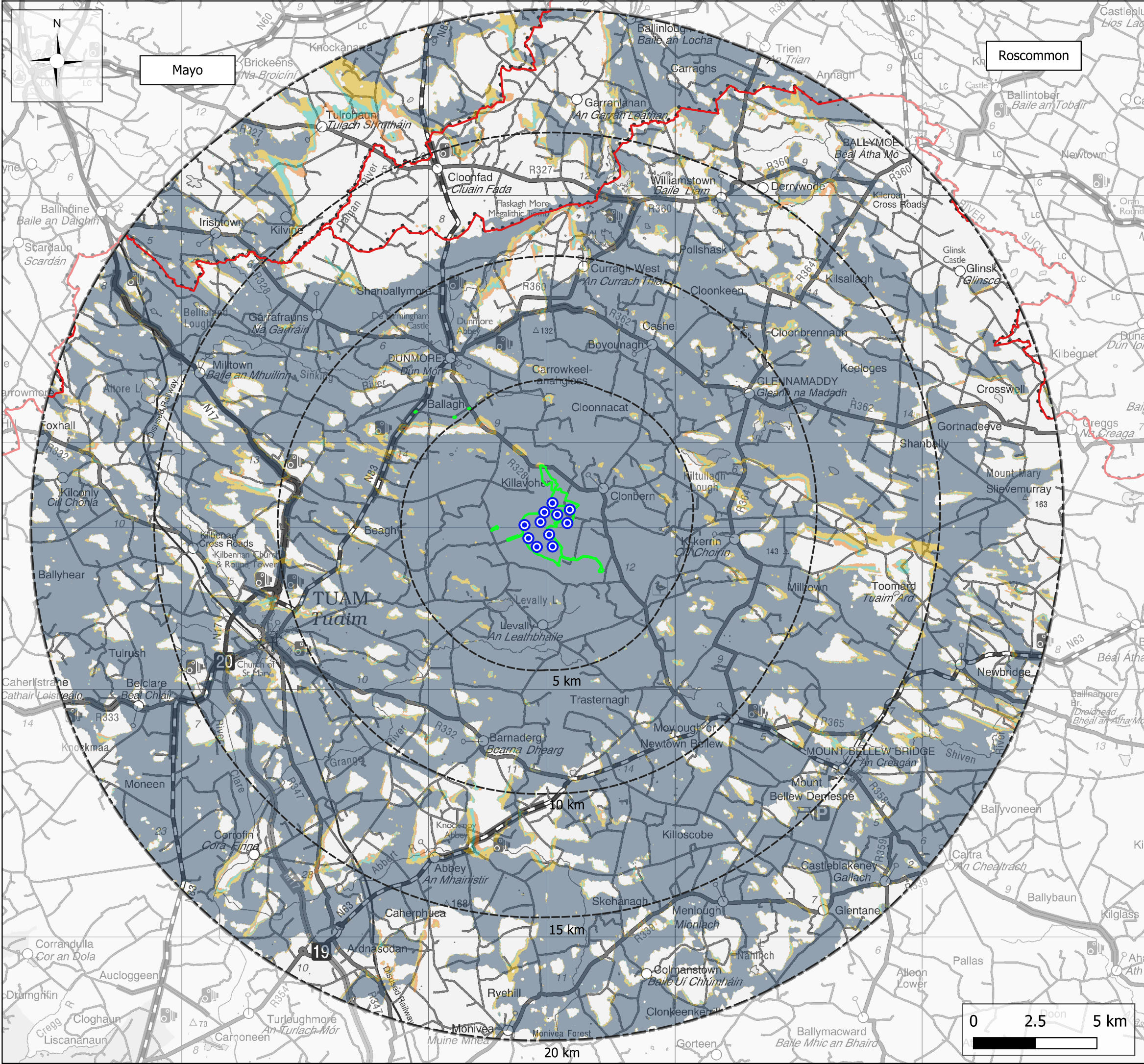
14.3 Visibility of the Proposed Project

14.3.1 ZTV Mapping: Theoretical Visibility of the proposed turbines

Zone of Theoretical Visibility (ZTV) mapping is an important step in the LVIA process, in that it clearly shows which areas will have theoretical visibility of the proposed turbines and which areas will have no theoretical visibility.

The ZTV mapping methodology outlined in Section 1.3 of Appendix 14-1 was used to examine the theoretical visibility of the 11 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 14-1, 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 10 m OSI contour data) and does not account for topographical variation of smaller scale (e.g. < 10 metre). Therefore, in reality, small, localised undulations in topography are likely to further inhibit 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 screened out from further assessment.



Map Legend

- County Border
- LVIA Study Area
- EIAR Site Boundary
- Proposed Turbine Locations

Zone of Theoretical Visibility

- 1-2 Turbines Theoretically Visible
- 3-4 Turbines Theoretically Visible
- 5-8 Turbines Theoretically Visible
- 9-11 Turbines Theoretically Visible

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Drawing No.

Figure 14-1

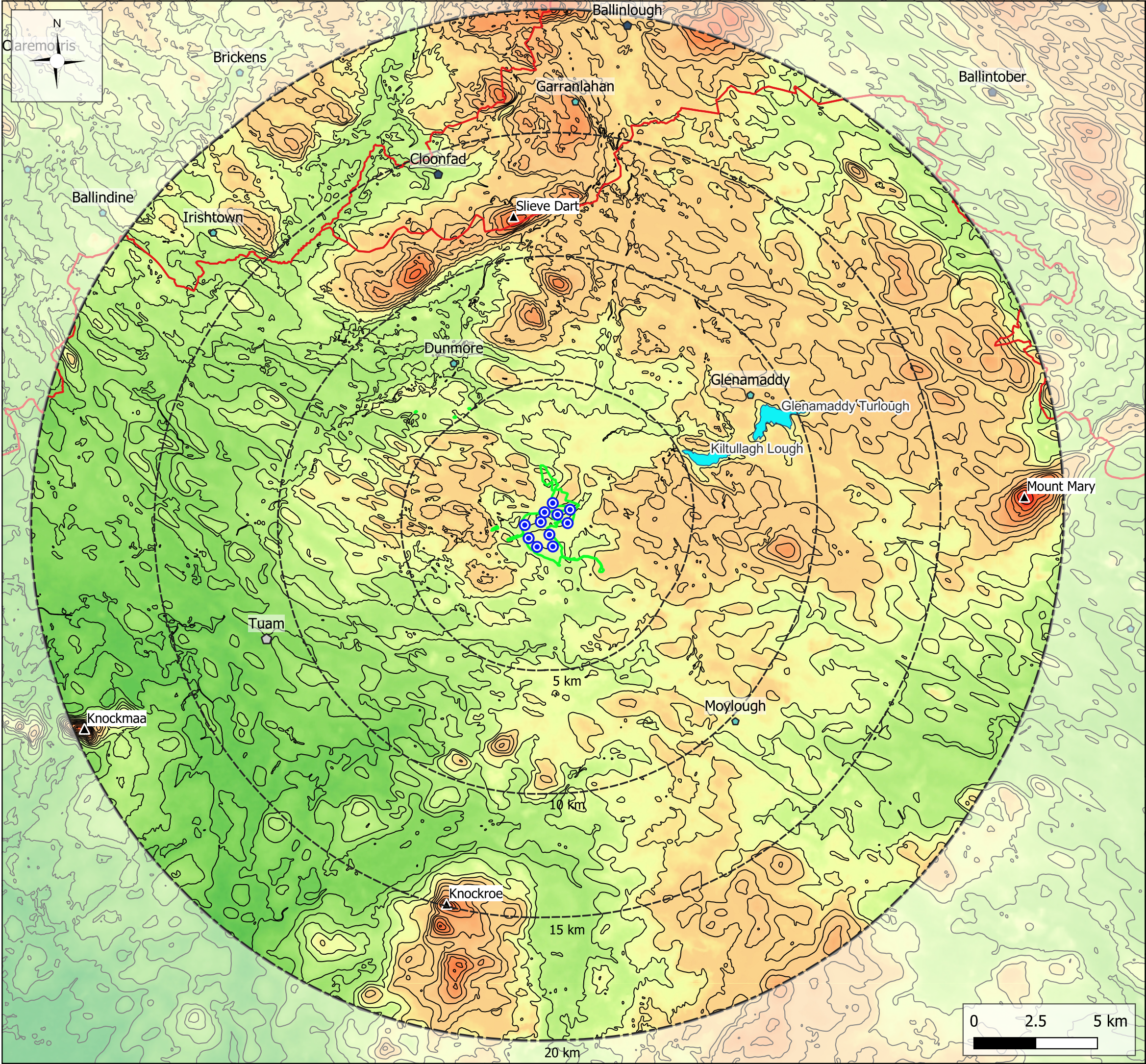
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Zone of Theoretical Visibility

Project Title

Clonbern Renewable Energy Development

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	180740	2024-04-05	JS	JW



Map Legend

- County Border
- LVIA Study Area
- EIAR Site Boundary
- Proposed Turbine Locations
- Standardised Settlement Hierarchy
 - County Hub Town
 - Town
 - Village
 - Small Village of Local Importance
 - Topographical Features
- Waterbodies
- 10m Contours
- Level of Elevation (AOD)
 - 1m
 - 35m
 - 70m
 - 105m
 - 140m
 - 175m

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Drawing No.

Figure 14-2

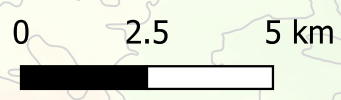
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Topography

Project Title

Clonbern Renewable Energy Development

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14.3.2 Half Blade ZTV of the Proposed Turbines

A half blade ZTV map is shown in Figure 14-1 above. 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 (See Appendix 14-4 - LVIA Baseline Map and other maps presented within this chapter). 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: 1-2 turbines theoretically visible.
- Teal: 3-4 turbines theoretically visible
- Yellow: 5-8 turbines theoretically visible
- Navy: 9-11 turbines theoretically visible

Figure 14-2 (above) shows the topographical features and elevation gradients existent within the receiving landscape of the LVIA Study Area, the geography of these topographical landforms defines the distribution of theoretical visibility illustrated in Figure 14-1.

The topographical characteristics of the Site and surrounding landscape setting is broadly represented of a flat landscape. The Site is low lying, and there is only approximately 45 metres difference in elevation from the lowest point (in the southwest of the LVIA Study Area ~ 25m AOD) to the approximate height of the Site (70m AOD). This minor difference in elevation between the lowest elevation and general landform prevails across large swathes of the LVIA Study Area, which comprises a total area of approximately 1,370km². Topographical features provide a relatively pronounced screening effect in generally flat landscapes. The following discussion considers various topographical characteristics of the LVIA Study Area as they relate to theoretical visibility as output by the ZTV map above.

Distribution of Theoretical Visibility within 5km of the Nearest Proposed Turbine

As shown on the physical landscape features map (Figure 14-2), the Proposed Project is located within a relatively flat area of land with only gentle undulations in the topography within 5km of the proposed turbines. As a result, theoretical visibility is predominantly full within 5km. There is one small patch of land where no theoretical visibility occurs within 5 km, located to the northwest of the Site behind a small steep slope. The path of the R328 Regional Road to the north of the Site is undulating in parts, with some steeper roadside landform resulting in areas of partial theoretical visibility along the road within 5km of the nearest proposed turbine. It is noted that there will be further reduced levels of actual visibility along this road and elsewhere within 5km, primarily as a result of screening from existent vegetation common throughout the landscape in the immediate environs of the Site, which is generally flat, consisting mainly of agricultural fields bordered by mature hedgerows. However, at locations in close proximity to the proposed turbines the disproportionate screening effect produced by the mature hedgerows and treelines is reduced when compared to this effect at locations further from the proposed turbines. This means that the theoretical visibility shown on Figure 14-1 above is likely more accurate at locations in closer proximity to the Site, albeit that screening will still occur in this area. This is discussed in greater detail below in Section 14.3.3.

Distribution of Theoretical Visibility beyond 5km from the Nearest Proposed Turbine

As shown on Figure 14-1 and Figure 14-2 above, the flat nature of the landscape in the LVIA Study Area results in widespread theoretical visibility throughout, although again it is noted that the landcover typical within the LVIA Study Area will substantially inhibit actual visibility on the ground. A number of topographical features, which can be observed on Figure 14-2, reduce this theoretical visibility, primarily outside of 10km from the proposed turbines. To the south, topographical elevations around

Barnaderg and Knockroe Hill create large areas of no theoretical visibility beyond 10km from the nearest proposed turbine. This is similarly the case to the north, where the screening provided by Slieve Dart creates the largest area of no theoretical visibility within the LVIA Study Area, with large areas of County Roscommon and County Mayo having no theoretical visibility as a result.

The pattern of theoretical visibility to the east and northeast is influenced by smaller topographical features that, due to the increased distance from the Site, have a larger influence on theoretical visibility than similar rises in topography closer to the Site (this is a result of the decreased scale of the proposed turbines in views from locations further from the Site). While the landscape is still generally flat in this direction, with only smaller undulations evident in Figure 14-2, given the increased distance from the Site these smaller undulations result in large patches of partial and no theoretical visibility beyond 10km.

To the southeast the elevation level of the topography gently declines away from the Site, resulting in mostly full theoretical visibility throughout the LVIA Study Area in this direction. This is similarly the case to the west where a large area of low, flat landform results in mainly full theoretical visibility, apart from beyond 10km from the Site, where again smaller undulations have a greater effect, with patchy theoretical visibility shown on Figure 14-1 as a result. Again, it is noted that in the locations and directions described in this section, which are not located in close proximity to the Site, actual on the ground visibility will likely be heavily influenced by local screening elements that are typically present throughout the landscape, primarily in the form of mature hedgerows and treelines that define the field pattern.

14.3.2.2 On-Site Appraisal of Actual Visibility During Field Surveys

Multiple field surveys were conducted during 2020, 2021, 2022, 2023 and 2024 to determine the actual visibility from locations where the ZTV has indicated full theoretical visibility. These surveys determined that screening from localised undulations in topography, vegetation and man-made elements significantly reduce the likelihood of viewing turbines in vast areas of the LVIA Study Area, in particular from areas beyond 5km from the nearest proposed turbine.

In most instances, screening existent in the gently undulating and highly vegetated landscape beyond 5km from the Site 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 were found. An example of such a view can be represented by the Glenamaddy Turlough Picnic area, a designated scenic view, where a large body of water permits open long-range views in the direction of the proposed turbines. 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 14.7.

The Physical landscape features map (Figure 14-2) shows the elevation gradients existent within the LVIA Study Area. In a general sense, the landscape of the LVIA Study Area is very flat, with the most prominent flat landscapes to the southwest of the Site. On-site appraisals of visibility in the LVIA Study Area determined that long range views are very limited in this flat landscape, particularly when the viewer is at the same base elevation as the proposed turbines or lower. The low base elevation of the turbines relative to the surrounding landscape causes a 'disproportionate screening effect' (see example/definition below), further reducing visibility of the proposed turbines in large areas of the LVIA Study Area where the ZTV indicates full visibility.

Disproportionate Screening Effects

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 tall 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 screening elements such as vegetation (forestry, road-side hedgerows and trees) and buildings (particularly within towns and villages) on long range visibility are accentuated in flat lowland landscapes, this is called a disproportionate screening effect. The graphic in Figure 14-3 below best explains this 'disproportionate screening effect'. A ZTV may indicate full theoretical visibility of the proposed turbines from an open field or an open peatland. 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 wind turbine. Distance becomes a substantial factor determining visibility of proposed turbines as it is difficult to see beyond a few kilometres above screening within a flat landscape.

The image below illustrates the disproportionate screening effect that small features in the landscape can have on screening a proposed wind turbine from view. Figure 14-3 shows a 180-metre-tall wind turbine located one kilometre from a viewing location. The illustration in Figure 14-3 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 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.

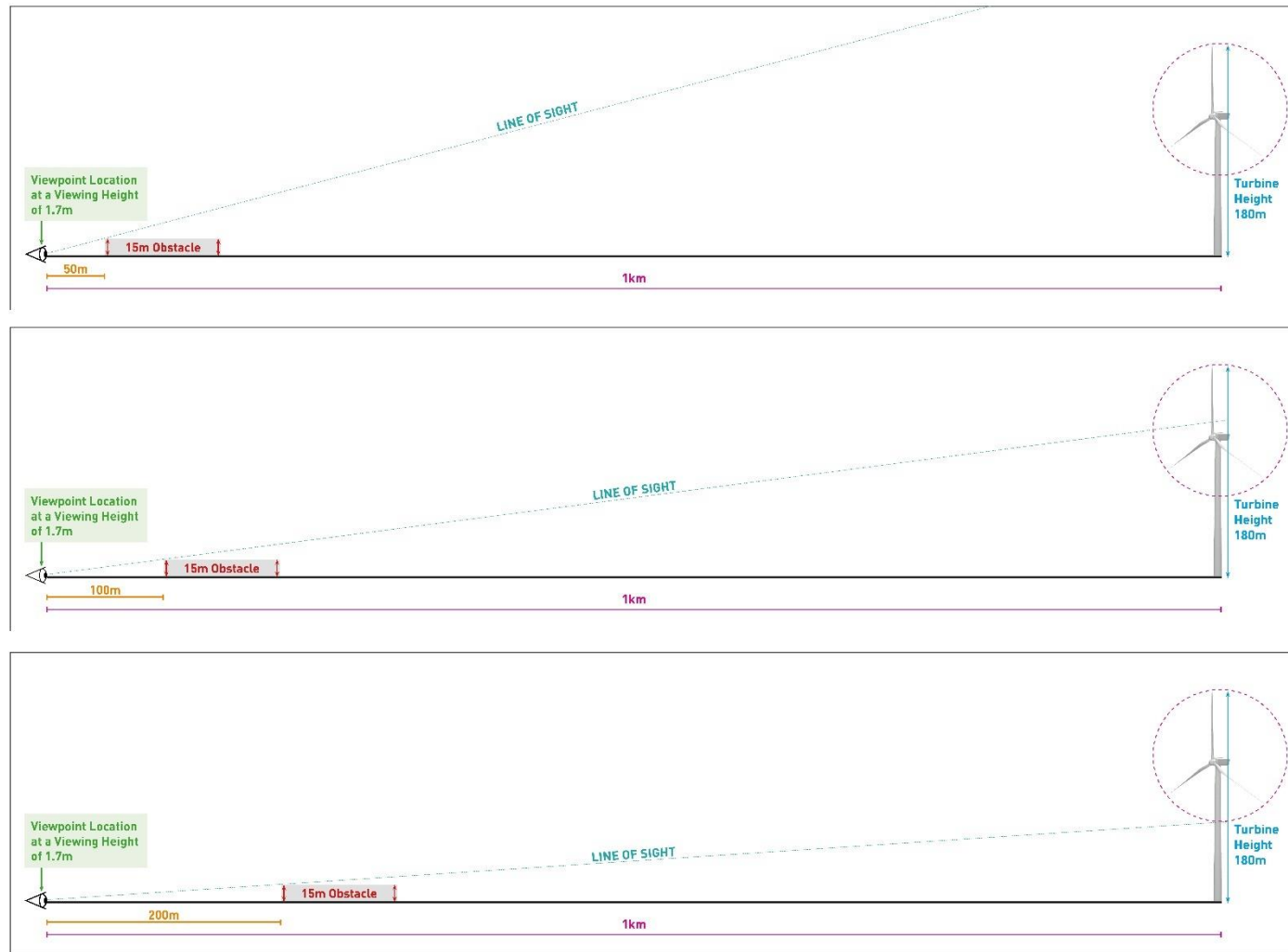


Figure 14-3 Disproportionate Screening Effect

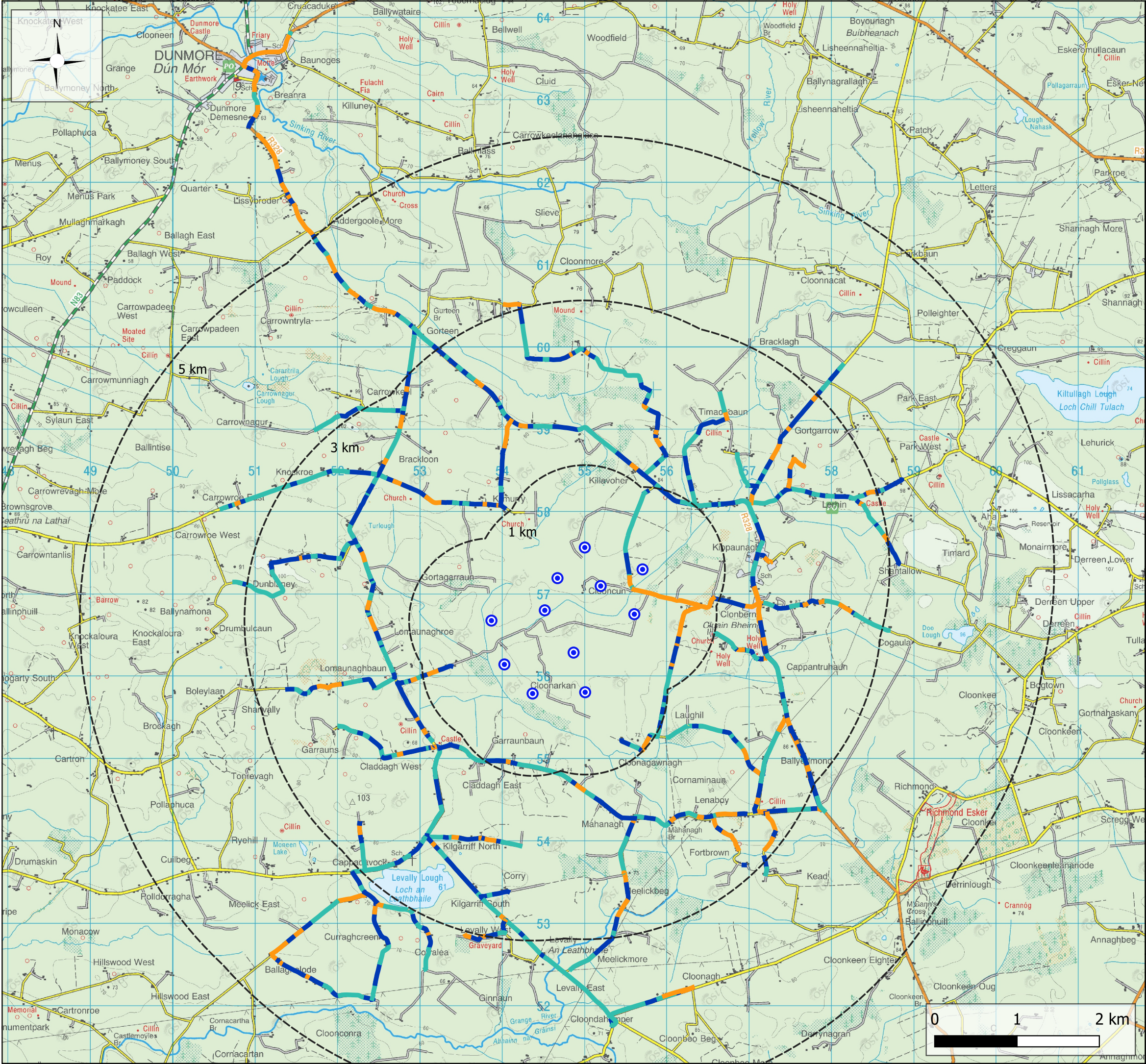
14.3.3 Visibility in Close Proximity to the Site – Route Screening Analysis

As presented later in this chapter, on-site visibility appraisals and photomontages indicate that most visibility and the greatest visual effects are likely to arise in close proximity to the Site. Visibility of the proposed turbines from areas in close proximity to the Site (< 3km) is generally reduced by screening from the vegetated nature of the landscape immediately surrounding the Site. In order to test this objectively, a method termed Route Screening Analysis (RSA) was undertaken in August 2021 to comprehensively assess the varying characteristics of screening factors existent on roads surrounding the proposed turbines.

The RSA determined the actual likely visibility of the proposed turbines in comparison with theoretical visibility on all public roads within 3km of the proposed turbines. Additional RSA was undertaken from roads beyond 3km where visual receptor sensitivity was considered highest (i.e. the roads around the Levally Lough SAC and the R328 regional road serving the village of Dunmore). The roads were surveyed using a methodology outlined in Section 1.3.3 of Appendix 14-1, one of three screening classifications were recorded as these roads were driven:

- Little/No Screening – mainly open and with some very light vegetation (see Plate 14-1).
- Partial/Intermittent Screening – light deciduous roadside vegetation and vegetation with short gaps which would allow intermittent or partial views (see Plate 14-2).
- Dense/Full Screening – vegetation which is dense enough to block views e.g., coniferous forestry (see Plate 14-3).

The results of the route screening survey are mapped in Figure 14-4 below, this figure shows the extent at which each 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 the screening until an appropriate termination point or junction. Screening along the R328 regional road was recorded to a distance of 5km as it is a relatively prominent transport route in the LVIA Study Area.



Map Legend

- Proposed Turbine Locations
- Route Screening Analysis
 - Little/No Screening
 - Partial/Intermittent Screening
 - Dense/Full Screening

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Drawing No.

Figure 14-4

Drawing Title

Route Screening Analysis

Project Title

Clonbern Renewable Energy Development

Scale	Project No.	Date	Drawn By	Checked By
1:45,000	180740	2024-01-09	JS	JW






Plate 14-1 Example of 'Little/No Screening' near Claddagh

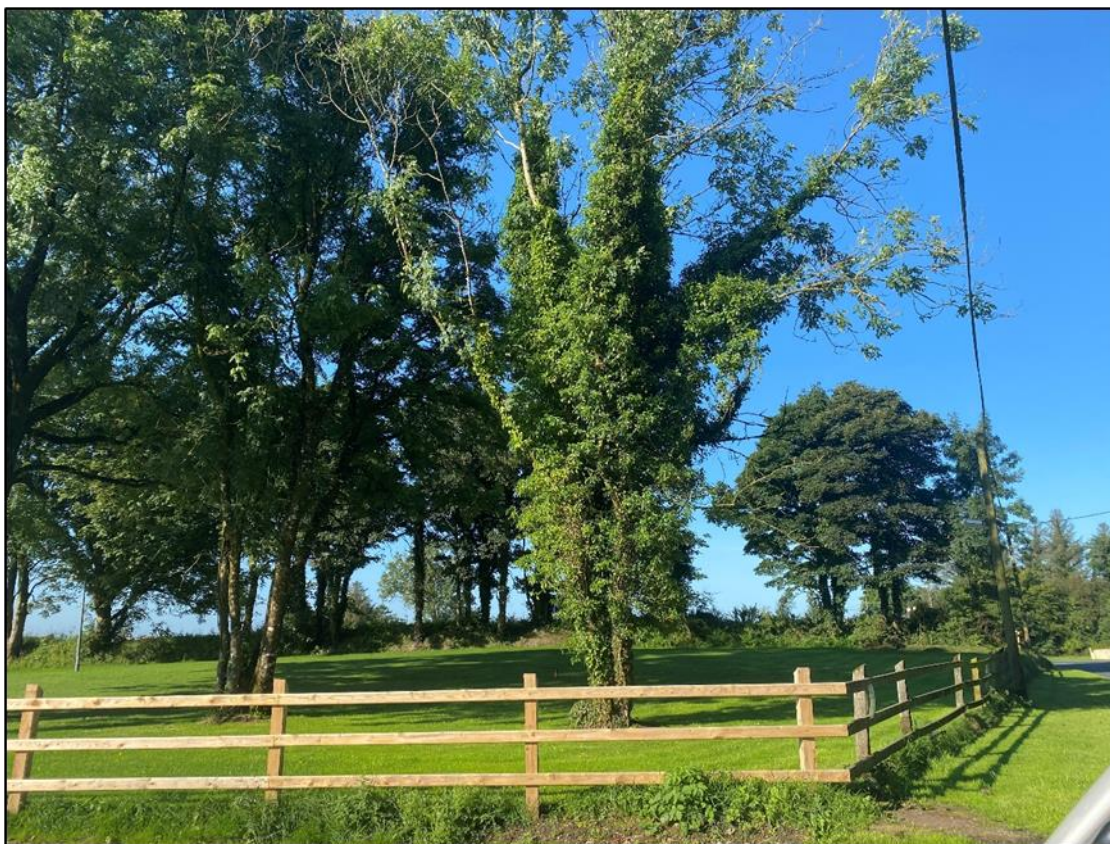


Plate 14-2 Example of 'Intermittent/Partial Screening' near Gortgarrow



Plate 14-3 Example of 'Full/Dense Screening' near Dunmore

Inner Perimeter Roads

There are very few roads within 1km of the proposed turbines, only the local road located to the east of the Site that is orientated in a north-south direction. This road runs between the north-easternmost proposed turbine and the rest of the proposed turbines. Plate 14-1 above demonstrates the extent of the screening towards the proposed turbines from this road. The dominant screening type on this road is 'Little/No Screening', with large stretches of open visibility from the north and south-east of the Site. These stretches are broken up by a relatively long stretch of 'Dense/Full Screening' where the road intersects the turbines.

Within 1 and 3 km of the Site 'Partial/Intermittent Screening' remains the slightly dominant category alongside some areas of 'Little/No Screening', with small sections of 'Dense/Full Screening' also present, particularly where residential and other buildings which restrict visibility are present along these roads. The village of Clonberne, and the roads in and around this settlement, are primarily 'Dense/Full Screening' or 'Partial/Intermittent Screening', with a stretch of 'Little/No Screening' to the north end of the section of the R328 regional road which runs through the village. Within the village of Clonberne, the built environment provides 'Dense/Full Screening' from views towards the proposed turbines. This is shown in Plate 14-4 below.



Plate 14-4 Example of the 'Full Screening' provided by the built environment of Clonberne

The R328 regional road runs northwest to southeast within 3km of the proposed turbines and, outside of the section within Clonberne, is mainly a mosaic of 'Partial/Intermittent Screening' and 'Little/No Screening'. To the south of the Site the L2223 local road runs east to west and is mainly a mosaic of 'Partial/Intermittent Screening' and 'Little/No Screening', with some small sections of 'Dense/Full Screening'. On the local roads adjoining the L2223 to the north and south within 3km, 'Little/No Screening' is the slightly dominant category alongside some areas of 'Partial/Intermittent Screening', with some larger stretches of 'Dense/Full Screening' also present to the southeast of the Site.

