

13. LANDSCAPE AND VISUAL

13.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) addresses the potential landscape and visual impacts of the proposed Ballivor Wind Farm. The emphasis in this chapter is on the likely significant direct and indirect effects of the Proposed Development. It covers the assessment methodology, a description of the Proposed Development and the existing landscape based on relevant guidance. It includes a description of the landscape policy with specific reference to wind energy and the study area in which the Proposed Development is located.

The landscape of the 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 wind farm uses visibility mapping, representative viewpoints and photomontages. The potential impacts in both landscape and visual terms are then assessed, including cumulative impacts.

13.1.1 Statement of Authority

MKO has developed extensive expertise and experience over the last 15 years in the Landscape and Visual Impact Assessment of a range of projects, including large scale wind energy developments. The Landscape and Visual Impact Assessments were conducted and reported in this Chapter by Audrey Williams, the Chapter was then subsequently reviewed and finalised by Jack Workman and Michael Watson.

This Landscape and Visual Chapter was drafted by Audrey Williams, a Landscape Architect with MKO. Audrey has a combined three and a half years of landscape design and project management experience from Ireland, Sweden and Canada, with a focus on residential and park planning design and renewable energy projects. Audrey 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, as well as preparing landscape masterplans for residential and commercial spaces. Audrey has extensive project management experience in landscape design and master planning and preparing landscape feasibility reports for large wind farm projects.

This Chapter was finalised by Jack Workman MSc, TMLI and Saoirse Fitzsimons. Jack is chartered is a Technician Member with the British Landscape Institute (TMLI) and the Landscape & Visual Project Director at MKO. Jack is an Environmental Scientist and Landscape and Visual Impact Assessment (LVIA) specialist. For the past three years his primary role at MKO has been producing the Landscape and Visual 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.

Saoirse Fitzsimons is an Environmental Scientist and LVIA Specialist with MKO. Her primary role at MKO is producing the Landscape and Visual chapter of EIA reports. Saoirse holds an MSc. In Coastal and Marine Environments from the National University of Ireland, Galway where she was awarded The Prof Micheál O Cinnéide Award for Academic Excellence. Since joining MKO, Saoirse has worked widely on renewable energy infrastructure, commercial, recreational, and residential projects. Saoirse is a qualified Unmanned Aerial Vehicle Operator and holds an A1/A3 and A2 drone licence.

This chapter was reviewed by Michael Watson. Michael is Project Director and head of the Environmental Team at MKO, an Irish planning and environmental consultancy with wind energy a company specialism. Michael has extensive expertise conducting LVIA's for wind farm developments and 20 years' professional consultancy experience as a project director, project manager and lead coordinator of environmental impact assessments for wind energy and other large-scale infrastructure projects.

13.1.2 'Do Nothing' Scenario

If the Proposed Development were not to proceed, the site would continue to be managed under the requirements of the relevant IPC licence and therefore the ongoing site management and environmental monitoring, peat stockpile removal (due to be completed by 2024), and wind measurement would continue. In addition, if the Proposed Development were not to proceed, the implementation of peatland rehabilitation plans as required under IPC License would occur. Likewise, the PCAS scheme in adjacent Bogs (where selected) would continue to be implemented. These land uses and activities will also continue if the Proposed Development does proceed.

If the Proposed Development were not to proceed, the opportunity to capture part of Meath and Westmeath'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. The opportunity to generate local employment and investment and to diversify the local economy would also be lost. Furthermore, the opportunity to open up the Wind Farm Site to the public and provide amenity and recreational facilities would be lost.

13.1.3 Proposed Development Description

The Proposed Development comprises the construction of 26 No. wind turbines and all associated works. The proposed turbines will have a blade tip height of 200 metres above the top of the foundation. The applicant is seeking a ten-year planning permission. The full description of the Proposed Development, as per the public planning notices, is as follows:

- i. 26 No. wind turbines with a blade tip height of 200m and all associated hard-standing areas.*
- ii. 2 No. permanent Meteorological Anemometry Masts with a height of 115 metres and removal of existing meteorological mast.*
- iii. 4 No. temporary construction compounds, in the townlands of Bracklin and Grange More.*
- iv. 5 No. temporary security cabins at the main construction site entrances as well as at a number of access points around the site, in the townland of Killagh, Grange More and Coolronan.*
- v. 2 No. borrow pits located in Carranstown Bog, and in third party land in the townland of Craddanstown; All works associated with the opening, gravel and spoil extraction, and decommissioning of the borrow pits.*
- vi. 1 No. 110 kV electrical substation, which will be constructed in the townland of Grange More. The electrical substation will have 2 No. control buildings, a 36 metre high telecom tower, associated electrical plant and equipment, a groundwater well and a wastewater holding tank. All associated underground electrical and communications cabling connecting the turbines and masts to the proposed electrical substation, including road crossings at R156 and local road between Lisclogher and Bracklin Bogs, and all works associated with the connection of the proposed wind farm to the national electricity grid, which will be to the existing Mullingar – Corduff 110 kV overhead line via overhead line.*
- vii. Provision of new internal site access roads with passing bays measuring a total length of 28km and provision/upgrade of existing/new pathways for amenity use measuring a total length of approximately 3.3km and associated drainage.*
- viii. Temporary accommodating works to existing public road infrastructure to facilitate delivery of abnormal loads at locations on the R156 and R161 in the townlands of Doolystown and Moyfeagher;*
- ix. Accommodating works to widen existing site entrances off the R156 into Ballivor and Carranstown Bogs and reopen entrances at Lisclogher and Bracklin Bogs for use as construction site entrances and to facilitate delivery and movement of turbine components and construction materials; Entrances will be used for maintenance and amenity access during the operational period;*

- x. *Permanent vertical realignment of the R156 in the vicinity of the site entrance to achieve required sight lines.*
- xi. *Construction of permanent site entrances off a local road into Lislogher and Bracklin Bogs to facilitate a crossing point for turbine components and construction materials and operation/amenity access;*
- xii. *Provision of amenity access using existing entrances off the R156 and local roads in the townlands of Bracklin, Coolronan, Clondalee More and Craddanstown;*
- xiii. *3 No. permanent amenity carparks in Ballivor Bog (50 car parking spaces), Carranstown (15 car parking spaces) and Bracklin Bog (15 car parking spaces) and the provision of bicycle rack facilities at each location.*
- xiv. *All associated site works and ancillary development including access roads, amenity pathways, drainage and signage.*
- xv. *A 10-year planning permission and 30-year operational life from the date of commissioning of the entire wind farm.*

A full description of the Proposed Development is provided in Chapter 4 of this EIAR.

Essential Aspects of the Proposed Development from an LVIA Perspective

The term ‘proposed turbines’ or ‘Proposed Development turbines’ refers to the 26 No. turbines proposed as part of the Proposed Development. Guidance for LVIA (GLVIA3, 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”*. The tall, vertical nature of the proposed turbines make them the most prominent elements of the Proposed Development 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 Development which will give rise to effects on the landscape and visual amenity and are therefore a primary focus of the LVIA conducted in this Chapter.

The proposed wind turbines to be installed on the site will have a ground-to-blade tip height, hub height and blade length within the following, limited, ranges:

- Turbine Tip Height –200 metres
- Hub Height –115 metres
- Blade Rotor Diameter: - 170 metres

Other components of the Proposed Development 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 due consideration throughout this chapter and are assessed in detail in Section 13.7.3.3 – 13.1.1.1 - *Other (non-turbine) Components of the Proposed Development – Landscape and Visual Effects*.

In- Text Reference to the Proposed Development

With respect to references throughout this chapter, where:

- The ‘proposed turbines’ are referred to, this relates to the turbine components of the Proposed Development.
- The ‘Proposed Development’ is referred to, this relates to all the project components described in detail in Chapter 4 of this EIAR.
- The ‘Southern Cluster’ is referred to, this relates to the 12 No. proposed turbines – T01 to T12 sited in Ballivor Bog at the southern extent of the Wind Farm Site.
- The ‘Northern Cluster’ is referred to, this relates to the 14 No. proposed turbines – T13 to T26 sited Lislogher Bog and Bracklin Bog at the northern extent of the Wind Farm Site.

13.1.4 Appropriate Design and Suitable Siting

The Proposed Development site was strategically selected as a landscape highly suitable for the development of wind energy. Also, 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 Development 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 Development and strategic siting of turbines in the landscape was informed by extensive early-stage impact assessment work conducted in 2020 and 2021, including a Residential Visual Amenity Appraisal. The evolution of the turbine layout included omission of turbines from the project and careful micro-siting of turbines aimed at preventing the potential for significant landscape and visual effects. Details of the various turbine layout iterations included as part of this design process are included in Chapter 3 – *Consideration of Reasonable Alternatives*

Siting in a Suitable Landscape for Wind Energy Development

During the initial site selection process, landscape sensitivity was identified as a key constraint and so landscapes considered to be less sensitive are preferred over sites with more sensitivity to change. The following factors detail why the Proposed Development site was strategically selected as a landscape highly suitable for the development of wind energy:

- The Proposed Development is strategically sited within a large expanse of uninhabited peatland set back from visual receptors in the wider landscape;
- The Proposed Development is strategically sited in a flat landscape of degraded cutover peatland, a landscape currently of low value and low sensitivity;
- The proposed turbines are strategically sited in a very flat landscape bound by mature hedges and treelines. The wider landscape setting is also very flat and highly vegetated. Consequently, (as demonstrated by the photomontage visuals in the Appendix 13-4: Photomontage Booklet) there is very limited visual exposure of the Proposed Development from receptors located beyond 3km from the proposed turbines;
- Local planning policy specifically promotes the selection of cutover peatlands as landscapes suitable for the development of wind energy.
- The peatlands of the Proposed Development site form part of a modified working landscape setting where there is limited visibility (or large set back distances) from large population centres and designated landscape and visual receptors of high sensitivity;
- Siting of the proposed turbines at a similar base elevation relative to receptors (and viewpoints) in the wider landscape reduces their visual prominence and visual effects in the highly vegetated landscape, as demonstrated by the photomontages included in the Appendix 13-4: Photomontage Booklet

Project Layout and Design

Details of the various project design iterations and the considerations related to potential landscape and visual effects are described in detail in Chapter 3 – *Consideration of Reasonable Alternatives*. The project layout that is the subject of this LVIA, already incorporates the following landscape and visual design considerations for Best practice wind farm design:

- Initial project layouts included turbines sited within Carranstown bog and Lislogher West bog. These turbines were omitted from the proposal in order to mitigate the potential for any surrounding visual effects on sensitive receptors as well as ensuring sufficient separation distance between the two distinct turbine clusters.
- The turbine layout has been designed to create two coherent clusters, sympathetic to the arrangement of the geographic layout of the viable lands within the peatland site. Use of two turbine clusters balances the need to maximise the potential renewable

energy output from this suitable landscape resource, whilst ensuring adequate setback from sensitive receptors.

- Each turbine cluster comprises a coherent group of turbines, use of consistent spacing within each cluster ensures the turbines are contiguous and connected to each other visually.
- Both turbine clusters are sufficiently separated from each other so that they read in an understandable way in the landscape when viewed as a whole from distant receptors, such as elevated vantage points in the wider landscape (e.g. VP02).
- All turbines in the 26-turbine layout have been sited greater than 500 metres from residential receptors in order to protect residential visual amenity in accordance with the Wind Energy Development Guidelines (WEDG's) for Planning Authorities (Department of the Environment, Heritage and Local Government (DoEHLG), 2006). In reality, all turbines are greater than 800m from residential receptors, adhering to the 4 times tip height set-back distance explicitly set out for residential visual amenity prescribed by the Draft Revised WEDG's (Department of Housing, Planning and Local Government (DoHPLG), 2019).
- The proposed connection to the national electricity grid will be via a connection into the existing Mullingar to Corduff 110kV overhead line which currently traverses Carranstown Bog. This eliminates the requirement to create a new grid connection route outside of the Wind Farm Site, therefore eliminating any associated landscape and visual effects that would likely occur if such infrastructure was required.
- The internal site road layout makes use of the existing tracks and machine pass routes wherever possible, to minimise the requirement for new tracks within the Proposed Development Site.
- The layout of the Proposed Development has been designed to ensure minimal loss of valuable landscape receptors such as areas of intact bog, woodland or valuable biodiversity corridors.
- The Proposed Development includes specific measures and interventions to improve the ecological and amenity value of the landscape at the Proposed Development Site; including a Biodiversity Enhancement Plan which is presented in Appendix 6.4 and an Amenity Map which is presented in Appendix 4.4

13.1.5 Scoping Replies & Pre Planning Consultation

A scoping and consultation exercise has been carried out by MKO, as detailed in Chapter 2 of this EIAR. Comments pertaining to landscape and visual impact and residential amenity were received from the EPA and Fáilte Ireland and are considered in the chapter. Responses to the scoping exercise are summarised in chapter 2 and are included in full in Appendix 2-1.

Several pre-application consultations were held separately with Westmeath County Council, Meath County Council and An Bord Pleanála throughout 2020. The meetings were attended by representatives of the various planning authorities (Westmeath County Council, Meath County Council, An Bord Pleanála), Bord na Móna and MKO. In each meeting, MKO presented an overview of the scope of the LVIA including ZTV mapping and a selection of the photomontages that had been produced. Westmeath County Council did not highlight any specific areas of focus for the LVIA. Specific requests made by Meath County Council and An Bord Pleanála in separate pre-planning meetings are reported below.

Meath County Council - Pre-Planning (August & October 2020)

Meath County Council highlighted that landscape and visual impacts should be considered in relation to the Boyne Valley Tourism Strategy 2016-2020, as well as residential visual amenity. They also requested that the LVIA include assessments from the following receptors:

- Views from Scarriff Bridge;
- Heritage Towns – Trim Castle

- The Hill of Tara and intervisibility between this landscape and Frewin Hill located in Co. Westmeath.
- Royal Canal
- Dublin to Sligo Railway

All of the receptors listed above have been assessed in this Chapter, as well as receptors relating to tourism in the county as highlighted in the Boyne Valley Tourism Strategy 2016-2020.

An Bord Pleanála – Pre Planning (September 2021)

The Board requested the LVIA include sites in the wider area, including centres of population, amenity areas and scenic routes. These receptors are identified in Section 13.5 and then assessed in Section 13.7.3.2. The Board’s representatives also noted the proximity of the Proposed Development to Bracklyn House, a protected structure to the west of the Proposed Development Site. The Board also indicated they expect cumulative impact assessment of the Proposed Development with the Bracklyn Wind Farm. The likely landscape and visual impact on Bracklyn House and cumulative assessment of the Bracklyn Wind Farm are included in this Chapter.

13.2 Methodology and Assessment Criteria

This section summarises the methodology and the guidance used to undertake the landscape and visual impact assessment of the Proposed Development; a more comprehensive description of the methodology is detailed in *Appendix 13-1*. There are six main sections to this assessment:

- Visibility of the Proposed Development
- Landscape Baseline
- Visual Baseline
- Cumulative Context
- Representative Viewpoints and Photomontage Locations
- Likely and Significant Effects – the assessment of landscape, visual and cumulative effects

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

Where the ‘Proposed Development site’ or ‘the site’ is referred to, this relates to a study area defined by the ‘Wind Farm Site Boundary’ which incorporates the immediate landscape setting where all infrastructure of the Proposed Development is sited, as shown delineated in red on the LVIA Baseline map (Appendix 13-5) and the ZTV Map (Figure 13-1 below) as the ‘Wind Farm Site Boundary’.

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’. As detailed in the LVIA Methodology - *Appendix 13-1* (and below), the geographical parameters for this LVIA include an LVIA Study Area of 25km for landscape and visual effects and a LVIA Study Area of 15km for effects on landscape character.