To the west of the Site the road network is made up of local roads where 'Little/No Screening' is the slightly dominant category alongside some areas of 'Partial/Intermittent Screening'. Scattered stretches of 'Dense/Full Screening' are also present along this local road network northwest of the Site. North of the Site and along the R328 regional road, visibility is characterised by a mosaic of 'Partial/Intermittent Screening' and 'Little/No Screening', with the local road to the north of the R328 consisting of primarily 'Little/No Screening'. This road also includes relatively long stretches of 'Partial/Intermittent Screening', mixed with small sections of 'Dense/Full Screening'.

Outer Perimeter Roads

The outer perimeter roads that were assessed in the Route Screening Analysis include those roads surrounding the Levally Lough located to the southwest of the Site, which can be seen in Plate 14-5 below, and the section of the R328 located to the north of the Site that leads to Dunmore. The dominant category for the outer perimeter roads around the Levally Lough to the south is 'Partial/Intermittent Screening', with smaller sections of both 'Little/No Screening' and 'Dense/Full Screening' also present.



Plate 14-5 View of Levally Lough located to the south-east of the Site

The section of the R328 that lies outside 3km to the north of the Site is primarily ‘Dense/Full Screening’, with some smaller sections of ‘Partial/Intermittent Screening’. An example of the ‘Dense/Full Screening’ present on this road be seen on Plate 14-3 above. In Dunmore, the built environment provides ‘Dense/Full Screening’ from views towards the proposed turbines, with the majority of the roads within Dunmore falling under this category. This can be seen in Plate 14-6 and Plate 14-7 below.



Plate 14-6 View to the southeast from Dunmore towards the Proposed Project



Plate 14-7 The built environment seen here greatly restricts visibility of the proposed turbines from within Dunmore.

Table 14-1 Distribution of Screening recorded during Route Screening Analysis.

Screening Class	Length of Road Mapped in Figure 14-4	Percentage Distribution of Screening on the Surveyed Roads
Little/No Screening	33.7 km	40.1%
Partial/Intermittent Screening	31.8 km	37.8%
Dense/Full Screening	18.6 km	22.1%

'Little/No Screening' was recorded for 40.1% of the surveyed roads and was the most common class recorded, followed closely by 'Partial/Intermittent Screening' at 37.8%. This, along with mosaic pattern of screening evident along most roads, seen in Figure 14-4 above, suggests that there will be intermittent visibility along most of the roads, with visibility varying along any route, offering glimpses and areas where there is open visibility, but which quickly transition into 'Partial/Intermittent Screening' or 'Dense/Full Screening' (22.1%). Given that there is at least some level of screening (either 'Partial/Intermittent Screening' or 'Dense/Full Screening') present on along the majority of the roads that were route screened, this suggests that the widespread full theoretical visibility indicated on the ZTV is not fully representative of the actual on-the-ground visibility of the proposed turbines, given the flat nature of the LVIA Study Area.

The route screening analysis concluded that visibility is mainly confined to within close proximity of the Site. Due to the flatness of the Site and the surrounding landscape and the presence of roadside screening lining much of the local road network, visibility can mainly be classified as 'Partial/Intermittent Screening' or 'Dense/Full Screening', as outlined above. While areas within the local road network show 'Little/No Screening' and where there is very little vegetation present, the

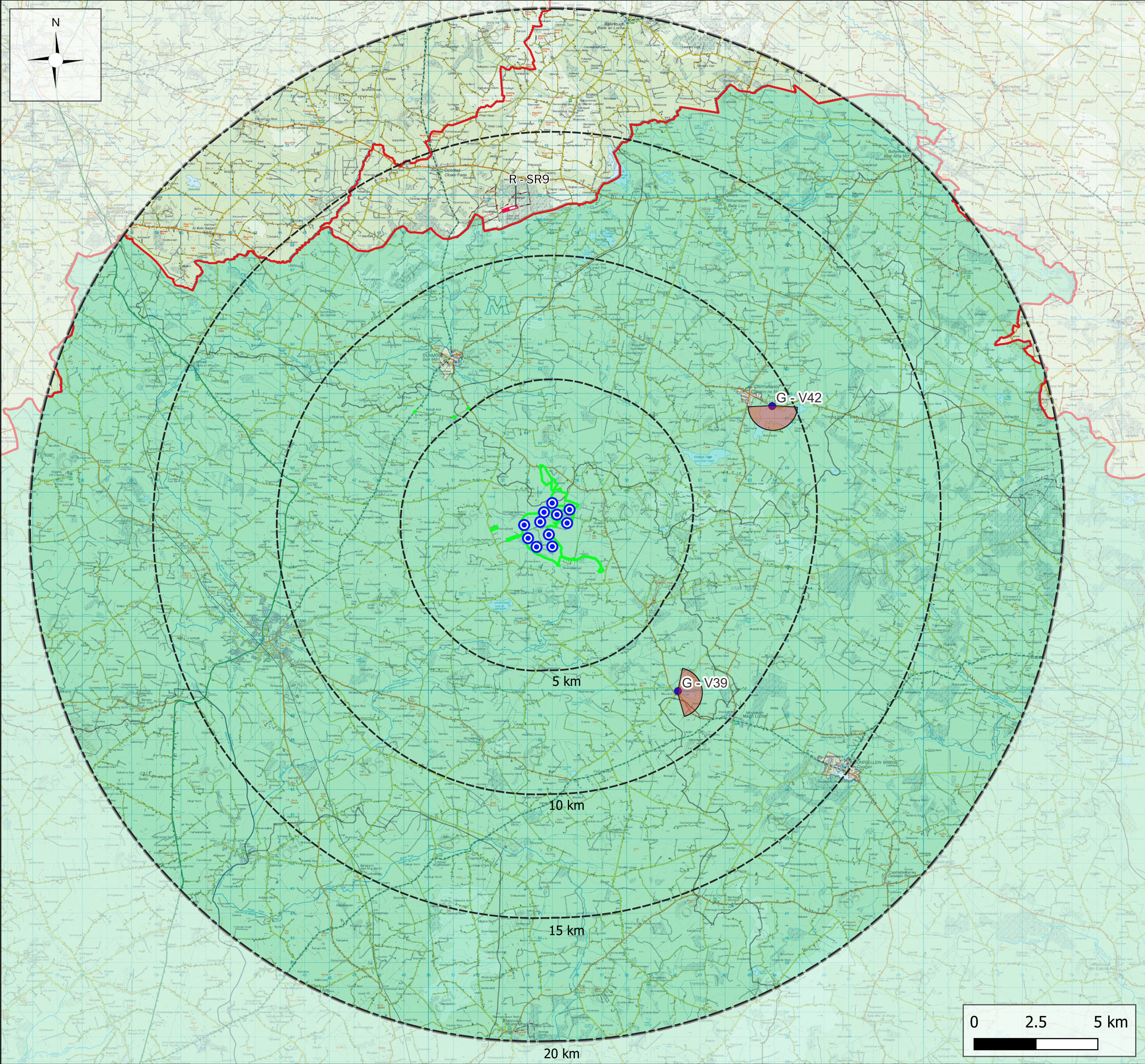
proposed turbines will be seen, the majority of the public road network will have no or limited visibility of the proposed turbines.

The outcomes of the RSA and on-site visibility appraisals provide a strong indication of locations where visibility of the proposed turbines will occur and where potential effects on receptors will arise and not arise in close proximity to the Site. These methods are therefore a useful tool (as well as ZTV mapping) for ensuring a focussed approach in selection of photomontage viewpoints and assessment of effects on receptors surrounding the Site such as local residential visual amenity. The RSA is therefore also considered and discussed in Section 14.7.3.3.4 – *Residential Visual Amenity*.

14.4 Landscape Baseline

The Landscape Baseline reports relevant policy pertinent to the LVIA, as well as a description of the receiving landscape of the Site and its wider setting. This is broken down into the following sections:

- **Landscape Designations and Policy Context** - Policy setting pertaining to the location and nature of the Site from a landscape perspective based on:
 - Galway County Development Plan 2022-2028
 - Roscommon County Development Plan 2021-2027
 - Mayo County Development Plan 2022-2028
- **Landscape Character of the Site** – A description of the physical landscape and characteristics of the Site and its immediate setting, this includes the following considerations:
 - Landscape characteristics based upon findings from site visits conducted in 2020, 2021, 2022, 2023, and 2024.
 - An appraisal of landscape value and the susceptibility of the landscape to change, and a determination of landscape sensitivity.
- **Landscape Characterisation in The WEDG's for Planning Authorities** – A review of the guidance (2006 WEDGs and 2019 draft WEDGs) relating to the landscape characteristics of the Site.
- **Landscape Character of the Wider Landscape Setting** – A description of the wider landscape setting, including the identification of designated Landscape Character Areas (LCAs) located within a 15 km LCA Study Area and a preliminary analysis using ZTV mapping.



Map Legend

- County Border
- LVIA Study Area
- EIAR Site Boundary
- Proposed Turbine Locations
- County Galway Protected Views
- County Galway Protected View Direction
- County Roscommon Scenic Route

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Drawing No.

Figure 14-5

Drawing Title

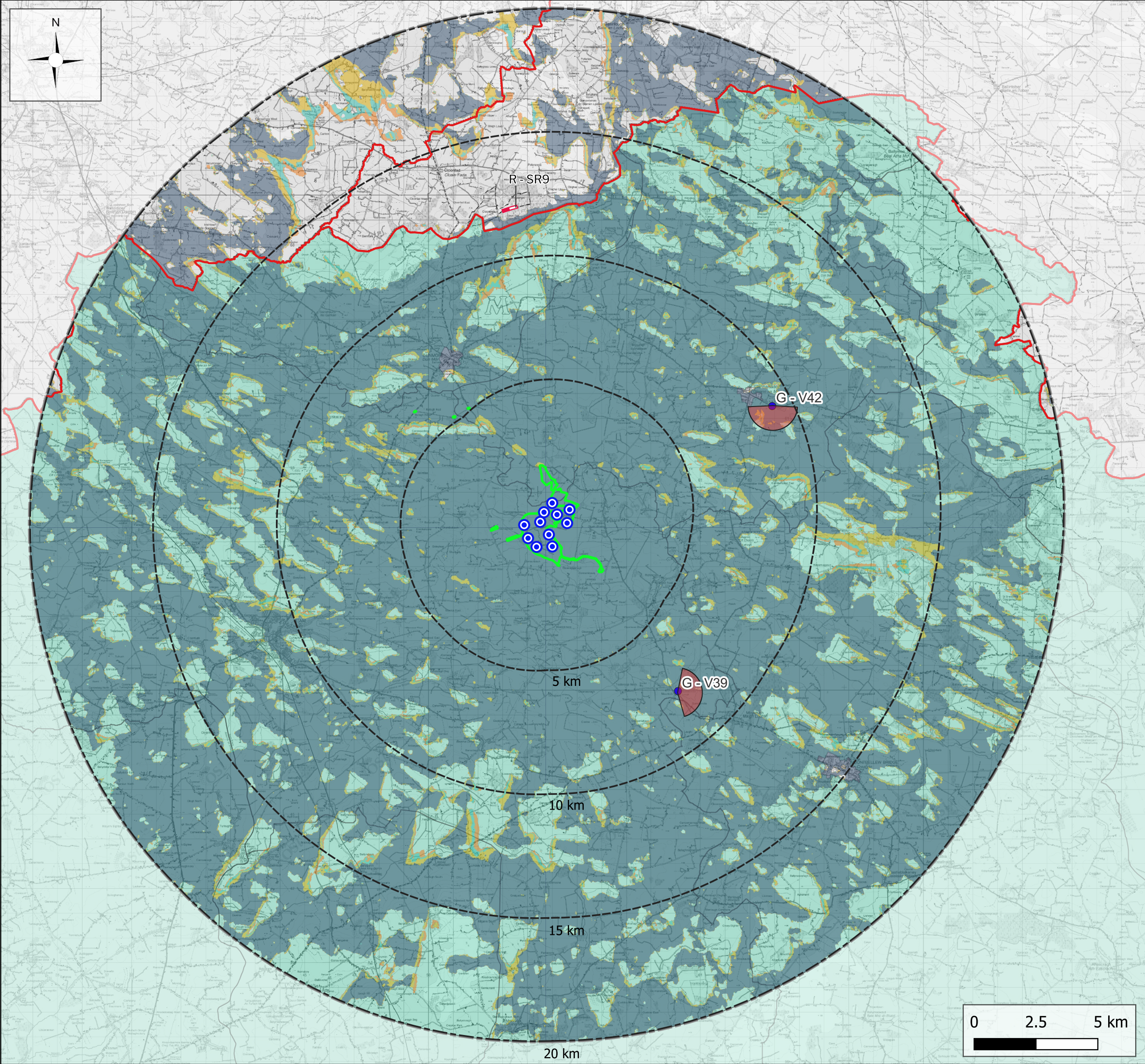
Landscape Baseline

Project Title

Clonbern Renewable Energy Development

Scale	Project No.	Date	Drawn By	Checked By
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Map Legend

- County Border
- LVIA Study Area
- EIAR Site Boundary
- Proposed Turbine Locations
- County Galway Protected Views
- County Galway Protected View Direction
- County Roscommon Scenic Route
- ZTV**
 - 1-2 Turbines Theoretically Visible
 - 3-4 Turbines Theoretically Visible
 - 5-8 Turbines Theoretically Visible
 - 9-11 Turbines Theoretically Visible

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Drawing No.

Figure 14-6

Drawing Title

Landscape Baseline and ZTV

Project Title

Clonbern Renewable Energy Development

Scale	Project No.	Date	Drawn By	Checked By
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14.4.1 Landscape Designations and Policy Context

This sub-section reviews the policies and objectives of various planning policy documents relating to landscape, planning and the locational siting of wind farms, as they relate to the Site of the Proposed Project.

The Site is located in County Galway, therefore, the Galway County Development Plan 2022-2028 (hereafter referred to as the GCDP) was consulted to identify landscape designations existent in the LVIA Study Area. Additionally, general landscape policy and landscape policy pertaining to wind energy development are also included in this section of the LVIA, providing context for the selection of the Site as a landscape suitable for a wind energy development.

County Roscommon and County Mayo are partially located within the LVIA Study Area and comprise areas with theoretical visibility of the proposed turbines. Therefore, both the Roscommon County Development Plan 2021-2028 (hereafter referred to as the RCDP) and the Mayo County Development Plan 2022-2028 (hereafter referred to as the MCDP) were also consulted to identify landscape designations existent in the LVIA Study Area.

14.4.1.1 County Galway

Section 8.13 of the GCDP outlines policies related to the landscape and visual amenity within County Galway. The GCDP references the Landscape Character Assessment as a process that “describes, maps and classifies landscapes objectively. Defining landscape character enables an understanding to be formed of the inherent value and importance of individual landscape elements and the processes that may alter landscape character in the future”. The Landscape Character Areas located within the LVIA Study Area are outlined below.

The GCDP sets out an overall strategy for the proper planning and sustainable development of the administrative area of Galway County Council. It contains the following policy objectives related to landscape:

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

LCM 2 Landscape Sensitivity Classification - The Planning Authority shall have regard to the landscape sensitivity classification of sites in the consideration of any significant development proposals and, where necessary, require a Landscape/Visual Impact Assessment to accompany such proposals. This shall be balanced against the need to develop key strategic infrastructure to meet the strategic aims of the plan.

Objective LCM 3 Landscape Sensitivity Ratings - Consideration of Landscape Sensitivity Ratings shall be an important factor in determining development uses in areas of the County. In areas of high landscape sensitivity, the design and the choice of location of proposed development in the landscape will also be critical considerations.

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

The following sub-sections address the specific elements covered by this planning policy including the designations of the landscape character assessment, the designated views, and Landscape Sensitivity Ratings.

14.4.1.1.1 Landscape Sensitivity Rating

Section 8.13.2 of the GCDP states that a “landscape’s capacity to absorb new development, without exhibiting a significant alteration of character or change of appearance is referred to as it’s ‘sensitivity’”. This depends on factors such as elevation, slope, as well as the types of land-cover and soil.” The Landscape Character Assessment contained in Appendix 4 of the GCDP defines and classifies the LCUs according to the following classifications:

- Iconic: Unique Landscape with high sensitivity to change
- Special: High sensitivity to change
- High: Elevated sensitivity to change
- Low: Unlikely to be adversely affected by change

As seen in Figure 14-5 above, the Proposed Project is located in a LCU classified as Low sensitivity, which is defined as “Unlikely to be adversely affected by change” in the GCDP.

14.4.1.1.2 Protected Views and Scenic Routes

The Landscape Character Assessment for County Galway identifies protected views and scenic routes “of great natural beauty located across the county.” The GCDP states that these protected views and scenic routes “have a very important amenity, tourism, economic and cultural value for the county and its people.” In light of this the GCDP contains the following policy related to protected views and scenic routes.

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

There are no designated scenic routes within County Galway in the LVIA Study Area. There are, however, two designated protected views within the LVIA Study Area, as shown on Figure 14-6. These are listed in Table 14-2 below.

Table 14-2 Protected Views within the LVIA Study Area

Name	Description (GCDP)
Protected View No. 39 – Summerville Lough	<p>“Significance - Local</p> <p>This view is from the Summerville Lough picnic area.</p> <p>The focus of this view is Summerville Lough. The wooded shores that form the background are an important feature of the view.” (Appendix 4, GCDP)</p>
Protected View No. 42 – Glenamaddy Turlough	<p>“Significance - Local</p> <p>This view is from the Glenamaddy Turlough carpark and viewing area.</p>

Name	Description (GCDP)
	<i>The focus of this view is Glenamaddy Turlough. The wooded shores that form the background are an important feature of the view.” (Appendix 4, GCDP)</i>

As these scenic amenity designations are of a visual nature, they are comprehensively addressed in Section 14.5 of this Chapter – *Visual Baseline*, where ZTV mapping and on-site appraisals determine the likely visibility of the proposed turbines from protected viewpoints.

14.4.1.1.3 Landscape Character Assessment

Galway County Council have prepared a Landscape Character Assessment that is contained in *Appendix 4* of the GCDP. This Landscape Character Assessment categorises Galway County into different Landscape Character Types (LCTs). The Proposed Project is located within the North Galway Complex Landscape LCT, as seen in Figure 14-7 below. This LCT is described as:

“An extensive grassland plain stretching from the Suck River in the east to the watershed of the River Clare in the west. It includes elevated areas such as Slieve Dart in the north, as well as lakes, turloughs, raised bogs, wetlands and winding rivers. Agriculture, scattered forestry and associated field patterns are very mixed and can exhibit large and abrupt changes of character over very short distances, especially in areas around bogs. It has a dense network of smaller settlements and roads, though at a lower density than the southern plains of the county. Open areas around bogs produce extensive sky views and the area that are free from light pollution.”

The Landscape Character Assessment for County Galway further describes this LCT as follows:

“The appearance and character of this landscape is very varied. Most consists of a plain that undulates with gentle slopes and occasional elevated areas like Knockma or Slieve Dart. Areas of high-quality grassland, large bogs and forestry can all be encountered in close proximity.

Settlement occurs throughout this landscape, interconnected with a dense network of small roads that also serve extensive areas of dispersed rural housing on smaller holdings. Settlement is, generally, less dense towards the north-east because this part of the county contains large areas of blanket and raised bog, often interspersed with large areas of forestry.

The large size of some of the bogs within this landscape provide areas of distinctive character and solitude where natural processes are still dominant. The Suck River lies within a shallow and distinctive lowlands that define much of the eastern boundary of this landscape.

A history of less intensive development has resulted in a wealth of intact family-based local knowledge, place names and relatively undisturbed sites of historical importance such as Glinsk Castle.

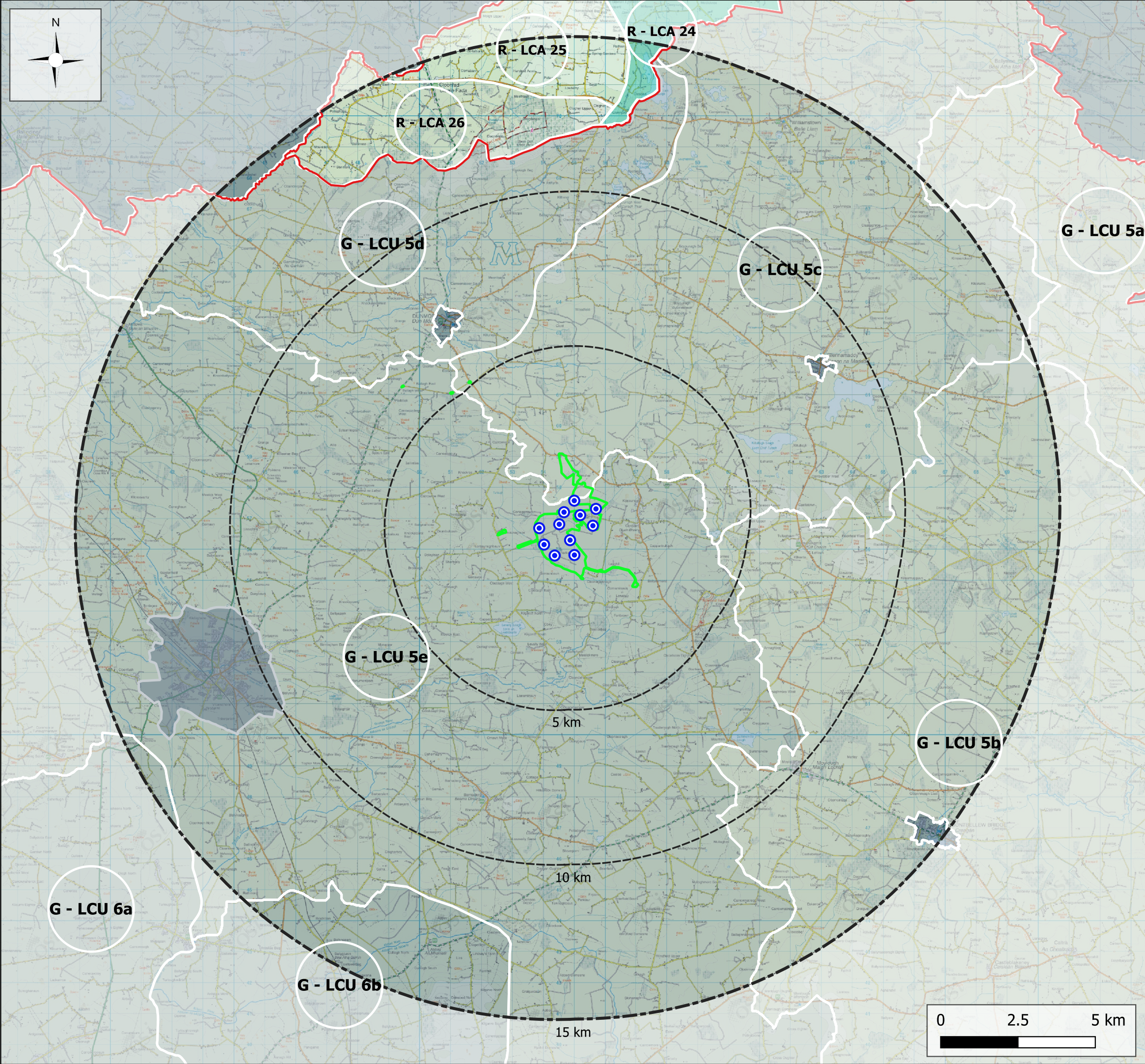
A history of less intensive development has resulted in a wealth of intact and relatively undisturbed sites of historical importance.”

It is further stated in the Landscape Character Assessment that within this LCT the sensitivities are noted as *“Open countryside offers frequent extensive panoramic views from local highpoints.”*

This LCT is further categorised into Landscape Character Units (LCUs), which can be seen on *Map 04: North Galway Complex & Shannon Environs Landscape Units* of the Landscape Character Assessment of the GCDP. The Proposed Project is located within the LCU 5e – North River Clare Basin Unit, which is described as an *“Extensive, largely level plain with low enclosure. A long-settled working*

landscape of large regular stone-walled fields. Extensive areas of bog in east. Transition zone from bog areas to east." in the GCDP. This LCU and other LCUs within the LCA Study Area (15km from the nearest proposed turbine) are discussed in further detail below in Section 14.4.4.2 below, as well as in Appendix 14-2, which contains the full landscape character assessment tables.

**For purposes of clarity, continuity and reference to mapping figures in this chapter; designated LCUs and LCAs are prefixed by the first letter of the county in which it is located e.g., 'G' for Galway and 'R' for Roscommon. The last number in each label corresponds to the label or number assigned to each designation in the respective county development plans (e.g., G – LCU5e = Galway – Landscape Character Unit 5e).*



Map Legend

- County Border
- LVIA Study Area
- EIAR Site Boundary
- Proposed Turbine Locations

County Mayo LCUs

- M - LCU L

County Galway LCUs

- G - LCU 5a
- G - LCU 5b
- G - LCU 5c
- G - LCU 5d
- G - LCU 5e
- G - LCU 6a
- G - LCU 6b

County Roscommon LCAs

- R - LCA 24
- R - LCA 25
- R - LCA 26

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Drawing No.

Figure 14-7


Drawing Title

Landscape Character Areas/Units

Project Title

Clonbern Renewable Energy Development

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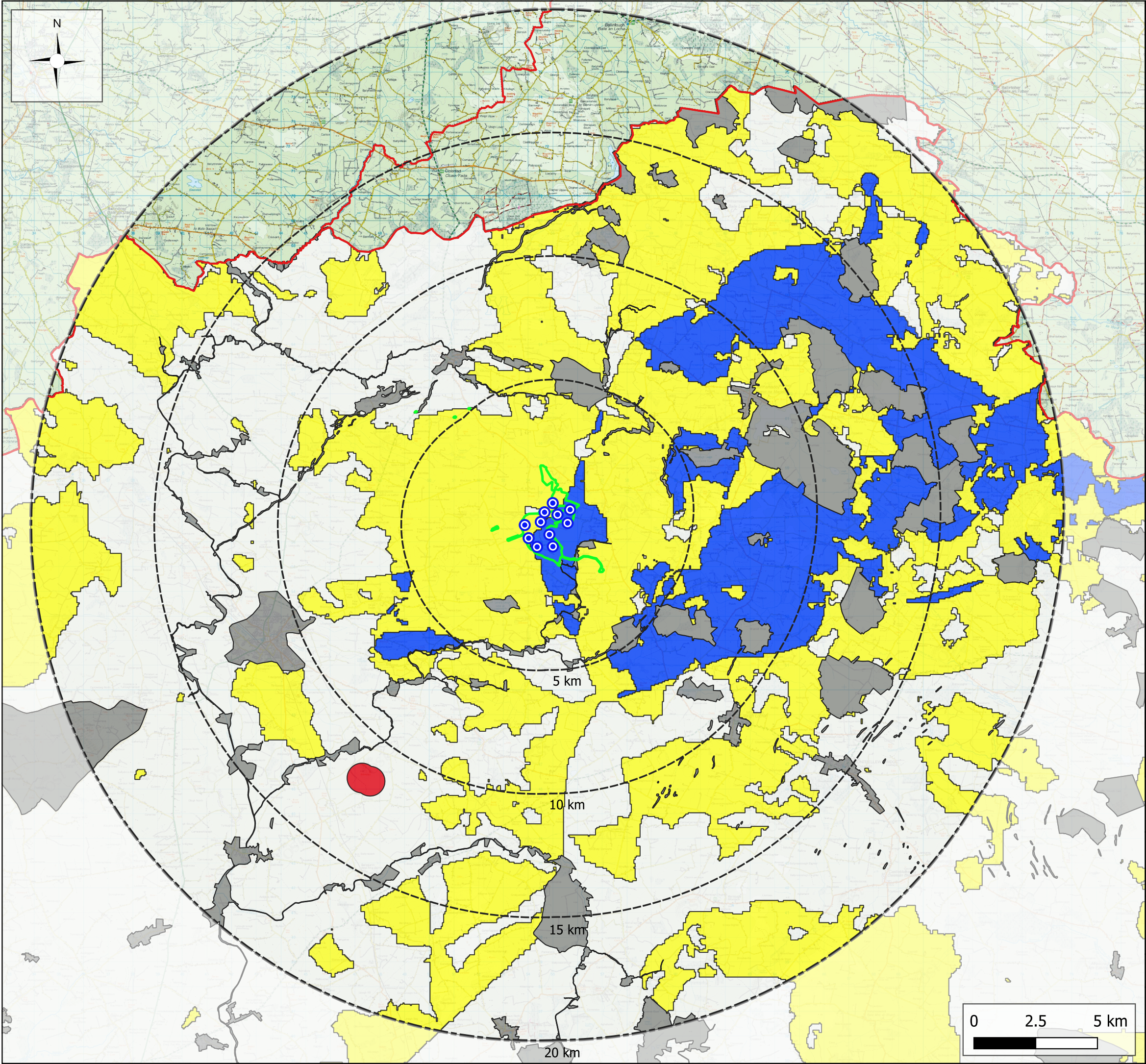
14.4.1.1.4 Wind Energy Strategy

The Renewable Energy Strategy (RES) for County Galway is set out in *Appendix 1* of the GCDP. The RES uses five classifications for the suitability of areas for wind energy developments in County Galway. The five classifications are as follows:

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

The Site is located partially within an area classified as Acceptable in Principle (6 of the 11 proposed turbines), and partially within an area classified as Open to Consideration (5 of 11 proposed turbines), as seen in Figure 14-8 and Figure 14-9 below. In the RES, these areas are defined as follows:

- **Acceptable in Principle** – *“Areas where Wind Energy development will be facilitated as an appropriate landuse. Development Management should attempt to control the development of new uses that would reduce the viability of Wind Energy in these areas.”*
- **Open to Consideration** – *“Areas where Wind Energy development is likely to be favourable considered - subject to the results of more detailed assessment of policies and potential effects.”*



Map Legend

- County Border
- LVIA Study Area
- EIAR Site Boundary
- Proposed Turbine Locations
- Wind Energy Strategy
 - Strategic Area
 - Acceptable in Principle
 - Open to Consideration
 - Not Normally Permissible
 - Generally to be Discouraged

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Drawing No.