The distance at which a ZTV is set from a proposed wind farm development usually defines the parameters of the LVIA Study Area. In most cases, ZTV mapping will be produced within a radius of 20 km from the proposed turbines, however, the 2006 DoEHLG WEDG's for Planning Authorities require that:

“in areas where landscapes of national or international renown are located within 25 km of a proposed wind energy development, the Zone of Theoretical Visibility should be extended as far (and in the direction of) that landscape”.

The archaeological complex known as The Hill of Tara (approx. 26.1 km from the proposed turbines) is a candidate on the World UNESCO Tentative list for Ireland, it is a National Monument in State Care and therefore is deemed to be a landscape of national and international renown. As reported previously in Section 13.1.5, Meath County Council requested an impact assessment be conducted from The Hill of Tara. Therefore, the ZTV shown in Figure 13-1 (Section 13.3, Visibility of the Proposed Development) has been extended to 26.1 km to include the most elevated location at The Hill of Tara heritage landscape. The ZTV was extended to other landscape areas to 25km. Consequently, the LVIA Study Area has been established as 25km from the proposed turbines in all directions and to 26.1 km from the proposed turbines in the direction of The Hill of Tara (as requested by the Planning Authority). 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 LVIA Study Area of 15km is deemed appropriate for effects on landscape character in relation to the assessment of effects upon designated Landscape Character Areas (A comprehensive assessment of LCAs are included in Appendix 13-2).

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

- Effects on landscape and visual receptors that have minimal or no theoretical visibility (as predicted by the Zone of Theoretical Visibility (ZTV)) and/or very distant visibility, and are therefore unlikely to be subject to significant effects;
- Notwithstanding the Hill of Tara (As noted above impacts requested by Meath County Council), effects on designated landscapes beyond a 25km radius from the Proposed Development, 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 landscape character beyond a 15km radius from the Proposed Development, where it is judged that potential significant effects on landscape character are unlikely to occur;
- Effects on visual receptors beyond a 25km radius from the Proposed Development, where it is judged that potential significant effects are unlikely to occur;
- Cumulative landscape and visual effects beyond a 25 km radius from the proposed turbines, where it is judged that potential significant effects are unlikely to occur;
- Receptors in County Offaly due to distance from the Proposed Development and the lack of prominent sensitive visual or landscape receptors within the small area of the county located within the LVIA Study Area;
- Effects on receptors in County Cavan due to the lack of theoretical visibility indicated by the ZTV from any sensitive receptors located in the LVIA Study Area.

13.2.2 Guidelines

The legislation and general guidance on Environmental Impact Assessment is set out in Chapter 1 of this EIAR. The LVIA assessment reported in this Chapter was guided and informed by guidance documentation specifically pertaining to Landscape and Visual Impact Assessment, details of EU and National landscape policy and the guidelines used to produce this assessment are outlined in the Methodology Appendix - *Appendix 13-1*.

The Guidelines for Landscape and Visual Impact Assessment 3rd Edition or GLVIA3 (The Landscape Institute/Institute of Environmental Management and Assessment, UK, 2013) is the primary guidance document used for the landscape and visual impact assessments (LVIA) in this Chapter. A range of other guidelines also inform the preparation of this LVIA, which include:

- WEDG's for Planning Authorities (Department of the Environment, Heritage and Local Government, 2006)
- Review of Draft Revised WEDG's (Department of Housing, Planning and Local Government, 2019)
- Visual Assessment of Wind Farms: Best Practice (Scottish Natural Heritage, 2002)
- Visual Representation of Wind Farms: Version 2.2 (Scottish Natural Heritage, 2017)
- Siting and Designing Wind Farms in the Landscape, Version 3a (Scottish Natural Heritage, 2017)
- Assessing the Cumulative Landscape and Visual Impact of Onshore Wind Energy Developments. (Nature Scot, 2012)
- Photography and photomontage in landscape and visual impact assessment (Landscape Institute Advice Note 01/11, 2011)
- Visual Representation of Development Proposals (Landscape Institute Technical Guidance Note 06/19, 2019)
- Spatial Planning for Onshore Wind Turbines – natural heritage considerations (Scottish Natural Heritage, 2015)

13.2.3 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: Westmeath, Meath; Kildare) pertaining to landscape and wind energy;
- Landscape designations in the LVIA Study Area;
- Landscape character of the LVIA Study Area;
- Landscape character of the Proposed Development site based on:
- Site Surveys undertaken throughout 2020, 2021 and 2022;
- Landscape Character Types identified in Landscape Character Types as a basis for Guidelines: WEDG's for Planning Authorities (Department of the Environment, Heritage and Local Government, 2006) and also cognisant of the Draft Revised WEDG's (Department of Housing, Planning and Local Government, 2019)

Visual

- Identification of Visual Receptors in the LVIA Study Area;
- Preliminary assessments of visibility of the Proposed Development from visual receptors using Zone of Theoretical Visibility (ZTV) mapping and on-site appraisals.

13.2.4 Assessment of Potential Impacts

The landscape and visual assessment methodology used in this chapter (detailed in Appendix 13-1) includes clearly documented methods based on the GLVIA3 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 detailed before being 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).

Assessment of potential impacts uses photomontages, whereby the potential effects arising as a result of the proposed turbines are assessed from viewpoint locations representative of prominent and sensitive landscape and visual receptors located within the LVIA Study Area. The photomontages are included in Appendix 13-4 of this EIAR and a comprehensive assessment of each viewpoint is included in Appendix 13-3. Detailed information on the methodology used for the production of photomontages and the methods used for landscape and visual impact assessment are presented in the methodology appendix - *Appendix 13-1*. 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 (Section 13.3).

13.3 Visibility of the Proposed Development

13.3.1 ZTV Mapping: Theoretical Visibility of the Proposed Development turbines

ZTV mapping is an important step in the LVIA process, in that it clearly shows which areas of the LVIA Study Area will have theoretical visibility of the proposed turbines and which areas will have no visibility. The ZTV mapping methodology detailed in Appendix 13-1 was used to examine the theoretical visibility of the 26 No. proposed turbines from all landscape and visual receptors within the LVIA Study Area, using the half blade height of the wind turbines as points of reference. As noted in Appendix 13-1, actual visibility on the ground is significantly less than predicted by the ZTV mapping due to factors such as screening from vegetation 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.

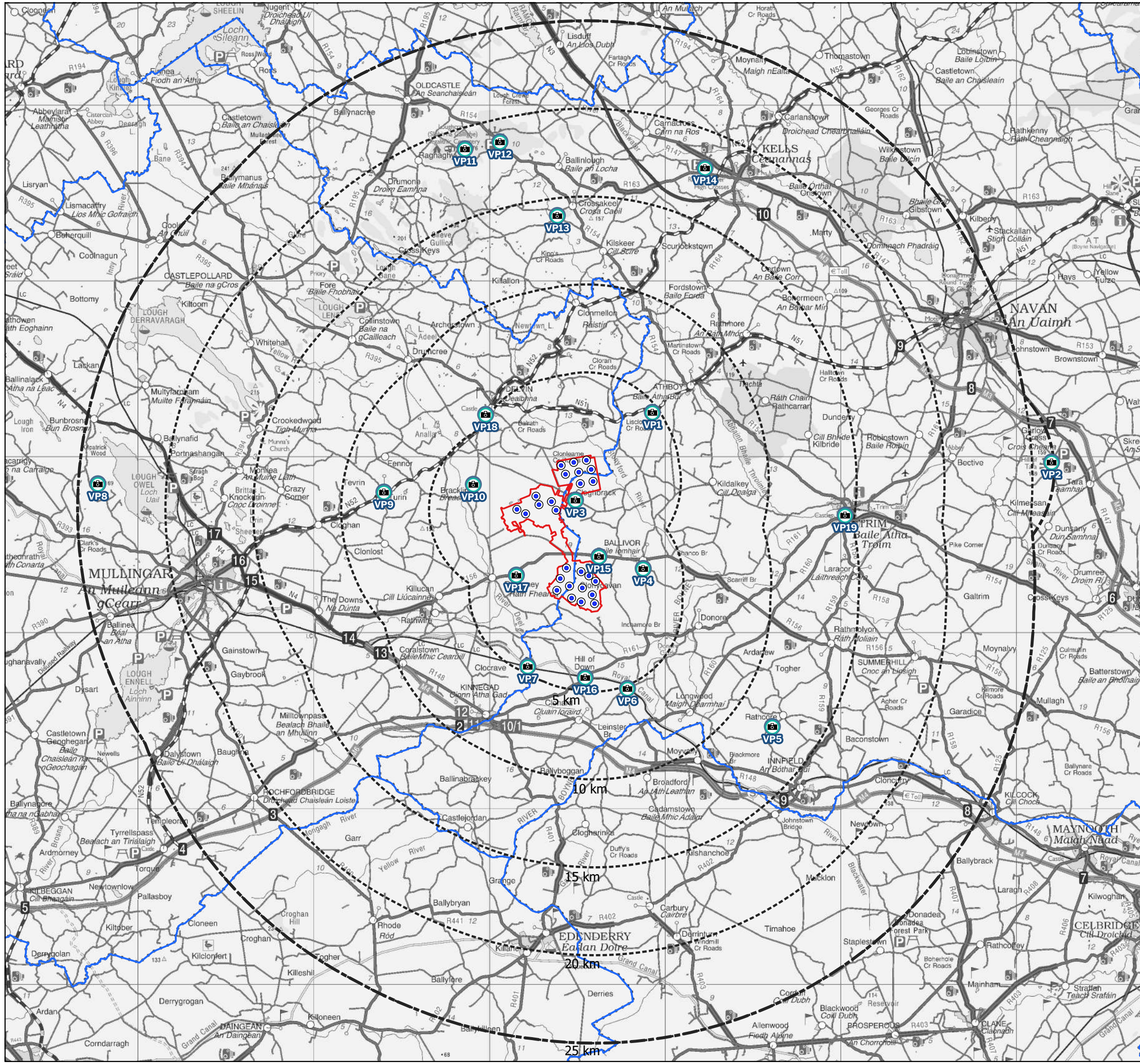
13.3.2 Half Blade ZTV of the Proposed Turbines

A Half Blade ZTV map is shown in Figure 13-1 below. The ZTV map is used within several mapping figures included in this chapter to enable assessment of theoretical visibility of the proposed turbines from landscape and visual receptors (See Appendix 13-5 - LVIA Baseline Map; Figure 13-14 Landscape Character Areas & ZTV; Figure 13-6 Visual Baseline & ZTV). Separate colour bands are used on the ZTV map to indicate the number of turbines which will potentially be visible, shown on Figure 13-1. The legend on Figure 13-1 shows the number of visible turbines for each corresponding colour, which are as follows:

- > Orange: 1-6 turbines theoretically visible
- > Teal: 7-13 turbines theoretically visible
- > Yellow: 14-20 turbines visible
- > Navy: 21-26 turbines visible

Figure 13-2 (below) 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 13-1.

The topographical characteristics of the LVIA Study Area is generally representative of the Irish midland landscape in that it is relatively flat, particularly to the south and east. There is only approximately 245 metres difference in elevation from the lowest point (Boyne River Valley to the east ~ 30m AOD) to the highest point (Loughcrew to the north ~275m AOD) across the LVIA Study Area which comprises a total area of approximately 2,510 km² (approx. 3.6% of the Republic of Ireland). Topographical features provide a relatively pronounced screening effect in 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 below.



Map Legend

- Proposed Turbines
 - Wind Farm Site Boundary
 - LVIA Study Area
 - County Boundaries
- Half Blade ZTV**
- 1-6 Turbines Theoretically Visible
 - 7-13 Turbines Theoretically Visible
 - 14-20 Turbines Theoretically Visible
 - 21-26 Turbines Theoretically Visible
 - Photomontage Viewpoint Locations
Volume 2 Photomontage Booklet

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Drawing No.

Figure 13-1

Drawing Title

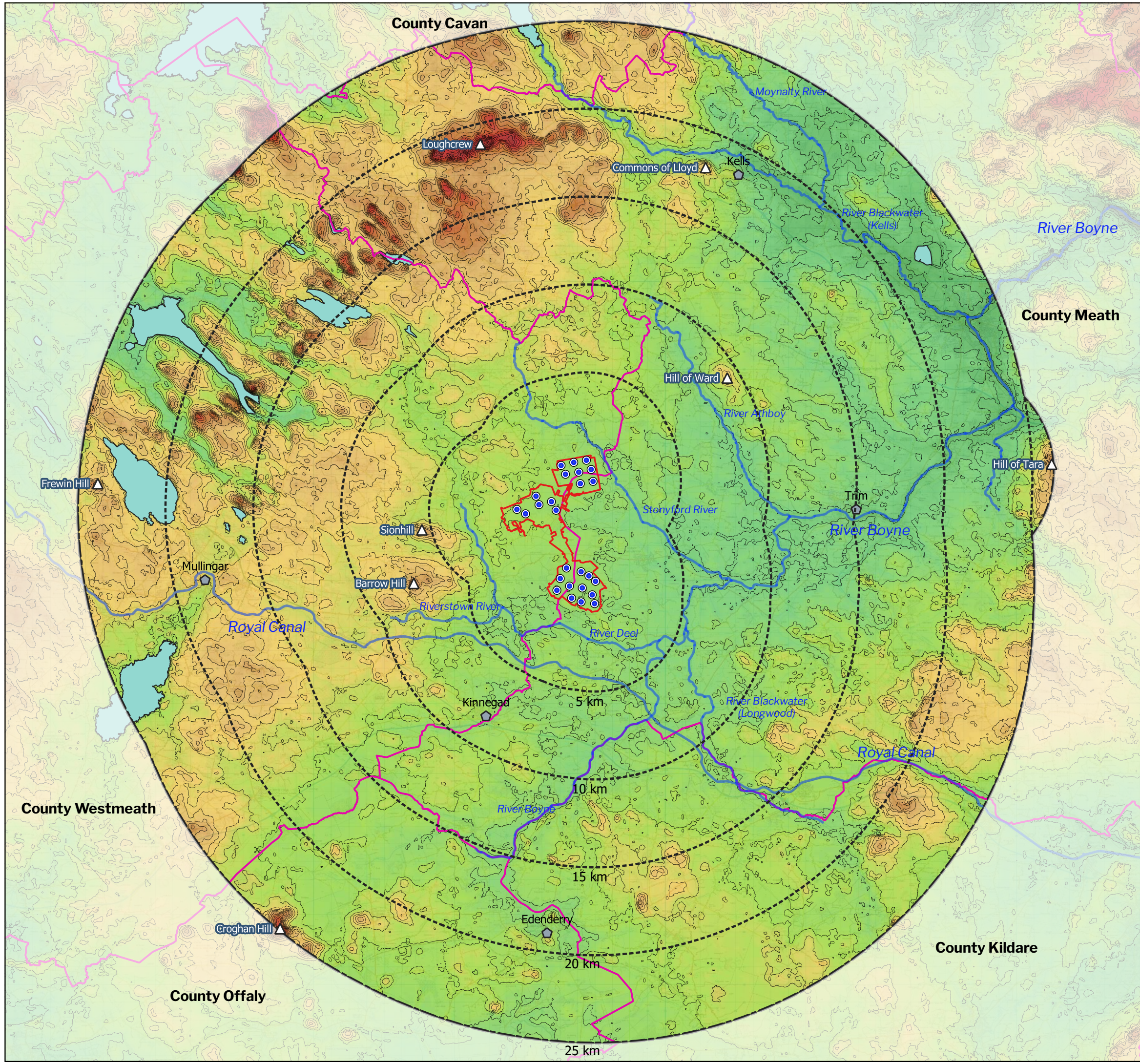
Half Blade ZTV Map

Project Title

Ballivor Wind Farm

Scale 1:210,000	Project No. 191137	Date 23.02.2023	Drawn By JW	Checked By KM
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Map Legend

- Proposed Turbines
 - Wind Farm Site Boundary
 - LVIA Study Area
 - County Boundaries
- Elevation Above Ordnance Datum (Metres)
- 1
 - 20
 - 40
 - 60
 - 80
 - 100
 - 120
 - 140
 - 160
 - 180
 - 200
 - 220
- Contours - 10 metre Interval
 - Watercourse/Waterway
 - Waterbodies
 - Key Settlements
 - Landscapes of Renown and Local Topographic Features

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Drawing No.

Figure 13-2

Drawing Title

Physical Landscape Features

Project Title

Ballivor Wind Farm

Scale 1:210,000	Project No. 191137	Date 23.02.2023	Drawn By JW	Checked By KM
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Theoretical Visibility within 10km of the Proposed Development

Figure 13-1 illustrates full theoretical visibility of the 26 No. turbines within the flat lowland landscape immediately surrounding the site within 5km of the proposed turbines. The landscape between 5-10km from the proposed turbines is also predominantly flat lowland, therefore the ZTV predominantly shows full theoretical visibility excepting small pockets of partial theoretical visibility from slight topography undulations.

The only notable topographic features of the landscape within 10km of the proposed turbines are Barrow Hill (approximately 8km west of turbine T10) and Sionhill (approximately 5.8km west of turbine T17). These landforms obscure or partially obscure visibility of the Proposed Development from receptors to the west, this is illustrated on the ZTV map by limited theoretical visibility of the Proposed Development around the population centre of Mullingar and other receptors further to the west.

Distribution of Theoretical Visibility to the West of the LVIA Study Area

The north-eastern extent of County Westmeath (north-western portion of the LVIA Study Area) comprises a landscape of hills interspersed with lakes and small river valleys. As shown in the Physical Landscape Features Map (Figure 13-2), landform beyond 5km north and west of the proposed turbines becomes a lot more irregular and undulating as the landscape transitions from flat lowlands to the Westmeath Hills. The ZTV map shows that this change in landforms causes a sporadic and intermittent spread of theoretical visibility to the north-west of the LVIA Study Area beyond 10km from the Proposed Development.

Distribution of Theoretical Visibility to the East of the LVIA Study Area

The ZTV indicates widespread full theoretical visibility within the flat lowland landscape of the Boyne Valley in County Meath to the north, east and south of the Proposed Development to distances of 10-15km. Whilst the landscape of the LVIA Study Area is in general very flat, there are topographical features which influence the distribution of theoretical visibility of the proposed turbines beyond 10km from the site. Slightly elevated landforms around the Hill of Ward and River Athboy (See Figure 13-2) limit the theoretical visibility of the proposed turbines from locations beyond 10km to the north-east of the LVIA Study Area. The south side of the Boyne Valley rises gently to the south of Trim Town and elevated landforms north of Innfield will obscure views of Proposed Development in many areas to the south-east of the LVIA Study Area beyond 11km from the proposed turbines, as indicated by the partial and no theoretical visibility shown on the ZTV map.

Distribution of Theoretical Visibility to the North

Approximately 15km north of the proposed turbines landform rises to Loughcrew and the Sliabh na Callaigh Hills. These rolling hills and gentle peaks largely restrict theoretical visibility of the Proposed Development from locations in the northern portion of the LVIA Study Area beyond 15km from the proposed turbines. As shown by ZTV map there is no theoretical visibility or partial theoretical visibility of the proposed turbines from the population centres of Kells and Navan. The ZTV map shows predominantly no theoretical visibility in County Cavan excepting a very small area which is unrepresentative of any prominent landscape or visual receptors, hence the rationale for screening out assessment of potential impacts in this LVIA, as reported previously in Section 13.2.1.

Distribution of Theoretical Visibility to the South of the LVIA Study Area

The geographical distribution of theoretical visibility becomes intermittent and relatively sparse beyond 10km south of the proposed turbines in County Offaly and County Kildare due to slight landform

undulations. Croghan Hill is located approximately 25km south-west of the proposed turbines and is the only elevated landform feature within County Offaly located in the LVIA Study Area.

ZTV at the Hill of Tara

The ZTV and LVIA Study Area was extended to 26.1km to account for the peak at the Hill of Tara which is a heritage landscape of national renown, which is located at the far eastern of the LVIA Study Area. The ZTV shows full theoretical visibility of all proposed turbines from the peak of the hill and other areas within the landscape setting of this site.

Additional ZTV Mapping

Additional ZTV mapping exercises were conducted to assess the theoretical visibility of the Proposed Development cumulatively with all other existing, permitted and proposed wind farm developments located within the 25km LVIA Study Area. These ZTV maps are presented and discussed in Section 13.6 of this Chapter, *Cumulative Baseline*.

13.3.3 Factors Influencing Turbine Visibility

As mentioned previously, the ZTV map is a useful tool to indicate areas where there will be no visibility of the proposed turbines. In practice, vast areas of the LVIA Study Area which have an indication of full theoretical visibility by the ZTV map (Figure 13-1) are likely to have no visibility of the proposed turbines due to other screening factors existent within the landscape. Multiple field surveys were conducted during 2020, 2021 and 2023 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 substantially reduce the likelihood of viewing turbines in vast areas of the LVIA Study Area, in particular areas beyond 5km from the proposed turbines.

The Physical Landscape Features map (Figure 13-2) shows the elevation gradients existent within the LVIA Study Area (only 245 metre difference across an area approximately 2,510 km²). The landscape of the LVIA Study Area is therefore considered to be very flat, typical of the Irish midlands. 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. The low base elevation of the turbines relative to the surrounding landscape causes a 'disproportionate screening effect' (see example/definition below), reducing visibility of the proposed turbines in large areas of the LVIA Study Area where the ZTV indicates full theoretical visibility.

Disproportionate Screening Effects in a Flat Landscape

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 13-3 below best explains this 'disproportionate screening effect'. A ZTV may indicate full theoretical visibility of the proposed turbines from an open field or 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.

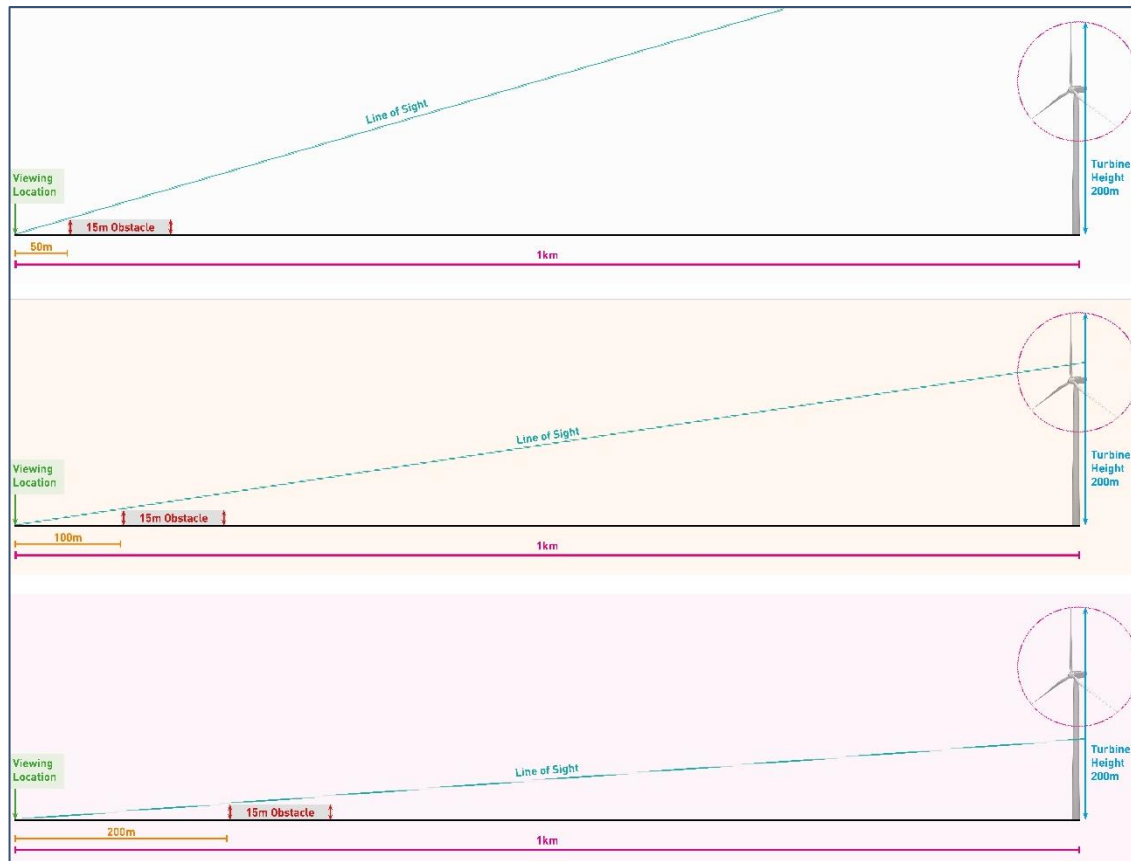


Figure 13-3 Disproportionate Screening Effect

The image above illustrates the disproportionate screening effect that small features in the landscape can have on screening a proposed wind turbine from view. Figure 13-3 shows a 200-metre-tall wind turbine located one kilometre from a viewing location. The illustration in Figure 13-3 is modelled proportionally to ensure measurement accuracy and scaled to fit this report. A 15-metre-tall obstacle, such as a treeline is used as the landscape feature giving rise to the 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.

The Proposed Development is located within a flat peatland which forms part of a flat lowland landscape. Various wind farms have been consented and constructed within landscape types such as this throughout Ireland (e.g. Cloncreen Wind Farm, Derrinlough Wind farm; Mount Lucas Wind Farm). A common feature of this landscape type is that smaller screening vegetation in the intervening landscape can have a disproportionate screening effect on turbine visibility. This means that distance becomes an important factor influencing actual visibility on the ground. As the turbines are not located at height, relative to the surrounding landscape, they appear smaller in scale quickly as distance increases, as seen in such a planar view. The topography of the site and wider landscape setting therefore reduces the potential for overbearing or domineering effects provided sufficient setback from receptors is achieved – as it is designed into this project. The low-lying elevation and flat topography of the Proposed Development Site contributes to the landscape’s capacity to accommodate a wind farm, as is evident by the photomontage visualisations which inform the impact assessments reported later in this Chapter (See Appendix 13-4 *Photomontage Booklet* and Appendix 13-3). Many of the photomontages illustrate that even at close distances from the site, the flat topography and the screening landcover thereon, serve to reduce the visibility of the turbines.

Vegetation Screening

The small scale of the landscape in the immediate environs around the site of the Proposed Development and the historical land management and farming practices, have resulted in landcover in the form of hedgerows, tree lines and woodland scrub in particular along roadways. The vegetation screening found throughout much of the LVIA Study Area create sufficient screening from visual receptors and limits the potential for associated domineering effects. This screening, located between visual receptors and the Proposed Development has the effect of either removing views altogether, or making those views of the turbines intermittent in nature.

13.3.4 Visibility in Close Proximity to the Proposed Development - Route Screening Analysis

As presented later in this Chapter, on-site visibility appraisals and photomontages indicate that most visibility and the most significant visual effects are likely to arise in close proximity to the Proposed Development Site. Actual visibility of the proposed turbines from areas in close proximity to the Proposed Development (<3km) is reduced by screening from the vegetated nature of the landscape immediately surrounding the site. In order to test this objectively, a method was developed by MKO, termed Route Screening Analysis (RSA). The RSA was conducted in 2021 in order to assess the varying characteristics of screening factors existent on roads surrounding the Proposed Development Site. An outline of this RSA method is reported below; however, a full comprehensive description of the methodology is detailed in Section 1.2.3 of the Methodology Appendix - *Appendix 13-1*. Every public road was driven within 3 km radius as well as roads between 3km and 5km where visual receptor sensitivity was considered higher (i.e. the roads around the Villages of Ballivor, Raharney and Delvin). The extent of roadside screening was recorded digitally on a tablet/GPS device as the route is driven. In addition, dashcam video footage was recorded along the routes to allow later confirmation of mapping, and to methodically record the views along the route. All routes were driven slowly. Using the GPS within the tablet device and custom-built data collection application, screening was geographically logged as one of three categories:

- Little/No Screening – mainly open and unobstructed views, where views of the proposed turbines would be readily available (see Plate 13-1)
- Intermittent/Partial Screening – Partial or intermittent views of the proposed turbines would be available. Screening in the form of vegetation, local topography or built form will limit or restrict views of the proposed turbines but may not entirely prevent views. e.g., light deciduous roadside vegetation (see Plate 13-2)
- Full Screening – a location from which no views in the direction of the proposed turbines would be available, and from which the turbines will not be seen. For example, vegetation which is dense enough to block views e.g. coniferous forestry (see Plate 13-3).

Plate 13-1 below was taken east of Raharney and shows an example of ‘Little/No Screening’. Plate 13-2 below was taken west of the village of Ballivor where ‘Intermittent/ Partial Screening’ remains the dominant category. The results of the RSA were mapped and are presented in Figure 13-4 below.



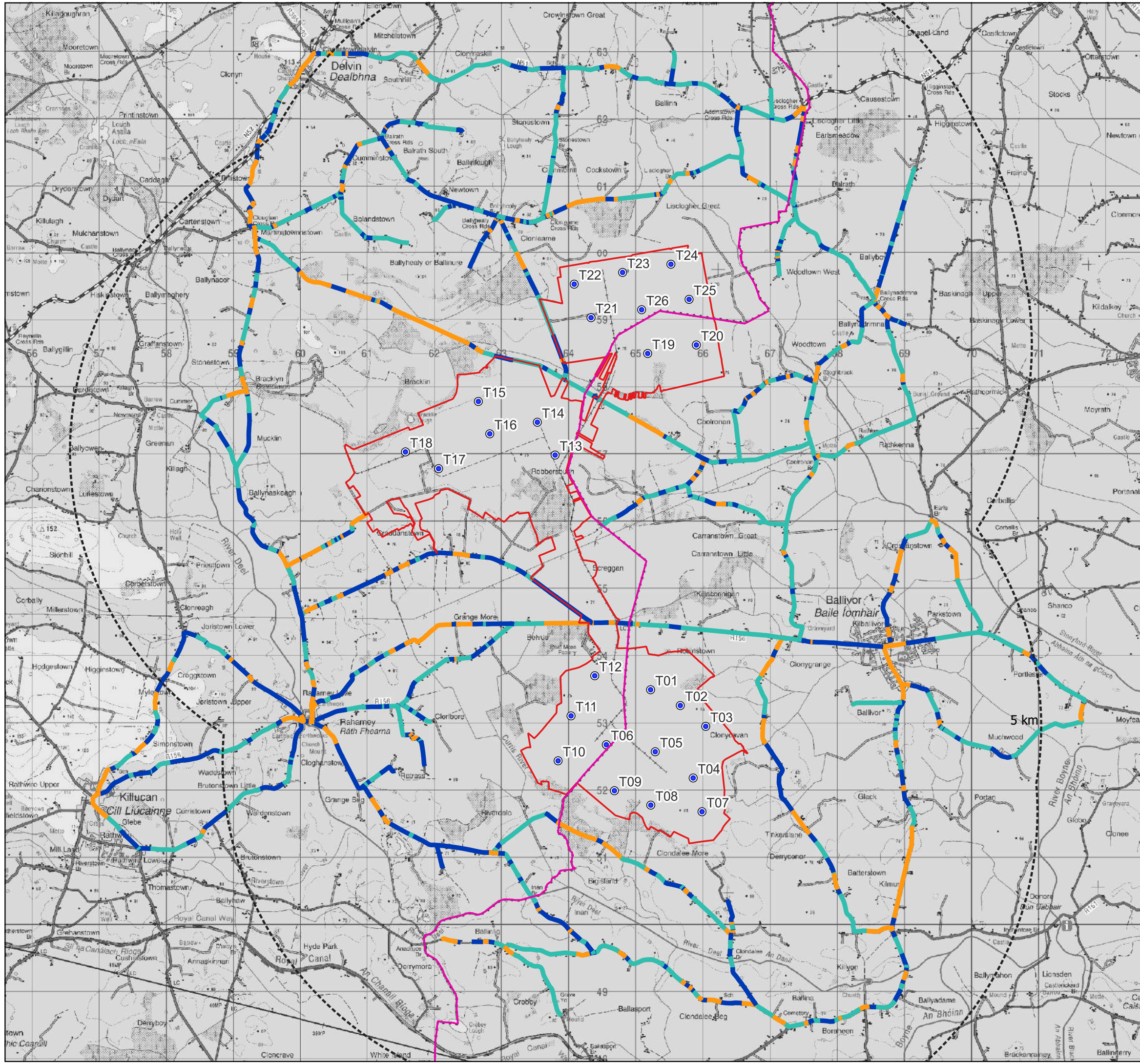
Plate 13-1 An Example of ‘Little/No Screening’



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



Plate 13-3 An Example of 'Full Screening'



Map Legend

- Proposed Turbines
- Wind Farm Site Boundary
- County Borders

Route Screening Analysis

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

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Drawing No.