Figure 14-8

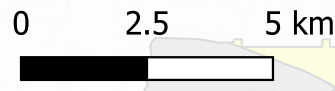
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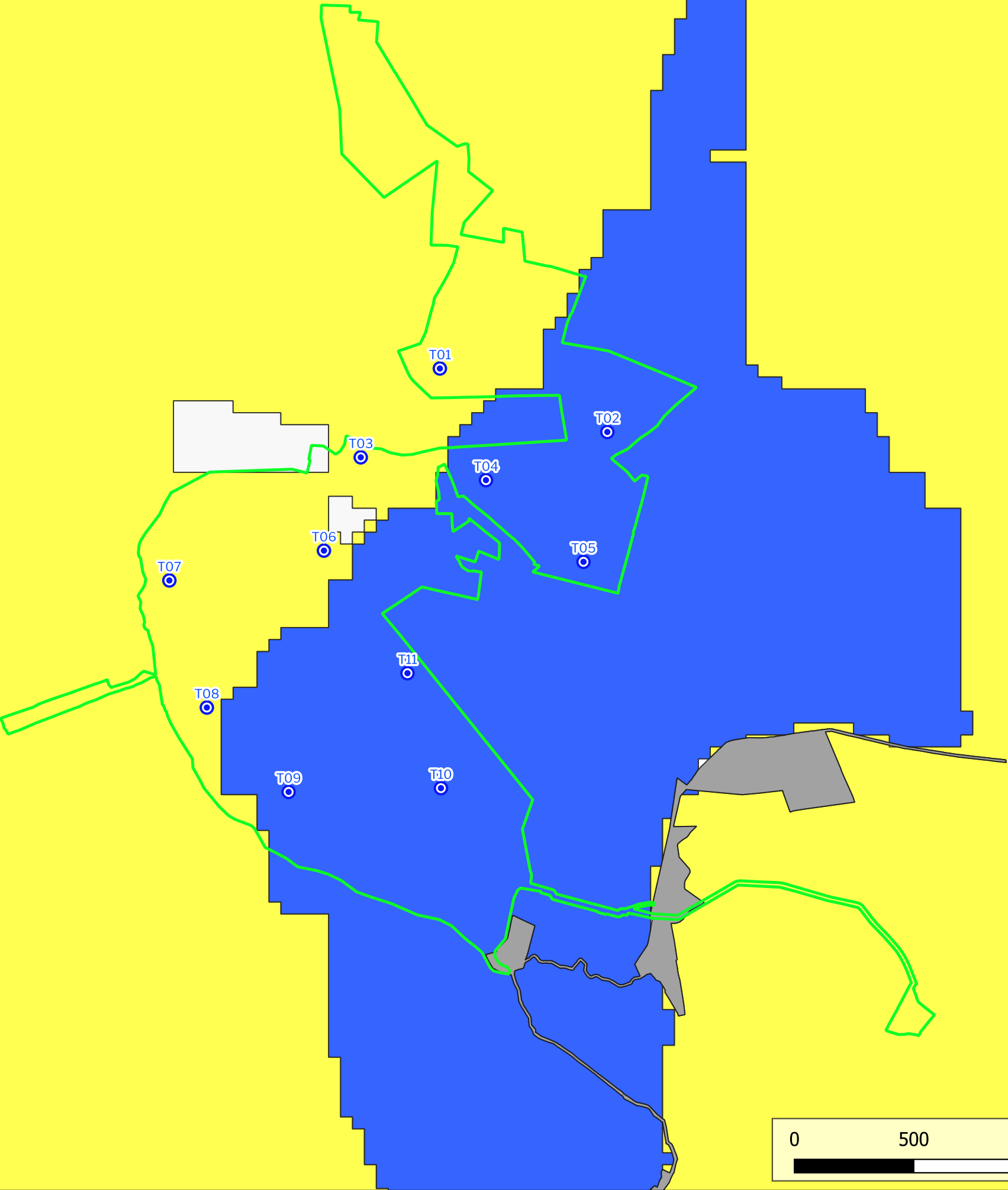
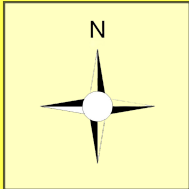
Wind Energy Strategy

Project Title

Clonbern Renewable Energy Development

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	180740	2024-04-05	JS	JW





Map Legend

- EIAR Site Boundary
- ⦿ Proposed Turbine Locations
- Wind Energy Strategy
 - Strategic Area
 - Acceptable in Principle
 - Open to Consideration
 - Not Normally Permissible
 - Generally to be Discouraged

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Drawing No.

Figure 14-9

Drawing Title

Wind Energy Strategy

Project Title

Clonbern Renewable Energy Development

Scale	Project No.	Date	Drawn By	Checked By
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14.4.1.2 Landscape Policy within the Other Surrounding Counties

While the Proposed Project is located in Co. Galway; Counties Roscommon and Mayo are located within the LVIA Study Area. As indicated by ZTV mapping (See Section 14.3 previously), there is some theoretical visibility of the proposed turbines in every county in the LVIA Study Area. Therefore, relevant designations pertinent to the landscape and visual impact assessment conducted in this chapter are identified and listed below from the following County Development Plans:

- Roscommon County Development Plan 2022-2028 (RCDP)
- Mayo County Development Plan 2022-2028 (MCDP)

14.4.1.2.1 Landscape Character Areas – Other Counties in the LVIA Study Area

County Mayo

Landscape policy is covered in *Chapter 10* of the MCDP. Relevant landscape policy and landscape objectives contained within the MCDP are as follows:

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

One Landscape Character Unit (LCU) identified in the *Landscape Appraisal of County Mayo* is located within the LCA Study Area. The LCU is included in the LCA map shown in Figure 14-7 above, and in the LCA map accompanied by ZTV in Figure 14-17 below. This LCU was identified as having theoretical visibility of the proposed turbines and is located within the LCA Study Area:

- LCU Area L – South-East Mayo Plains

County Roscommon

Section 10.13 of the RCDP includes the following policies in relation to Landscape Character:

“It is a Policy of Roscommon County Council to:

NH 10.25: Minimise visual impacts on areas categorised within the County Roscommon Landscape Character Assessment including “moderate value”, “high value”, “very high value” and with special emphasis on areas classified as “exceptional value” and where deemed necessary, require the use of Visual Impact Assessment where proposed development may have significant effect on such designated areas.

The *Landscape Character Assessment of County Roscommon* (LCACR) was initially published in 2008 and an amended version now forms part of the current RCDP (2022-2028). The LCACR identifies 36 No. Landscape Character Areas (LCAs) within the County. As illustrated below in Figure 14-17, 3 No. Roscommon LCAs were identified within the LCA Study Area (15 km radius from the proposed turbines), these are listed below:

- Roscommon LCA 24 – Ballinlough Bogland and Esker Ridges
- Roscommon LCA 25 – Cloonfad Hills and Esker Ridges
- Roscommon LCA 26 – Cloonfad Bog and Upland

14.4.1.2.2

Designated Scenic Amenity – Other Counties in the LVIA Study Area

Counties Roscommon and Mayo protect scenic amenity within their respective counties through the designation of scenic views, prospects and scenic routes. Both counties have differing naming conventions and policy objectives pertaining to their respective designations. In a general sense, it is a policy objective for each county to take additional care in the protection of the unique and valuable scenic views which fall within the following designations:

- County Mayo – Scenic Routes
- County Roscommon – Scenic Views and Scenic Routes

There are no County Mayo designated Scenic Routes designated Scenic Views within the LVIA Study Area. There is one County Roscommon designated Scenic Route within the LVIA Study Area, which can be seen on Figure 14-5 previously at the start of Section 14.4:

- Roscommon Scenic Route 9

Section 10.13 of the RCDP includes the following policies in relation to views:

“It is a Policy of Roscommon County Council to:

NH 10.26: Protect important views and prospects in the rural landscape and visual linkage between established landmarks, landscape features and views in urban areas.”

As this scenic amenity designations Roscommon Scenic Route 9 is of a visual nature, it is comprehensively addressed in Section 14.5 of this Chapter – *Visual Baseline*, where ZTV mapping and on-site appraisals determine the likely visibility of the proposed turbines from scenic routes.

14.4.2

Landscape Character of the Proposed Project Site

Landscape character refers to the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how people perceive this. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement, and creates the particular sense of place found in different areas. The identification of landscape character as outlined in the *Landscape and Landscape Assessment: Consultation Draft of Guidelines for Planning Authorities Guidelines* (DoEHLG, 2000) comprises the identification of primarily physical units (areas defined by landform and landcover) and, where appropriate, of visual units.

The Site was visited during 2020, 2021, 2022, 2023 and 2024 where a preliminary assessment of topography, drainage, landcover and land use was conducted in conjunction with other LVIA surveys. Information gathered during these visits along with desk-based studies have informed the following Site descriptions.

The landscape character of the Proposed Grid Connection specifically is discussed at the end of this section.

The below figures show aerial views of the landcover of the Site, including the proposed borrow pit which is located approximately 1km west of T07, and the TDR accommodation work proposed at 3no. locations between 5.3km and 6.3km northwest of T07.

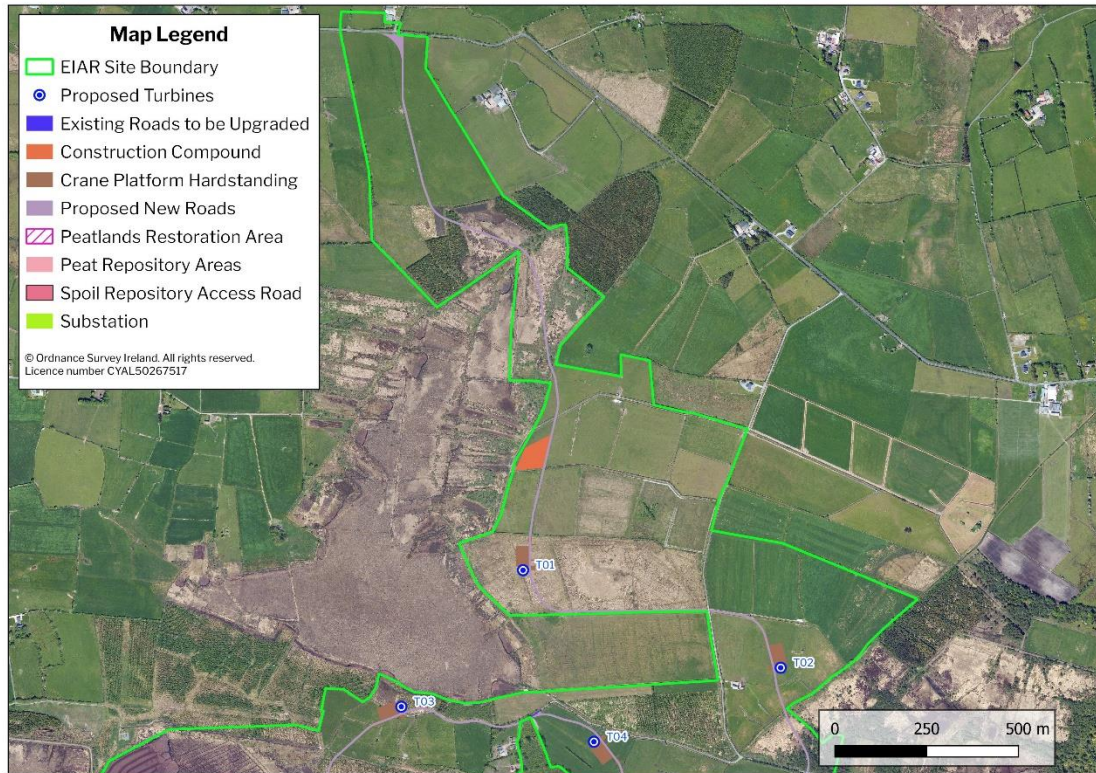


Figure 14-10 Aerial Map showing the landcover of the Site

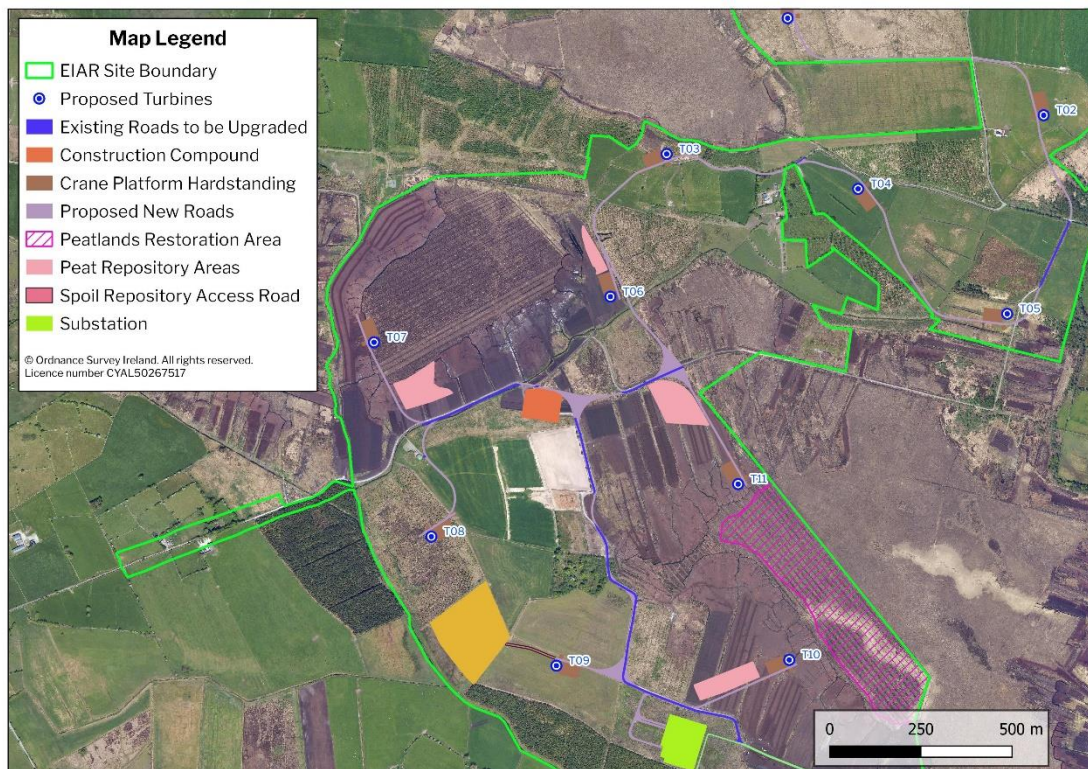


Figure 14-11 Aerial Map showing the landcover of the Site



Figure 14-12 Aerial View of the Proposed Borrow Pit



Figure 14-13 Aerial View of the Proposed TDR Accommodation Works

Land Cover and Land Use

Landcover is the term used to describe the combinations of vegetation and land-use that cover the land surface. It comprises the more detailed constituent parts of the landscape and encompasses both natural and man-made features.

The landcover of the Site mainly consists of agricultural pastureland fields, cutover peatland and commercial coniferous forestry, with widespread young to mature forestry coverage. The cutover peatland covers a majority of the southeastern and northwestern parts of the Site. A working landscape of agricultural fields comprises the southwestern and northeastern parts of the Site. These areas are dominated by grassland fields and hedgerows. Plate 14-8 and Plate 14-10 below show examples of both the peatland and agricultural land found on Site.



Plate 14-8 Cutover bog landcover on Site

The image in Plate 14-8 above showing recent peat extraction activity and Plate 14-9 below showing an area of previous peat extraction with some vegetation regrowth, were both taken from within the Site and show examples of the peat cover found on Site. The peatland found on Site is regarded as degraded in terms of its ecological significance due to historic peat extraction activities.



Plate 14-9 View to the northeast from a location 367m north of proposed turbine T11.



Plate 14-10 View west of an agricultural field which is the proposed location of turbine T5.

Much of the landcover within and surrounding the Site is agricultural, as seen in Plate 14-10 above. The extent of the agricultural land is mainly flat and modified grassland, with some gentle slopes as seen in Plate 14-10 above. The agricultural areas within the northern parts of the Site and directly surrounding the Site are defined by hedgerows and wooden fences, such as those seen in the left-hand side of the image above. Beyond the Site, the landcover is predominantly pastoral agricultural fields separated by hedgerows and mature deciduous tree lines, with some other areas of cutover peatland present to the west, east and north, bounding the Site.



Figure 14-14 View east showing the landcover of the proposed borrow pit.

Landform and Drainage

The topography of the Site is relatively flat and low lying with only gentle variation in elevation levels. Figure 14-15 below shows the topography of the Site, which is generally flat with some gentle undulations, which can be seen in the background of Plate 14-11, for example. These undulations are a result of small local watercourses and drainage ditches, and the lower levels of elevations are concentrated around the paths of these watercourses and drainage ditches. Much of the Site is approximately at 70 metres AOD (Above Ordnance Datum) and the highest level is in the northern part of the Site at 85 metres AOD.

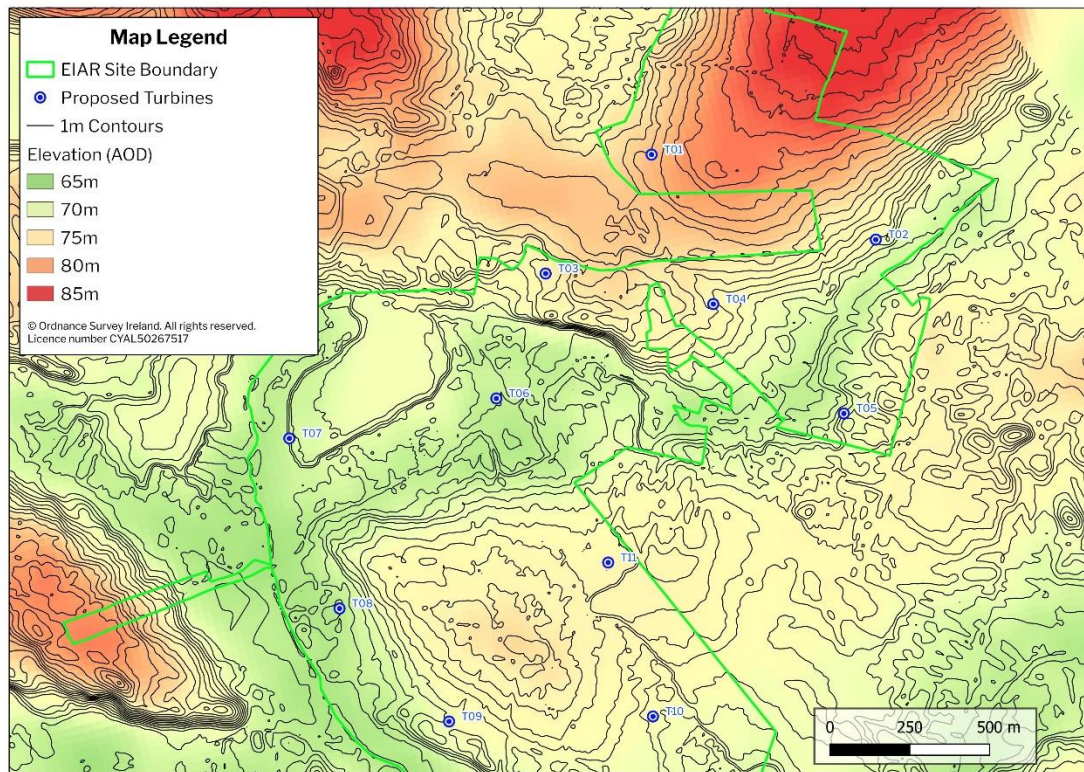


Figure 14-15 Topography of the Site



Plate 14-11 View to the northwest from the western entrance to the Site.

Views within the Site

The Site is generally a large, remote enclosed landscape. Views within the Site itself are generally contained by the commercial forestry enclosing the Site. Whilst the remote location provides some aesthetic value due to the lack of infrastructure within the Site, it is noted that the landscape of the Site has clearly been subject to substantial levels of human interference and modification as a result of the historic peat harvesting operations and, to a lesser extent, commercial forestry. Plate 14-12 below shows a view over the central and northern parts of the Site, where in the background a gentle slope rises preventing further views in this direction. This is the case for the majority of views within the Site, which either are screened by vegetation (hedgerows, or tracts of commercial forestry), as seen in Plate 14-13 below or are contained by gentle rises in topography and tracts of commercial forestry (see Plate 14-12).

External views from within the Site are generally contained by these landscape features, with some limited vantage points where longer-range views occur.



Plate 14-12 View to the northwest from a location adjacent to the proposed on-site substation.



Plate 14-13 View to the east from a location adjacent to turbine T5

Landscape Character and Setting of the Proposed Substation

The proposed onsite 220kV substation is located within agricultural land approx. 287m southwest of T10, as seen on Figure 14-11. The footprint of the proposed onsite 220kV substation compound measures approximately 13,597 square metres in area and will include 2 no. control buildings and the

electrical substation components necessary to consolidate the electrical energy generated by each wind turbine and export that electricity from the onsite 220kV substation to the national grid. The Site of the proposed onsite substation encompasses a section of a grassland field as seen in Plate 14-14 below. To the southwest of the proposed substation is a large block of commercial plantation forestry which provides screening of views in this direction. The proposed substation is located approximately 475m from the nearest residential receptor, which is located on the other side of the commercial forestry seen in Plate 14-14 below. Landscape and visual effects arising as a result of this element of the Proposed Project are discussed in full below in Section 14.7.



Plate 14-14 View to the west from the centre of the proposed on-site substation location

Landscape Character of the Proposed Grid Connection Underground Cable and Interface Towers

As described in full in Section 4.3.2 of this EIAR, the connection to the national electricity grid will originate at the proposed onsite substation and will be connected to the national grid via an underground grid connection cable which will connect into the existing 220kV transmission line located approximately 1.7km southeast of the proposed substation. The proposed underground cable will be located primarily within the public road following the route shown below on Figure 14-16.

Two Line Cable Interface Masts (End Masts) will be used to connect the high voltage underground cable into the existing 220kV line, the landcover of the site of which can be seen in the right-hand side of Figure 14-16 below. Each mast has a footprint of approximately 70m² and an overall height of up to 20m. The End Masts will be lattice steel structures with cross-arms which can extend over the base footprint and internal bracing and are very similar in size and character to the masts proposed for the overhead line option.



Figure 14-16 Aerial View of the landcover of the Proposed Grid Connection Underground Cabling and Interface Towers

The most visible elements of the Proposed Grid Connection will be where it rises above ground in the form of End Masts creating a loop-in connection. The End Masts will be present within the field show below in Plate 14-15, aligned with the existing electricity transmission lines seen in both images. Detailed drawings of these tower options are included in the planning drawing pack accompanying the planning application.



Plate 14-15 View over the agricultural field where the proposed underground grid connection will join the 220kV transmission line.

14.4.2.2 Landscape Value and Sensitivity of the Site

Landscape Values were assessed in order to determine the landscape sensitivity of the Site as well as the wider landscape setting and establish the capacity of the immediate landscape in which the Proposed Project will be built, as it is prescribed by the best practice guidance, “*as part of the baseline description the value of the potentially affected landscape should be established*” (Page 80, GLVIA3, 2013). Comprehension of the landscape value and its susceptibility to change enables determination of the sensitivity of the landscape at a micro level (the Site) and its capacity to absorb the infrastructure of a wind farm development.

Determination of landscape value takes into consideration the scenic amenity designations, the sensitivity and value designations found in the local landscape policy as well as other indications of landscape value attached to undesignated landscapes. Table 14-3 below describes various factors that aid in identifying the landscape value. These factors and indicators were appraised collectively to determine a landscape value for the Site. The Landscape value and susceptibility to change were then considered in forming a landscape sensitivity classification of either **Low**, **Moderate**, **High** or **Very High** for the Site.

Table 14-3 Indicators of Landscape Value

Indicator	Description
Landscape Designations	<p>The proposed turbines are located within LCU 5e of County Galway – North River Clare Basin Unit, however the EIAR Site Boundary is located within two LCU’s, LCU 5e and LCU 5c; Springfield Basin Unit. Both units are part of the North Galway Complex Landscape Character Type where sensitivities include “<i>open countryside offering frequent extensive panoramic views from local high-points</i>”. The designated landscape sensitivity for the entirety of the lands located within County Galway within the LVIA Study Area is Low.</p> <p>As noted above in <i>Section 14.4.1.1.4</i>, the proposed turbines are located within areas designated as ‘<i>acceptable in principle</i>’ and ‘<i>open to consideration</i>’.</p>
Landscape Elements Quality / Condition	<p>This refers to the physical state of the landscape and the condition of each individual elements. Due to its nature as a cutover peatland site with plantation forestry, the Site is a modified working landscape. The condition of the landscape is degraded in several locations within the Site due to the forestry operations and historic peat extraction.</p>
Scenic / Aesthetic Qualities	<p>The Site has some rural aesthetic qualities given the lack of buildings and infrastructure present on the Site. However, these views are common throughout the local area within 5km of the Site with historic peat extraction and commercial forestry as common land-use activities on and surrounding the Site. It is further noted that the landscape of the Site has clearly been subject to substantial levels of human interference and modification. Views from within the Site are generally limited by the tracts of forestry and gentle undulations, creating a sense of enclosure within the Site itself.</p>

Indicator	Description
Rarity or Conservation Interests	<p>There are no designated areas of conservation within the EIAR Site Boundary.</p> <p>Most of the habitats within the study area were highly modified from their natural state or common and widespread in the wider area and were of low ecological significance or biodiversity value. These habitats included buildings and artificial surfaces, stone walls and other stonework, conifer plantation, recolonising bare ground, spoil and bare ground, improved agricultural grassland, agricultural wet grassland and low diversity wet grassland. The peatland habitats are degraded and do not support active peat formation as the habitats are extensively drained. The cutover peatland habitats are subject to recent and continued turbary activity and are dominated by bare peat. The treelines and hedgerows on Site are assessed as having high ecological value and act as corridors for features of higher ecological value.</p> <p>Watercourses within the Site are predominantly small in size. However, they are likely to support commuting and foraging habitat for otter populations of local significance as well as kingfisher and the Levally stream which runs through the site has downstream connectivity with Lough Corrib SAC. The Site is also drained by a network of drainage ditches. These are small man-made channels that are often devoid of vegetation and regularly maintained or choked with vegetation and are slow flowing.</p> <p>Following the surveys that were undertaken, it is concluded that the habitats of highest ecological significance within the study are those that are areas of uncut, although degraded raised bog and the area of species-rich wet grassland to the east of T1. See Chapter 6 for further details.</p>
Wildness / Naturalness	<p>The Site is a mixture of agricultural land, cutover peat, and commercial forestry, and so it is considered to be a landscape highly modified by human interference. The Site is relatively undeveloped in terms of buildings and other infrastructure, therefore there is a degree of wildness considering the setback from human settlement, although it is notable that transport infrastructure passes through the Site.</p>
Recreational Value	<p>The Site comprises privately owned land and is not used for any public recreational activities.</p>
Cultural Meaning / Associations	<p>No National Monuments or those subject to a Preservation Order are located within the Proposed Wind Farm Site. No monuments subject to a Preservation Order are located within 10km of the nearest proposed turbine. Two National Monuments in State Care (Ownership) are located within 10km of the nearest proposed turbine and are listed in Table 13-3 and shown on Figure 13-2 of Chapter 13. The monuments comprise Dunmore Abbey (No. 273)</p>

Indicator	Description
	<p>and Dunmore Castle (No. 248) which are located 7km and 8.1km, respectively, from the nearest proposed Turbine, T1.</p> <p>One recorded monument, GA030-073— Enclosure, is located within the Proposed Wind Farm Site. No NIAH structures are located within the Proposed Wind Farm Site.</p> <p>No National Monuments in State Care or those subject to a preservation order are located within 100m of the underground electrical cabling route and associated infrastructure, or in the footprint of the proposed onsite substation. No recorded monuments are located within 100m of the proposed underground electrical cabling route and associated infrastructure or in the footprint of the proposed onsite substation. No Protected Structures are located within 100m of either side of the Proposed Grid Connection underground electrical cabling route and associated infrastructure, or in the vicinity of the proposed 220kV substation. See Chapter 13 for further details.</p>

In consideration of the factors detailed in Table 14-3 above, the landscape value of the Site is deemed **Low**. The Site is predominantly located within an area of low scenic amenity and minimal aesthetic qualities due to the presence of cutover peat and commercial forestry. All turbines are located in areas ‘open to consideration’ or ‘acceptable in principle’. The Proposed Project is located within an area designated as Low landscape sensitivity in the GCDP. 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**.

14.4.3 Landscape Characterisation in the WEDG’s for Planning Authorities

The following section considers the WEDG’s (DoEHLG, 2006) and is cognisant of the draft WEDG’s (DoHPLG, 2019). These guidelines offer guidance for the siting and design of wind energy developments in various landscape contexts by defining six landscape character types that represent most situations where wind turbines may be proposed. The guidance is intended to be indicative and general and notes that it represents the ‘best fit’ solutions to likely situations. The six landscape character types include ‘Mountain Moorland’, ‘Hilly and Flat Farmland’, ‘Flat Peatland’, Transitional Marginal Land’, ‘Urban/industrial’ and ‘Coastal’ landscape character types. The guidelines note that where a wind energy development is located in one landscape character type but is visible from another, it will be necessary to decide which might more strongly influence the approach adopted for the assessment. In consideration of Galway County Council landscape designations and site visits conducted by the MKO Landscape and Visual team, the physical characteristics of the Site is best described by ‘Hilly and Flat Farmland’ landscape character type. Therefore, the best practice siting and design strategies prescribed for Hilly and Flat Farmland (DoEHLG, 2006) were implemented for the Proposed Project.

14.4.3.1 Hilly and Flat Farmland

The key characteristics of Hilly and Flat Farmland landscape type as stated in the WEDG’s (DoEHLG, 2006 & DoHPLG, 2019) 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.”*

The siting and design guidance given for ‘Hilly and Flat Farmland’ landscape in the 2006 WEDGs and 2019 draft WEDGs is 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 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, adhering to the recommended 4 x tip height set-back distance from the draft WEDG’s (DoHPLG, 2019). Also, siting the turbines on a flat plain of low-lying land within a relatively flat landscape results in visibility of turbines reducing rapidly with increased distance from the Site.

The guidelines also recommend locational siting on ridgelines in order to reduce overlapping of turbines with landscape elements which may cause visual confusion and clutter. As shown in the photomontages (EIAR Volume 2: Photomontage Booklet) and described throughout the photomontage visual impact assessment tables (See Appendix 14-3), the proposed turbines are viewed as a coherent development within the landscape and limited visual clutter and confusion occurs. As evidenced by the photomontages and accompanying descriptions (Appendix 14-3), an optimum aesthetic effect is achieved through adherence to many of the other recommendations in the guidelines listed below (Spatial Extent, Spacing and Layout).