Figure 13-4

Drawing Title

Route Screening Analysis

Project Title

Ballivor Wind Farm

Scale
1:55,000

Project No.
191137

Date
28.02.2023

Drawn By
SF

Checked By
JW



Figure 13-4 map demonstrates that the majority of the roads surrounding the Proposed Development are a mosaic of ‘Intermittent/Partial Screening’ and ‘Full Screening’ due to the presence of mature roadside vegetation. The presence of roadside screening is an important factor influencing visibility of a wind farm, particularly in contexts such as the landscape setting of the Proposed Development site, where the site is at the same elevation or slightly lower than the surrounding roads. In this regard, the actual visibility of the proposed turbines from the local road network and receptors in the wider area is likely to be far less than as indicated by the ZTV map.

Table 13-1 shows the distribution of the screening classes on the 208.66 km of public road surveyed during the RSA.

Table 13-1 Distribution of Screening Classes recorded (within 3km) during the Route Screening Analysis

Screening Class	Length of road mapped	Percentage Distribution of screening on the surveyed roads
No Screening	96.63km	46.31%
Partial/Intermittent Screening	70.93km	34.00%
Full/Dense Screening	41.09km	19.69%

The table above shows that some form of roadside screening was recorded for over half of all the roads surveyed (59.69%). The RSA confirmed that visibility of the proposed turbines from most of the local road network in close proximity to the site is limited due to roadside screening, and road users will generally not have open views of the proposed turbines when travelling in this area, and the extent of visibility is likely to be far less than as indicated by the ZTV. The outcome of the Route Screening Analysis is discussed in relation to the assessment of visual effects on residential receptors in Section 13.7.3.2.3.

Roads immediately surrounding the Proposed Development site within 1 kilometre are mainly local roads where a lot of roadside screening was recorded. The R156, passing between two turbine clusters within the Carranstown and Ballivor bogs, has ‘Intermittent/Partial Screening’ towards the site. The N51, which runs north of the Lislogher Bog, is a mosaic of ‘Little/No Screening’ and ‘Intermittent/Partial Screening’ with some areas of ‘Full Screening’, There are also stretches of this national road with open views across harvested peatland towards the site.

Within 1-3 kilometres of the site, ‘Intermittent/Partial Screening’ remains the dominant category. Within 3km of the Ballivor, ‘Full Screening’ and ‘Intermittent/Partial Screening’ is mainly evident along the local roads west of the site. To the east and north-east of the Ballivor site, ‘Intermittent/Partial Screening’ and ‘Little/No Screening’ is mainly evident within 3km of the site. Around the villages of Raharney, Delvin and Ballivor, visibility is mainly restricted to ‘Intermittent/Partial Screening’ due to mature vegetation screening along the local road, as shown in Plates 13-9 and 13-10 below.



Plate 13-4 Local Road around the village of Raharney with dense screening /no visibility

Beyond 3km and where areas of 5km were assessed, ‘Intermittent/Partial Screening’ remains the dominant category. Within this area is the villages of Raharney and Delvin, and partial areas of Ballivor to the east. The R156 from Ballivor to Raharney have areas of ‘Little/No Screening’ to the east of the Ballivor site and ‘Intermittent/Partial Screening’ west of the site. Within the streetscapes of these villages themselves, ‘Full Screening’ remains the dominant category, as the proposed Ballivor turbines will not be visible from receptors in the villages within 5km of the turbines. Plate 13-10 below was taken from the Hill of Down, which is also a designated Scenic Viewpoint V54 (Co. Meath). From this heightened position on the bridge, the proposed turbines will be visible over a longer distance. However, the majority of the R161 is lined with vegetation, as can be seen in Plate 13-10 and therefore visibility of the turbines will be intermittent or fully screened.



Plate 13-5 Example of 'intermittent/partial screening' from the Hill of Down (Scenic View 54, Co. Meath).

Landscape Baseline

The Landscape Baseline reports relevant policy pertinent to the LVIA and a description of the receiving landscape of the Proposed Development Site and its wider setting. As well as establishing the key sensitivities and key characteristics of the baseline landscape, this part of the LVIA focusses on identifying the key sensitive landscape receptors that are assessed later in this Chapter. The Landscape Baseline is broken down into the following sections:

- **Landscape Designations and Policy Context** - Policy setting pertaining to the location and nature of the Proposed Development Site from a landscape perspective based on:
 - Westmeath County Development Plan 2021-2027 (WCDP)
 - Meath County Development Plan 2021-2027 (MCDP);
 - Kildare County Development Plan 2023-2029 (KCDP)
 - Offaly County Development Plan 2021-2027 (OCDP)
 - The Boyne Valley Tourism Strategy 2016-2022 (Meath County Council, 2016)
 - As requested by the planning authority
- **Landscape Character of the Proposed Development Site** – A description of the physical landscape and characteristics of the Proposed Development Site and its immediate setting, this includes the following considerations:
 - Landscape characteristics based upon findings from site visits conducted in 2020 and 2021;
 - 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 WEDG's (DoEHLG, 2006) and siting guidance relating to the landscape characteristics of the Proposed Development Site.

Landscape Receptor Preliminary Analysis - a preliminary visibility analysis and screening exercise of using ZTV mapping. 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 Proposed Development Site.

The Proposed Development is located in County Westmeath and County Meath, therefore, the current Westmeath County Development Plan 2021-2027 and the current Meath County Development Plan 2021-2027 were 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 Proposed Development Site as a landscape suitable for a wind energy development.

As demonstrated by ZTV map (Figure 13-1), three other counties are located in the LVIA Study Area; County Cavan, County Kildare and County Offaly. As reported previously County Cavan is screened out of this assessment due to the absence of any sensitive receptors in the very small area of this county within the LVIA Study Area with any theoretical visibility. The county development plans of Counties Kildare and Offaly were also consulted to identify relevant landscape designations within the LVIA Study Area.

All landscape policy designations within the LVIA Study Area are mapped below in Figure 13-5 – *Landscape Policy Context Map*. The mapping figure shows that most sensitive landscape designations are set back from the Proposed Development at the outer periphery of the LVIA Study Area (>10km).

13.4.1.1 County Westmeath Landscape Policy

The Westmeath County Development Plan 2021-2027 (hereafter referred to as the WCDP) came into effect on the 3rd of May 2021. The WCDP sets out policies on landscape in *Chapter 13 Landscape and Lake Amenities* and *Chapter 14 Cultural Heritage*. The following policies and objectives deal with the Westmeath landscape generally:

“It is a policy of Westmeath County Council to:

***CPO 13.2** Protect the distinctiveness, value and sensitivity of County Westmeath’s landscapes and lakelands by recognising their capacity to sustainably integrate development.*

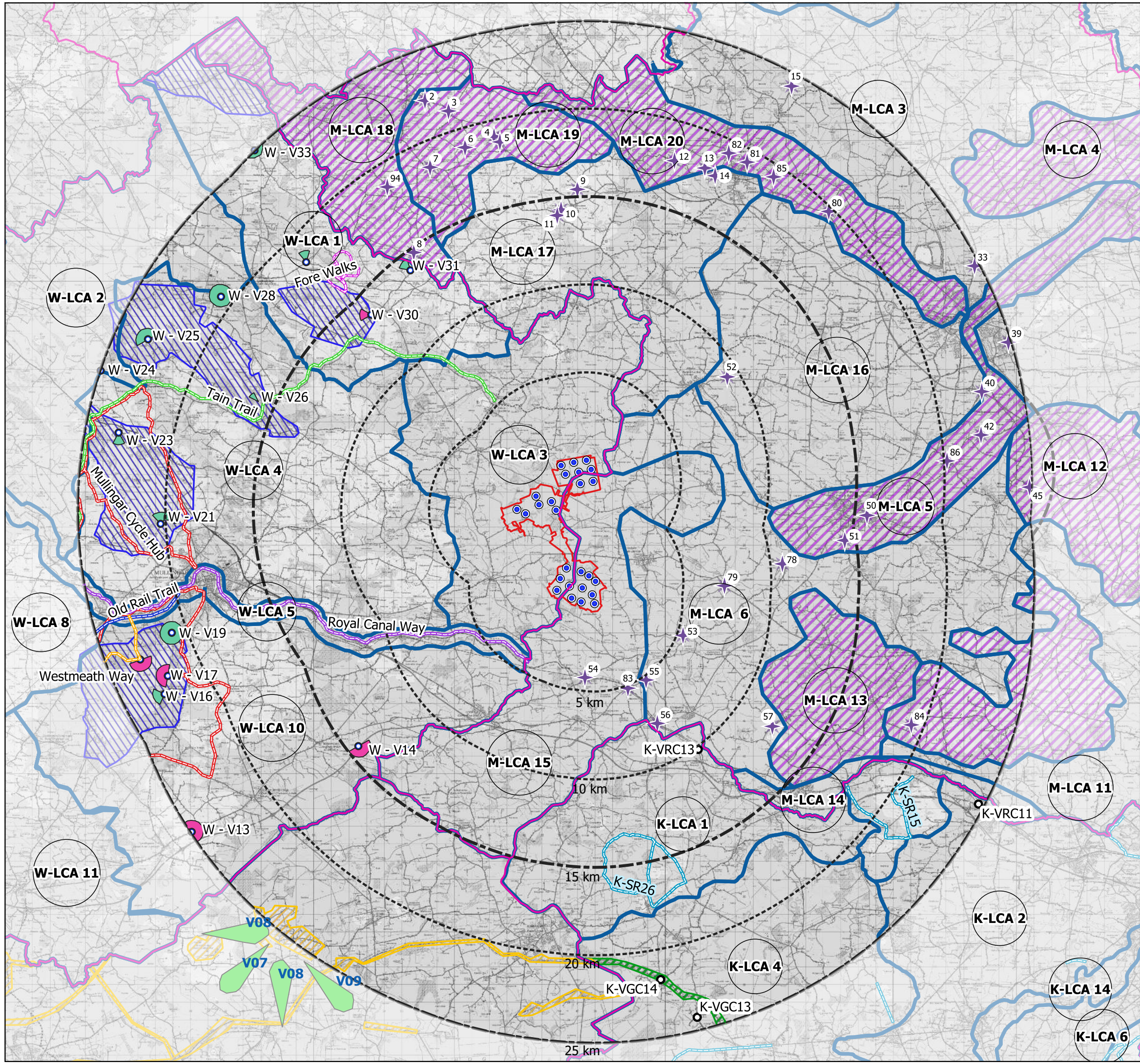
***CPO 13.4** Conserve and enhance the high nature conservation value of the Landscape Character Areas in order to create/protect ecologically resilient and varied landscapes.*

***CPO 13.6** Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality.*

***CPO 14.50** Support the economic viability of parks, gardens and demesnes by encouraging high quality development that does not lead to the loss of, or cause harm to the character, the principal components of, or the setting of parks, gardens and demesnes of special historic interest.*

***CPO 14.52** Require a masterplan to be prepared for development proposals within historic designed and demesne landscapes. Such a plan should include an appraisal of the designed landscape together with an architectural appraisal, in order to inform design proposals, which must be sensitive to and respect the built heritage elements and green space values of the site.”*

As outlined previously in Section 13.1.4 above, the final Proposed Development design is the subject of an extensive iterative design process informed by early-stage impact assessment work including ZTV mapping and photomontage preparation. Therefore, in relation to policy *CPO 13.6*, every effort has been made to bring forward the optimum design for the Proposed Development with respect to minimising visual impact on the landscape.



Map Legend

- Proposed Turbines
- Wind Farm Site Boundary
- LVIA Study Area
- County Boundaries
- County Landscape Character Areas
- Landscape Designations**
- Co. Westmeath Areas of High Amenity
- Co. Meath High Sensitivity Areas
- Co. Kildare Special Sensitive Landscape
- Co. Offaly Areas of High Amenity
- Designated Scenic Amenity**
- Co. Westmeath Protected Views Origin
- Co. Westmeath Protected Views
- Hill of Uisneach Panorama
- Regional
- County
- Local
- Co. Westmeath Scenic Routes
- Mullingar Cycle Hub
- Old Rail Trail
- Royal Canal Way
- Tain Trail
- Westmeath Way
- Fore Walks
- ★ Co. Meath Scenic Views
- Co. Kildare Scenic Views
- Co. Kildare Scenic Routes
- Co. Offaly Scenic Views

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Drawing No.

Figure 13-5

Drawing Title

Landscape Policy Context

Project Title

Ballivor Wind Farm

Scale 1:210,000	Project No. 191137	Date 23.02.2023	Drawn By SF	Checked By JW
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The WCDP includes policies and objectives pertaining to wind energy development and landscape and amenity designations which are referred to in the following sections:

- Areas of High Amenity
- Landscape Character Areas
- Scenic Amenity, Views and Prospects
- Wind Energy Policy

Co. Westmeath Areas of High Amenity

The WCDP notes that Lakelands are important, prominent, and unique landscape features of Westmeath. As reported below, Section 13.128 of the WCDP designates five sensitive lake landscape areas within the county which have a high amenity and high landscape value.

“Much of Westmeath’s landscape, particularly its lake landscape is highly regarded for its amenity and recreational value and should be protected. In recognition of this, the Council have specifically designated the following lakes as Areas of High Amenity (HAA):”

- *Lough Ree High Amenity Area*
- *Lough Lene High Amenity Area*
- *Lough Owel High Amenity Area*
- *Lough Ennell High Amenity Area*
- *Lough Derravaragh High Amenity Area”*

Chapter 13 of the WCDP sets out the county’s policy objectives for preservation and enhancement for Areas of High Amenity:

Policy CPO 13.20 - Protect High Amenity areas from inappropriate development and reinforce their character, distinctiveness and sense of place.

Policy CPO 13.22 - Protect lakeshores from any inappropriate development which would detract from the natural amenity of the area.

The designated Areas of High Amenity are mapped in *Map 64* in Volume 2 of the WCDP. As shown in Figure 13-5 above (Landscape Policy Context Map), Lough Lene, Lough Owel, Lough Ennell and Lough Derravaragh are located in the western portion of the LVIA Study Area. The Hill of Uisneach is also designated as an Area of High Amenity in the WCDP, however, it is not in the LVIA Study Area and is therefore not considered further in this EIAR. There are no Areas of High Amenity within or in close proximity to the Proposed Development Site. The closest Area of High Amenity is Lough Lene at 13.1km north-west of the nearest proposed turbine.