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 Project, with the proposed turbines adhering to the recommended 4 x tip height set-back distance from the draft WEDG’s. The scale of cutover peatland, forestry and agricultural field system of the Site lends itself to a turbine layout of this extent, with turbines clustered on a large uninhabited area.

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**, there is no structured or ordered field pattern on the Site, considering the presence of large tracts of cutover peatland and blocks of forestry. The turbines are spaced evenly throughout a Site of varied landcover and a lack of structured field pattern. When the turbines are viewed from locations where the rest of the Site cannot be seen, the layers of turbines seen within views correspond well to the layers of fields typically seen throughout views within this landscape.

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 are aligned in a rough grid layout within the 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, particularly within 5km of the proposed turbines.

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 turbines are tall features within the landscape. However, the development as a whole retains a relatively even profile; when viewing the turbines, the nacelles are positioned at relatively even heights, or evenly descending with increased distance, improving visual coherence when viewed from areas within the wider landscape area.

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 or permitted wind farms within 10km of the Site. As noted below in Section 14.6, the proposed (information available in the public domain (<https://www.cooloowindfarm.com/>) but not yet submitted to planning) Cooloo Wind Farm turbines are located between 5-10km from the Site. Aside from these, the only other turbines located within the LVIA Study Area are two existing turbines located approximately 11.7km southwest of the nearest proposed turbines, 1 permitted turbine located approximately 12.2km southwest of the nearest proposed turbines, and 1 turbine located approximately 11.4km northeast of the nearest proposed turbines. As outlined in Section 14.7 below, the Proposed Project is aligned with the guidance quoted above as wind energy development will not dominate in this landscape considering the level of existing and permitted wind energy development nearby and the intermittent views of turbines available. Cumulative landscape and visual effects related to the Proposed Project and the proposed Cooloo Wind Farm are discussed in detail below in Section 14.7.

14.4.4 Landscape Character of the Wider Landscape Setting

Landscape character refers to the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how people perceive this. It reflects combinations of geology, landform, soils, vegetation, land use and human settlement, and creates the sense of place found in

different areas. The landscape surrounding the Proposed Project is the rural agricultural landscape of northeast Galway. It is a working, settled landscape with the surrounding agricultural field structure dominating visually and providing a sense of order to the landscape. The settlement pattern is focused along local and regional roads within 5km of the Site, with lines of one-off, rural housing predominating. Clonberne, a small rural settlement, is the nearest major grouping of residences, located approximately 1.5 km to the east of the nearest proposed turbine.



Plate 14-16 Typical agricultural view from the roadside within 5km of the Site

After agricultural land, raised bogs make up a large proportion of the landcover in the wider area, particularly to the east of the LVIA Study Area, and a cultural history of turf cutting activities associated with these, including on the Site itself. Slieve Bog to the north, and a tract of connected peatlands to the east. Keeloges Bog, Funshin Bog, Clooncullaun Bog and Kilmore Bog are the most substantial of these features. Also of note is the Carrownagappul Bog to the southeast, part of the 'Living Bog' restoration project. As a result of historical forestry activities on the peatlands in the LVIA Study Area, large tracts of commercial forestry are also seen throughout the landscape and forms a notable element of the landscape character of the areas within 5km of the Site. Another large-scale human intervention in the surrounding landscape is quarrying, with a large quarry site located approximately 3km west of the site.



Plate 14-17 View northwest from the viewing platform at Carrownagappul 'Living Bog'

Beyond 5km from the site, are the surrounding settlements of Tuam (west), Dunmore (north), Glenamaddy (northeast) and Moylough (southeast) with the main road network focused on linking these settlements (see Figure 14-18 below, for example). The landcover throughout the LVIA Study Area follows similar patterns as that closer to the Site, with a relatively flat or gently undulating agricultural field structure dominating, and with tracts of cutover raised bog with commercial forestry interspersed.



Plate 14-18 View to the east from the townland of Knockroe, showing the type of agricultural field pattern prevalent throughout the LVIA Study Area

In terms of topography and elevation, there are some small gentle undulations throughout the LVIA Study Area, although it is relatively flat, and in general slopes downwards from east to west, with some hills scattered throughout. Knockma Hill is a notable feature near the western extent of the LVIA Study Area, offering long-range views to the southeast from that location. Knockroe is a gentler hill to the southeast of Knockma. To the east of the LVIA Study Area, Mount Mary marks the highest point. Slieve Dart is the highest point to the north, located on the border of Galway and Roscommon. Aside from these hills there are few notable points of high elevation within the LVIA Study Area, and none of these are located within 10km of the Site, emphasising the relatively flat nature of the landscape surrounding the Site. There are also several loughs (Levally, Summerville, and Kiltullagh) and turloughs (Glenamaddy) located within 10km of the Site, which provide some recreational, and scenic amenity to the landscape.



Plate 14-19 View from the viewing area at Glenamaddy Turlough

Historic Landscape Character

No archaeological landscapes have been formally identified or designated in the GCDP. A comprehensive description and assessment of cultural heritage monuments existent within the Site and in the wider landscape is included in Chapter 13 of this EIAR – *Cultural Heritage*. As detailed in that chapter, no National Monuments or those subject to a Preservation Order are located within the Proposed Wind Farm Site. No monuments subject to a Preservation Order are located within 10km of the nearest proposed turbine. Two National Monuments in State Care (Ownership) are located within 10km of the nearest proposed turbine and are listed in Table 13-3 and shown on Figure 13-2 of Chapter 13. The monuments comprise Dunmore Abbey (No. 273) and Dunmore Castle (No. 248) which are located 7km and 8.1km, respectively, from the nearest proposed Turbine, T1.

One recorded monument, GA030-073— Enclosure, is located within the Proposed Wind Farm Site. No NIAH structures are located within the Proposed Wind Farm Site.

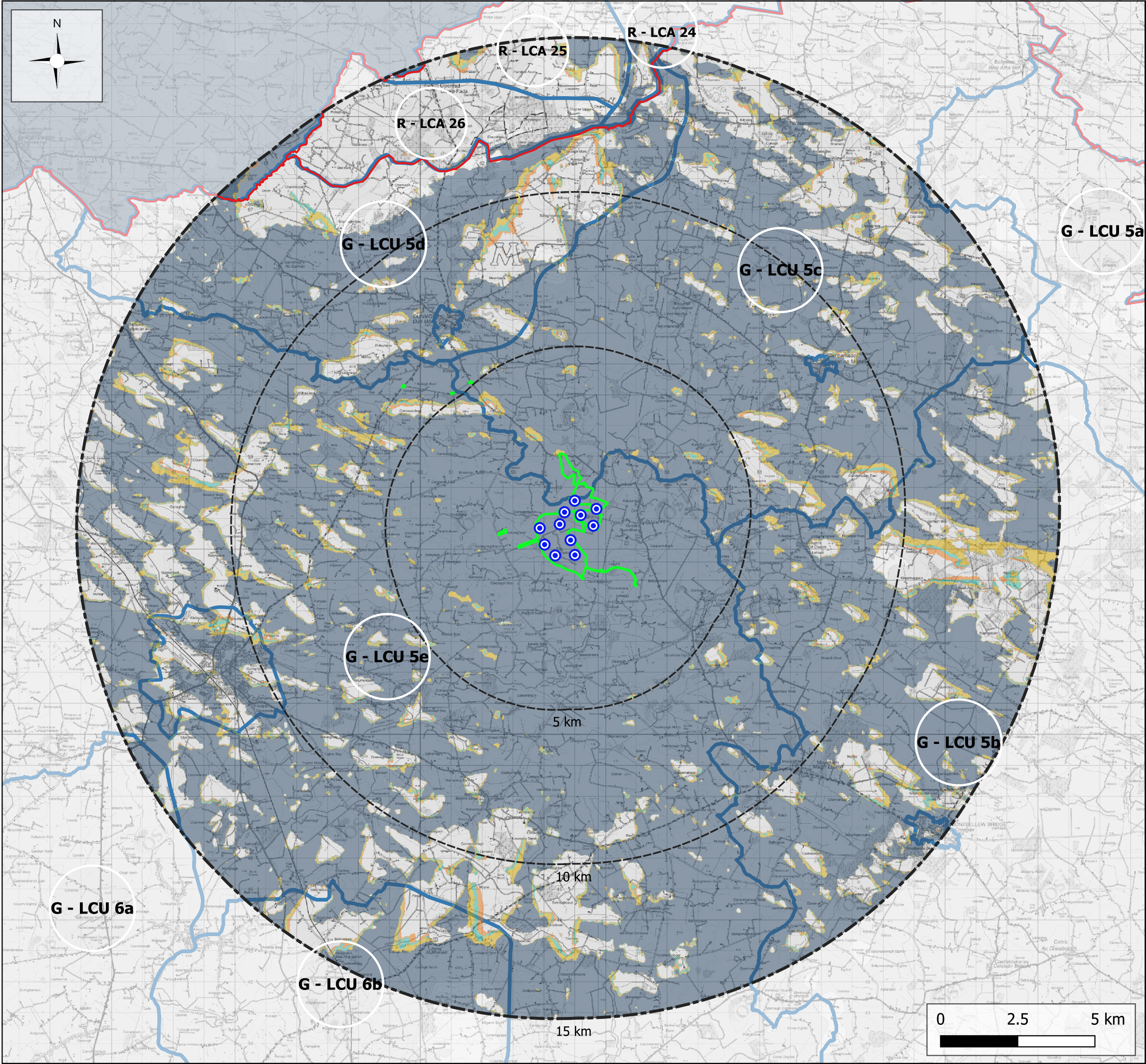
No National Monuments in State Care or those subject to a preservation order are located within 100m of the underground electrical cabling route and associated infrastructure, or in the footprint of the proposed onsite substation. No recorded monuments are located within 100m of the proposed underground electrical cabling route and associated infrastructure or in the footprint of the proposed onsite substation. No Protected Structures are located within 100m of either side of the Proposed Grid Connection underground electrical cabling route and associated infrastructure, or in the vicinity of the proposed 220kV substation.

14.4.4.2 Designated Landscape Character Areas (LCAs)

As noted in Section 14.2.1, the LCA Study Area extends to 15 km from the proposed turbines. In Section 14.4.1 - *Landscape Designations and Policy Context*, 11 No. designated LCAs were identified within 15 km of the proposed turbines, in Counties Galway, Roscommon and Mayo.

LCA Preliminary Assessment

A map showing all LCAs within the LCA Study Area and the distribution of theoretical visibility of the proposed turbines occurring in each LCA is shown in Figure 14-17 shown below.



Map Legend

- County Border
- EIAR Site Boundary
- LVIA Study Area
- Proposed Turbine Locations
- LCA/LCU Boundary
- Zone of Theoretical Visibility
 - 1-2 Turbines Theoretically Visible
 - 3-4 Turbines Theoretically Visible
 - 5-8 Turbines Theoretically Visible
 - 9-11 Turbines Theoretically Visible

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Drawing No.

Figure 14-17

Drawing Title
Landscape Character Areas/Units and
ZTV

Project Title
Clonberne Renewable Energy Development

Scale	Project No.	Date	Drawn By	Checked By
1:120,000	180740	2024-04-05	JS	JW



Each LCA is listed below in Table 14-4, as well as a description of theoretical visibility within each LCA, as indicated by the ZTV in Figure 14-17. Several LCAs identified in the LCA Study Area have very small areas of theoretical visibility indicated by the ZTV map in Figure 14-17 and very small portions of these LCAs are located within the LCA Study Area. The potential visibility of the proposed turbines was appraised during Site surveys (multiple surveys conducted during 2020, 2021, 2022, 2023, and 2024) from all LCAs with very limited or partial theoretical visibility. The ZTV and on-site visibility appraisals determines which LCAs are screened in for full assessment later in this chapter (See also Appendix 14-2), the screening result is noted in Table 14-4.

Table 14-4 LCA Preliminary Assessment

Map Ref	LCA	Theoretical Visibility (TV) as indicated by ZTV	Actual Visibility	Screened in for Assessment
Up to 5km				
G – LCU 5e	North River Clare Basin Unit	Primarily full TV within 5km with some more intermittent patches of no TV between 5km and 15km from the Site	Visibility will occur. However, on-site appraisals determined that there would be limited visibility in areas of the LCU beyond 5km from the proposed turbines.	Yes
G – LCU 5c	Springfield Basin Unit	Primarily full TV within 5km with some more intermittent patches of no TV between 5km and 15km from the Site, particularly in the southern and north-eastern parts of the LCU	Visibility will occur. However, on-site appraisals determined that there would be limited visibility in areas of the LCU beyond 5km from the proposed turbines.	Yes
G – LCU 5b	Castlegar Basin Unit	Large areas of full TV within 10km with a mixture of large areas of no TV and full TV between 10km and 15km	Visibility will occur. However, on-site appraisals determined that there would be limited visibility in areas of the LCU beyond 10km from the proposed turbines.	Yes
5 to 10km				
G – LCU 5d	Slieve Dart Unit	There are large areas of TV within this LCU. Within 10km there are also large areas of no TV, along with a large stretch of	There are likely to be limited views from the southern part of this LCU given the flat nature of the intervening landscape	Yes

		no TV near the border with County Roscommon and Mayo	and the levels of vegetation present in the landscape. As the level of elevation rises towards Slieve Dart in the north of this LCU, there are likely to be open views from this elevated area towards the proposed turbines. In addition, there are two elevated locations (Checker Hill) along the southern border of this LCA where, again, the elevated topography will afford views in the direction of the Proposed Project.	
10 to 15km				
G – LCU 6b	Southern River Clare Basin Unit	Full and No TV of the turbines within the very small section of this LCU located within 15km of the proposed turbines.	Given the distance from the proposed turbines, there are likely to be no or very limited background views of the proposed turbines from the small part of this LCU located within the LCA Study Area.	No, given the distance from the nearest proposed turbine and the very small section of this LCU located within 15km of the proposed turbines, there will be no Significant effects on the landscape character of this LCU arising as a result of the Proposed Project.
G – LCU 6a	Black River Basin Unit	Full and No TV of the turbines within the very small section of this LCU located within 15km of the proposed turbines.	Given the distance from the proposed turbines, there are likely to be no or very limited background views of the proposed turbines from the small part of this LCU located within the LCA Study Area.	No, given the distance from the nearest proposed turbine and the very small section of this LCU located within 15km of the proposed turbines, there will be no Significant effects on the landscape character of this LCU arising as a

				result of the Proposed Project.
G – LCU 5a	Suck Valley Unit	Full and No TV of the turbines within the very small section of this LCU located within 15km of the proposed turbines.	Given the distance from the proposed turbines, there are likely to be no or very limited background views of the proposed turbines from the small part of this LCU located within the LCA Study Area.	No, given the distance from the nearest proposed turbine and the very small section of this LCU located within 15km of the proposed turbines, there will be no Significant effects on the landscape character of this LCU arising as a result of the Proposed Project.
M – LCU L	South-East Mayo Plains	There is primarily no TV within the very small section of this LCU located within 15km of the proposed turbines.	Given the distance from the proposed turbines, there are likely to be no or very limited background views of the proposed turbines from the small part of this LCU located within the LCA Study Area.	No, given the distance from the nearest proposed turbine and the very small section of this LCU located within 15km of the proposed turbines, there will be no Significant effects on the landscape character of this LCU arising as a result of the Proposed Project.
R – LCA 26	Cloonfad Bog and Upland	There is very little TV at the very edge of the LCA. The majority of the LCA has no TV.	Turbines will not be visible from within this LCA, while there will be visibility from the southern side of Slieve Dart, this is located beyond the border of this LCA.	No, turbines will not be visible.
R – LCA 25	Cloonfad Hills and Esker Ridges	There is a small patch of TV within this LCA, however the majority of the area has no TV.	Given the distance from the proposed turbines, there are likely to be no or very limited background views of the proposed turbines from the small part of this LCA	No, given the distance from the nearest proposed turbine and the very small section of this LCA located within 15km of the

			located within the LCA Study Area.	proposed turbines, there will be no Significant effects on the landscape character of this LCA arising as a result of the Proposed Project.
R – LCA 24	Ballinlough Bogland and Esker Ridges	There are patches of TV in this LCA within the small part of this LCA located within 15km of the proposed turbines.	Given the distance from the proposed turbines, there are likely to be no or very limited background views of the proposed turbines from the small part of this LCA located within the LCA Study Area.	No, given the distance from the nearest proposed turbine and the very small section of this LCA located within 15km of the proposed turbines, there will be no Significant effects on the landscape character of this LCA arising as a result of the Proposed Project.

LCAs in Table 14-5 below are screened out from further assessment in this LVIA as views towards the turbines were either entirely screened out or substantially screened. In some cases, distance to the proposed turbines or the limited footprint of the LCA located within the LCA Study Area precluded LCAs from being assessed further in this LVIA.

Table 14-5 LCAs **Screened Out** from further assessment

Map Ref.	LCA
G – LCU 5a	Suck Valley Unit
G – LCU 6a	Black River Basin Unit
G – LCU 6b	Southern River Clare Basin Unit
M – LCU L	South-East Mayo Plains
R – LCA 26	Cloonfad Bog and Upland
R – LCA 25	Cloonfad Hills and Esker Ridges
R – LCA 24	Ballinlough Bogland and Esker Ridges

Following the pre-assessment exercise, the LCAs shown in Table 14-6 below have been selected for assessment. As some proposed turbines are likely to be visible from areas within these LCAs, potential landscape effects may arise as a result of the Proposed Project.

Table 14-6 LCAs **Screened In** for further assessment

Map Ref.	LCA
G – LCU 5e	North River Clare Basin Unit
G – LCU 5c	Springfield Basin Unit
G – LCU 5b	Castlegar Basin Unit
G – LCU 5d	Slieve Dart Unit

A detailed description of the four LCAs screened in for assessment (Table 14-6) and the likely effects on landscape character as a result of the Proposed Project are presented in the Landscape Character Assessment Tables that form Appendix 14-2. A summary of landscape effects on these LCAs are reported in Section 14.7.3 of this chapter - *Operational Phase Effects*.

14.5

Visual Baseline

14.5.1

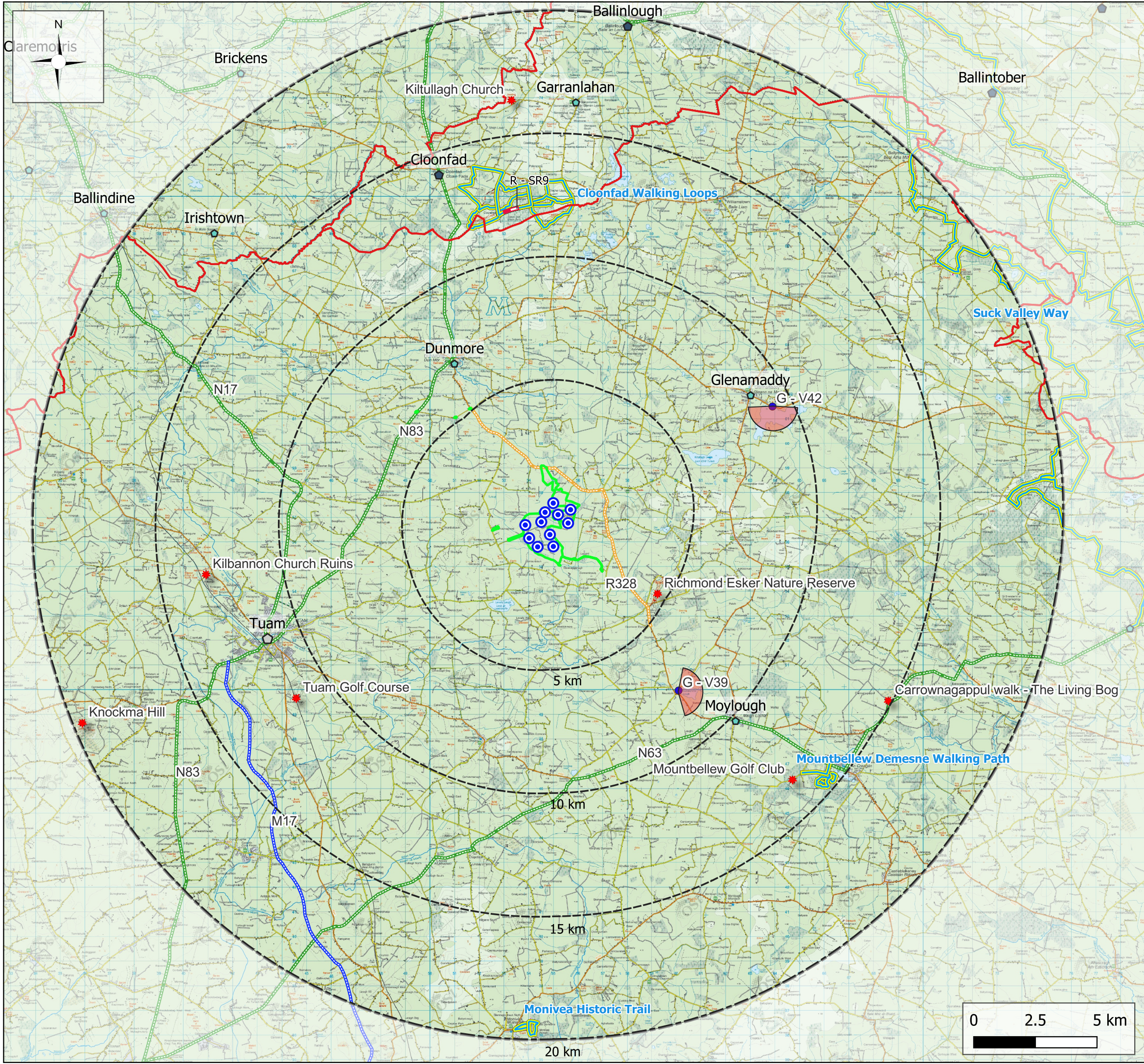
Visual Receptors

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 14-1 – LVIA Methodology). To this end, the following visual receptors have been identified within the LVIA Study Area and are listed below:

- Designated Protected Views and Scenic Routes
- Settlements
- Recreational Routes (Waymarked Walking Routes; Cycle Routes; Scenic Drives; Tourist Routes)
- Recreational, Cultural Heritage, and Tourist Destinations
- Transport Routes

These visual receptors are identified in the visual baseline map (Figure 14-18 below) and are listed in tables in the following sections along with theoretical visibility at those locations indicated by the ZTV map in Figure 14-19, seen below. During site visits conducted during 2020, 2021, 2022, 2023, and 2024 the likely visibility of the proposed turbines 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.

Considering the visual containment of the landscape surrounding the proposed turbines and limited visibility beyond 5km, the impact on residential visual amenity is a key focus in this LVIA and areas selected as representative photomontages are discussed in Section 14.7.3.



Map Legend

- County Border
- LVIA Study Area
- EIA Site Boundary
- Proposed Turbine Locations
- Designated Scenic Amenity
 - County Galway Protected Views
 - County Galway Protected View Direction
 - County Roscommon Scenic Route
- Settlements
 - Standardised Settlement Hierarchy
 - County Hub Town
 - Town
 - Village
 - Rural Settlement Clusters
- Recreational Routes
 - Recreational Routes
- Recreational Destinations
 - Recreational, Cultural Heritage and Tourist Destinations
- Transport Routes
 - Motorway
 - National Roads
 - Regional Roads

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Drawing No.

Figure 14-18

Drawing Title

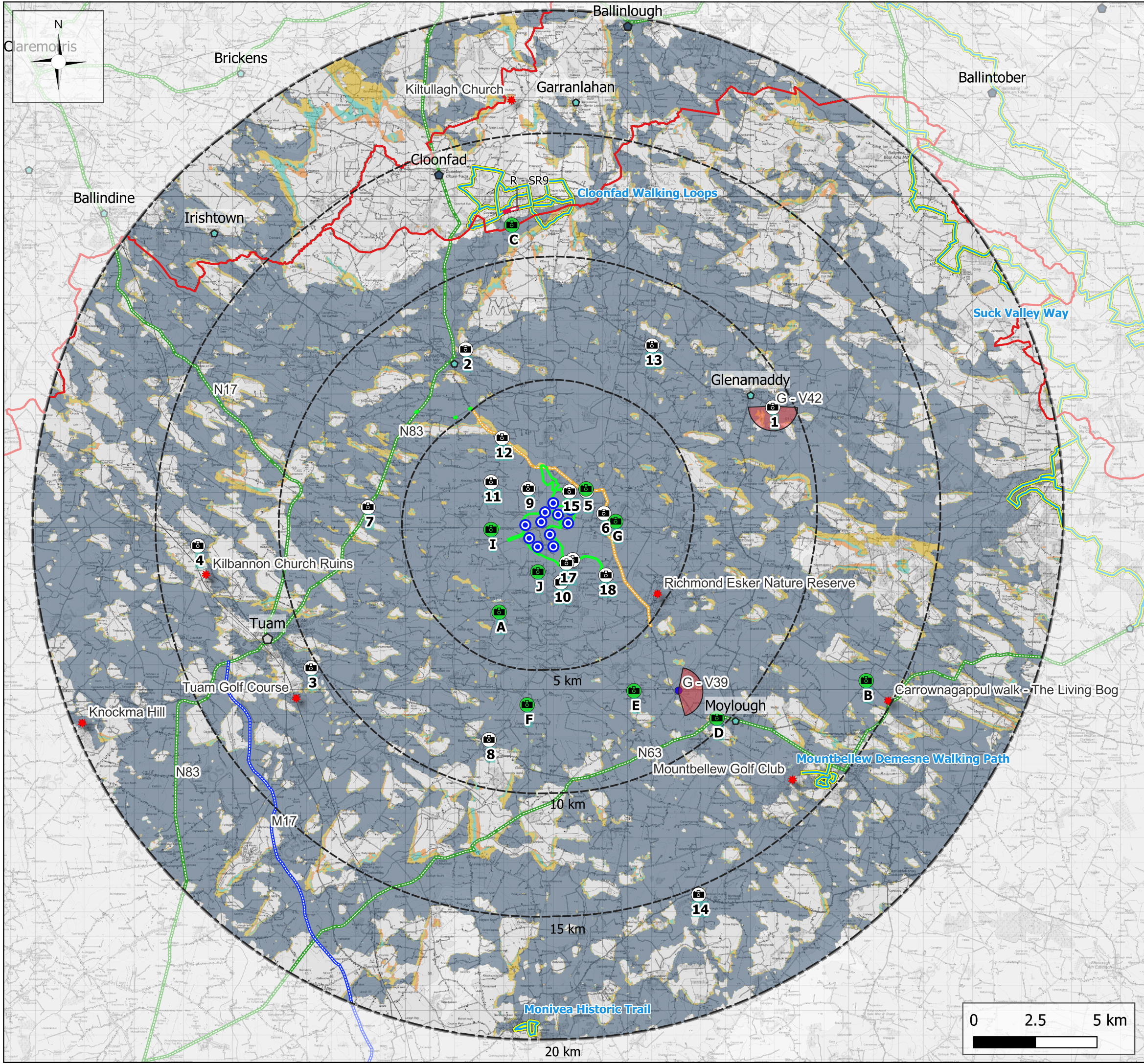
Visual Baseline

Project Title

Clonberne Renewable Energy Development

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	180740	2024-04-05	JS	JW





Map Legend

County Border

LVIA Study Area

EIAR Site Boundary

Proposed Turbine Locations

Designated Scenic Amenity

County Galway Protected Views

County Galway Protected View Direction

County Roscommon Scenic Route

Settlements

Standardised Settlement Hierarchy

County Hub Town

Town

Village

Rural Settlement Clusters

Recreational Routes

Recreational Routes

Recreational Destinations

Recreational, Cultural Heritage and Tourist Destinations

Transport Routes

Motorway

National Roads

Regional Roads

Photomontage Viewpoint Locations

Photowire Viewpoint Locations

ZTV

1-2 Turbines Theoretically Visible

3-4 Turbines Theoretically Visible

5-8 Turbines Theoretically Visible

9-11 Turbines Theoretically Visible

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Drawing No.

Figure 14-19

Drawing Title

Visual Baseline and ZTV

Project Title

Clonberne Renewable Energy Development

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	180740	2024-04-05	JS	JW

MKO

14.5.1.1 Designated Protected Views and Scenic Routes

1 no. designated scenic route and 2 no. scenic views were previously identified and described in Section 14.4.1 of this chapter – *Landscape Designations and Policy Context*. These scenic amenity designations are mapped in Figure 14-18 (seen previously). Table 14-7 (below) lists the scenic designations located in the LVIA Study Area as well as any descriptions relating to the direction or object of the view detailed in the relevant county development plan. If detailed in the development plan, the direction of the view and range (field of view) is reported in Table 14-7 and whether it is likely that the designated scenic amenity is directed towards the Proposed Project. Table 14-7 also notes the theoretical visibility of the proposed turbines from these designated locations is as indicated by the ZTV Figure 14-19.

Based upon these initial visibility assessments, scenic amenity designations are either screened in or out for full assessment in this LVIA.

**For purposes of clarity, continuity and reference to mapping figures in this chapter; designated scenic views are labelled 'V' and scenic routes 'SR', each is prefixed by the first letter of the county in which it is located e.g., 'G' for Galway and 'R' for Roscommon. The last number in each label corresponds to the label or number assigned to each designation in the respective county development plans (e.g., G-V9 = Galway - Protected View No. 9).*

Table 14-7 Designated Protected Views and Scenic Routes

Map Ref.	Scenic Route/View Description	Direction and Range of View	Directed to Turbines?	Theoretical Visibility	Screened in for Assessment
G-V39	This view is from the Summerville Lough picnic area. The focus of this view is Summerville Lough. The wooded shores that form the background are an important feature of the view.	NE to SE	No	Yes	No
G-V42	This view is from the Glenamaddy Turlough carpark and viewing area. The focus of this view is Glenamaddy Turlough. The wooded shores that form the background are an important feature of the view.	E to W	Partially	Yes	Yes
R-SR9	An approximately 500m stretch of a local road within County Roscommon, located on the northern slope of Slieve Dart.	NW to NE	No	No	No

14.5.1.2 Settlements

In order to identify which settlements within the LVIA Study Area should be considered for viewpoint selection, the settlement strategies and hierarchy set out in the core strategy of the Development Plans of Counties Galway, Mayo and Roscommon were consulted. The settlement hierarchies of the three counties in the LVIA Study Area use differing classifications and naming conventions. MKO have created a standardised settlement hierarchy to enable cross-comparison of these population centres and clarity within the visual baseline mapping and throughout this assessment. Each settlement is given one of the following classifications in consideration of its size, population density and existing designation in the relevant county development plan.