Co. Westmeath Landscape Character Areas

Landscape character refers to the distinct and recognisable pattern of elements that occur 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 Character Assessment of County Westmeath identifies and designates 11 distinct Landscape Character Areas (LCAs). This Landscape Character Assessment was undertaken for the 2008-2014 Westmeath County Development Plan and the resultant LCA designations are adopted in the current WCDP (2021-2027). As shown in below, the Proposed Development Site is located in County Westmeath LCA 3 – River Deel Lowlands.

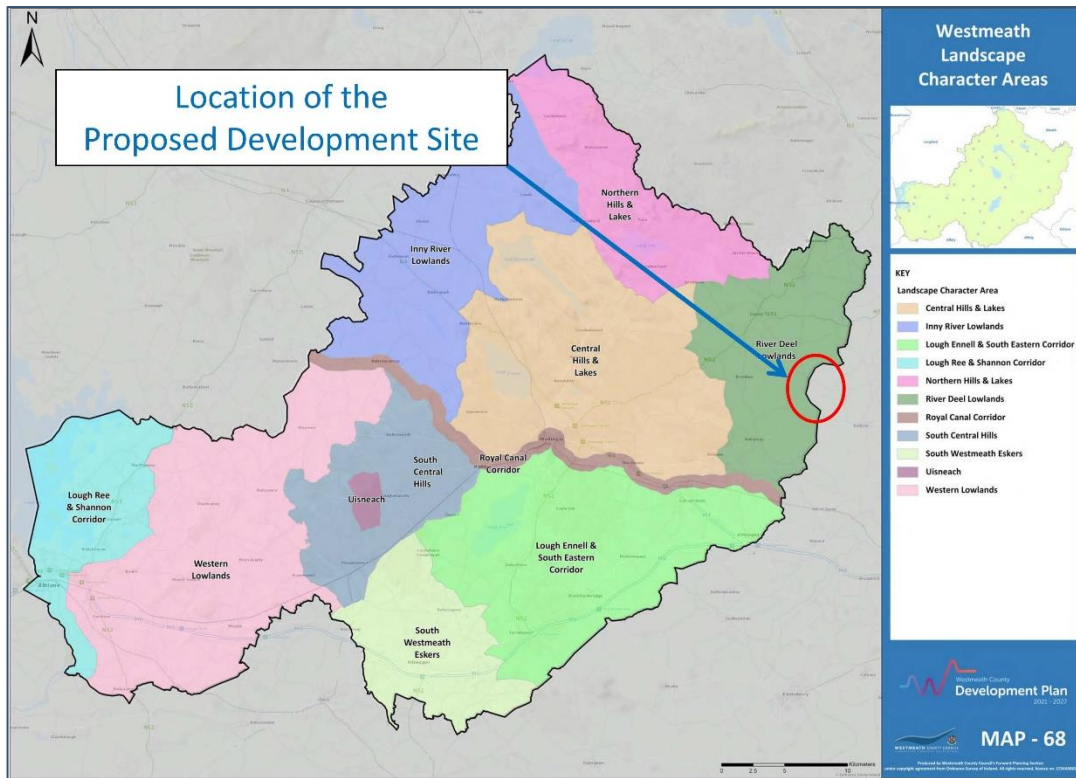


Figure 13-6 Co. Westmeath Landscape Character Areas (Extract from Westmeath County Development Plan 2021-2027)

The WCDP contains the following objectives related to the Landscape Character Areas.

“It is a policy objective of Westmeath County Council to:

CPO 13.8 *Protect the landscapes and natural environments of the County by ensuring that any new developments do not detrimentally impact on the character, integrity, distinctiveness or scenic value of their area. Any development which could unduly impact upon such landscapes will not be permitted.*

CPO 13.9 *Ensure the preservation of the uniqueness of a landscape character type by having regard to the character, value and sensitivity of a landscape in new development proposals.*

CPO 13.10 *Ensure development reflects and, where possible, reinforces the distinctiveness and sense of place of the landscape character types, including the retention of important features or characteristics, taking into account the various elements which contribute to their distinctiveness.*

CPO 13.12 *Require a Landscape and Visual Impact Assessment for proposed developments with the potential to impact on significant landscape features within the county.*

CPO 13.14 *Landscape Character Area 2: Explore the potential for funding to examine the feasibility of developing the River Inny basin as a biodiversity heritage area.*

CPO 13.15 *Landscape Character Area 5: Continue to work with Waterways Ireland to enhance and protect the visual corridor of the Royal Canal, by incorporating a visual buffer zone on each side of the bank of the canal*

CPO 13.16 *Landscape Character Area 6: Explore the feasibility of promoting Lough Ree and its islands as a model for a living Biodiversity Reserve.*

CPO 13.17 *Minimise impact on the ecological, archaeological, biodiversity and visual amenity surrounding quarry sites and quarrying of sensitive sites within the Landscape Character Areas including the lake valley landscape, eskers and canal corridor.*

CPO 13.18 *Protect and enhance the setting of the Hill of Uisneach and support increased public access to the site. Only sensitive development that does not undermine the archaeological and cultural significance of the site will be permitted.*

CPO **13.19:**
*a. Protect and sustain the established appearance and character of views associated with the High Amenity Area around the Hill of Uisneach.
 b. Require any development proposals within the High Amenity Area around the Hill of Uisneach to demonstrate that no adverse effects will occur on the established appearance or character of this feature as viewed from either the Protected Panoramic Views or from surrounding public roads.”*

As shown in the Landscape Policy Context Map previously (Figure 13-5), 5 No. County Westmeath LCAs (including LCA 3) are located within the LVIA Study Area for assessment of landscape character (15 km from the Proposed Development Site) these are listed below:

- > LCA 1 - Northern Hills and Lakes
- > LCA 3 - River Deel Lowlands
- > LCA 4 – Central Hills and Lakes
- > LCA 5 – Royal Canal Corridor
- > LCA 10 – Lough Ennell and South Eastern Corridor

A comprehensive description and assessment of LCA 3 and other LCAs screened in for assessment (see Section 13.4.4 below) in the wider landscape surrounding the Proposed Development Site (to 15km) is included in Appendix 13-2.

Co. Westmeath Designated Scenic Views and Scenic Routes

Section 13.26 of the WCDP contains a number of policies and objectives relating to Westmeath’s 36 Protected Views. In relation to Protected Views, the WCDP states that:

“It is a policy objective of Westmeath County Council to:

CPO 13.81 *Protect and sustain the established appearance and character of views listed in Appendix 5 of this plan that contribute to the distinctive quality of the landscape from inappropriate development.”*

The WCDP categorises the protected views according to their significance (Local, Regional, National). These views are listed, described and mapped in Appendix 5 of the WCDP.

All designated views and scenic routes that are both listed in Appendix 5 of the WCDP and are also located in the LVIA Study Area (within 25km for visual receptors) are listed below in Table 13-2. The location of these designations and the focus of their view in relation to the proposed turbines is illustrated in Figure 13-5 above – Landscape Policy Context Map.

**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., ‘W’ for Westmeath and ‘M’ for Meath. The last number in each label corresponds to the label or number assigned to each designation in the respective county development plans (e.g., M-V54 = Meath - Designated Scenic View No. 54).*

Table 13-2 County Westmeath Designated Views and Prospects

View No.	View Description (Appendix 5, Westmeath County Development Plan 2021-2027)	Significance	Figure 13-5 Map Ref.
13	Panoramic views from Garrane Hill on the Regional road R-446. This is a panoramic view of the surrounding landscape from the highest point on the R446 road when looking down the roads to the NE and SW.	County	W – V13
14	Views of Sculpture along the M6. Another important feature is the flatness of the open landscape off to the southwest (mostly bog) which allows for a distant horizon view that draw attention to dramatic skies.	County	W-V14
16	Views of Lough Ennell along coast beside Lough Ennell Caravan Park From picnic walkway by lake shore. The focus of this view is Lough Ennell to the west. The lough's wooded shores form the background and are an important feature of the view.	Local	W-V16
17	View of Lough Ennell from Belvedere House gardens from picnic walkway by lake shore. The focus of this view is Lough Ennell to the north. The lough's wooded shores form the background and are an important feature of the view.	County	W-V17
18	View of Lough Ennell from carpark from the parking area by lake shore. The focus of this view is Lough Ennell to the south. The lough's islands and wooded shores form the background and are an important feature of the view.	County	W-V18
19	Scenic route through forest and woodlands from Butler's Bridge/Kilpatrick Bridge, Local road L-1137. View from the bridge on the local road L-1137 and end at the shore of Lough Ennell.	Local	W-V19
21	View of Lough Owel by Pitch and Putt from picnic walkway by lake shore.	Local	W-V21
22	View of Lough Owel from Mullingar Sailing Club from lake shore and parking area.	Local	W-V22
23	View of Lough Owel from Local road L-5818. The focus of this view are glimpses of Lough Owel set among low hills.	Local	W-V23
24	Panoramic view of countryside from Local road L-5821. This is a panoramic view at the turn on the road. It looks out NW over extensive areas of bogland with distant views of Lough Derravaragh.	Local	W-V24
25	View from Lough Derravaragh Caravan Park from piers and park along lake shore	Local	W-V25
26	View from pier along south Lough Derravaragh from parking area and pier.	Local	W-V26

View No.	View Description (Appendix 5, Westmeath County Development Plan 2021-2027)	Significance	Figure 13-5 Map Ref.
28	Scenic drive through State Forest on Kinturk Avenue from where the local road comes off the R-394 to where the forestry ends.	Local	W-V28
29	View of Lough Glore and surrounding landscape from Regional road R-195 near Mooretown Crossroads at the L-1633	Local	W-V29
30	View from Lough Lene Parking and Picnic area from the parking area, boat slip and park area	County	W-V30
31	View of Lough Bane from local road L-1633. The focus of this view is Lough Bane to the northwest. Unobstructed views across the field gently sloping into the lough is an important feature of the view.	Local	W-V31

16 No. Westmeath designated scenic views were identified within the 25km LVIA Study Area.

Section 13.26 of the WCDP identifies a number of different scenic routes that are also mapped in Appendix 5, as follows:

- Lough Ree Driving Route
- Mullingar Cycling Hub
- The Táin Trail
- Old Rail Trail/ Greenway
- Royal Canal Way
- Fore Walking Routes
- Westmeath Way

Six of the designated scenic routes have some part of their respective routes located in the LVIA Study Area. The Lough Ree Driving Route is not located within the LVIA Study Area and is not considered further in this chapter. As the scenic amenity designations listed above and in Table 13-2 (above) are of a visual nature, they are addressed in Section 13.5 of this Chapter – *Visual Baseline*, where ZTV mapping and on-site appraisals determine the likely visibility of the proposed turbines within these scenic views and from these scenic routes.

County Westmeath Wind Energy Strategy

The County Westmeath Wind Energy Strategy (WES) forms Chapter 10 in Section 10.23 of the WCDP 2021-2027. Westmeath County Council recognises the importance of wind energy and how wind power plays a vital role in achieving national targets. In 2006, the Department of Environment, Heritage and Local Government prepared the Wind Energy Development Guidelines for Planning Authorities in relation to the siting and development of wind turbines and the information required as part of a planning application. These guidelines have helped to assess the strategic wind farm areas, which is informed by the Landscape Character Assessment in Volume 2 of the WCDP.

Wind Energy policies and objectives relating to landscape and visual include the following:

“Policy CPO 10.142 - Have regard to the principles and planning guidance set out in Department of Housing, Planning and Local Government publications relating to ‘Wind Energy Development’ and the DCCAE Code of Practice for Wind Energy

Development in Ireland and any other relevant guidance which may be issued in relation to sustainable energy provisions.

Policy CPO 10.146 - *To strictly direct large-scale energy production projects, in the form of wind farms, onto cutover cutaway peatlands in the County, subject to environmental, landscape, habitats and wildlife protection requirements being addressed. In the context of this policy, industrial scale/large-scale energy production projects are defined as follows: Projects that meet or exceed any of the following criteria:*

- **Height:** over 100m to blade tip, or
- **Scale:** More than five turbines, or
- **Output:** Having a total output of greater than 5MW Developments sited on peatlands have the potential to increase overall carbon losses.

Proposals for such development should demonstrate that the following has been considered:

- *Peatland stability; and*
- *Carbon emissions balance.”*

As reported above, the WCDP directs large scale renewable energy development towards cutover peatland landscapes. In line with Policy CPO 10.146, the Proposed Development is sited in a cutover peatland landscape and has been designed in accordance with governmental Wind Energy Development Guidelines (WEDGs) to ensure appropriate protection of the landscape (See Section 13.1.4).

Policy CPO 10.148 - *With regard to wind energy developments, to ensure that the potential for visual disturbance should be mitigated by applying an appropriate setback distance, which, where relevant, complies with available Ministerial Guidelines”*

The LVIA conducted in this chapter has been informed by and is following the guidance detailed in the WEDG’s (DoEHLG, 2006), as well as being cognisant of the Draft Revised WEDG’s (DoHPLG, 2019). This guidance is discussed below in Section 13.4.3 in relation to the character of the Wind Farm Site and design of the Proposed Development.

A *Wind Energy Capacity Map* (Map 69) is included in the WCDP, which assesses the capacity of each Landscape Character Area has to accommodate Wind Energy Development. In the WCDP, all Westmeath LCAs are designated as ‘Low Capacity’, except for LCA 9 – Uisneach, which has ‘No Capacity’. There are **no** LCAs in the current WCDP which have a High or Medium Capacity for wind energy development.

On the 16th April 2021, the Minister for Local Government and Planning issued a notice to Westmeath County Council pursuant to section 31AM(8) of the Planning and Development Act, as amended, on the basis that, having considered the Westmeath County Development Plan 2021-2027, the Office of the Planning Regulator is of the opinion that:

“...the Office [of the Planning Regulator] remains of the view that the inclusion of the policy objective CPO 10.132 (renumbered CPO 10.143) and an unchanged Wind Energy Capacity Map in the adopted Development Plan create a significant limitation or constraint on renewable energy projects which is inconsistent with the SPPR [Specific Planning Policy Requirements] and would also significantly restrict other policy objectives supporting wind energy development such as policies CPO 10.139, CPO 10.142 and CPO 10.144.”

The Office of the Planning Regulator advised Westmeath council to:

- i. Delete wind energy policy objective CPO 10.143 in its entirety from section 10.23.2 of the Development Plan.
- ii. Take such steps as are required to identify, on an evidence-basis and using appropriate and meaningful metrics, the wind energy production (in megawatts) which County Westmeath can contribute in delivering its share of overall Government targets on renewable energy and climate change mitigation over the plan period, consistent with the requirements set out in the Specific Planning Policy Requirement in the Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change (July 2017).

Such steps shall be accompanied by revisions to the Wind Energy Capacity Map and Landscape Character Assessment, and coordination of the objectives for wind energy development in the Development Plan with those of the neighbouring counties as are necessary to ensure a coordinated approach with wind energy objectives of adjoining local authorities having regard to requirements of section 9(4) of the Act.

The consultation period in relation to the Draft Ministerial Direction, set out above, has now ended and the Chief Executive's Report on submissions dated 18th June 2021 was provided, recommending that Objective CPO10.143 be omitted from the County Development Plan and committing the council to carrying out an assessment of how the implementation of the plan will contribute to realising overall national targets and climate change mitigation.

13.4.1.2 County Meath Landscape Policy

The Meath County Development Plan 2021-2027 (hereafter referred to as the MCDP) came into effect on the 3rd of November 2021. *Chapter 8* of the MCDP contains a strategy for Culture and Natural Heritage where landscape policy and objectives are outlined. Relevant policy and objectives in the MCDP pertaining to wind energy development and landscape and amenity designations are referred to in the following sections:

- > Landscape Character Areas
- > Landscape Sensitivity Designations
- > Scenic Views and Prospects
- > Wind Energy Policy

Co. Meath Landscape Character Areas

The following policies in the MCDP relate to Landscape Character and designated Landscape Character Areas (LCAs):

“Policy HER 52 - To protect and enhance the quality, character, and distinctiveness of the landscapes of the County in accordance with national policy and guidelines and the recommendations of the Meath Landscape Character Assessment (2007) in Appendix 5, to ensure that new development meets high standards of siting and design.

Objective HER 49 - To ensure that the management of development will have regard to the value of the landscape, its character, importance, sensitivity and capacity to absorb change as outlined in Appendix 5 Meath Landscape Character Assessment and its recommendations.

Objective HER 50 - To require landscape and visual impact assessments prepared by suitably qualified professionals be submitted with planning applications for development which may have significant impact on landscape character areas of medium or high sensitivity.”

The 2007 County Meath Landscape Character Assessment (MLCA) comprises Appendix A.05 of the MCDP 2021-2007, it identifies and designates 4 No. Landscape Character Types and 20 distinct

Landscape Character Areas (LCAs). The Proposed Development is located in the 'Lowland Areas' Landscape Character Type and LCA 15 - South West Lowlands. LCA 15 is described in the

“The area is characterised by rolling hills interspersed with beech copses and well-wooded hedgerows dividing rough pasture. The area is characterised by rolling hills interspersed with beech copses and well-wooded hedgerows dividing rough pasture. The main transport routes are the N4 from Enfield to Kinnegad and the Royal Canal (a tourist route). This is one of the more remote areas of Meath with only the village of Clonard servicing a large area. Pasture farmland is dominant although there is rough pasture in the upland areas interspersed with a mix of woodland plantations, small copses and scrubby woodland more prevalent in the south west. Fields are small to medium sized and enclosed with well-wooded hedgerows.”

In relation to views in LCA 15, the MLCA reports:

“Views within this area are generally limited by the complex topography and mature vegetation except at the tops of drumlins and from bridges crossing the Royal Canal where panoramic views are available. Short-range views are channelled along narrow valleys between drumlins often along roads and the lowland adjacent to the Royal Canal.”

As shown in the Landscape Policy Context Map previously (Figure 13-5), 5 No. LCAs (including LCA 15) are located within the LVIA Study Area for assessment of landscape character (15 km from the Proposed Development Site) these are listed below:

- > LCA 5 - Boyne Valley;
- > LCA 6 - Central Lowlands;
- > LCA 13 – Rathmoylan Lowlands;
- > LCA 16 – West Navan Lowlands;
- > LCA 17 – South West Kells Lowlands;
- > LCA 18 – Lough Sheelin Uplands
- > LCA 19 – Loughcrew and Slieve na Calliagh Hills;

A comprehensive description and assessment of LCA 3 and other LCAs screened in for assessment (see Section 13.4.4 below) in the wider landscape surrounding the Proposed Development Site (to 15km) is included in Appendix 13-2.

Co. Meath Landscape Sensitivity Designations

The MCDP attributes landscape sensitivity to designated LCAs within the county. Landscape Sensitivity is defined in the MCDP as:

“the overall resilience of a landscape character area to sustain its character in the face of change and its ability to recover from loss or damage to its components. Sensitivity is evaluated from ‘High’ to ‘Low’ and is based on the interaction of individual components such as landform, amount of evident historical features (time depth) and distribution of viewers. A highly sensitive landscape is likely to be vulnerable, fragile and susceptible to change whereas a landscape with low sensitivity is likely to be more robust and/or tolerant of change.”

A Matrix of Landscape Character which indicates the Value, Importance and Sensitivity of Landscape Character Areas is included in the Meath Landscape Character Assessment 2007, which forms Appendix 5 of the Meath County Development Plan 2021-2027 and is shown below in Figure 13-7.

Landscape Character Type	Landscape Character Area	Value: Exceptional, Very High, High, Moderate, Low, Very Low	Importance: International National Regional Local	Sensitivity: High, Medium, Low
River Corridors and Estuaries	5. Boyne Valley	Exceptional	International	High
	8. Nanny Valley	Very High	Regional	High
	14. Royal Canal	High	Regional	Medium
	20. Blackwater Valley	Very High	Regional	High
Lowland Landscapes	3. North Navan Lowlands	Moderate	Regional	Medium
	6. Central Lowlands	High	Regional	Medium
	10. The Ward Lowlands	Low	Regional	High
	11. South East Lowlands	Very High	Regional	Medium
	13. Rathmoylon Lowlands	High	National	High
	15. South West Lowlands	High	Regional	Medium
	16. West Navan Lowlands	Moderate	Local	Medium
17. South West Kells Lowlands	Moderate	Local	Medium	
Hills and Uplands Areas	1. Teervurcher Uplands	High	Local	Medium
	2. North Meath Lakelands	Moderate	Regional	Low
	4. Rathkenny Hills	Very High	Regional	High
	9. Bellewstown Hills	Very High	Regional	Medium
	12. Tara-Skryne Hills	Exceptional	National / International	High
	18. Lough Sheelin Uplands	High	Regional	High
	19. Loughcrew and Slieve na Calliagh Hills	Exceptional	National / International	High
Coastal Landscape	7. Coastal Plains	Moderate	Regional	High

Figure 13-7: Landscape Value and Sensitivity for each LCA (extracted from Meath County Development Plan 2021-2027).

The Proposed Development is located in LCA 15 – Southwest Lowlands, which is deemed to be an LCA of ‘High’ landscape value, ‘Regional’ importance and overall ‘Medium’ sensitivity. LCAs located in the LVIA Study Area designated as having ‘High’ Sensitivity are mapped previously in Figure 13-5.

Co. Meath Heritage Landscapes

Chapter 8 of the MCDP affords protection to the character of valuable cultural heritage landscape receptors, including:

- Landscape Conservation Areas: The Hill of Tara landscape and, Loughcrew and Slieve na Calliagh Hills
- Historic walled towns
- UNESCO World Heritage Site - Brú na Bóinne
- Built Heritage such as the Royal Canal, Designed Landscapes, Gardens and Demesnes.

Section 8.17.4 of the MCDP affords special protection to the high sensitivity landscapes of Tara/Skryne, as well as Loughcrew and Slieve Na Calliagh Hills under policy HER POL 54, designating them as Landscape Conservation Areas:

“HER POL 54: To protect the archaeological heritage, rural character, setting and amenity of the Tara landscape and Loughcrew and Slieve na Calliagh Hills”

These Landscape Conservation Areas are located in the LVIA Study Area (nearest proposed turbine >17 km from Slieve na Calliagh; >25 km from the Hill of Tara) and are assessed later in this Chapter.

Historic walled towns such as Navan, Trim, Kells and Athboy are located in the LVIA Study Area and are addressed later in this Chapter. Brú na Bóinne is not located in the LVIA Study Area and is not considered further in this Chapter.

The Royal Canal is located approximately 3.7km south of the nearest proposed turbines and the effects on its landscape and visual amenity are assessed later in this Chapter. Bracklyn Estate (Co. Westmeath) is a demesne landscape located in close proximity to the west of the northern turbine cluster. Ballinlough Castle and Gardens which is located approximately 5.7km north of the nearest proposed turbine. Loughcrew Estate and Gardens is approximately 19km north of the nearest proposed turbines. Impacts on these heritage landscapes are assessed later in this Chapter and other demesne landscapes and gardens are identified in the visual baseline exercise under tourism receptors. The Boyne Valley Tourism Strategy 2016-2022 (Meath County Council, 2016) includes a route for the ‘Boyne Scenic Drive’ which links several heritage landscape receptors identified above. Figure 13-8 is extracted from the Boyne Valley Tourism Strategy and shows the route between various destinations. The map below shows Trim Castle, Loughcrew Cairns and monuments at Kells as prominent destinations to the west of the scenic drive (bottom left of the Figure below). These locations are located to the north and east of the LVIA Study Area and the likely effects on these receptors are comprehensively assessed later in this Chapter.

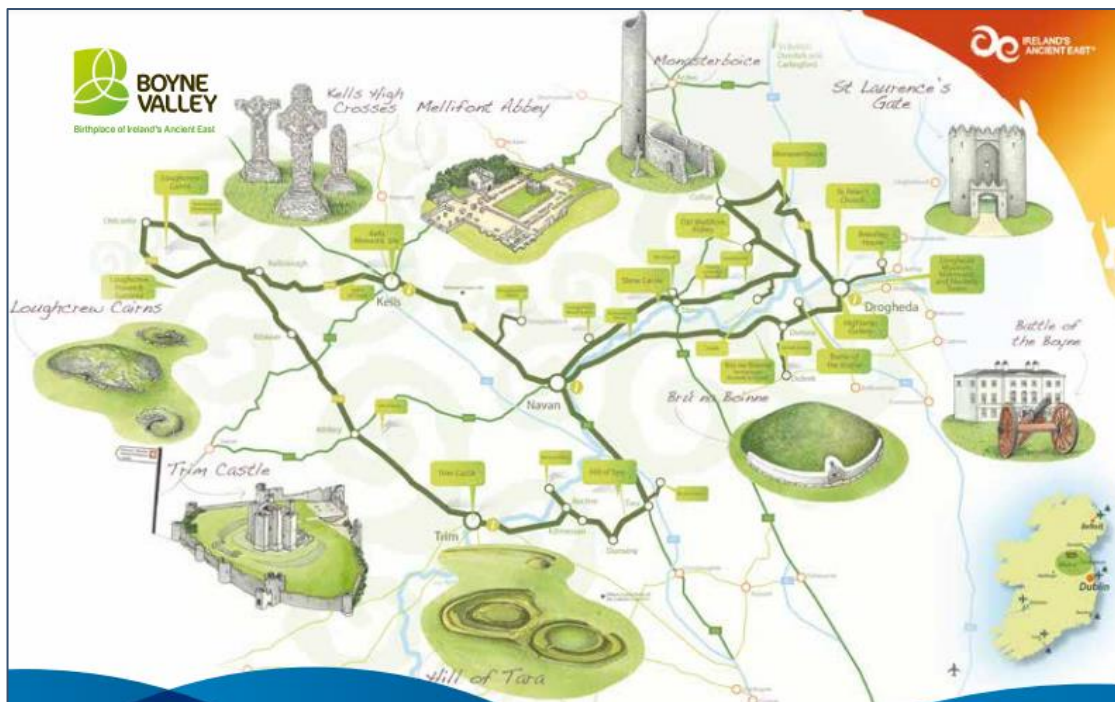


Figure 13-8 Boyne Valley Scenic Drive Extracted from the Boyne Valley Tourism Strategy 2016-2020 (Meath Co.Co., 2016)

Co. Meath Scenic Views and Prospects

Section 8.18 of the MCDP discusses scenic amenity in the County:

“The landscape of the County has many vantage points which offer attractive views from hilltops and upland areas, along river valleys and the coast. Many of these views are associated with heritage and tourism sites and provide vantage points over high quality landscapes. These scenic views are of an amenity and tourism value and contribute to our quality of life. It is not envisaged that the designation of a protected view would prohibit all development within the view, rather that any development proposed within the view should be designed and located so as not to obstruct the view or be unduly intrusive in the landscape as seen from these vantage points.”

A policy objective relating to scenic views and prospects in the MCDP include the following:

“It is a policy objective of the Council:

Objective HER 56 To preserve the views and prospects listed in Appendix 10, in Volume 2 and on Map 8.6 and to protect these views from inappropriate development which would interfere unduly with the character and visual amenity of the landscape.”

All Co. Meath protected views and prospects that are both listed in Appendix 10 of the MCDP and are also located in the LVIA Study Area (within 25km for visual receptors) are listed below in

Table 13-3. The location of these designations are illustrated in Figure 13-5 above – *Landscape Policy Context Map*. Like Co. Westmeath, Appendix 10 of the MCDP categorises protected views according to their significance – Local; Regional; and National.

Table 13-3 County Meath Protected Views and Prospects

View No.	View Direction; View Location; View Description (Appendix 10, MCDP)	Significance	Figure 13-5 Map Ref.
2	South; County road at Bellewstown; Views to south of Loughcrew skyline. Foreground contains extensive housing.	Local	M-V2
3	South; County road from R154 at Boolies; Extensive views south west across unusually open and unenclosed landscape towards skyline of cultural and scenic significance. Foreground and middleground obstructed by housing and infrastructure.	Regional	M-V3
4	North; R154 between Patrickstown and Oldcastle I. View directed north; Extensive view northwards across extensive settled landscape with settlements, housing, infrastructure and agriculture all visible. Infrastructure and housing visible in near and middle foreground. Few mature trees in foreground or middle distance. Extensive view southwards across extensive settled landscape with low densities of housing.	Regional	M-V4
5	South; R154 between Patrickstown and Oldcastle II; Extensive view south across extensive landscape with relatively low levels of enclosure and relatively low levels of visible development.	Regional	M-V5
6	Panorama; Slieve na Calliagh; Panorama; Panoramic views in all directions including intervisibility between the 3 peaks. Site of high cultural and scenic significance characterised by absent or very low levels of enclosure.	National	M-V6
7	South East; County road between Rahaghy and Patrickstown; Extensive view across important scenic and cultural landscape	Regional	M-V7
8	South West; County road between Skerry Cross Roads and Ballinlough; Framed View from local road across Lough Bane	Regional	M-V8
9	West; County road between Crossakeel and Magee’s Cross Roads; Extensive view of cultural significance. Skyline to the west across normal pasture and tillage landscape with extensive housing and agricultural buildings and infrastructure.	Regional	M-V9

View No.	View Direction; View Location; View Description (Appendix 10, MCDP)	Significance	Figure 13-5 Map Ref.
10	North West; County road between Crossakeel and Ardglassan; Extensive view across mature agricultural area with low densities of non-agricultural development and low intensities of infrastructure visible. Extensive view of Loughcrew and extensive view to south of wooded skylines and distant hills. Similar views available along much of this road.	National	M-V10
11	South and West; County road between Ardglassan and Rathniska; View to south: Extensive views across tillage lowlands. Very low levels of development visible. Many mature trees and large fields. View to west: Occasional views of Loughcrew. Established pattern of settlement and infrastructure.	Local	M-V11
12	North; County road between Keeran's Cross Roads and Commons of Lloyd at Castlepole; View to the north. Typical lowland pasture and tillage. Fields bounded by mature trees. Extensive development visible including housing, agricultural structures and infrastructure (including bypass).	Local	M-V12
13	Panorama; Tower of Lloyd at Kells; 360 degree panoramic views to surrounding landscape. Significant visual relationships including Loughcrew to the west and toward Carlingford Lough and the Mourne Mountains to the north east. Views also including extensive areas of development including infrastructure and urbanisation. Site is also of cultural heritage significance.	National	M-V13
14	North North East; R163 between Kells and Drumbaragh; Extensive view to north-north-east across a landscape of settlement, infrastructure, mixed farming and woodland	Local	M-V14
15	East; County road between Carlanstown and Ardlonan; Expansive views to east across typical agricultural lowlands with low levels of scattered development	Local	M-V15
33	East; At Proudstown Cross Roads on R162; Extensive eastward view to distant location across settled landscape. Dense urbanisation on right hand side of view. More open but still undeveloped left hand side.	Local	M-V33
39	North East; At Johnstown on county road to south of Casey's Cross Roads on R153; Extensive view to north-east across working landscape with visible infrastructure (powerline, major road) and scattered residential development.	Local	M-V39
40	South East and South; On road to south of Cannistown Church and M3; Extensive view mainly to south east and south over settled landscape with infrastructure (motorway), powerlines, playing fields and houses.	Local	M-V40