- County Hub Town
- Town
- Village
- Rural Settlement Clusters

Table 14-8 below lists the settlements identified from the respective CDPs within the 20km LVIA Study Area also noting their county status within the settlement strategy and whether there is theoretical visibility indicated by the ZTV.

Table 14-8 Settlement Hierarchies within the LVIA Study Area

Settlement	County Settlement Hierarchy	Standardised Settlement Hierarchy	Theoretical Visibility	Screened In?
Up to 10km				
Dunmore	Small Growth Village	Small Village of Local Importance	Yes	Yes
Glenamaddy	Small Growth Village	Small Village of Local Importance	Partial	Yes
10 to 15km				
Tuam	Key Town	Town	Partial	Yes
Moylough	Small Growth Village	Small Village of Local Importance	Yes	Yes
Cloonfad	Serviced Villages	Village	No	No
15 to 20km				
Irishtown	Rural Settlements	Small Village of Local Importance	Partial	No, considering the distance and the large areas of no theoretical visibility present in and around the settlement, views of turbines at this distance for this receptor will have no potential to give rise to a Significant visual effect.

Garranlahan	Unserviced Villages	Small Village of Local Importance	No	No
Ballinlough	Serviced Villages	Village	Partial	No, considering the distance and the large areas of no theoretical visibility present in and around the settlement, views of turbines at this distance for this receptor will not give rise to a Significant visual effect.

14.5.1.3 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 encompass the following:

- Waymarked walking routes (Source – Sport Ireland Designated Trails)
- Cycle routes (Source – Sport Ireland Designated Cycle Routes)

Routes were identified and located within the LVIA Study Area by examination of OSI maps and online sources such as: Sportireland.ie/outdoors/Irelands-trails; Heritagemaps.ie and Activeme.ie. Many routes exist of differing scale and prominence are located within the LVIA Study Area, only recreational routes of county or national importance were included in this LVIA. The routes are shown in Figure 14-18 previously and are listed in Table 14-9 below along with theoretical visibility distributed upon each route by ZTV mapping.

Table 14-9 Recreational Routes within the LVIA Study Area

Route Name	Description	Theoretical Visibility	Actual Visibility	Screened In?
Up to 15km				
Mountbellew Demesne Walking Path	Trail walk through the Mountbellew Demesne, primarily through a wooded area.	Full to Partial	Very limited due to the presence of trees along the majority of the route	No
Cloonfad Walking Loops	Seven adjoining walking loops on roads through woodland and through an open cut-away bog with panoramic views of the surrounding countryside.	Primarily no theoretical visibility, some small stretches of roads with theoretical visibility	The majority of the routes are on the north side of a hill, with views directed away from the Proposed Project. There may be some partial background views of turbines from	Yes, there will be some limited views of the proposed turbines from small sections of the route located on elevated land on the southern side of Slieve Dart and following a precautionary approach this receptor is screened in.

Route Name	Description	Theoretical Visibility	Actual Visibility	Screened In?
			very limited stretches of the route with theoretical visibility.	
15 to 20km				
Monivea Historic Trail	This walk follows tarred road, forest road and path in a loop through coniferous trees interspersed with shady broadleaf trees.	Primarily full theoretical visibility	Very limited due to the presence of trees along the majority of the route,	No
Suck Valley way	The Suck Valley Way is a circular route that runs up the west side of the Suck from Mount Talbot to the outskirts of the town of Castlerea and returns, with one brief interruption, down the east side. The landscape is a typical river valley one of bogs, callows, woods and unspoilt traditional farmland of many tiny fields, and makes for wonderful and varied low-land walking.	Primarily no theoretical visibility aside from one small stretch of the route within the LVIA Study Area. This section with theoretical visibility passes through a forested area.	There will be no or very limited visibility of the Proposed Project from any location along this route,	No

14.5.1.4 Recreational, Cultural Heritage and Tourist Destinations

Recreational, cultural heritage, and tourist destinations were identified in the LVIA Study Area through a desktop exploration of localised tourism plans as well as considering the most popular tourism destinations in County Galway, Roscommon and Mayo listed on Tripadvisor.ie. This section also identifies popular and sensitive cultural heritage receptors in the LVIA Study Area.

The impact assessment in this chapter considers the effects of the Proposed Project on cultural heritage receptors from the perspective of a visitor to a site, monument, or heritage landscape. In this regard, only prominent and popular cultural heritage receptors are identified in the visual baseline exercise. A comprehensive description and assessment of all cultural heritage receptors are assessed in Chapter 13 of this EIAR– *Cultural Heritage*.

Prominent outdoor tourism and recreational, and cultural heritage destinations identified in the LVIA Study Area are listed below in Table 14-10.

Table 14-10 Recreational, Cultural Heritage, and Tourist Destinations

Route Name	Description	Theoretical Visibility	Actual Visibility	Screened In?
Up to 10km				
Richmond Esker Nature Reserve	Richmond Esker is a stated owned nature reserve, run by the national parks and wildlife service. It is one of the few esker ridges left in the country which still carries native woodland. Although the park has been extensively planted with conifers and other exotic species.	Full theoretical visibility	Given the nature of this destination as a heavily wooded area, there will be heavy screening of the proposed turbines throughout. There are unlikely to be views of the turbines from within the reserve.	No
10 to 15km				
Kilbannon Church Ruins	This is a medieval ecclesiastical site and National Monument northwest of Tuam. A damaged round tower is present on site	No theoretical visibility	There are additional screening elements between this site and the Proposed Project, there will be no visibility of the proposed turbines.	No
Tuam Golf Club	A parkland golf course located in Tuam, County Galway.	Primarily full theoretical visibility	The presence of multiple dense treelines present on the golf course will heavily screen views in the direction of	No

Route Name	Description	Theoretical Visibility	Actual Visibility	Screened In?
			the Proposed Project.	
Mountbellew Golf Club	A parkland golf course located in Mountbellew	Patches of full and no theoretical visibility.	The presence of multiple dense treelines present on the golf course will heavily screen views in the direction of the Proposed Project.	No
Carrownagappul Walk – The Living Bog	A large accessible raised bog just outside Mountbellew	Primarily full theoretical visibility.	The flat open landscape permits long-ranging views in the direction of the Proposed Project	Yes
15 to 20km				
Knockma Wood	Several looped forest trails crossing the crest of Knockma Hill	Full theoretical visibility on the northern and eastern side of the hill, with no theoretical visibility on the southern sides.	Views in the direction of the Proposed Project are heavily screened from the summit and the sections of the path with long-rang visibility. The majority of the forest trails are within a heavily wooded area with limited external visibility. The summit viewpoint is not directed towards the Proposed Project.	No
Kiltullagh Church	This is a former Christian Church and burial site.	Partial theoretical visibility	There will be very limited visibility of the proposed turbines with only blade tips likely to be visible in the distant background	No
Glinsk Castle	Glinsk Castle is a tower house and National Monument	No theoretical visibility	No visibility will occur	No

14.5.1.5 Transport Routes

Motorways, national primary and national secondary roads were identified within the LVIA Study Area. The visual baseline exercise determined that most visibility of the proposed turbines will occur within 5km of the proposed turbines. Therefore, regional roads within 5 km were included in the visual baseline exercise. Transport routes (regional road and local roads) within 3-5km (3km in the case of local roads and 5km in the case of regional or national roads) were also assessed as part of the route screening analysis included in Section 14.3.3.

Table 14-11 (below) lists the transport routes and the geographical extent of theoretical visibility upon each section of the identified transport routes as illustrated in the Visual Baseline and ZTV Map. On site appraisals determined that in most instances there will be limited visibility from large portions of these transport routes where the ZTV has indicated full theoretical visibility due to local topography and roadside screening. For the purpose of viewpoint selection, locations were identified where most open visibility is likely to occur on these transport routes.

Table 14-11 Transport Routes within the 20km LVIA Study Area

Transport Route	Description	Theoretical Visibility	Screened In?
Up to 5km			
R328	A road connecting Ballindine on the N17 to Moylough on the N63, passing within 1km of the nearest proposed turbine.	Primarily full theoretical visibility along this route within the LVIA Study Area.	Yes
5 to 10km			
N83	A national secondary road that runs (north to south) through Cloonfad, Dunmore, Tuam and then on south to Galway City, passing within 6.1km of the nearest proposed turbine.	Primarily full theoretical visibility along this route within the LVIA Study Area.	Yes
N63	A national secondary road linking the M17 with Moylough and County Roscommon further to the east, passing within 9.2km of the nearest proposed turbine.	Full theoretical visibility where it passes closest to the proposed turbines.	Yes
N17	A national primary road running through Ballindine just outside the north-west of the LVIA Study Area to Tuam, passing within 9.7km of the nearest proposed turbine.	Intermittent theoretical visibility along the stretch of road closest to the proposed turbines with more consistent stretches of theoretical visibility outside of 10km from the Site.	Yes
10 to 20km			
M17	The M17 motorway crosses the south-western border of LVIA Study Area near Annagh Cross	Primarily full theoretical visibility along this route within the LVIA Study Area.	Yes

	and travels northward to Tuam, passing within 13.5km from the nearest proposed turbine		
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14.5.2 Visual Receptor Preliminary Assessment

After identifying the visual receptors in the LVIA Study Area based on designated protected views and scenic routes, settlements, recreational routes, and recreational, cultural heritage, and tourist destinations and transport routes, a preliminary assessment was carried out to screen out visual receptors that will not be impacted by the Proposed Project.

Zone of theoretical visibility mapping and visibility appraisals conducted on site during surveys undertaken in 2020, 2021, 2022, 2023, and 2024 were used to scope out visual receptors from further assessment. In the case of the visual receptors shown in Table 14-12 below, views towards the turbines were either entirely screened or substantially screened from view. In some cases, the factor of distance to the Site as well as the directional focus of views was included in the screening assessments and was a contributing factor precluding these locations being selected as viewpoints.

Directions have been indicated for designated scenic views and scenic routes by either written text or on accompanying maps in the relevant county development plans. Therefore, the viewing points, protected views and scenic routes within the LVIA Study Area, listed in Table 14-12 that are not directed towards the proposed turbines have been screened out from further assessment.

Table 14-12 Visual Receptors **Screened Out** for further assessment

Visual Receptor Category	Visual Receptor
Designated Protected Views and Scenic Routes	<ul style="list-style-type: none"> G-V39 R-SR9
Settlements	<ul style="list-style-type: none"> Cloonfad Irishtown Garranlahan Ballinlough
Recreational, Cultural Heritage, and Tourist Destinations	<ul style="list-style-type: none"> Richmond Esker Nature Reserve Kilbannon Church Ruins Tuam Golf Club Mountbellew Golf Club Knockma Wood Kiltullagh Church Glinsk Castle
Recreational Routes	<ul style="list-style-type: none"> Mountbellew Demesne Walking Path Monivea Historic Trail Suck Valley Way Cloonfad Walking Loops
Transport Routes	None Screened Out

Following the pre-assessment exercise, the visual receptors shown in Table 14-13 below are screened in and will be assessed further in the assessment below (Section 14.7). In order to inform the assessment, individual viewpoints were selected at or along those receptors, from which photomontages were

produced. In some instances, a visual receptor may be represented by a photomontage viewpoint that is closer to the Proposed Project but of similar geographical location and orientation.

Photomontage imagery was captured from many locations in the LVIA Study Area. 18 No. Photomontage viewpoints were selected for the final EIAR Volume 2: Photomontage Booklet. Before selection of the final viewpoints, early-stage photomontages (photowires) were produced from almost all of the visual receptors listed below. In some instances, the Photowires indicated limited visibility of the proposed turbines and were not taken forward for inclusion in the final Photomontage Booklet. These early-stage photomontages and the visual receptors they represent are presented in Appendix 14-5 and some will be included and discussed in text during the assessments included in Section 14.7 of this chapter. The location of Photowire viewpoints in Appendix 14-5 are marked as green icons in Figure 14-21 below, labelled alphabetically (e.g. A to K). The Photowire viewpoints are labelled PWA – PWK throughout this chapter.

Table 14-13 Visual Receptors Screened In for Further Assessment

Visual Receptor Category	Description	Viewpoint No.
Designated Protected Views and Scenic Routes	G-V42	VP1
Settlements	Dunmore	VP2
	Glenamaddy	V1
	Tuam	VP3, VP4
	Moylough	PWD, VP8
Recreational Routes	Cloonfad Walking Loops	PWC
Recreational, Cultural Heritage, and Tourist Destinations	Carrownagappul Walk – The Living Bog	PWB
Transport Routes	R328	VP6, VP5, VP12
	N83	VP7
	N63	VP4
	N17	VP7, VP4
	M17	VP3

The viewpoints listed above were selected according to the key visual receptors identified in the visual baseline where open visibility of the proposed turbines is likely to occur occurs.

14.5.3 Visual Amenity from Residential Receptors

During multiple surveys conducted in 2020, 2021, 2022, 2023, and 2024 visibility appraisals determined that most visibility of the proposed turbines will occur within 5 km of the proposed turbines. This area is a relatively sparsely populated, modified working landscape, however, it is a settled landscape and residential housing is organised along the local road network as well as small settlement clusters around local crossroads and junctions. 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. For the purposes of this Chapter and in the context of the EIAR, it would be a disproportionate measure to capture imagery, produce photomontages and assess visual effects from every residential dwelling where the proposed turbines are likely to be visible. Several photomontage viewpoint locations representing residential properties located in close proximity to the Proposed Project were selected for inclusion in the photomontage booklet and are assessed in Appendix 14-3 and discussed later in this chapter. The following viewpoints are located in proximity to residential receptors and settlement centres within 5 km from the proposed turbines.

- VP9 – townland of Kilmurry
- VP15 – townland of Killavoher
- VP5 – townland of Timadoolaun
- VP6 – townland of Kippaunagh
- VP10 – townland of Mahanagh
- VP11 – townland of Brackloon
- VP12 – townland of Gorteen
- VP18 – townland of Ballyedmond
- VP16 – townland of Cloonagawnagh
- VP17 – townland of Cloonagawnagh

The impact of the proposed turbines on residential visual amenity is discussed in detail in Section 14.7.

14.6 Cumulative Context

In terms of cumulative landscape and visual effects, other wind energy projects are of primary focus, as only these would be described as very tall vertical elements in the landscape and have greatest potential to give rise to significant cumulative effects. A long list of all applications considered by each of the different disciplines in their cumulative impact assessment are included in Appendix 2-3. There is no potential for Significant cumulative impacts from a landscape and visual perspective in relation to the non-wind energy applications listed in Appendix 2-3. The purpose of this section is to identify all wind farm developments in the LVIA Study Area which potentially contribute to assessment of cumulative and in combination landscape and visual effects. This 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. This chapter also assesses the Proposed Project in combination with the *'likely future receiving environments'* (EPA, 2022) which includes all existing and permitted wind farm developments in the LVIA Study Area.

The effects reported both in this chapter and within the assessment appendices (Appendix 14-2 – LCA Assessment Tables; Appendix 14-3 – Photomontage Assessment Tables) uses appropriate and logical narrative to discuss cumulative interactions between the Proposed Project and all other wind energy developments.

Other wind energy developments within 20km of the Proposed Project were identified by a search of relevant online Planning Registers, reviews of relevant EIAR (or historical EIS) documents, planning application details and planning drawings, and served to identify past and future projects, their activities, and their environmental impacts. 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 have been constructed.

A variety of projects exist within differing stages of the wind farm life cycle (existing, permitted and proposed). All wind farm developments in the LVIA Study Area are identified in this section and within one of the following categories:

- **Existing** – Existing wind energy developments currently operational in the baseline landscape at the time of conducting this LVIA;

- **Permitted** – Permitted wind energy developments, permitted (consented) at the time of conducting this LVIA. These developments have a high probability of being operational in a future receiving landscape.
- **Proposed** - All well-developed wind farm proposals with project specifications in the public domain at the time of conducting this LVIA. Cumulative effects between the Proposed Project and the other proposed developments within this category is more uncertain and is reliant on an outcome of the planning and consenting system.

These categories are a useful guide to enable understanding and structure when viewing the photomontage booklet and identification of developments in this section. However, irrespective of how a development is categorised, the assessments of cumulative landscape and visual effects includes all wind farm developments.

Presentation of Cumulative Wind Farms in the Photomontage Booklet

A description of how these various cumulative categories are presented in the photomontage booklet is comprehensively reported in Section 1.3.2.2 of the Appendix 14-1 – *LVIA Methodology*. All existing turbines are presented in the baseline view and accompanying wireline. The proposed view with cumulative shows all existing, permitted and proposed turbines.

At the time of writing, it is noted that a public website detailing, at a high level, a proposal for 11 no. proposed turbines at Shancloon and adjacent townlands, Co. Galway, with an approx. tip height of 150m – 180m, to be located approx. 19.9 km northwest of the Site at its closest point. Coordinate details for the proposed turbines are not publicly available although a map of the indicative turbine locations is available.

The existing, permitted and proposed wind turbines present within the LVIA Study Area are listed in below in Table 14-14 below.

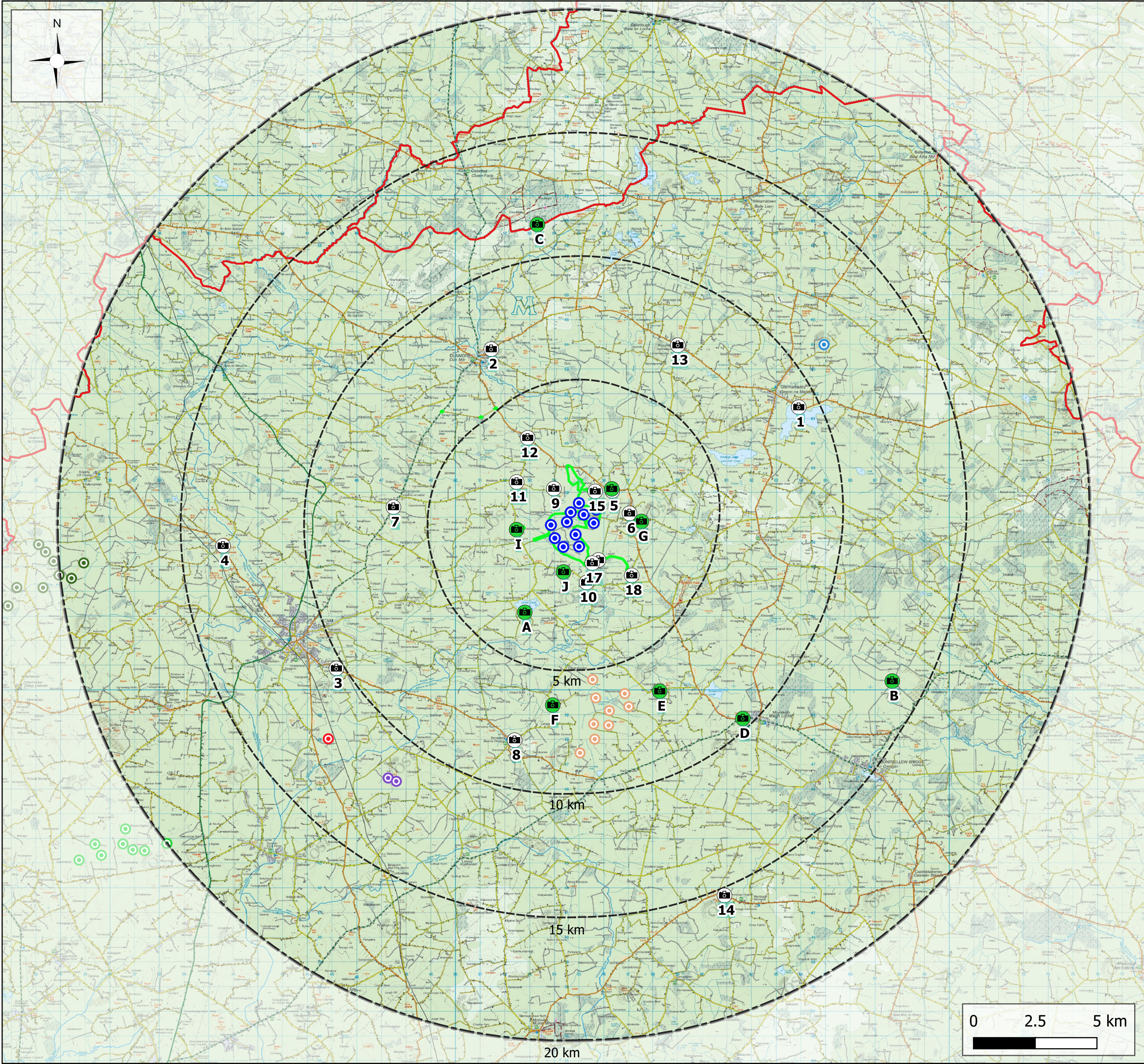
Table 14-14 Other existing, permitted and proposed wind farms within 20km of the proposed turbines.

Other Wind Farms	Status	No. of Turbines	Distance from the nearest turbine of the Proposed Project	Tip Height and Blade Dimensions
Cooloo Wind Farm	Proposed	9	5.3km	Tip Height 180m; Rotor Diameter 162m
Clooncon East Wind Turbine	Permitted	1	11.3km	Tip Height 89.95m; Rotor Diameter 70.5m
Clonlusk Wind Farm	Operational	2	11.6km	Tip Height 119m; Rotor Diameter 82m
Cloonascragh Wind Turbine	Permitted	1	12.3km	Tip Height 168m; Rotor Diameter 136m
Laurclavagh Wind Farm	Proposed	8	19.9km	Tip Height 185m; Rotor Diameter 163m

Other Wind Farms	Status	No. of Turbines	Distance from the nearest turbine of the Proposed Project	Tip Height and Blade Dimensions
Shancloon	Proposed	11	19.9km	Tip Height 150m-180m: Other Dimensions Unknown

There are 6 no. existing, permitted, and proposed wind farms within a 20-kilometre radius of the proposed turbines, listed in Table 14-14. The locations of the 6 no. wind farms can be identified on the Cumulative Context Map, Figure 14-20. If the turbines are theoretically visible, all turbines are included within the proposed photomontage imagery in the Photomontage Booklet. The exceptions to this are the proposed Shancloon turbines, which considering the lack of publicly available dimensions aside from a wide-ranging tip height (e.g. no hub height and rotor diameter), and the distance of the proposed Shancloon turbines from the turbines of the proposed project (19.9km at their closest point), are not included within the Photomontage Booklet. However, potential cumulative effects (in an uncertain scenario where the proposed Shancloon wind farm secures planning permission and is built) are comprehensively assessed below in Section 14.7.3, including an assessment the likely levels of cumulative visibility of the proposed Shancloon turbines and the turbines of the Proposed Project.

An assessment of the cumulative landscape and visual effects are included in the assessment of effects detailed in Section 14.7.



Map Legend

- County Border
- LVIA Study Area
- EIAR Site Boundary
- Proposed Turbine Locations
- Photomontage Viewpoint Locations
- Photowire Viewpoints
- Other Wind Turbines
 - Clonlusk Wind Farm (Existing)
 - Clooncon East Wind Turbine (Permitted)
 - Cloonascragh Wind Turbine (Permitted)
 - Cooloo Wind Farm (Proposed)
 - Laurclavagh Wind Farm (Proposed)

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Drawing No.

Figure 14-20

Drawing Title

Cumulative Context

Project Title

Clonbern Renewable Energy Development

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	180740	09.01.2024	JS	JW



14.7 Likely or Significant Landscape and Visual Effects

All elements of the Proposed Project are assessed in this Chapter, however, as detailed in Section 14.1.3, the focus of assessments throughout the Chapter is upon the turbines of the Proposed Project, as they are deemed to be the essential aspect of the proposal under assessment from a landscape and visual perspective.

14.7.1 Do-Nothing Scenario

If the Proposed Project was not to proceed, no change would be made to the current land-use practise of agriculture, peat extraction, and commercial forestry. Should this occur, the landscape and visual impact would be neutral in the context of this EIAR.

If the Proposed Project were not to proceed, the opportunity to capture part of Galway's valuable renewable energy resource would be lost, as would the opportunity to contribute to meeting Government and EU targets for the production and consumption of electricity from renewable resources and the reduction of greenhouse gas emissions.

If the Proposed Project were not to proceed, the opportunity to rewet a portion of the bog on Site would be lost. Please see Appendix 6-6 Biodiversity Management and Enhancement Plan for details.

14.7.2 Construction Phase Effects

It is estimated that the construction phase of the Proposed Project will last between 18-24 months. The construction of the development will involve the construction of 11 turbines with a blade tip height of 180m and all associated works, and a 220kV electrical substation and associated works including underground cabling and two Line Cable Interface Masts (End Masts). Construction phase effects also include the associated effects resulting from the movement of construction and turbine transport vehicles into and out of the Site, to allow the construction of the turbines, roads, and associated elements.

14.7.2.1 Landscape Effects - Proposed Project

The earthworks such as cut, and fill required to facilitate construction of the Proposed Project will have a direct effect on the landscape and have the greatest potential for landscape effects. Where excavation is required, 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 construction. Excavation will be visually contained by the surrounding forestry and landform and will not be visible from the wider LVIA Study Area. The construction activities may potentially cause temporary impacts on the landscape such as the creation of temporary structures, dust, and noise. In general, it is considered that the construction phase will have a Short-Term, Moderate, Negative effect in terms of direct landscape effects.

The construction works will be temporary/short-term in nature and completed as soon as practically possible. All construction activities will follow best practise methods to reduce impacts upon the environment and landscape of the Site. Further details are contained in the Construction and Environmental management Plan (CEMP) contained in Appendix 4-4 of this EIAR.

14.7.2.2 Visual Effects - Proposed Project

The most substantial visual effects will arise from requisite construction activities such as building tower sections and erecting the turbines. There will be temporary scenarios during the construction phase where the proposed turbines will be partially constructed and may be seen as either standalone 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. These construction activities will cause Slight, Short-Term Negative visual effects.

General housekeeping measures, necessary for Health & Safety requirements, will ensure that the active construction areas will be kept tidy, mitigating localised visual impacts during the construction phase. A detailed description of the Proposed Project is included in Chapter 4 of this EIAR. The following sections assess the visual effects associated with the construction phase of the other (non-turbine) components of the Proposed Wind Farm.

14.7.2.3 Ancillary Project Elements - Proposed Wind Farm

14.7.2.3.1 Site Access Roads and Hardstand Areas

The proposed access roads and hardstand areas are flat features and will be most visible within their immediate surroundings, within the Site, hence no Significant impacts will arise within the landscape. Every use will be made of the existing farm and access tracks on the Site. Some tracks will be upgraded appropriately whilst several stretches of new internal roads will need to be constructed. The landscape and visual impact of the construction of these flat and hard surfaces will be very localised. The visual effects arising from the access roads and hardstand areas are considered to be highly localised, Short-Term, and Slight.

14.7.2.3.2 Peat and Spoil Management Areas

To manage any excess overburden generated through construction activities, spoil management areas have been selected within areas suitable for spoil management. The effects of spoil management areas will be very localised within the Site therefore, the creation of spoil management areas will have a temporary negligible effect on the landscape.

14.7.2.3.3 Turbine Delivery Route (TDR) Accommodation Works

The proposed transport route for the proposed abnormal loads has been the subject of a route assessment to determine if any works are required along its length. Full details of the assessment are included as part of the traffic impact assessment set out in Section 15.1 of this EIAR and summarised below.

To facilitate the transportation of turbine components, minor accommodating works are required at three locations as detailed in Section 4.4.3 of this EIAR. At Ballagh West, Lissybroder and Carrowntryla the works comprise accommodation areas adjacent to the L6466 local road to reduce the turning area required by abnormal loads.. Please see Chapter section 15.1 of this EIAR for further details.

The landscape value and sensitivity of these temporary works areas are deemed to be low and change to occur will be highly localised. These works are likely to cause Not Significant, Negative Landscape and Visual Effects.

14.7.2.3.4 Borrow Pit

It is proposed to develop 1 no. on-site borrow pit as part of the Proposed Project which is located in the western region of the Site, as detailed above in Section 14.4.2. The borrow pit will provide the majority of all rock and hardcore material required during construction of the wind farm development. The

extraction of material from the borrow pit is a construction phase activity only, done through means of rock breaking and blasting. The effects of the borrow pit will be highly localised and the landscape value and sensitivity of the borrow pit location is deemed to be Low. The nature of a borrow pit will entail the decrease in vertical elevation of the proposed excavation area. The existing area itself, as seen in Figure 14-14 above, is a greenfield site where previous excavation work is evident in the immediate surroundings, where the proposed borrow pit is bordered by higher elevated ridges to the south. The vegetation and walls along this ridge reduce visibility from south of this proposed borrow pit. While local elevations of the undulating landscape reduce visibility from the north of this lower elevated proposed site. Local residential receptors are deemed to be of High sensitivity, with the closest residential receptor located 170m south of the proposed borrow pit, and the closest residential receptor to the north 500m away from the proposed borrow pit. The magnitude of change is deemed to be negligible given the nature of the vertical extent downwards into the ground and the resultant lack of visibility, therefore there will be a Slight residual effect. The topography and presence of vegetation provide ample visual screening for views from the residential receptors towards the proposed borrow pit.

The local road which runs perpendicular to the proposed borrow pit is deemed to be of Low sensitivity given its size and low traffic numbers. This local road has partial visual screening north of the proposed borrow pit, though roadside vegetation and the local topography. On approach from the south along the local road, there is less vegetative visual screening, however the local undulations, as discussed in relation to the residential receptors, reduce visibility into the proposed borrow pit. The greatest visibility from this local road is from a relatively short section of road alongside the existing site entrance. It is also noted that a cumulative quarry project (Pl. Ref. 24/60013, see Appendix 2-3) is located on the opposite side of the road as the proposed borrow pit location. This will be a larger development than the proposed borrow pit and while it will result in some cumulative visual effects as a result of views of quarry type developments on either side of the local road, it is noted that 544m of the proposed borrow pit will be planted along the northern, western and southern perimeter during the operational phase of the Proposed Project to reduce the landscape and visual impact of the proposed borrow pit (see Chapter 4 for further details). This planting will substantially reduce visibility of the proposed borrow pit following the Construction Phase, and any cumulative effects will be limited to short-term visual effects on a receptor (a short stretch of the local road) of Low sensitivity. Given the limited visibility, the magnitude of change is deemed Slight (including cumulative visual effects), therefore there will be a Slight residual visual effect.

14.7.2.3.5 **38kV Line to Cable Interface End Masts**

As seen on Figure 4-12 of Chapter 4, there are two 16.2m high line to cable interface end masts proposed as part of the Proposed Wind Farm. These masts are of a height where they will be visible from their immediate surroundings, however, from beyond the nearest field or adjacent roadway, there is unlikely to be any substantial visibility of the two masts given the level of visual screening in the landscape. Therefore, no Significant impacts will arise within the landscape. The landscape and visual impact of the construction of these masts will be very localised, given their setback from sensitive receptors visual. The visual effects arising from the masts are considered to be highly localised and Slight.

14.7.2.4 **Ancillary Project Elements - Proposed Grid Connection**

14.7.2.4.1 **Grid Connection Underground Electrical Cabling Route – Construction Phase Effects**

The underground electrical cabling route will be located underground, therefore the greatest effects attributed to this element of the Proposed Project will occur during the construction phase. The underground electrical cabling route works are to be carried out partially along existing public road corridors. The construction phase of the underground electrical cabling route will be short-term, localised, and transient in nature, as the works move along the cabling route. The works will include

roadside vegetation removal, soil/road surface stripping, excavation, and other associated construction activities. These activities will cause temporary change to the physical landscape along the underground electrical cabling route. Changes will be localised to the immediate environment surrounding the grid connection and will not permanently affect the character of the landscape setting or visual amenity of the wider area. The proposed grid connection underground cabling works are likely to cause Slight Temporary, Negative landscape and visual effects.

The following measures will be implemented to mitigate effects during the construction phase and operational phase of the Grid Connection underground electrical cabling route:

- In all circumstances, excavation depths and volumes will be minimised, and excavated material will be re-used where possible.
- Where the cable trench is to be located in the road verge, subsoil should be piled on site and re-used after cabling works. Should any medium planting be removed, it should be replaced with the same or similar species whenever it is not possible to salvage and reinstate.
- Any areas of bare soil remaining after the landscaping phase will be seeded as soon as possible with a grass seed mix to minimise sediment run-off.

The underground grid connection cable route will be connected to 2 no. End Masts (lattice type towers) which will be constructed adjacent to the existing 220kV overhead transmission line located approximately 1.7km southeast of the substation. These 2 no. End Masts comprise the only visible elements of the proposed connection between the on-site substation and the OHL. The addition of the End Masts will be of similar scale to the existing towers comprising the OHL, the construction of these End Masts will not substantially alter the character of the landscape or visual amenity of the wider area. The proposed addition of the End Masts to facilitate the connection to the OHL is likely to cause Slight Negative landscape and visual effects during the construction phase. Landscape and visual effects related to these End Masts in the operational phase are assessed fully below in Section 14.7.3, with the aid of a photomontage.

14.7.2.4.2 **Proposed 220kV Substation and Operational Access Road**

Landscape and visual effects will occur as the proposed substation is built due to the earthworks and requisite construction activities; these will cause a substantial but localised change to views in the immediate area. As established in the baseline investigations, the proposed substation is located on a site encompassing sections of a grassland field. To the southwest of the proposed substation is a large block of commercial plantation forestry which provides screening of views in this direction. The proposed substation is located approximately 475m from the nearest residential receptor, which is located on the other side of the commercial forestry. The majority of the construction activities associated with the proposed substation and operational access road will not be visible from outside of the Site and so will be highly localised. Once the upper parts of the substation building itself is being constructed this may be visible from the wider area. Visibility of the substation will be limited from receptors in the wider area due to the screening effect from the vegetation bordering the substation and in the intervening space. Therefore, visual effects are likely to be highly localised, Negative, Temporary and will be Slight. Landscape and visual effects related to the proposed substation during the operational phase are assessed fully below in Section 14.7.3, with the aid of photomontages.

14.7.3 **Operational Phase Effects**

14.7.3.1 **Landscape Effects – Proposed Project**

14.7.3.1.1 **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 within the landscape of the Site. There will be a substantial magnitude of

change to the landscape in localised areas within the Site where the landscape is materially altered (infrastructure footprint).

In a local context, the Site is located in a modified remote working landscape of local value. Cutover peat and commercial forestry are the dominant landcover features of the relatively flat landscape within the Site itself. The landscape value and sensitivity of the Site was deemed to be Low in Section 14.4.2.2 above. Low sensitivity balanced with a substantial magnitude of change amounts to long-term landscape effects of Moderate significance upon the physical fabric of the landscape of the Site (See LVIA Methodology, Appendix 14-1). 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 of Moderate significance.

Mitigation of Landscape Effects within the Landscape of the Site

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

- The internal site road layout makes use of the existing roads wherever possible, to minimise the requirement for new tracks within the Site.
- To minimise cut and fill activities required to construct the Proposed Project, the proposed access roads, 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 'dressing' the edges of the development infrastructure during reinstatement/regrading, including that of the spoil management areas. 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 Project has been designed to ensure minimal loss of valuable landscape receptors and biodiversity corridors such as woodland and hedgerows along field boundaries.

Residual Landscape Effects

Once the Proposed Project is operational and construction is complete, the landscape will naturally re-vegetate around the Proposed Project footprint with the aid of mitigation measures (e.g., retention of natural seedbank during soil stripping). Considering the mitigation measures above, residual effects upon the landscape of the Site are deemed to be Slight.

14.7.3.1.2 Landscape Character Areas – Landscape Effects

An assessment of the effects on landscape character was undertaken for the Landscape Character Areas within the LCA Study Area (within 15km from the proposed turbines) that were identified as having potential for visibility of the proposed turbines in the Landscape Receptor Preliminary Assessment previously in Section 14.4.4.2. The individual assessments for each LCA are summarised in Table 14-15 below and are included in detail in Appendix 14-2 in this EIAR, 'Landscape Character Assessment Tables'. The assessment criteria and grading scales which aided the assessment of landscape effects are detailed in Section 1.5.2 of the methodology appendix – Appendix 14-1.

Table 14-15 Landscape Character Area Assessment Summary

Landscape Character Area	LCA Sensitivity to Wind Farm Development	Magnitude of Change	Residual Effect - Significance of Effect on Landscape Character (EPA, 2022)
G – LCU 5e North River Clare Basin Unit	Low	Substantial	Moderate
G – LCU 5c Springfield Basin Unit	Low	Moderate	Slight
G – LCU 5b Castlegar Basin Unit	Low	Slight	Not Significant
G – LCU 5d Slieve Dart Unit	Medium	Slight	Slight

As demonstrated in Table 14-15, no Significant landscape effects are likely to occur on landscape character in the LVIA Study Area. The Proposed Project is primarily located in LCU 5e North River Clare Basin Unit. LCU 5e has a Moderate landscape character effect as a result of the Proposed Project. Part of the EIAR Site Boundary also falls within LCU 5c Springfield Basin Unit, where a Slight residual landscape character effect was deemed to arise. The remainder of the LCAs screened in for full assessment were deemed to have residual landscape effects of Slight or Not Significant. These effects are fully assessed and detailed in Appendix 14-2.

Discussion of Landscape Effects on LCAs

The largest magnitude of change will occur within LCU 5e North River Clare Basin Unit as the proposed turbines will materially change the landscape of this LCA. The proposed turbines are likely to be most visible from areas within 5km of the Site and elevated areas within this LCA. As shown on the ZTV, majority of theoretical visibility is evident within 5km of the nearest proposed turbine, beyond 5km, there is primarily full theoretical visibility of the proposed turbines with some large patches of no theoretical visibility. On-site appraisals determined that there would be more limited visibility of the proposed turbines in parts of this LCA beyond 5km from the Site due to the relatively flat topography and screening in the landscape which limit views of the turbines. There are large parts of this LCA where there will be no visibility of the Proposed Project, or where the Proposed Project will be seen as a small background feature, and so the greatest effects on landscape character will be localised to parts of the LCA in close proximity to the Site (i.e. within 5km of the Site).

LCU 5e is located within the landscape character type 'Northern Galway Complex' which has a rating of Low sensitivity in the GCDP. It is noted in *Appendix 4 Landscape Character Assessment* that the "open countryside offers frequent extensive panoramic views from local high points." There are a number of photomontage viewpoints located at various points throughout this LCU where elevated vantage points allow for visibility of the proposed turbines. These include VP8, VP3, and VP4 which are all located between 8-14km from the nearest proposed turbine. From all these viewpoints the proposed turbines appear as small background elements, with substantial screening provided by vegetation existing in the intervening space. This effect becomes more and more pronounced further from the Site, as evidenced by the visibility demonstrated in VP4 as compared to VP8. It is also notable that the local high points where these VPs have been captured from show views over a rural modified working landscape, none of which are designated as protected views within the GCDP. These locations show the most open visibility of the proposed turbines that will be available from areas within the LCU outside of 5km of the proposed turbines, with views in general being more heavily screened than what is represented by these photomontages. In general, there will be no or very limited views of the Proposed Project from parts of LCU 5e beyond 5km of the proposed turbines.

There are numerous photomontage viewpoints located within 5km of the proposed turbines, within this LCU (5e North River Clare Basin Unit). VP9, VP15, VP5, VP6, and VP10 are all located within 1.5km of the nearest proposed turbine within this LCU. From this distance the proposed turbines will largely be visible within the landscape and will alter the character of the landscape substantially through the introduction of a large renewable energy development into views of the rural agricultural landscape. Further from the proposed turbines, but still within 5km, the Proposed Project will occupy a smaller horizontal and vertical extent within views of the landscape and will better take advantage of screening provided by vegetation common in the landscape type, although the proposed turbines will be seen to a large degree still and will have a substantial impact on the character of the landscape from these locations (see VP11)

It is also noted that the Wind Energy Strategy for County Galway designates large areas of ‘Acceptable in principle’ and ‘Open to Consideration’ in this LCU, including within the Site itself. Siting of the proposed turbines is thus plan-led and in the Wind Energy Strategy for County Galway (updated as of the 2022-2028 GCDP) it is clearly envisioned that wind turbines will be seen as features within this LCU. Overall, as set out in Appendix 14-2, a ‘Moderate’ effect on the landscape character of this LCU is likely to occur as a result of the Proposed Project, with effects on landscape character primarily limited to areas within 5km of the proposed turbines. It is also noted in relation to LCU 5e that the LCA assessment tables contained within Appendix 14-2 include potential cumulative landscape effects within the determination of residual significance in those tables. Cumulative landscape effects are also discussed in the following section below.

Two other LCUs are located within 5km of the nearest proposed turbine. Firstly, LCU 5c Springfield Basin Unit is located only 100m north of the nearest proposed turbine, with part of the EIAR Site Boundary located within this LCU. LCU 5c is also located within the landscape character type ‘Northern Galway Complex’ which has a rating of Low sensitivity in the GCDP. Again, it is noted in *Appendix 4 Landscape Character Assessment* that the “*open countryside offers frequent extensive panoramic views from local high points.*” VP13 and VP1 are both located outside of 5km of the nearest proposed turbine within this LCU. VP13 is representative of the type of view available from these distances from within this LCU, where there is no screening in the direction of the proposed turbines (which is the case for large parts of this LCU where no visibility of the proposed turbines will occur). From this viewpoint the proposed turbines are seen as relatively small features in the background of the view, with a minimal effect on the landscape character of the area. From locations within 5km of the nearest proposed turbine, views of the Proposed Project will be similar as to that described in relation to LCU 5e previously, with turbines largely visible within the landscape which will alter the character of the landscape substantially. However, this effect is localised to the limited part of the LCU that is located within 5km of the nearest proposed turbine. Even from locations within 5km of the Site, within this LCU, there will be high levels of screening of the proposed turbines, notable from the section of the R328 regional road located within the LCU. VP12 shows one of the most open views of the proposed turbines available from along this route, with the turbines still partially screened. Views will be momentary along this route, as demonstrated by the route screening analysis presented in Section 14.3.3 above. It is again noted that the Wind Energy Strategy for County Galway designates large areas of ‘Acceptable in principle’ and ‘Open to Consideration’ in this LCU. It can therefore be said that views of proposed turbines are plan-led and in the Wind Energy Strategy for County Galway (updated as of the 2022-2028 GCDP) it is clearly envisioned that wind turbines will be seen as features within, and adjacent to, this LCU. Overall, as set out in Appendix 14-2, a ‘Slight’ effect on the landscape character of this LCU is likely to occur as a result of the Proposed Project, with effects on landscape character primarily limited to areas within 5km of the proposed turbines.

The two other LCUs assessed in Appendix 14-2 are, for the vast majority (excepting a small part of LCU 5b), located beyond 5km from the nearest proposed turbine. From these distances views of the proposed turbines are generally only available from local high points, with consequently a more limited geographical spread of the effects on the landscape character of these LCUs arising as a result of the Proposed Project. LCU 5d is more dramatically undulating than the other LCUs being discussed here, in particular with the presence of Slieve Dart to the north of the LCU. Photowire 55, seen in Appendix 14-5, demonstrates the expected level of visibility from certain elevated sections of Slieve Dart, which is

located approximately 11.5km north of the nearest proposed turbine. At this distance, the proposed turbines are viewed as within a separate landscape character unit and consequently the effects on landscape character of this LCU, while still present, are mitigated. As noted in Table 14-15 above and assessed fully in Appendix 14-2, a Slight effect on landscape character was deemed to arise in relation to this LCU. A Not Significant effect on landscape character was deemed to arise in relation to LCU 5b.

14.7.3.2 Discussion of Cumulative Landscape Effects – Proposed Project

Cumulative impacts on the character of the wider landscape are most likely to occur as a result of the proposed turbines, where they might be visible in conjunction with other wind farm developments. A description of the cumulative visual interactions between the proposed turbines and other cumulative projects in the LVIA Study Area is included in the photomontage assessment tables contained in Appendix 14-3. A comprehensive assessment of likely visual effects arising from the intervisibility of the Proposed Project and other wind farms is included in Section 14.7.3.4 – *Discussion of Cumulative Visual Effects*.

In a cumulative context, the Proposed Project is located within a relatively flat agricultural plain extending as far as Lough Corrib to the west, and to the River Shannon to the east. There is limited wind energy development existing at present within this landscape and within the LVIA Study Area, aside from the 2 existing Clonlusk Wind Turbines, and some permitted individual turbines, and the visibility of these turbines is restricted as a result of generally flat and heavily vegetated landscape. In this sense the landscape of the LVIA Study Area has capacity to absorb additional wind energy development without Significant effects on the character of the landscape. Wind energy developments do not dominate this landscape type and the addition of the Proposed Project will not substantially alter the baseline status of the landscape in this regard. There will be additional areas and locations where turbines will now be visible as a result of the Proposed Project, although again views will be intermittent as result of the flat terrain and vegetation in the landscape. The highest cumulative landscape effects will be localised to areas within 5km of the proposed turbines where visibility will be greatest. From locations beyond this, any views of the Proposed Project will be background views where the proposed turbines occupy a limited horizontal and vertical extent within views. In relation to the wider landscape, this area within 5km of the proposed turbines is relatively lower in terms of landscape sensitivity, given the presence of cutover peat bogs and commercial forestry as land uses. Therefore, cumulative landscape effects can be said to be limited to areas of lower landscape sensitivity in the LVIA Study Area and are concentrated in a landscape area which has capacity to absorb further wind energy development without Significant effects on its landscape character.

It is noted that the proposed (planning application not yet submitted) Cooloo Wind Farm is also sited within this landscape area, located 5.4km south of the nearest turbine of the Proposed Project. This proposal includes 9 no. turbines of similar scale to the turbines of the Proposed Project. In relation to the addition of the Proposed Project in an uncertain scenario where the proposed Cooloo Wind Farm is submitted to planning, consented, and constructed, there are likely to be some cumulative effects on landscape character arising. This includes views of turbines becoming common over an area including the area in proximity (within 5km) to the Site combined with views in the area surrounding the proposed Cooloo Wind Farm, which is located between 5-9km south of the nearest turbine of the Proposed Project. In this potential future scenario, this will result in a larger area within this part of the landscape where turbines will be visible. This larger cumulative area of visibility of turbines (including the Proposed Project and the proposed Cooloo Wind Farm) will be located in the northeastern part of LCU 5e. As noted in Appendix 14-2 (LCA Assessment Tables), these cumulative effects in an uncertain scenario where cumulative effects on the landscape arising from both the Proposed Project and the proposed Cooloo Wind Farm are reliant on an outcome of the consenting process. However, these potential cumulative effects have been incorporated into the determination of the magnitude of change and the determination of residual effects for the LCUs assessed in that appendix. No Significant effect on landscape character were deemed to arise in relation to these LCUs and this is similarly the case for cumulative landscape effects in general. The landscape of the LVIA Study has the capacity to

accommodate both developments, considering the sensitivity of the landscape assigned in the GCDP (this landscape type is assigned a Low sensitivity), the large areas of ‘Acceptable in principle’ and ‘Open to Consideration’ designation contained within the Wind Energy Strategy in the LVIA Study Area, this is again, plan-led development of wind energy in relation to cumulative landscape effects.

14.7.3.3 Visual Effects – Proposed Project

14.7.3.3.1 Selection of Photomontage Viewpoints

Photomontages were used to assess the visual effects arising as a result of the Proposed Project from 18 no. viewpoint locations, which are presented in the EIAR Volume 2: Photomontage Booklet. These 18 no. viewpoint locations are on the A0 Map – Appendix 14-4 LVIA Baseline Map and on Figure 14-21 below. The locations chosen for photomontages follow a detailed and extensive process including review of baseline information, site visits and high-quality photo taking at multiple locations within the LVIA Study Area. Many locations, which based on a desktop review had the potential for views of the Site, had complete intervening 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 Project.

Multiple on-site surveys and visibility appraisals conducted throughout 2020, 2021, 2022, 2023, and 2024 determined that visibility of the Proposed Project is greatest from the locations in close proximity to the Proposed Project due to the characteristics of the surrounding landscape. Due to this, viewpoint selection was particularly focused on locations proximate to the Site, 10 of the 18 final photomontage locations are located within 5km of 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 18 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 06/19, 2019). Photowires were produced from 10 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. These Photowires do not form part of the assessment of visual effects included in Appendix 14-3. However, 10 no. Photowires are presented within Appendix 14-5 and they are discussed later in this section of the Chapter to illustrate certain points. The location of Photowire viewpoints in Appendix 14-5 are marked as green icons in Figure 14-21, labelled alphabetically (e.g. A to K)

Note on VPs 16, 17 and 18

These viewpoints are included in order to ensure a comprehensive assessment of all elements of the Proposed Project, including the Proposed Grid Connection, with the proposed onsite substation shown in VP16 and VP17, and the proposed End Masts shown in VP18.

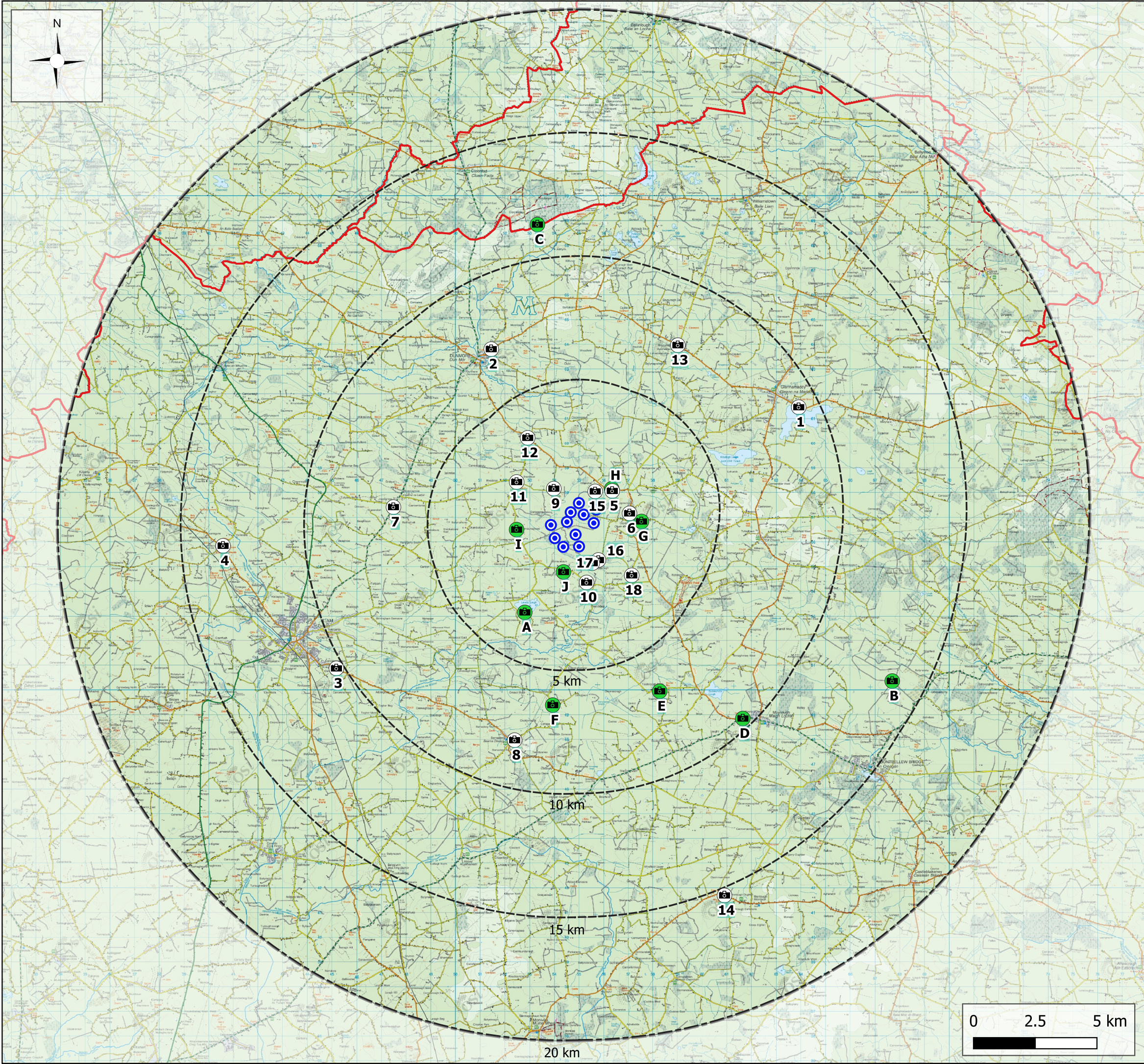
14.7.3.3.2 Summary of Photomontage Viewpoint Assessment – Appendix 14-3

Visual effects were assessed using the assessment methodology described in Appendix 14-1. Each viewpoint location is shown in Figure 14-21. The individual, comprehensive and detailed assessment from the 18 no. viewpoints are presented in Appendix 14-3 of this EIAR – Photomontage Assessment

Tables and summarised in Table 14-16 Summary of Viewpoints Impact Assessment Results below. Appendix 14-3 and Table 14-16 Summary of Viewpoints Impact Assessment Results should be read in conjunction with the photomontage booklet forming Volume 2 of the EIAR.

The visual effect of the Proposed Project was assessed from each viewpoint in terms of the sensitivity of the visual receptors, along with the magnitude of change, as recommended in the GLVIA3 (2013) guidelines. This, in conjunction with a detailed review of the photomontages themselves as well as the likely visibility of the Proposed Project 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 Project, 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 effects.



Map Legend

- County Border
- LVIA Study Area
- EIAR Site Boundary
- Proposed Turbine Locations
- Photomontage Viewpoint Locations
- Photowire Viewpoints

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Drawing No.

Figure 14-21

Drawing Title

Photomontage Viewpoint Locations

Project Title

Clonbern Renewable Energy Development

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	180740	2024-04-05	JS	JW



Table 14-16 Summary of Viewpoints Impact Assessment Results

VP No.	Description	Grid Ref.	Approx. distance & direction to nearest proposed turbine	Visual Sensitivity of Receptor(s) (at viewpoint)	Magnitude of Change	Residual Significance of Visual Effect
1	View from the Glenmaddy Turlough Picnic area in the townland of Mountkelly, located approximately 9.2km northeast of the nearest proposed turbine. This view is a designated viewpoint in the GCDP 2022-2028.	E: 563,869 N: 761,496	9.2km SW	High	Negligible	Slight
2	View from the R360 regional road leaving the village of Dunmore in the townland of Carrownaseer South, located approximately 7.2km from the nearest proposed turbine.	E: 551,414 N: 763,846	7.2km SE	Medium	Negligible	Imperceptible
3	View from the R332 regional road on the outskirts of Tuam in the townland of Carrownagarraun, located approximately 10.3km southwest of the nearest proposed turbine.	E: 545,142 N: 750,923	10.3km NE	Medium	Slight	Not Significant
4	Views from the R332 regional road in the townland of Pollacarrogune, located approximately 13km west of the nearest proposed turbine.	E: 540,552 N: 755,885	13km E	Medium	Negligible	Imperceptible
5	View from a junction on the R328 regional road in the townland of Timadooan, located approximately 1km northeast of the nearest proposed turbine.	E: 556,316 N: 758,106	1km SW	High	Moderate	Moderate
6	View from the R328 regional road outside Clonberne National School in the townland of Kippaunagh, located approximately 1.3km east of the nearest proposed turbine.	E: 557,015 N: 757,198	1.3km W	High	Substantial	Moderate

VP No.	Description	Grid Ref.	Approx. distance & direction to nearest proposed turbine	Visual Sensitivity of Receptor(s) (at viewpoint)	Magnitude of Change	Residual Significance of Visual Effect
7	View from the N83 national road in the townland of Rahogarty North, located approximately 6.4km west of the nearest proposed turbine.	E: 547,453 N: 757,451	6.4km E	Medium	Slight	Not Significant
8	View from a local road outside of Barnaderg in the townland of Knock, located approximately 8km southwest of the nearest proposed turbine.	E: 552,360 N: 748,018	8km NE	Medium	Slight	Slight
9	View from a local road in the townland of Kilmurry, approximately 1.1km northwest of the nearest proposed turbine.	E: 553,949 N: 758,199	0.9km S	High	Substantial	Significant
10	View from a local road in the townland of Mahanagh, located approximately 1.4km south of the nearest proposed turbine.	E: 555,276 N: 754,400	1.4km N	High	Moderate	Moderate
11	View from a crossroad of two local roads in the townland of Knockroe, located approximately 2.2km northwest from the nearest proposed turbine.	E: 552,444 N: 758,467	2.2km SE	Medium	Moderate	Moderate
12	View from the R328 regional road in the townland of Gorteen, located approximately 3.3km northwest of the nearest proposed turbine.	E: 552,891 N: 760,255	3.3km SE	Medium	Slight	Not Significant
13	Views from the R362 regional road in the townland of Cashel, located approximately 7.6km northeast of the nearest proposed turbine.	E: 558,973 N: 764,006	7.6km SW	Medium	Slight	Not Significant

VP No.	Description	Grid Ref.	Approx. distance & direction to nearest proposed turbine	Visual Sensitivity of Receptor(s) (at viewpoint)	Magnitude of Change	Residual Significance of Visual Effect
14	Views from the R339 regional road opposite the Menlough GAA pitch in the townland of Cloonmweelaun, located approximately 14.7km southeast of the nearest proposed turbine.	E: 560,863 N: 741,733	14.7km NW	Low	Negligible	Imperceptible
15	View from a local road in the townland of Killavoher, located approximately 769m northwest of the nearest proposed turbine. The view is captured from a small local road leading to the Site.	E: 555,624 N: 758,087	0.8km S	High	Substantial	Significant
16	View from a local road in the townland of Cloonagawnagh, located 940m east of the nearest proposed turbine, and 1.1km from the proposed onsite substation.	E: 555,756 N: 755,310	0.9km NW	High	Substantial	Moderate
17	View from a local road in the townland of Cloonagawnagh, located 837m southeast the nearest proposed turbines, and 868m from the proposed onsite substation.	E: 555,507 N: 755,184	0.8km NW	High	Moderate	Moderate
18	View from a local road in the townland of Ballyedmond, located 2.4km east of the nearest proposed turbine and approximately 185m from the nearest part of the proposed Line Cable Interface Masts.	E: 557,105 N: 754,690	2.4km W	Medium	Moderate	Moderate

The assessment of visual effects determined the residual significance of the visual effects to range from ‘Significant’ to ‘Imperceptible’, with the number of findings at each level of Significance listed in Table 14-17 below.

Table 14-17 Summary of Viewpoint Impact Assessment Results

Significance of Residual Visual Effect	Description	No. of Viewpoints
Profound	An effect which obliterates sensitive characteristics	0
Very significant	An effect, which by its character, magnitude, duration or intensity alters most of a sensitive aspect of the environment	0
Significant	An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment	2
Moderate	An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends	7
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities	2
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.	4
Imperceptible	An effect capable of measurement but without significant consequences	3

The significance of the residual visual effect was not considered to be “Very Significant”, or “Profound” at any of the 18 no. viewpoint locations. A residual effect of “Significant” was deemed to arise at two locations, with a residual effect of ‘Moderate’ deemed to arise at seven other locations, whilst all other viewpoints were assessed as resulting in Slight (2), Not Significant (4) and Imperceptible (3) residual visual effects.

The viewpoint assessment results (see Appendix 14-3) will be summarised and discussed in more detail in the following sections.

14.7.3.3.3 **Discussion of Visibility and Visual Effects on Specific Visual Receptors in the LVIA Study Area**

The assessment of visual effects uses photomontages shown in Volume 2 Photomontage Booklet, and discussion of these effects is aided by the photowires presented in Appendix 14-5. ZTV mapping is also a useful tool for screening receptors in and out (based purely on topography) and selection of photomontage viewpoints. The ZTV indicates vast areas of the LVIA Study Area where the Proposed Project will not be visible, as comprehensively discussed in Section 14.3. The following section discusses the visual effects arising at key sensitive visual receptors within the zone of theoretical visibility and screened in for assessment previously in Section 14.5 – *Visual Baseline*.

Designated Scenic Routes and Views

2 no. designated scenic routes and views were screened out for further assessment in Section 14.5 above as the ZTV indicated that there is no visibility and visibility during the site visit was difficult to establish due to screening by topography and vegetation. The remaining one designated protected view was brought forward for viewpoint assessment.