View No.	View Direction; View Location; View Description (Appendix 10, MCDP)	Significance	Figure 13-5 Map Ref.
41	South; On county road between Dowdstown Bridge and Garllow Cross Roads; View looking south towards Hill of Tara across open landscape with significant concentration of development to east and woodland to west. Contains infrastructure including road, 220kV powerline and anglemasts.	Regional	M-V41
42	East; On county road between Bective and Bellinter cross roads; View sustained for 500m taking place across unoccupied level countryside with few enclosures.	Local	M-V42
43	East; Hill of Tara Car Park; View east to Skryne. Settled landscape. Historic features.	Local	M-V43
44	<p>Panorama; Hill of Tara; Views across settled landscape with visible development including foreground powerlines, agricultural buildings, houses, quarries and roads.</p> <p>View to the west: other prominent hilltops visible at great distance. Foreground contains extensive areas of hedgerows and woodland.</p> <p>View to the south: Wicklow and Dublin Mountains visible on horizon. Relatively little development visible. Substantial woodland in the foreground.</p> <p>View to the east: across settled working landscape with a variety of structures and development visible including historic structures such as Skryne. Distant industrial plants.</p> <p>View to the north: panoramic views into very distant horizons. Encompassing a settled landscape with many buildings and structures visible in near and middle distance.</p> <p>Note areas immediately below hill to the north and south are obstructed by topography at variance with protection plan.</p>	National	M-V44
45	North East; On county road between Kilmessan and Castleboy; Local View of Tara hill top.	Local	M-V45
50	North-West; On R154 between Trim and Scurlockstown; View looking to north west across very open fields of flood plain across river, toward important collection of cultural heritage remains silhouetted on the skyline. An iconic image of Trim's status as a Heritage Town. Much modern development visible to the left.	Regional	M-V50
51	North-; On R158 between Trim and Laracor; Expansive view to north of Trim's Heritage buildings in profile creating a distinctive urban style.	Local	M-V51

View No.	View Direction; View Location; View Description (Appendix 10, MCDP)	Significance	Figure 13-5 Map Ref.
52	Panorama; Hill of Ward; Panoramic views in all directions to very distant horizons. Very open landscape in foreground and middle distance across a working landscape with relatively little settlement visible except for town of Athboy to west.	Regional	M-V52
53	North, North East and South; On R161 at Inchatore Bridge to west of Donore; View of Boyne in open and largely undeveloped countryside. View to the north and north east of typical river corridor with immature vegetation from R161. No development currently visible. No apparent cultural heritage significance is visible.	Local	M-V53
54	East and West; On R161 at Royal Canal; Views along Royal Canal to the east and west at intersection with R161	Regional	M-V54
55	North; On Stoneyford Bridge on county road between Blackshade and Moyfin; View to middle distance along the River Boyne. Typical lowland countryside. Very little development visible.	Local	M-V54
56	South; Along Royal Canal at Boolykeagh; An unusual view to south containing water in the foreground with elevated views to distant horizons mostly to the south west. Very little development evident.	Regional	M-V56
57	West and North West; County road between Rathcore and Clonguiffin; Views to west/north west like this available from this location where there are gaps in the hedge. Expansive views available to very distant horizons across mixed farmland working landscape with relatively low levels of development.	Local	M-V57
78	North and South; Boyne Valley from Derrindaly Bridge; View of Boyne in open and largely undeveloped countryside	Local	M-V78
79	North East and South West; Boyne Valley from Scarriff Bridge; View of Boyne in open and largely undeveloped countryside	Local	M-V79
80	South East; Blackwater Valley Navan from R147 Kells Road in the vicinity of Bloomsbury	Local	M-V80
81	South East and North West; Blackwater Valley from Maudlin Bridge; River view in context of mature trees.	Local	M-V81
82	East and West; Blackwater Valley from Mabes Bridge; River view in context of mature trees.	Local	M-V82
83	South East and North West; Clonard Blackshade; Blackshade Bridge over the Royal Canal and with views along the canal in both directions.	Local	M-V83

View No.	View Direction; View Location; View Description (Appendix 10, MCDP)	Significance	Figure 13-5 Map Ref.
84	West; Coole Hill; Elevated Views across open countryside at Coole hill off road from Kilcock to Summerhill.	Local	M-V84
85	East and West; Headford Bridge; View of River Blackwater from Headford Bridge with estate landscape visible.	Local	M-V85
86	North West, North East and South West; Bective Bridge; View looking northward from Bective Bridge towards Bective Abbey and along river Boyne in both directions.	Local	M-V86
94	South East; Moylagh Castle from local road to east of R195; View of Moylagh Castle and Motte.	Local	M-V94

40 No. Co. Meath protected views and prospects are located in the LVIA Study Area. These views are primarily located in close proximity to sensitive landscape receptors such as the River Boyne, the Royal Canal and landscapes of cultural heritage value. Most elevated vantage points in the county are designated as protected views, particularly where there are open panoramic views across the flat lowland landscape. As the scenic amenity designations listed above in Table 13-3

Table 13-3 are of a visual nature, they are addressed in Section 13.5 of this Chapter – *Visual Baseline*, where ZTV mapping and on-site appraisals determine the likely visibility of the proposed turbines within these protected views.

Co. Meath Wind Energy Policy

Chapter 6 of the MCDP comprises general policy renewable energy, and the following policy in relation to Wind Energy:

“INF POL 40: To encourage the development of wind energy, in accordance with Government policy and having regard to the Landscape Character Assessment of the County and the Wind Energy Development Guidelines (2006) or any revisions thereof”

MLCA forms Appendix A0.5 of the MCDP, it includes a landscape capacity designation (‘Low’, ‘Medium’ or ‘High’) and description for different types of development for each designated LCA. As reported previously, the Proposed Development is located in LCA 15 - South West Lowlands, which is designated as having a ‘Medium’ capacity to accommodate wind turbines. The MLCA states the following in relation to LCA 15, but it does state the following:

“Medium potential capacity to accommodate wind farms or single turbines because views within this LCA are generally short range and limited by topography and vegetation so there are opportunities for choosing locations where visual impacts are minimal. However, such development could cause the loss or degradation of hedgerows and trees and archaeology so location will be a critical consideration”

It is reported throughout this chapter that the flat, vegetated nature of the landscape surrounding the Proposed Development has characteristics making it suitable for wind energy development. As also reported above (in the MLCA – Appendix A0.5 of the MCDP), landscape views in LCA 15 are ‘*generally short range and limited by topography and vegetation*’, this limits the geographic visual exposure of the proposed turbines and ultimately minimises the extent of potential visual impacts. With regards to loss or degradation of hedgerows and trees, the Proposed Development includes specific measures and interventions to improve the ecological and amenity value of the landscape at the Proposed Development Site; including a Biodiversity Enhancement Plan which is presented in Appendix 6-4 and an Amenity Plan which is presented in Appendix 4-4. Avoidance of archaeological receptors are also considered in the design of the proposed Development as reported in Chapter 12 of this EIAR – *Cultural Heritage*.

Chapter 11 of the MCDP outlines County Meath's Development Management Standards and Land Use Zoning Objectives. Section 11.8.3 includes policy and objectives relating to wind energy development in the county. Relevant Policies and Objectives relating to Wind Energy development and landscape as set out in the MCDP are reported below:

“DM POL 28 - To require compliance with the Wind Energy Development Guidelines, (2006) and Circular PL20-13, and any updates thereof. Any proposal shall be supported by both a technical and an environmental statement prepared to an acceptable standard which sets out how the proposal complies with the Guidelines.”

The WEDGs (2006) are a key guidance document used during the iterative design process of the Proposed Development, and it is used as a point of reference in the assessments of the Proposed Development in this Chapter of the EIAR. The Proposed Development is therefore compliant with policy DM POL 28.

The MCDP also states:

“Objective DM OBJ 79 - Topographical enclosures and extensive areas of degraded or previously developed lands should be identified for wind farm development to help minimise visual impacts and to harmonise wind turbines with the landscape.”

The Proposed Development as sited in a large cutover peatland, which is considered an extensive degraded landscape, which therefore aligns with Objective DM OBJ 79. As demonstrated throughout this Chapter, siting of the proposed turbines in the flat peatland landscape of the Proposed Development Site is advantageous for minimising landscape and visual effects compared with other landscape types.

The MCDP also states:

“Objective DM 80 - In general, matt finishes and neutral colours for turbines and structures are required.”

In line with Objective DM 80, the proposed turbines will be a neutral matt white colour, as illustrated in the photomontages. The MCDP also states:

“DM OBJ 82: All planning applications shall be accompanied by detailed proposals for the restoration of the site after removal of the turbines and associated infrastructure including access roads. Adequate financial security will be required to ensure site restoration and removal of the wind farm.”

In line with objective DM OBJ 82 above, a detailed decommissioning plan for the Proposed Development is included in Appendix 4-5 of this EIAR.

13.4.1.3 Landscape Policy within other surrounding Counties

While the Proposed Development is located in Co. Westmeath and County Meath, other Counties are located in the LVIA Study Area. As noted previously in Section 13.2.1, County Cavan is scoped out of assessment. However, as indicated by ZTV mapping there is some theoretical visibility of the proposed turbines in County Kildare and County Offaly. 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:

- The Kildare County Development Plan 2017-2023 (hereafter referred to as the KCDP)
- Offaly County Development Plan 2021-2027 (Offaly County Council) (hereafter referred to as the OCDP)

Co. Offaly and Co. Kildare Landscape Character Areas

The impact assessments on designated LCAs (See Appendix 13-2) uses an LVIA Study Area of 15km from the proposed turbines (as detailed previously in Section 13.2.1). Only approximately 2km² of County Offaly is located within 15km. Also, a landscape character assessment has not yet been conducted or published for County Offaly and County Offaly does not have any designated LCAs. Consequently, this LVIA does not comprise an impact assessment of LCAs in County Offaly.

Section 13.3 of Chapter 13 of the KCDP identified designated LCAs in Co. Kildare that were the subject of a county wide landscape character assessment in 2004. Only Co. Kildare LCA 1 – *North Western Lowlands* is located in the 15km LVIA Study Area for assessment of LCAs. This LCA is designated as having Class 1 - Low Sensitivity.

A comprehensive description and assessment of Co. Kildare LCA 1 and other LCAs screened in for assessment (see Section 13.4.4 below) in the wider landscape surrounding the Proposed Development Site (to 15km) is included in Appendix 13-2.

Co. Offaly & Co. Kildare Sensitive Landscape Designations Landscape Sensitivity and Areas of High Amenity

Counties Offaly and Kildare designate sensitive landscape receptors. Each county has differing naming conventions, sensitivity classifications and policy objectives pertaining to their respective landscape designations. In a general sense, it is a policy objective for each county to take additional care in the protection of the unique, valuable and sensitive landscapes which fall within the following designations:

- The OCDP classifies ‘Areas of High Amenity’ as areas in Co. Offaly with scenic and amenity value worthy of special protection. Thirteen are listed and shown on *Figure 4.18* of the OCDP. The following receptors are located in the LVIA Study Area and are mapped on the Landscape Policy Context Map (Figure 13-5):
 - The Grand Canal
 - Croghan Hill
- The KCDP (Section 13.4) recognises Areas of High Amenity within County Kildare. These areas are designated as protected landscapes “*because of their outstanding natural beauty and/or unique interest value and are generally sensitive to the impacts of development*”. The following receptors are located in the LVIA Study Area and are mapped on the Landscape Policy Context Map (Figure 13-5):

The following receptors are High Amenity Areas located in the LVIA Study Area, are mapped on the Landscape Policy Context Map (Figure 13-5) and will be assessed later in this Chapter:

- Co. Offaly - The Grand Canal
- Co. Offaly - Croghan Hill and Environs
- Co. Kildare – The Grand and Royal Canal Corridors

Co. Offaly & Co. Kildare Designated Scenic Amenity

Counties Offaly and Kildare protect scenic amenity within their respective counties through the designation of scenic views, prospects and scenic routes. Each county has 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 Offaly – Scenic Views and Scenic Routes (Key Amenity Routes);
- County Kildare – Scenic Routes and Protected Views (KCDP Map Ref: V1-13.3);

Designated scenic amenity and views from these counties are mapped in the Landscape Policy Context map (Figure 13-5) previously and listed in below.

**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., ‘W’ for Westmeath and ‘M’ for Meath. The last number in each label corresponds to the label or number assigned to each designation in the respective county development plans (e.g., M -V54 = Meath – Designated Scenic View No. 54).*

Table 13-4 Designated Scenic Amenity of County Offaly and Kildare within the LVIA Study Area

Dev Plan Ref No.	Designated Scenic Amenity Name / Description	Figure 13-5 Map Ref.
County Offaly – Scenic Views and Key Amenity Routes		
V09	Townlands of Grovesend and Coole(Croghan Hill); View to - South to bog lands	O – V9
County Kildare – Scenic Routes and Protected Views		
RC11	View to and From Allen Bridge on the Royal Canal	K – VRC11
RC13	View to and From Moyvally Bridge on the Royal Canal	K – VRC13
RGC13	View to and From Hamilton Bridge on the Grand Canal	K – VGC13
RGC14	View to and From Ticknevin's Bridge on the Grand Canal	K – VGC14
Hilltop View 5	Hill at Ovidstown	K – VH5
Hilltop View 6	Hill at Killickaweeny	K – VH6
Hilltop View 17	Carbury Hill	K-VH17
SR-15	Views of the Plains of Kildare and West Central Boglands, to and from Newtown Hills (including county roads L5027, L50281, L5028, L1007).	K-SR15
SR -26	Views from the county roads (L1005, L5019, L5018, L1006, L5017 and L5011) of Carbury Castle and Hill – Teelough road junction with the R402 and upland area at Mylerstown	K-SR26

As the scenic amenity designations listed above in Table 13-4

Table 13-4 are of a visual nature, they are addressed in Section 13.5 of this Chapter – Visual Baseline, where ZTV mapping and on-site appraisals determine the likely visibility of the proposed turbines within these protected views.

13.4.2 Landscape Character of the Proposed Development 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 Guidelines (DoEHLG, 2000) comprises the identification of primarily physical units (areas defined by landform and landcover) and, where appropriate, of visual units.

The Proposed Development site was visited multiple times during 2020 and 2021 where an assessment of topography, drainage, landcover and land use was conducted in conjunction with other LVIA surveys. Information gathered during these visits has informed the following descriptions of the Proposed Development Site.

Proposed Development Site Overview and Location

The Proposed Development Site comprises an expansive network of open peatlands located at the Westmeath-Meath County boundary. The peatlands were originally raised bogs which are typically found in the lowland landscapes of the Irish midlands. The character of these peatlands forming the Proposed Development Site is now strongly influenced by the industrial peat extraction practices historically conducted at the site. The bogs of the Proposed Development Site include: Ballivor Bog, Carranstown Bog, Bracklin Bog and Lislogher Bog. Due to extensive peat harvesting operations in the 20th Century, the Proposed Development Site has been degraded and now resembles a cutover peatland landscape.

The Proposed Development Site is located 2.5 km south-southeast of Delvin, 3.7 km east of Raharney and 2.2 km west of Ballivor Village. The character of the wider landscape surrounding the site comprises a rural agricultural landscape comprising fields of pasture, occasional forestry plantations and dispersed rural settlement.

Topography and Landform

The topography of the Proposed Development Site and surrounding landscape is very flat and low lying with little variation in topography levels as shown in above and below. Much of the site is at approximately 70 metres A.O.D. (Above Ordnance Datum) and the highest level is in the northern and western site boundary at 80 metres A.O.D.

Due to historic peat extraction operations the topography and landform has been substantially altered and modified. In most areas of the site, the landform is very flat (See Plate 13-6 below) and is often at a lower elevation than the surrounding landscape beyond the site boundary due to the large quantity of material that was removed during the operational harvesting of peat. Modified landforms exist throughout the site these include a large network of drainage ditches, which were cut into the bog to facilitate peat extraction. Elevated berms or banks of peat exist along extraction plot boundaries where the landform within the plots have lowered over time during operational peat extraction.