Protected View No. 42 – Glenamaddy Turlough (Map Ref G-V42)

This is a view of Local Significance, described in the GCDP as *“This view is from the Glenamaddy Turlough carpark and viewing area. The focus of this view is Glenamaddy Turlough. The wooded shores that form the background are an important feature of the view”* (Appendix 4, GCDP). This protected view has full theoretical visibility of the proposed turbines. VP1 is located at this viewpoint. As seen from the photomontage produced from this viewpoint, there is substantial screening of the turbines from this location with only one turbine hub visible. At this distance, and within the scale of the view and landscape type, the turbines appear well absorbed within the landscape and appropriately scaled, seen as small, insubstantial elements in the background of the view. The proposed turbines are seen above and behind the wooded shores of the Turlough and do not obstruct views of the Turlough itself or the wooded shores. While the proposed turbines are seen within the extent of the designated protected view, they are seen to the right-hand extent of a wide-ranging views of the Glenamaddy Turlough, which extends beyond the left-hand side of the photomontage. This viewpoint has been given a ‘High’ sensitivity on account of its designation as protected view in the GCDP. The magnitude of change was deemed to be ‘Negligible’. Overall, a Slight residual visual effect is deemed to arise.

Other Visual Receptors – Settlements

Of the 8 no. settlements identified in the LVIA Study Area, 4 no. were screened out in the ‘Visual Receptor Preliminary Assessment’, as the ZTV indicated that there was no theoretical visibility and/or no visibility of the Proposed Project could be established on site, or the settlements were located at such a substantial distance from the Proposed Project that Significant effects were deemed not likely to arise. Hence, viewpoints were selected for the remaining 4 no. settlements.

Dunmore – Dunmore is the closest settlement in the settlement hierarchy to the Site and has primarily full theoretical visibility of the proposed turbines. VP2 was captured to represent the most open views from the settlement. Due to the flat topography and distance from the nearest proposed turbine (approx. 7.1km), screening elements within the landscape in the form of commercial forestry and other treelines provide substantial screening of the proposed turbines from this location. This viewpoint has been given a ‘Medium’ sensitivity and the magnitude of change was deemed to be a ‘Negligible’. An Imperceptible residual visual effect was deemed to arise at this location, as detailed in full in Appendix 14-3. Plate 14-20 and Plate 14-21 show views towards the Proposed Project from other locations within the settlement, which demonstrate that the built environment and other screening factors within the landscape will provide substantial screening of the proposed turbines from Dunmore.



Plate 14-20 View to the southeast from Dunmore towards the Proposed Project



Plate 14-21 The built environment seen here greatly restricts visibility of the proposed turbines from within Dunmore.

Glenamaddy - Glenamaddy is the next closest settlement in the settlement hierarchy to the Site, located approx. 8.6km from the nearest proposed turbine, and has primarily full theoretical visibility of the

proposed turbines. VP1 was captured to represent the type of views of turbines available from the settlement. Due to the flat topography and distance from the nearest proposed turbine (approx. 8.6km), screening elements within the landscape in the form of treelines and hedgerows provide substantial screening of the proposed turbines from locations on the outskirts of the settlements. As seen in VP1, there will be visibility of the proposed turbines from these locations, but they will appear as small background elements within the view, partially screened by vegetation. From locations within the centre of the settlement itself, the built infrastructure of the small village will provide greater levels of screening. This viewpoint has been given a 'High' sensitivity on account of its designation as protected view in the GCDP, however the settlement of Glenamaddy is a lower sensitivity receptor than this. The magnitude of change was deemed to be 'Negligible'. A Slight residual visual effect was deemed to arise at VP1, as detailed in full in Appendix 14-3. This rating of significance is primarily related to the sensitivity of the viewpoint as a protected view in the GCDP (discussed in the previous section).

Tuam – Tuam is the largest settlement within the LVIA Study Area, located 11.5km southwest of the nearest proposed turbine. There are some areas of no theoretical visibility in the Town, primarily around the River Nanny. However, there are also large areas of full theoretical visibility throughout the remainder of the Town. From within the centre of the Town there will be limited external views in the direction of the Proposed Project as a result of screening from buildings and other built infrastructure. VP3 and VP4 represent views from Tuam, both are considered 'Medium' sensitivity viewpoints, with VP3 located on the outskirts of the settlement and VP4 located 3km northwest of the settlement along the R332 regional road. Views of the proposed turbines from these viewpoints are very limited, with the magnitude of change for VP3 deemed to be 'Slight', and the magnitude of change for VP4 deemed to be 'Negligible', with significance ratings of Not Significant (VP3) and Imperceptible (VP4), as discussed in full in Appendix 14-3. At this distance, views of the proposed turbines within the flat vegetated landscape will be background views of turbines where at least partial screening is provided by vegetation. In addition, at this distance the smaller topographical undulations present will have a greater screening effect than at locations closer to the Site.

Moylough – The settlement of Moylough is located 10.2km from the nearest proposed turbine. There is full theoretical visibility of the proposed turbines from Moylough although actual on-the-ground visibility was difficult to establish during Site visits. Views from within the town are limited as a result of screening from buildings, and localised topographical undulations prevent visibility of the proposed turbines from locations leaving the settlement to the west along the N63, which passes through the Moylough. Plate 14-22 below shows a view towards the proposed turbines from a cemetery located on the western extent of the settlement. As seen in the image below, localised topographical undulations and the woodland beyond prevent views of the proposed turbines from this location. Elsewhere along the road the roadside screening provides substantial screening in the direction of the proposed turbines. There may be some limited locations (e.g. from private residences or from localised elevated locations such as the mound seen in the midground of Plate 14-22) where visibility of the proposed turbines will occur from within Moylough. However, at this distance (>10km) and in this flat vegetated landscape, the proposed turbines will be visible only in the background of views, above and partially screened by treelines and hedgerows. There will be no Significant residual visual effects arising from Moylough in relation to the Proposed Project.



Plate 14-22 PWD demonstrating the lack of visibility of the proposed turbines from locations on the outskirts of Moylough.

Other Visual Receptors – Recreational Routes and Destinations, Cultural Heritage, and Tourist Destinations

Of the 12 recreational routes and destinations, cultural heritage and tourist destinations identified within the LVIA Study Area, 10 were screened out in the ‘Visual Receptor Preliminary Assessment’, as the ZTV indicated that there was no theoretical visibility and/or no visibility of the Proposed Project could be established on Site, including through the production of Photowires, which are shown in Appendix 14-5. The remaining two receptors are discussed below.

Cloonfad Walking Loops – this is a trail primarily passing through tracts of forestry located on Slieve Dart. Only small parts of the routes on the southern side of Slieve Dart have any theoretical visibility of the proposed turbines, and from the vast majority of the routes there will be no visibility of the proposed turbines. PWC is located along a part of the walking trail with theoretical visibility of the proposed turbines. As can be seen from this photowire, even from this elevated location along the trails, nearby vegetation elements provide substantial screening of the proposed turbines. Although this effect will differ depending on exact viewing location, there will be few locations where open unobstructed views of the proposed turbines are available. Considering this level of visibility, the distances involved and the fact that from the vast majority of these routes there is no actual visibility of the proposed turbines, there are no Significant effects deemed likely to arise in relation to the Cloonfad Walking Loops.

Carrownagappul Walk – The Living Bog – this is a large raised bog just outside Mountbellew, accessible to the public via a boardwalk positioned at the southern end of the bog. There is theoretical visibility over the majority of the bog, although it is noted that most of this area is generally inaccessible to the public. There is theoretical at the boardwalk. PWB is located on the boardwalk and shows that the proposed turbines will be visible from this location, although not to their full extent. The proposed turbines are partially screened by the intervening topography and vegetation and will be seen above the existing skyline, in the background of the view. At this distance (approx. 13.7km from the nearest proposed turbine), and with the level of screening existing within the landscape, there are no Significant effects deemed likely to arise in relation to the Carrownagappul Walk.

Other Visual Receptors – Major Transport Routes

Of the five major transport routes identified within the LVIA Study Area, none were screened out in the ‘Visual Receptor Preliminary Assessment’. Hence, viewpoints were selected to represent all major

transport routes identified. All the viewpoints below are discussed in greater detail above and in the photomontage assessment tables contained in Appendix 14-3. The Route Screening Analysis undertaken above in Section 14.3.4 details the likely visibility of the roads surrounding the Site, including smaller local roads, there are no Significant effects deemed likely to arise in relation to these transport routes.

R328 Regional Road – this is the closest main transport route to the Site, passing through the EIAR Site Boundary and approx. 950m from the nearest proposed turbine at its closest point. The road connects the settlements of Dunmore and Moylough, running in a northwest-southeast orientation. There is primarily full theoretical visibility of the proposed turbines indicated along the approx. 12.7 km stretch of the route located within 5km of the nearest proposed turbine. VP5, VP6, and VP12 are all located along this road, representing views of the proposed turbines various orientation and distances. The sensitivity of VP5 and VP6 was deemed to be ‘High’ on account of the nearby residential receptors located in close proximity to the nearest proposed turbine, with the road being a lower sensitivity receptor. The magnitude of change for VP5 was deemed to be ‘Moderate’ and the magnitude of change for VP6 was deemed to be ‘Substantial’. A residual visual effect of Moderate significance was deemed to arise at VP5 and VP6, which are both located within 1.5km of the nearest proposed turbines. The sensitivity of VP12 was deemed to be ‘Medium’ on account of the regional road, with the magnitude of change deemed to be ‘Slight’. A residual visual effect of Not Significant was deemed to arise at VP12, demonstrating that the greatest visual effects are concentrated along the stretch of the road within closest proximity to the Site. Approximately 4 km of this route is located within 1.5km of the nearest proposed turbines, where the scale of turbines in these views will reduce the potential for screening from landscape features such as roadside vegetation or other hedgerows and treelines.

Section 14.3.3 and Figure 14-4 above detail the level of roadside screening along the route within 5km of the proposed turbines, and the following is a summary of the route screening along the R328 as described above in that section. The R328 within the village of Clonberne, and the sections of the road around this settlement, are primarily ‘Full Screening’ or ‘Intermittent/Partial Screening’, with a stretch of ‘Little/No Screening’ to the north end of the section of the R328 regional road which runs through the village. Within the village of Clonberne, the built environment provides ‘Full Screening’ from views towards the proposed turbines. The R328 regional road runs northwest to southeast within 3 km of the Site and, outside of the section within Clonberne, is mainly a mosaic of ‘Intermittent/Partial Screening’ and ‘Little/No Screening’. The section of the R328 that lies outside 3 km to the north of the Site is primarily ‘Full Screening’, with some smaller sections of ‘Intermittent/Partial Screening’. There is either ‘Full Screening’ or ‘Intermittent/Partial Screening’ along 64% of the section of the R328 within 5km of the nearest proposed turbine, indicating that visibility along the route is intermittent, with some level of screening in the direction of the proposed turbines for the majority of the extent of the section of the route in closest proximity (i.e. <5km) of the proposed turbines.

N83 National Road – this road is located to the west and north of the Proposed Project. There is primarily full theoretical visibility along this route within the LVIA Study Area. The route passes within 6.1 km of the nearest proposed turbine at its closest point. VP7 is located along this route, at a location 6.4 km west of the Proposed Project. Views of the turbines from this location are of very small background elements, substantially screened by intervening vegetation and topography. In addition, the turbines are not located in the direction of travel of the national road and will therefore not be in the direct line of vision for visual receptors using the road. Considering the high speeds that receptors will be travelling at this location, views are likely to be momentary even where they do occur. The sensitivity of this viewpoint was deemed to be ‘Medium’ on account of the national road, and the magnitude of change was deemed to be ‘Slight’. A residual visual effect of Not Significant was deemed to arise at VP7.

N63 National Road – this road is located to the south of the Proposed Project. There is full theoretical visibility where it passes closest to the proposed turbines, at a location approx. 9.1 km south of the nearest proposed turbine. The stretch of the route located within 10km of the Site, which has a length of approx. 8 km, has primarily full theoretical visibility. Outside of 10km there are larger stretches of no theoretical visibility although overall, there is theoretical visibility indicated along the majority of the

route located within the LVIA Study Area. Actual visibility will be substantially less than indicated by the ZTV, given the distance of the route from the nearest proposed turbine and level of vegetation present in this flat intervening landscape. VP8 is representative of open views from along the N63 and is located at similar orientation and distance to the proposed turbines as this road. From along the N63 the proposed turbines are seen as small features in the background of the view as a coherent cluster. They are not located in the direction of travel of the road and will therefore not be in the direct line of vision for visual receptors using the road, the proposed turbines do not interfere with or obstruct views of any sensitive landscape features within this view. The sensitivity of this viewpoint was deemed to be 'Medium' on account of the national road, and the magnitude of change was deemed to be 'Slight'. A residual visual effect of Slight significance was deemed to arise at VP8, and this is representative of visual effects arising from the N63 national road.

N17 National Road – this road is located to the northwest of the Proposed Project. There are large stretches of full theoretical visibility indicated along this route. The stretch of the route located within 10km of the Site, which has a length of approx. 4 km, has one large stretch of full theoretical visibility. VP7 and VP4 are located at a similar orientation to this part of the route. The sensitivity of VP7 was deemed to be 'Medium' on account of the national road. The magnitude of change was deemed to be 'Slight', and a residual visual effect of Not Significant was deemed to arise at VP7, which is located 3km closer to the proposed turbines than the N17 national road. At VP4, which is located 13km east of the nearest proposed turbine, the sensitivity of the viewpoint was deemed to be 'Medium', and the magnitude of change was deemed to be 'Negligible'. Therefore, a residual visual effect of Imperceptible significance was deemed to arise. Even along the closest section of the N17 to the proposed turbines, they will appear as very small background elements, with screened provided by intervening vegetation in the landscape. In addition, the turbines are not located in the direction of travel of the national road and will therefore not be in the direct line of vision for visual receptors using the road. Considering the high speeds that receptors will be travelling along the road, views are likely to be fleeting even where they do occur.

M17 Motorway – this road is located to the southwest of the proposed turbines, between 20-13km from the nearest proposed turbine. There is primarily full theoretical visibility along this route within the LVIA Study Area. VP3 is located at a similar orientation (although 2.7km closer than the closest point along the M17) and is representative of views from the M17 Motorway. The sensitivity of this viewpoint was deemed to be 'Medium' at this viewpoint, which represent visual receptors located in Tuam town, more sensitive visual receptors than this busy transport route., The magnitude of change was deemed to be 'Slight'. A residual visual effect of Not Significant was deemed to arise at this location. Given the distance of the nearest proposed turbine, and the path of the section of the Motorway in the LVIA Study Area through a flat, heavily vegetated landscape, views of turbines will be intermittent, and where they do occur, the turbines will be very small elements in the background of views.

14.7.3.3.4 **Residential Visual Amenity**

During the Site selection process, early stage LVIA appraisals identified local residential receptors as the most sensitive receptors with the greatest potential to be adversely impacted by the proposed turbines with regard to visual impacts. Consequently, residential visual amenity was of key consideration during site selection and 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 Site. Finally, a visual impact assessment of each cluster of residences 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 residential receptors.

The Proposed Project design process has been informed by set-back distances, with regard to the siting of turbines in proximity to residential receptors, the Proposed Project adheres to the recommended

500m set back distance in the WEDGs and also the 4 times tip height set-back distance set out for residential visual amenity prescribed by the draft WEDGs.

Residential Context – Population Density and Arrangement of Dwellings

As reported in the landscape baseline (see Section 14.4.2 Landscape Character of the Site), the Site is a large uninhabited area characterised primarily by agricultural fields, cutover peat, and commercial forestry. Figure 14-22 below illustrates how the proposed turbines are set back from residential receptors in the surrounding landscape and that the distances are compliant with the guidance in the WEDGs and draft WEDGs.

The population of the four No. District Electoral Divisions (DED)s within and surrounding the Site is detailed in Chapter 5 – Population and Human Health. As shown in Table 5-2 in Chapter 5 – Population and Human Health of this EIAR, the population density of DEDs, recorded during the 2022 Census is 24.14 persons per km². This figure is significantly lower than the national population density of 73.27 persons per km² and the Galway County population density of 31.44 persons per km². These findings indicate that the landscape surrounding the Site has a relatively low population density.

There are 20 no. residential receptors located within 1 km of the proposed turbine locations. The closest non-involved residential receptor is located greater than 720m from the nearest proposed turbine i.e., over 4x tip height set back. As shown by the map below (Figure 14-22), the nearby residential receptors in closest proximity to the proposed turbines are arranged along a network of small local roads surrounding the Site, as well as within the village of Clonberne to the east. The map illustrates locations where photomontage and photowire imagery was captured to inform the impact assessment of the various residential clusters surrounding the Site.

Assessment of Residential Amenity – Photomontages

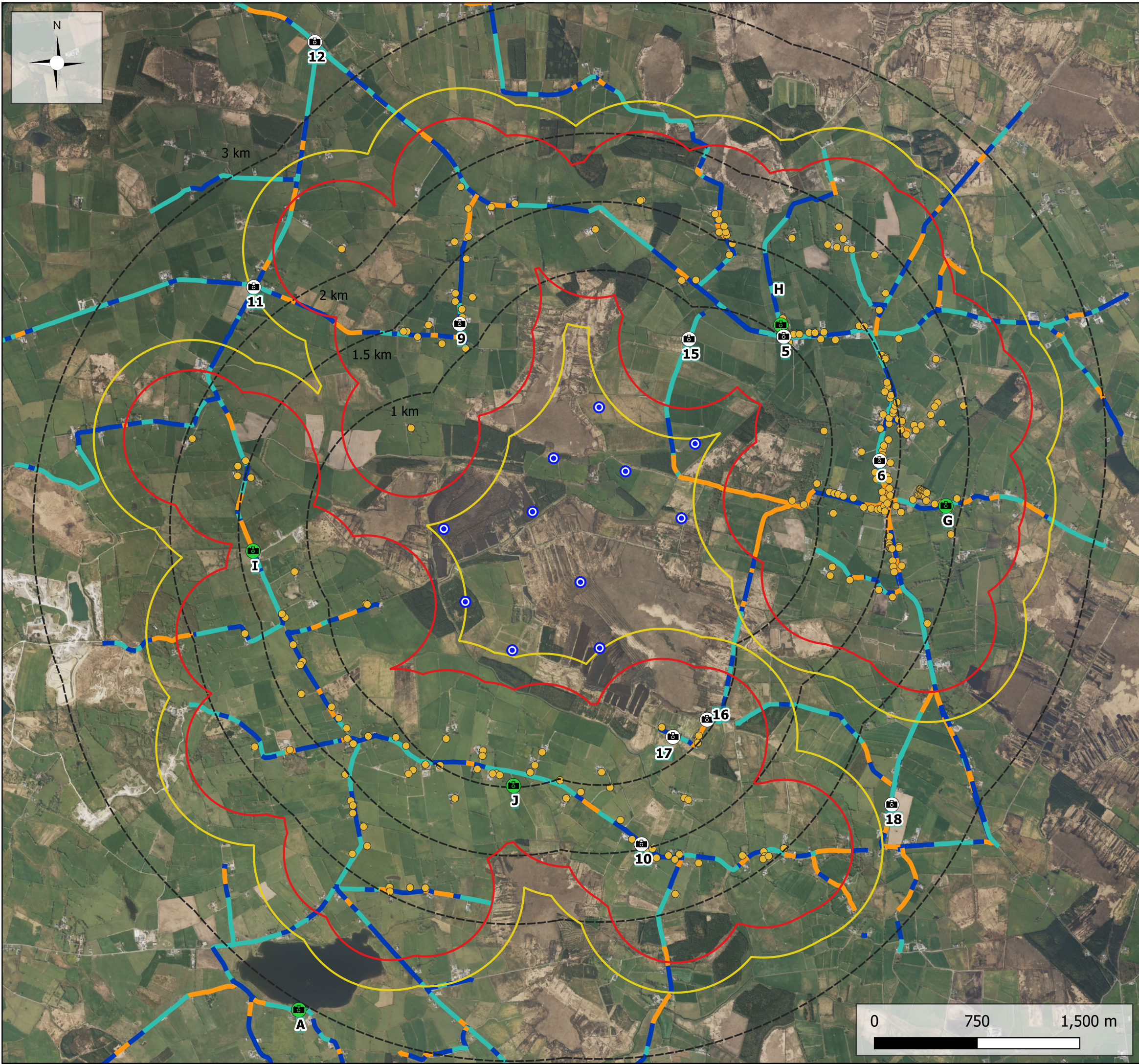
A large number of viewpoints (9 of the 18) were taken within 3km of the proposed turbines, with a total of 10 of 18 viewpoints located within 5km of the proposed turbines. In addition to these photomontages, a further 6 photowires are included in Appendix 14-5 from within 5km of the proposed turbines, including 4 photowires captured using a drone which provides detailed context shots in relation to the closest residential receptors. These are presented and discussed below.

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. It would be a disproportionate measure to include an individual photomontage from every residential dwelling 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 the GLVIA (2013), 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, GLVIA 2013). Furthermore, the GLVIA (2013) 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 GLVIA, 2013). It is submitted that 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, GLVIA 2013).

Seven photomontage viewpoints are located within 1.5 km of the proposed turbines. VP9, VP15, VP5, VP10, VP6, VP16 and VP17 were all taken from roads in townlands adjoining the Site, with the sensitivities of these viewpoints all considered ‘High’ on account of the residential receptors located in close proximity to the nearest proposed turbines. These viewpoints were specifically selected to assess the visual effects on residential amenity and receptors of local community importance in close proximity to the proposed turbines. Considering the proximity of these viewpoints to the proposed turbines and the resultant scale of the turbines in these views, the magnitude of change for these viewpoints were considered to be ‘Substantial’ for VPs 9, 15, 16, and 6, and ‘Moderate’ for VP5, 17 and

VP10. Visual effects are rated of relatively high significance, both ‘Significant’ and ‘Moderate’ residual visual effects were recorded from these areas due to the close proximity to the proposed turbines where the magnitude of change is greatest, and the sensitivity is relatively high in respect of residents who live in close proximity. These viewpoints were strategically selected where there are relatively open views in very close proximity with limited screening where possible. ‘Moderate’ residual visual effects were recorded for VP11 and VP18 (‘Medium’ sensitivity and ‘Moderate’ magnitude of change), which are viewpoints located within 3km and are representative of local residential amenity. From locations beyond this (see VP12) the photomontages show that as a result of factors such as distance (which causes the turbines to occupy a smaller horizontal and vertical extent within views), and screening from vegetation cause visual effects on residential receptors to dramatically decrease beyond 3km from the proposed turbines. It is also noted that this is informed by Section 14.3.3 above and in particular the disproportionate screening effect illustrated in Figure 14-3.

The following discussion of effects on residential visual amenity is informed by the ten viewpoints mentioned above, photowires included in Appendix 14-5, the mapping outcome of the Route Screening Analysis and other information gathered during site surveys.



Map Legend

- Proposed Turbine Locations
- Residential Receptors
- Photomontage Viewpoint Locations
- Photowire Viewpoint Locations
- Set-Back Distance Compliance 500m (DoEHLG, 2006)
- Set-Back Distance Compliance 720m (4 x Tip Height (180m) (DoHPLG, 2019))
- Route Screening Analysis
 - Little/No Screening
 - Partial/Intermittent Screening
 - Dense/Full Screening

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Figure 14-22

Residential Visual Amenity

Clonbern Renewable Energy Development

Scale	Project No.	Date	Drawn By	Checked By
1:27,000	180740	2024-04-05	JS	JW



Residential Receptors within 1.5km of the proposed turbines

VP9, VP15, VP16, and VP17 are viewpoints located adjacent to the closest residential receptors to the proposed turbines. In relation to these receptors, the Proposed Project adheres to the recommended 500m set back distance in the WEDGs (DoEHLG, 2006) and also the 4 times tip height set-back distance set out for residential visual amenity prescribed by the draft WEDGs (DoHPLG, 2019). VP9 is representative of a cluster of residential receptors located within 950m of the nearest proposed turbine to the northwest of the Site. The sensitivity of this viewpoint was deemed to be 'High' on account of the residential receptors in close proximity to the nearest proposed turbine, and the magnitude of change was deemed to be 'Substantial'. A residual visual effect of 'Significant' was deemed to arise in relation to the viewpoint. It is noted that VP9 is captured from a location with open visibility towards the proposed turbines, and that the route screening analysis shown above on Figure 14-22 indicates that the majority of this area has intermittent or full screening towards the proposed turbines. This indicates that the residential receptors located in this area will generally have views of the proposed turbines at least partially screened.

VP15 is representative of 1 residential receptor located 775m from the nearest proposed turbine to the northeast of the Site. Again, in relation to this receptor, the Proposed Project adheres to the recommended 500m set back distance in the WEDGs (DoEHLG, 2006) and also the 4 times tip height set-back distance set out for residential visual amenity prescribed by the draft WEDGs (DoHPLG, 2019). The sensitivity of this viewpoint was deemed to be 'High' on account of the residential receptor located in close proximity to the nearest proposed turbine, and the magnitude of change was deemed to be 'Substantial'. A residual visual effect of 'Significant' was deemed to arise in relation to this receptor located adjacent to the viewpoint. PWG is relevant in this discussion as it shows the scale of the landscape in the intervening space between the receptor represented by VP15, and the closest proposed turbines. As can be seen from Plate 14-23, there are multiple fields, hedgerows, and treelines in the intervening space between this receptor, and the closest proposed turbines, with this image demonstrating the setback distance between the proposed turbines and this receptor.

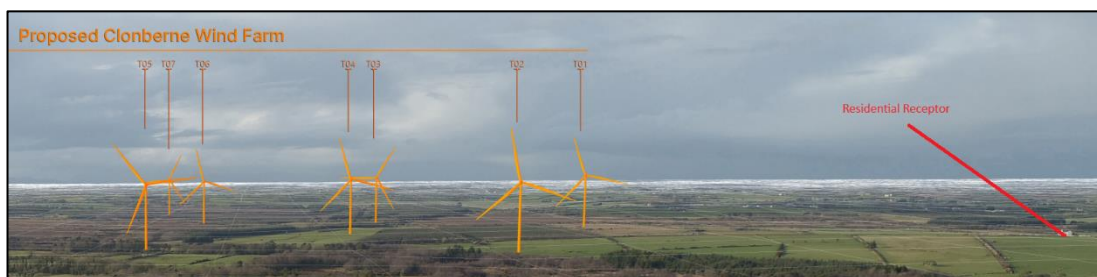


Plate 14-23 Extract from PWG

For both of these viewpoints it is noted that whilst the turbines are large features in the view, the proposed turbines do not obstruct or interfere with any sensitive or scenic views from this location. The baseline view is generally unremarkable and is typical of many other views of agricultural fields and forestry within the surrounding area. The turbines will be seen as large vertical features within views from these residential properties, however, given the similar base elevations of the turbines in relation to these receptors (see Figure 14-15 above), the field structure, vegetation, and other landscape elements seen throughout these views act as a physical landscape buffer and provide a sense of scale in relation to the setback distance of the turbines, with turbines viewed as sited beyond multiple fields or behind a treeline.

VP16 and VP17 are both located within the townland of Cloonagawnagh, to the southeast and within 1km of the nearest proposed turbine. The sensitivity of both viewpoints was deemed to be 'High' on account of the nearby residential receptors represented. The magnitude of change was deemed to be 'Substantial' for VP16 and 'Moderate' for VP17, with the lower rating here related to the high level of screening from vegetation surrounding VP17. The residual visual effects for both viewpoints was

deemed to be 'Moderate'. In both instances, the closest proposed turbine, T10, is located within 1km of the viewpoint. However, only this turbine is located within such proximity to the viewpoint, with the next closest turbines located 1.3km-1.5km from the viewpoints, with the scale of these turbines appearing much smaller in views from these locations. There are also substantial screening elements in the form of vegetation surrounding the residential receptors represented by these viewpoints.

VP5, VP6 and VP10 are demonstrative of the effect that distance has in this area within 1.5km of the nearest proposed turbine. VP6 is located within the village of Clonberne and represents the residential receptors located nearby within this area. The sensitivity of this viewpoint was deemed to be High on account of the receptors in close proximity to the proposed turbines, and the magnitude of change was deemed to be Moderate. It is noted that whilst the proposed turbines do constitute a change in one area of residential visual amenity, they do not comprise a large horizontal extent of views ($<46^\circ$ of 360° , equating to 13% of the horizontal field of view in most instances). PWG shows a further view from this area, from an elevated location, providing context to the setback distance of the proposed turbines. VP6 is located outside of the national school seen in the right-hand side of this image, with a substantial number of intervening landscape elements and distance seen to occupy the space between the proposed turbines and the receptors located around this viewpoint, and in the wider village. PWG shows that the proposed turbines are restricted the large uninhabited area of bog and forestry located beyond the village. The field structure, vegetation, and other landscape elements seen throughout the view act as a physical landscape buffer and provide a sense of scale in relation to the setback distance of the proposed turbines, with proposed turbines viewed as sited beyond multiple fields or behind the treelines seen. The proposed turbines will appear as smaller objects at this setback distance (approx. 1.3km) and are seen within a small horizontal extent of the view, with residual visual effects reducing to Moderate at this distance for the residential receptors located adjacent to this viewpoint.



Plate 14-24 Extract from PWG

VP10 is located in the townland of Mahanagh, approx. 1.4km southeast of the nearest proposed turbine. There are a number of residential receptors located nearby along the same local road. The level of screening recorded along this road (see Figure 14-22 above) indicates that there is largely open visibility towards the proposed turbines, which occupy a horizontal extent within views comprising $<44^\circ$ of 360° , equating to 12% of the horizontal field of view in most instances). This horizontal extent increases to up to $<60^\circ$ from other locations along this road. The sensitivity of this viewpoint was deemed to be High on account of the receptors in close proximity to the proposed turbines, and the magnitude of change was deemed to be Moderate. Again, from this location, the field structure, commercial forestry, and other landscape elements seen throughout the view are a physical landscape buffer and provide a sense of scale in relation to the setback distance of the turbines, with turbines viewed as sited beyond multiple fields or behind a treeline. This is also demonstrated by PWK which is taken from an elevated location further northwest along this road. This image illustrates the scale of the setback distance from the proposed turbines to the nearest residential receptors. All the proposed turbines will be viewed as on the other side of the commercial forestry located in the intervening space. It is also noted that there is additional screening provided by vegetation surrounding these properties, preventing open views towards the proposed turbines from the primary viewing locations within the properties in view, with this also occurring from multiple other locations along this road.



Plate 14-25 Extract from PWK



Plate 14-26 Extract from PWJ

PWJ also shows a drone view from a location further northwest along this local road, from a similar distance from the proposed turbines as VP10. Again, the scale of the setback distance is demonstrated by this view, with large tracts of land seen in the intervening space. At this distance the nearby residential receptors are located approximately twice the 4 x tip height setback distance set out in the draft WEDG's.

VP5 is located slightly closer to the proposed turbines than VP6 and VP10, with VP5 representing a cluster of residential receptors between 1km – 1.3km northeast the closest proposed turbine. The sensitivity of this viewpoint was deemed to be High on account of the receptors in close proximity to the proposed turbines, and the magnitude of change was deemed to be Moderate. The proposed turbines are seen to occupy a moderate horizontal spatial extent within this view, with only one turbine appearing as a large nearby vertical feature. The proposed turbines again occupy a relatively small horizontal extent within views from this location, comprising <40° of 360°, equating to 11% of the horizontal field of view in most instances. PWH also shows a drone view from this location, from a similar distance from the proposed turbines as VP5. Again, the scale of the setback distance is demonstrated by this view, with large tracts of land (multiple fields and field boundaries) seen in the intervening space between the receptors, and the closest proposed turbines.

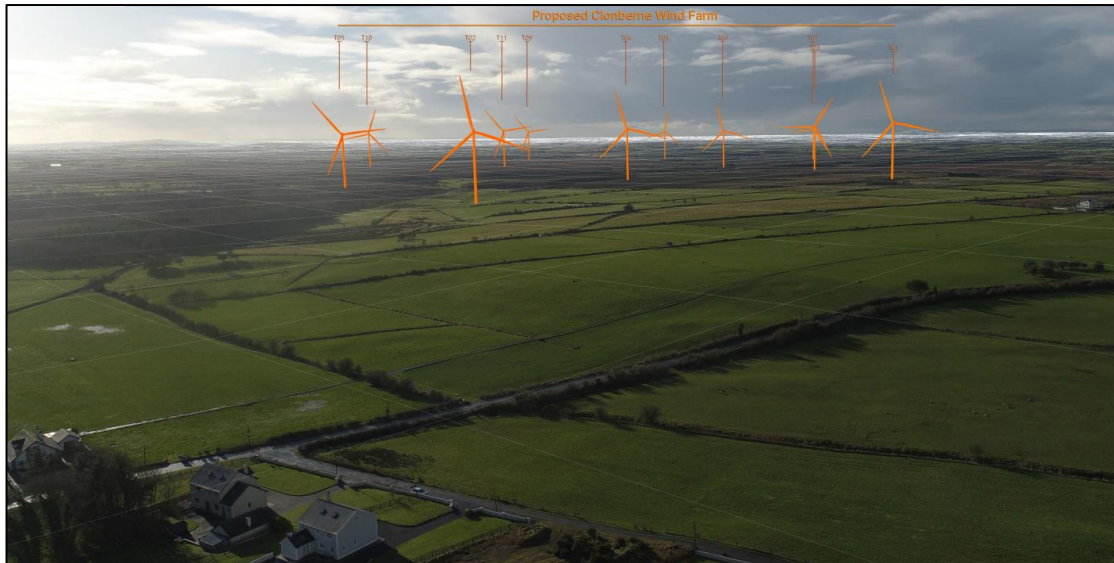


Plate 14-27 Extract from PWH

A residual visual effect of ‘Moderate’ was deemed to arise at VP6, VP10, and VP5, with the sensitivity of these viewpoints all considered High, and the magnitude of change deemed to Moderate. From these distances (approx. 1km to 1.5km away), the scale of nearest turbine is much reduced in relation to VP9, for example. These viewpoints demonstrate that that scale of the turbines reduces quickly with increased distance, which in this flat heavily vegetated landscape, will increase the likelihood that screening of the proposed turbines will occur. In addition, it is noted that from all locations discussed here the proposed turbines, by virtue of their clustered layout, occupy a limited horizontal extent of the overall view available from nearby receptors. With the horizontal extent of turbines visible, ranging from between 11%-15% of the view.

The drone views presented here also serve to demonstrate the scale of the setback distance between the proposed turbines and all surrounding residential receptors, with multiple fields, hedgerows, treelines and blocks of commercial forestry commonly seen in the intervening space, giving a sense of scale in relation to the setback distances themselves. The Proposed Project adheres to and exceeds the recommended 500m set back distance in the WEDGs (DoEHLG, 2006) and also the 4 times tip height set-back distance set out for residential visual amenity prescribed by the draft WEDGs (DoHPLG, 2019).

Residential Receptors beyond 1.5km of the proposed turbines

VP11 demonstrates that within 3km of the nearest proposed turbine, but beyond 1.5km, the scale of turbines reduces dramatically within views, an effect that is also noticeable from locations beyond 3km, as seen from VP12. For residential receptors located in this part of the LVIA Study Area, there will be relatively minor effects on residential visual amenity, with screening in the landscape having a greater effect at these distances (see also Section 14.3.3 above). VP11 is located 2.2km from the nearest proposed turbine, with nearby receptors assigned a Medium sensitivity at this distance, and with a Moderate magnitude of change deemed to occur. The overall residual effect is deemed to be Moderate. The proposed turbines appear substantially smaller in scale from this distance and it can be seen from the photomontage that nearby vegetation provides more effective screening as a result.

In summary, the highest effects on residential visual amenity will occur in relation to a relatively small number of receptors located within 1km of the proposed turbines, with the scale of turbines in view reducing quickly from locations further from the Site (see VP5 for example). Beyond 1.5km from the Site (see VP11) the scale of the turbines reduces substantially. It is relevant then, that the population density, recorded during the 2022 Census as 24.14 persons per km², is lower than the national population density and the Galway County population density. As the area surrounding the Site has a

low population density, site selection for the proposed turbines has resulted in reduced effects on residential visual amenity than might otherwise be the case.

14.7.3.3.5 Visual Effects Relating to the Proposed Grid Connection



Figure 14-23 Proposed Grid Connection

Proposed Onsite 220kV Substation

The proposed onsite substation is shown above on Figure 14-23, it is located to the southwest of proposed turbine T10. VP16 and VP17, both of which can be viewed in Appendix 14-5 were captured from a cluster of residential receptors located 800m-1000m from the proposed substation location and show views of the proposed substation. In both instances the proposed substation appears as a relatively small background feature within the view, located within a tract of commercial forestry which partially screens view of the lower half of the substation building. The addition of the substation was incorporated in the visual impact assessment conducted for each viewpoint, and reported in Appendix 14-3, with a 'Moderate' residual visual effect determined to arise at both locations. These viewpoints, (VP16 and VP17) show some of the most open views towards the proposed substation as will be available from this area, with large screening elements in the form of vegetation also noted as surrounding the nearby residential properties, which will reduce visibility of the proposed substation further.

Proposed Line Cable Interface Masts

The proposed Line Cable Interface Masts (End Masts) are located to the east of the proposed substation, with the underground cable route also shown on Figure 14-23 above. The majority of the proposed grid connection electrical cabling route is located underground; therefore, no visual effects will arise from this element. The underground grid connection is to be connected to the existing 220kV overhead line which passes close to the location of End Masts shown above. VP18 is located to the east of this area, and shows a proposed view of the above ground elements of the grid connection at this location, with the proposed turbines also visible in the background of the view. The sensitivity of this

viewpoint was deemed to be 'Medium' and the magnitude of change was deemed to be 'Moderate'. The residual visual effect was deemed to be 'Moderate'. There are a limited number of receptors nearby this location, with the viewpoint representing a small number of residential receptors, as well as the local road. It is also notable that the character of the baseline view is generally unremarkable, and already contains views of an existing 220kV line. While the proposed towers now seen do increase the density of electricity infrastructure seen, these are viewed beyond the closest field, partially screened, and within an area already subject to existing grid infrastructure.

Overall, the photomontage viewpoints and accompanying visual impact assessments conducted and reported in Appendix 14-3 demonstrate that there will be no Significant visual effects that arise as a result of the Proposed Grid Connection, and in relation to the Proposed Project, where the proposed turbines are seen alongside the proposed infrastructural elements related to the Proposed Grid Connection.

14.7.3.4 Discussion of Cumulative Visual Effects – Proposed Project

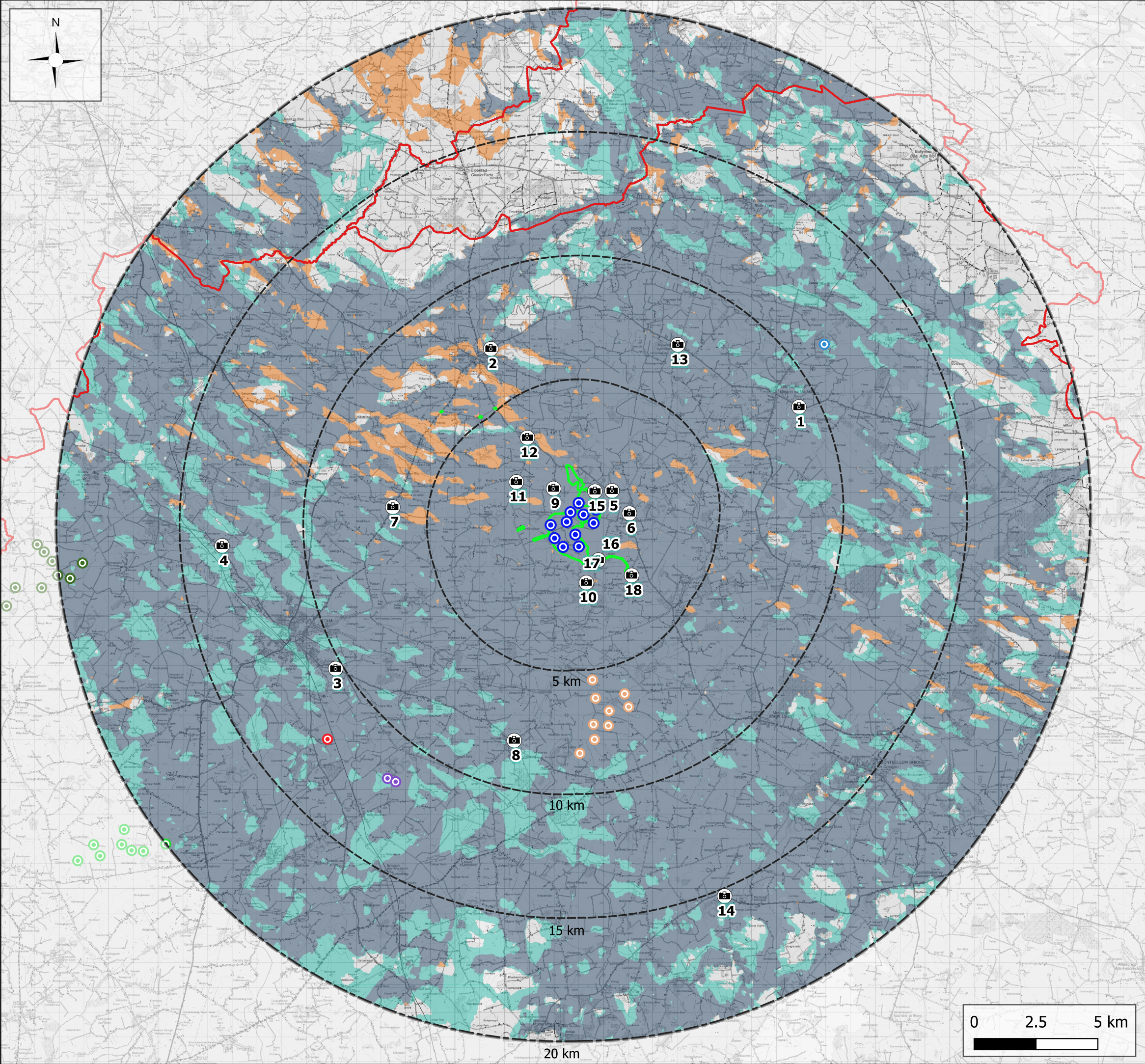
There are many potential scenarios and interactions where cumulative visual effects may occur. These scenarios can include interactions between the Proposed Project, other energy developments (wind farms or grid infrastructure), as well as other man-made landscape features (quarries, transport networks, overhead telecommunication lines). Guidance for assessment of cumulative effects of onshore wind farms (SNH,2012) & (NatureScot, 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. Cumulative visual effects were assessed as part of the Photomontage Assessment Tables found in Appendix 14-3. 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 are Long Term and Direct effects.

There are 6 other existing, permitted or proposed wind farms within 20km of the proposed turbines, as discussed above in Section 14.6. Figure 14-24 below shows the cumulative comparative ZTV of all cumulative wind farms and the turbines of the Proposed Project. Please note that turbine dimensions are not publicly available for the Shancloon Wind Farm (aside from an indicated tip height range of 150m-180m) and so they have not been included within the ZTV. Given the relatively flat nature of the LVIA Study Area (see full discussion above in Section 14.3.1), the ZTV indicates large areas of theoretical visibility of turbines throughout. As outlined in Section 14.3.3 above, and discussed in detail below, the theoretical visibility indicated on this map is substantially more than what will occur in reality.



Map Legend

- County Border
- LVIA Study Area
- EIAR Site Boundary
- Proposed Turbine Locations
- Photomontage Viewpoint Locations

Other Wind Turbines

- Clonlusk Wind Farm (Existing)
- Cloncoon East Wind Turbine (Permitted)
- Cloonascragh Wind Turbine (Permitted)
- Cooloo Wind Farm (Proposed)
- Laurclavagh Wind Farm (Proposed)
- Shancloon Wind Farm (Proposed)

Cumulative Comparative ZTV

- Theoretical Visibility of the Proposed Project Only
- Theoretical Visibility of the Cumulative Turbines Only
- Theoretical Visibility of both the Proposed Project and Cumulative Turbines

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Drawing No.

Figure 14-24

Drawing Title

Cumulative Comparative ZTV

Project Title

Clonbern Renewable Energy Development

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	180740	2024-04-05	JS	JW

The only existing turbines are the two Clonlusk turbines located 11.6km southwest of the nearest turbine of the Proposed Project. These turbines have tip height of 119m and considering their distance from the proposed turbines in this flat heavily vegetated landscape, there will be limited locations where the proposed turbines will be seen in combination with the existing Clonlusk turbines. There will be some locations around the local roads to northeast of the Clonlusk turbines, and the R332 regional road, where there will be views of the proposed turbines to the northeast, and views of the Clonlusk turbines to the southwest, creating a combined (in succession, where an observer has to turn their head to see both wind farms) views of turbines in two directions. However, from these locations the turbines of the Proposed Project will be seen as small background elements within views, and limited cumulative visual effects will arise as a result. Given the distance of these locations around the Clonlusk turbines from the proposed turbines and their smaller vertical extent within views, the proposed turbines will frequently be screened from view as a result of the vegetation in the landscape. This will give rise to sequential views (where the observer moves to a different point along the route to see the different wind farms) of the proposed turbines and the Clonlusk turbines. However, these views will be intermittent, and again as a result of the distance between the Site and the Clonlusk turbines cumulative visual effects will be minor with no cumulative visual effects on sensitive receptors identified within the LVIA Study Area.

There are two permitted individual wind turbines located within the LVIA Study Area. The permitted Cloonascragh Wind Turbine is located to the south of Tuam, 12.3km southwest of the nearest turbine of the Proposed Project. This turbine has a tip height of 168m. The permitted Clooncon East Wind Turbine is located 11.3km east of the nearest turbine of the Proposed Project, with a tip height of 89.95m. Both of these turbines are located a large distance from the Site, and in-combination views of the turbines of the Proposed Project and these turbines will be unlikely, considering the flat, vegetated nature of the landscape. Where intermittent in-combination or in-succession views of these permitted turbines and the turbines of the Proposed Project do occur, for example, from locations within the LVIA Study Area in the intervening space between the proposed turbines and the permitted turbines, they will be views of turbines with a small horizontal and vertical extent within views, considering the distances involved. From locations within 3km of the nearest proposed turbine, to the west of the Site, for example, views to the west towards the permitted Cloonascragh Wind Turbine will be views where that turbine appears as a small background feature within the view. The landscape in the area in the intervening space between the Site and the permitted turbines is relatively flat, with limited occasions where local high points allow for views of this distance. It is also noted that both of these permitted developments are single turbines. In light of the factors discussed here, it is evident that there will be no substantial combined or in succession views of both the Proposed Project and these permitted turbines. This can also be seen from the Photomontage Booklet, where from multiple viewpoints (VP13, VP6 and VP15) the wireline indicates that these permitted turbines are theoretically visible, however screening in the landscape prevents actual on the ground visibility. Any views, even where they do occur, will be intermittent, and again as a result of the distance between the Site and the permitted turbines cumulative visual effects will be minor.

There are two proposed wind farms located at the western edge of the LVIA Study Area. The proposed Laurclavagh wind farm (planning application submitted) and the proposed Shancloon wind farm (planning application not yet submitted). VP6 provides a good indication of the level of visibility of these proposed wind farms from the area located nearby the Proposed Project. Please note that turbine dimensions are not publicly available for the Shancloon Wind Farm (aside from an indicated tip height range of 150m-180m) and so they have not been included within the Photomontage Booklet. However, the Shancloon turbines are located a similar distance and orientation from the Site as the proposed Laurclavagh turbines. Given the distances involved and screening existent within the landscape, the proposed Laurclavagh turbines are not actually visible from VP6.

In general, as discussed extensively elsewhere in this chapter, the landscape of the LVIA Study Area is flat, and highly vegetated. Given this factor, as well as the large separation distance between these proposed wind farms and the Proposed Project, there will be extremely limited occasions where there is combined visibility of these cumulative developments. There will therefore be no significant cumulative

visual effects that occur as a result of the Proposed Project, in relation to these two proposed wind farms.

Proposed Cooloo Wind Farm

The proposed (planning application not yet submitted) Cooloo Wind Farm is located within the LVIA Study Area. This proposal includes 9 no. turbines located approximately 5.4km south of the nearest turbine of the Proposed Project. In relation to the addition of the Proposed Project in an uncertain scenario where the proposed Cooloo Wind Farm is submitted to planning, consented, and constructed, there are likely to be some cumulative visual effects arising. This includes views of turbines becoming common over an area including the area in proximity (within 5km) to the Site combined with views in the area surrounding the proposed Cooloo Wind Farm, which is located between 5-9km south of the nearest turbine of the Proposed Project. This will result in a larger area within this part of the landscape where turbines will be visible than if one of these developments were constructed by themselves. This larger cumulative area of visibility of turbines (including the Proposed Project and the proposed Cooloo Wind Farm) will be located in the northeastern part of this LCU. As shown above on Figure 14-5 – *Landscape Baseline*, and Figure 14-18 – *Visual Baseline*, there is a lack of designated sensitive landscape and visual receptors in this area. These cumulative effects in an uncertain scenario have been incorporated into the Magnitude of Change determination for the individual viewpoint assessments contained in Appendix 14-3. Figure 14-24 above shows the Cumulative Comparative ZTV of the proposed Cooloo Wind Farm and the turbines of the Proposed Project. As discussed previously, given the relatively flat nature of the LVIA Study Area (see full discussion above in Section 14.3.1), the ZTV indicates large areas of theoretical visibility of turbines throughout. As outlined in Section 14.3.3 above, and discussed in detail below, the theoretical visibility indicated on this map is substantially more than what will occur in reality. The following discussion presents various viewpoints shown in the Photomontage Booklet where views of both the Cooloo Wind Farm and the Proposed Project turbines can be seen and shows examples of the type of cumulative visibility that will potentially occur on the ground.

The proposed Cooloo turbines are theoretically visible from the following photomontage viewpoints:

- VP1 – proposed Cooloo turbines not actually visible
- VP2 – proposed Cooloo turbines not actually visible
- VP3 – proposed Cooloo turbines are visible
- VP4 – proposed Cooloo turbines are substantially screened
- VP5 – proposed Cooloo turbines not actually visible
- VP6 – proposed Cooloo turbines not actually visible
- VP7 – proposed Cooloo turbines are substantially screened
- VP8 – proposed Cooloo turbines are substantially screened
- VP9 – proposed Cooloo turbines are substantially screened
- VP11 – proposed Cooloo turbines are substantially screened
- VP12 – proposed Cooloo turbines not actually visible
- VP14 – proposed Cooloo turbines are substantially screened
- VP13 – proposed Cooloo turbines not actually visible
- VP15 – proposed Cooloo turbines are visible

Of the 18 no. photomontages produced the proposed Cooloo turbines are theoretically visible in 14 no. of these. Out of these 14 no. viewpoints where Cooloo is theoretically visible, actual visibility only occurs in 7 no. viewpoints. Out of these 7 no. viewpoint where the proposed Cooloo turbines are theoretically visible, the proposed turbines are substantially screened in 6 no. of these. This leaves 1 no. viewpoint (VP15) where there are open views of almost the full extent of the proposed Cooloo turbines. This summary indicates that, again, as a result of the flat, heavily vegetated landscape where the proposed Cooloo turbines and the Proposed Project are located results in limited occasions where combined visibility of both wind farms will occur. In the case of VP15, the only viewpoint with open

visibility of the full extent of the proposed Cooloo turbines, these turbines are viewed as a relatively small background elements, located approximately 5.3km away at their closest point.

In general, it is evident that the level of screening present in the landscape substantially reduces the level of actual visibility of both the Proposed Project and the proposed Cooloo turbines. While there is limited combined visibility of both the turbines of the Proposed Project and the proposed Cooloo turbines from the majority of the LVIA Study Area, as screening levels change as a receptor travels through the area, there will be intermittent views of the both the Proposed Project and the proposed Cooloo turbines, resulting in sequential views (where the observer moves to a different point along the route to see the different wind farms) of the proposed turbines and the Cooloo turbines. However, these views will be intermittent, and as a result of the distance between the proposed turbines and the Cooloo turbines cumulative visual effects will be minor with no Significant cumulative visual effects on sensitive receptors identified within the LVIA Study Area. The addition of the Proposed Project will not give rise to Significant cumulative visual effects.

14.7.4 Decommissioning Phase Effects

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

The important element of decommissioning from a landscape and visual impacts perspective is the dismantling and removal of the wind turbines. This will occur for a limited period of time and will predominantly involve cranes adjacent the turbines during the dismantling process. Once dismantled, turbine foundations would remain in place underground and will be covered with earth and reseeded as appropriate (See Chapter 4 of this EIAR). Removal of the turbines and ancillary infrastructure from the Site will result in a Short-term, Slight, Negative visual effect. A Decommissioning Plan is included as Appendix 4-6 to this EIAR.

14.8 Conclusion

The potential impacts on sensitive landscape and visual receptors which had potential to experience effects as a result of the Proposed Project were assessed through site visits and various tools, such as the production of verified photomontages, ZTV mapping and Route Screening Analysis (see Appendix 14-1 for methodology) to determine and assess the anticipated visibility of the Proposed Project.

The landscape area where the Proposed Project is located in an extensively flat, agricultural landscape. ZTV mapping (Figure 14-1) indicates full theoretical visibility within 5km of the proposed turbines, with occasional patches of limited visibility due to slight elevations. The flat nature of the landscape in the LVIA Study Area results in widespread theoretical visibility throughout, although it is noted that the landcover typical within the LVIA Study Area will substantially inhibit actual visibility on the ground. On-site surveys found that most actual visibility occurs within 5km of the Site, with intermittent views beyond this distance where the turbines appear as background elements, often screened by intervening vegetation.

The landcover of the Site mainly consists of agricultural pastureland fields, cutover peatland and commercial coniferous forestry, with widespread young to mature forestry coverage. Vegetated field boundaries offer natural screening, limiting views within the Site due to its flat terrain and the presence of treelines and hedgerows.

During the construction and operational phases, no Significant landscape effects are identified for designated landscape receptors (see Section 14.7.2.1 and Section 14.7.3.1) and it is determined that the addition of the Proposed Project is consistent with the landscape policies set out in the GCDP.

In terms of effects on landscape character, the proposed turbines are located within LCUs with a sensitivity rating of “Low”, the lowest in the GCDP. The Proposed Project is primarily located on

agricultural land and cutover bog. The largest magnitude of change will occur within LCU 5e North River Clare Basin Unit as the proposed turbines will materially change the landscape of this LCA. The proposed turbines are likely to be most visible from areas within 5km of the Site and elevated areas within this LCA. However, in general, there will be no or very limited views of the Proposed Project from parts of LCU 5e beyond 5km of the proposed turbines. Overall, as set out in Appendix 14-2, a 'Moderate' effect on the landscape character of this LCU is likely to occur as a result of the Proposed Project, with effects on landscape character primarily limited to areas within 5km of the proposed turbines.

Part of the EIAR Site Boundary also falls within LCU 5c Springfield Basin Unit, where a Slight residual landscape character effect was deemed to arise. The remainder of the LCAs screened in for full assessment were deemed to have residual landscape effects of Slight or Not Significant. These effects are fully assessed and detailed in Appendix 14-2.

The landscape of the Site, with its current land use has a Low sensitivity to wind energy developments (see Section 14.4.2 above). The combination of Low sensitivity and a Substantial magnitude of change results in Slight residual significance for Long-Term landscape effects (See LVIA Methodology, Appendix 14-1), localised to the Proposed Project's footprint. Effects on the perceptual and aesthetic character of the Site are also deemed to be of Slight significance.

Cumulative effects on landscape character are included in the impact assessment outlined in Appendix 14-2. Cumulative visual effects are also discussed and summarised above in this Chapter. the Proposed Project is located within a relatively flat agricultural plain extending as far as Lough Corrib to the west, and to the River Shannon to the east. There is limited wind energy development existing at present within this landscape and within the LVIA Study Area. Wind energy developments do not dominate this landscape type and the addition of the Proposed Project will not substantially alter the baseline status of the landscape in this regard. The landscape has the capacity to absorb another wind energy development without Significant cumulative landscape effects. The flat terrain and high screening levels prevent wind energy developments from dominating the landscape. In general, views of both the proposed turbines and cumulative turbines in combination will be intermittent as a result of the flat terrain and vegetated landscape. There are some additional cumulative effects due to increased views of turbines within this landscape as a result of the addition of the Proposed Project. However, as outlined above, the low level of visibility of both the proposed turbines and other cumulative turbines within the LVIA Study Area means that no Significant cumulative landscape effects will arise.

The significance of the residual visual effect was not considered to be "Very Significant", or "Profound" at any of the 18 no. viewpoint locations. A residual effect of "Significant" was deemed to arise at two locations, with a residual effect of 'Moderate' deemed to arise at seven other locations, whilst all other viewpoints were assessed as resulting in Slight (2), Not Significant (4) and Imperceptible (3) residual visual effects.

The visual assessment of 1 no. protected view screened in for full assessment found no Significant visual effects within the LVIA Study Area. In terms of other sensitive visual receptors, such as recreational, cultural heritage and tourist destinations, settlements and transport routes, visual effects were predominantly deemed either Moderate, Slight, Not Significant, or Imperceptible.

Significant visual effects are deemed to arise at two viewpoint locations nearby to residential receptors located within 1km of the proposed turbines. residential receptors near the proposed turbines benefit from a physical landscape buffer created by field structures and vegetation, mitigating visual impacts and providing a sense of scale in relation to setback distance from the turbines. The highest effects on residential visual amenity are confined to within 1km of the proposed turbines, with scale of turbines in view decreasing rapidly beyond 1km and substantially beyond 1.5km. It is noteworthy that the Proposed Project aligns with the recommended 500m and 4 times tip height set-back distances in the 2006 WEDGs and 2019 draft WEDGs for non-involved residential receptors, ensuring adherence to guidelines. In addition, the viewpoints located between 3-5km from the nearest proposed turbine show that effects on residential receptors will be dramatically reduced in comparison to the closer receptors

identified above on Figure 14-22. It is relevant then, that the population density, recorded during the 2022 Census as 24.14 persons per km², is lower than the national population density and the Galway County population density. As the area surrounding the Site has a low population density, site selection for the proposed turbines has resulted in reduced effects on residential visual amenity than might otherwise be the case.

Cumulative visual effects are included in the impact assessment outlined in Appendix 14-3. The only existing turbines are the two Clonlusk turbines located 11.6km southwest of the nearest turbine of the Proposed Project and there will be limited locations where the proposed turbines will be seen in combination with these. Cumulative visual effects will be minor with no cumulative visual effects on sensitive receptors identified within the LVIA Study Area.

There are two permitted individual wind turbines located within the LVIA Study Area. The permitted Cloonascragh Wind Turbine is located to the south of Tuam, 12.3km southwest of the nearest turbine of the Proposed Project. The permitted Clooncon East Wind Turbine is located 11.3km east of the nearest turbine of the Proposed Project. Both of these turbines are located a large distance from the Site, and in-combination views of the turbines of the Proposed Project and these turbines will be unlikely, considering the flat, vegetated nature of the landscape. It is evident that there will be no substantial combined or in succession views of both the Proposed Project and these permitted turbines. Any views, even where they do occur, will be intermittent, and again as a result of the distance between the Site and the permitted turbines cumulative visual effects will be minor.

There are two proposed wind farms located at the western edge of the LVIA Study Area. The proposed Laurclavagh wind farm (planning application submitted) and the proposed Shancloon wind farm (planning application not yet submitted). In general, as discussed extensively elsewhere in this chapter, the landscape of the LVIA Study Area is flat, and highly vegetated. Given the flat, and highly vegetated nature of the LVIA Study Area, as well as the large separation distance between these proposed wind farms and the Proposed Project, there will be extremely limited occasions where there is combined visibility of these cumulative developments. There will therefore be no significant cumulative visual effects that occur as a result of the Proposed Project, in relation to these two proposed wind farms.

The proposed (planning application not yet submitted) Cooloo Wind Farm is located within the LVIA Study Area. In general, it is evident that the level of screening present in the landscape substantially reduces the level of actual visibility of both the Proposed Project and the proposed Cooloo turbines. While there is limited combined visibility of both the turbines of the Proposed Project and the proposed Cooloo turbines from the majority of the LVIA Study Area, as screening levels change as a receptor travels through the area, there will be intermittent views of the both the Proposed Project and the proposed Cooloo turbines, resulting in sequential views (where the observer moves to a different point along the route to see the different wind farms) of the proposed turbines and the Cooloo turbines. However, these views will be intermittent, and as a result of the distance between the proposed turbines and the Cooloo turbines cumulative visual effects will be minor with no Significant cumulative visual effects on sensitive receptors identified within the LVIA Study Area. The addition of the Proposed Project will not give rise to Significant cumulative visual effects.

In conclusion, no Significant landscape effects have been identified and Significant visual effects only have potential to occur at a low number of residential properties located within certain areas identified within 1km of the proposed turbines. Overall, visibility of the Proposed Project throughout the LVIA Study Area is deemed to have no Significant effects.