Plate 13-6 Image showing the flat landscape of the Proposed Development Site

Drainage

The Proposed Development site is flanked by the River Deel to the West and Stonyford River to the East. The Proposed Development drains into these rivers via network of streams and drainage channels. The Deel and Stonyford are tributaries of the River Boyne which drains in an easterly, then north-easterly direction towards the coast. Under the Water Framework Directive (WFD), the site is located within the Boyne_SC_040 and Boyne_SC_050 sub catchments and the Boyne (Catchment ID 07). This is a catchment of considerable size and covers much of north-eastern County Meath. The surface of Ballivor Bog is drained by a network of northwest-southeast orientated drains, which discharges to Deel River. Carranstown Bog is drained by a network of northwest-southeast oriented drains, which discharges into the Grange More stream which in turn discharges to the Craddanstown stream before discharging into the River Deel. Bracklin Bog is drained by a series of drains before discharging into the River Deel. Lislogher Bog is drained by east-west oriented drains, which in turn discharges to the Stonyford River. While Lislogher West Bog was never produced, a series of northwest-southeast oriented ditches and drains were constructed in the 1980s. Further details regarding site drainage are set out in Chapter 9 of this EIAR: *Hydrology and Hydrogeology*.

Landcover

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.

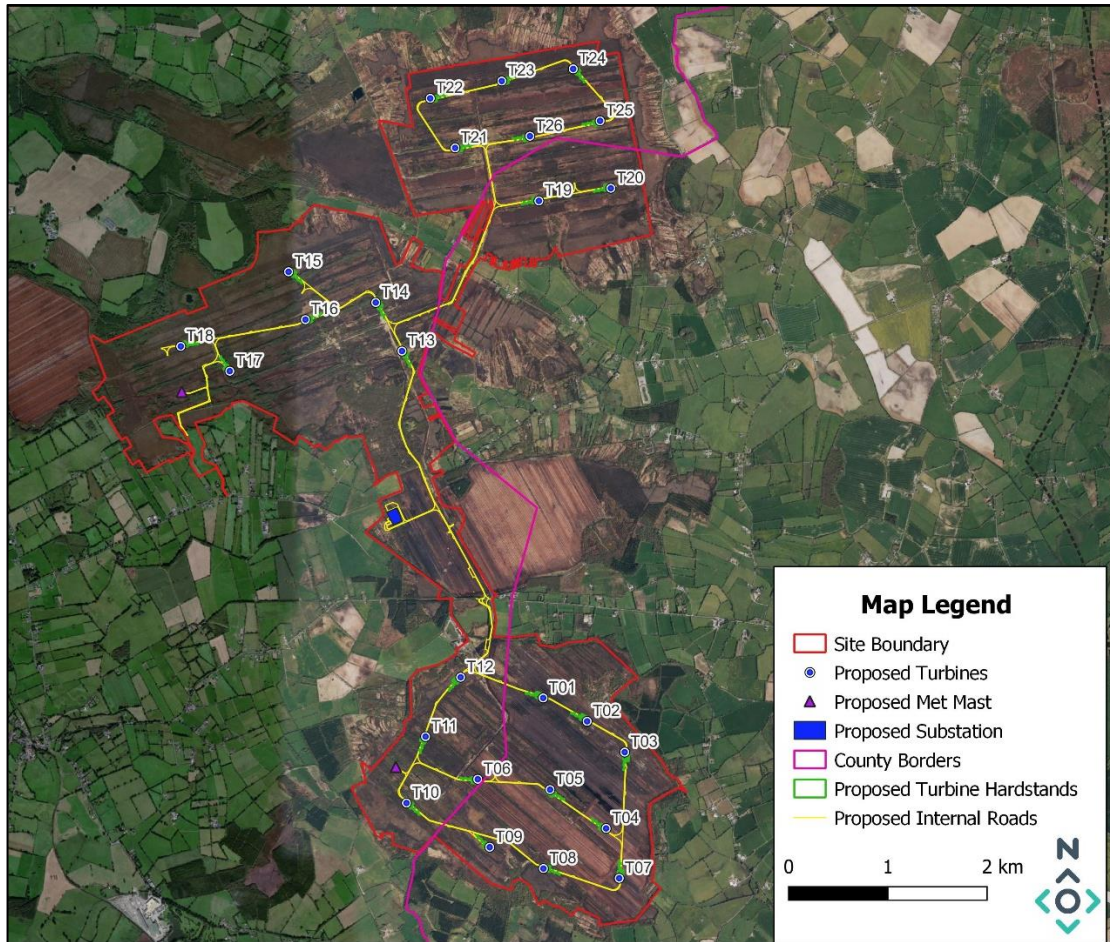


Figure 13-9: Zoom-in aerial map of the proposed Ballivor development and the current landcover.

The landcover within the Proposed Development Site comprises a mix of bare cutaway peat, re-vegetated peat, degraded bog, scrub, low woodland and remnants of high bog. Industrial features that facilitated historic peat extraction activities are still evident throughout the Proposed Development Site. Industrial elements such as railways infrastructure and a peat processing centre contribute to the industrialised landcover and character of the landscape.

All peat extraction operations ceased in 2020, and some areas of the Proposed Development Site have been out of production for many years. The images below show a variety of vegetation establishment that have occurred in areas of the site where peat harvesting has ceased. A variety of ground cover types other than bare cutaway peat (scrub, re-vegetated peat, degraded bog or transitional woodland) commonly occur along corridors where infrastructure such as drains and access roads exist, as well as along extraction plot boundaries where the peat banks form elevated berms.



Plate 13-7 A railway track traversing a drained area of cutover bog at the Proposed Development Site.



Plate 13-8 Peat Processing centre at the Proposed Development Site.

The four bogs comprising the Proposed Development Site (Ballivor, Carranstown; Bracklin; Lislogher) are narrowly separated by the road network, woodland, linear strips of agricultural land as well as residential properties. The peatlands are inter-connected by a railway that previously serviced peat extraction activities. Although these differing bogs have their own distinctive landscape attributes (e.g. scale, shape and orientation), the general character of the current landscape is very similar within each bog. The perimeter of the site is typically bounded by mature mixed woodland as seen across the background of most images of the Proposed Development Site presented in this Chapter.



Plate 13-9 View north across Carranstown Bog from the R156 Regional Road

As shown in the images below, tree colonisation is prevalent throughout the Proposed Development Site (particularly on Bracklin Bog) where peat harvesting operations has ceased earlier than other areas of the site. This is particularly evident along drainage corridors, where pioneer species such as birch encroach upon the peatland landscape. For a comprehensive description of the existing Flora and Fauna on the Proposed Development Site see Chapter 6– *Biodiversity*.



Plate 13-10 Re-vegetated peatland and Birch tree colonisation on Bracklin Bog



Plate 13-11 Established vegetation along an access track on the Proposed Development Site

An overhead powerline traverses Carranstown Bog in an east-west orientation as seen in Plate 13-12 below. Renewable energy generated from the proposed wind farm will connect to the existing national grid via a 110kV substation, in the north-western part of the Carranstown Bog from where a loop in loop out connection to the existing Mullingar-Corduff 110kV overhead line will be constructed. The proposed grid connection infrastructure for the Proposed Development will therefore be entirely contained within the Proposed Development Site boundary.



Plate 13-12 overhead powerline traversing Carranstown Bog

The proposed onsite substation is located on a flat area of land in the northwest of Carranstown Bog in proximity to a local road that runs along the eastern border of the Wind Farm Site. Plate 13-13 below shows the land cover at this location. The site of the proposed substation is covered in scrub vegetation and mature trees. Visibility of the substation from receptors on the local road is expected to be limited, due to the vegetation screening to the left of the image.

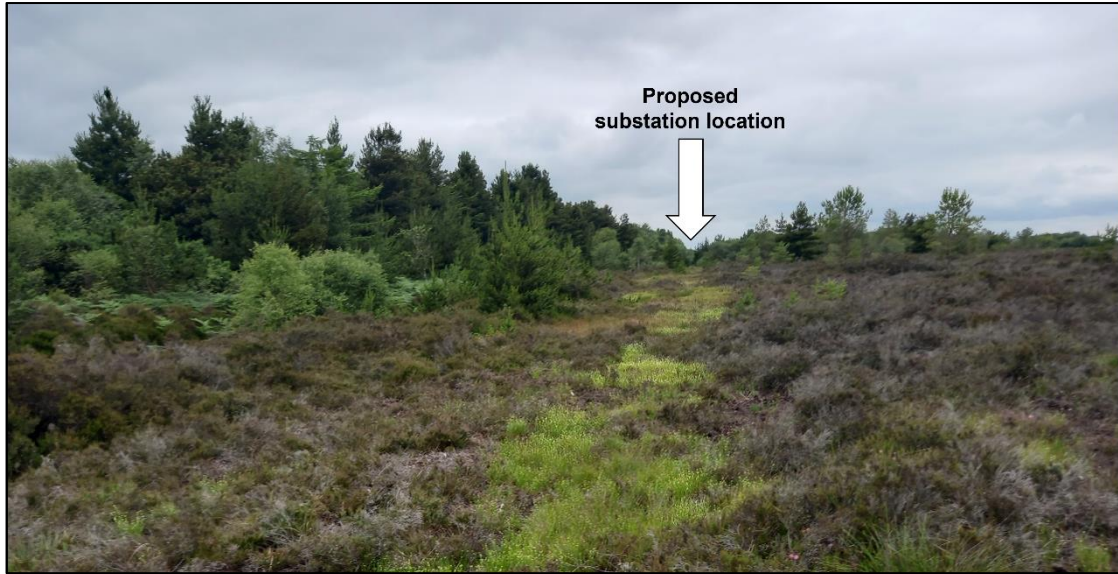


Plate 13-13 Proposed Substation Location



Plate 13-14 Cutover raised bog covered by scrub vegetation within the Proposed Development site



Plate 13-15 View of cutover raised bog showing peatland railway tracks to the south of the Proposed Development Site.

Land Use

Peat extraction activities at the Proposed Development Site ceased in June 2020. Since 2020 the site has been part of an on-going decommissioning programme in accordance with the IPC licence conditions, although minor non-extractive activities have occurred on site, such as:

- Movement and processing of peat stockpiles. The current operations include the consolidation of stockpiled peat from the bogs, its transfer to a conveyor via tippie trucks and subsequent transport to various Bord na Móna end users. It is estimated that the last of the stockpiles at Bracklin, Lisclogher and Carranstown will be removed by 2024. All stockpiles from Ballivor bog were removed by June 2022;
- Commercial forestry operations, which includes 10 hectares of land (approximately 1.78ha in Ballivor Bog) managed by Coillte;
- Environmental mitigation and monitoring measures (such as noise, dust, surface water) have been in operation at the Proposed Development since April 2000, in accordance with the IPC Licence conditions.
- Peatland Climate Action Scheme (PCAS): The PCAS scheme commenced at the eastern side of Carranstown Bog in 2022. The Peatland Climate Action Scheme (PCAS) is a programme of enhanced peatland rehabilitation measures designed to exceed/meet the standard stabilisation requirements as defined by the IPC Licence and to enhance the ecosystem services the Ballivor Bog Group, principally optimising climate action benefits.

Existing activities within the site include a wind measurement (a single temporary 100m meteorological mast on Lisclogher Bog). Rehabilitation of the eastern section of Carranstown bog was completed in 2022 and is shown in Plate 13-16 below.



Plate 13-16 Rehabilitation of the eastern section of Carranstown bog

Land use in the wider landscape setting surrounding the site includes forestry, agriculture, one-off rural housing and small village settlements. The permitted Bracklyn Wind Farm site (Planning Reference: PA25M.311565) is located adjacent to the western boundary of the Proposed Development site. The assessment of the likely cumulative landscape and visual effects of the permitted Bracklyn Wind Farm and proposed Ballivor Wind Farm is detailed in Section 13.7.3.1.4 and Section 13.7.3.4 of this Chapter.

Historic Landscape Character and Landscape Evolution

The Historic peat cutting practices at the Proposed Development Site have strongly influenced this landscape and the people who have inhabited it throughout history. Cutting turf is a culturally important tradition and the bogs of the Proposed Development site have sustained the local population for generations in terms of fuel for their homes and as a reliable source of employment. In this regard, the landscape of the Proposed Development is culturally valuable to the local communities who have this historic connection to the peatlands. An Amenity Plan forms part of the Proposed Development which is presented in Appendix 4-5. The Amenity Plan will enable public access the site in the form of walking trails (and car parking facilities), enabling the local residents to retain some of their cultural connection with this landscape.

A Famine House is located within a wooded area to the east of Bracklin Bog within the Proposed Development Site. This structure will be preserved and will not be physically altered by the Proposed Development as all proposed infrastructure is set back to the west beyond a 100m buffer. For more information on the impacts of the Proposed Development on this historic feature and other cultural heritage monuments on the site please see Chapter 12 of this EIAR – *Cultural Heritage*.

Bracklyn House is a heritage house located beyond the Proposed Development Site boundary approximately 1700 metres west of the nearest proposed turbine (T18). The house and lands of Bracklyn Estate is a demesne landscape which was historically a designed landscape comprising small intricate field patterns. The landscape of Bracklyn demesne has since evolved since its original design, and it now comprises working farmland with larger scale open field patterns used for intensive pastoral agriculture. Due to the changes in land-use and setting, this landscape it is not deemed to be a pristine demesne landscape and it is not a receptor of unique landscape value. The permitted Bracklyn Wind Farm is located in the intervening landscape between Bracklyn Estate and the Proposed Development. The likely landscape and visual effects, and cumulative effects of the Proposed Development with the permitted Bracklyn Wind Farm on this receptor is assessed later in this Chapter.

A comprehensive description and assessment of cultural heritage monuments existent within the Proposed Development Site Boundary and in the wider landscape is included in Chapter 12 of this EIAR – *Cultural Heritage*.

Nature of Views and Visual Amenity within the Proposed Development Site and its Landscape Setting

In general, long ranging views are very limited in flat landscapes such as the lowlands where the Proposed Development is sited. As detailed previously in Section 13.3.3, above ground features such as vegetation or localised topography undulations often cause a disproportionate screening effect in very flat landscapes, limiting long range views. However as shown below in Plate 13-17, unrestricted views are available throughout the Proposed Development Site due to the absence of above ground elements on the open expanses of bare cutover peat.



Plate 13-17 unrestricted views across the bare cutover peatland landscape

Although the landscape of the site is in a general sense very flat, views are often restricted by shrubs and scrub, as well as slight topography undulations as shown in the images below.



Plate 13-18: Restricted views within the Proposed Development Site



Plate 13-19 A relatively short range view across cutover peatland landscape.

Excepting entrance routes, the site is predominantly surrounded by mature treelines of broadleaf and conifer. The relatively dense woodland enclosing the site acts as a physical barrier, restricting views (as well as buffering noise and dust) both into and out of the Proposed Development Site.

The site and its surrounds are located within a rural landscape setting, characterised by agricultural fields outlined by field boundaries consisting of treelines and hedgerows. Views towards the site from the road network surrounding the site were assessed during the Route Screening Analysis, as detailed previously in Section 13.3.4.

Plate 13-20 shows a view from the R156 west of Carranstown Bog where views into the site are restricted by the dense broadleaf woodland lining the roadway. Plate 13-21 shows a more open, unrestricted view towards the site where there is limited roadside vegetation screening. Even though roadside screening is limited (Plate 13-21), visibility of the site is obscured by the intervening field and its mature boundary vegetation.



Plate 13-20 View from the R156 west of Carranstown Bog.



Plate 13-21 View towards the Proposed Development Site from local road north of the village of Ballivor

As shown below in Plate 13-23 there are open views to the north from the R156 where large areas of bare cutover peat of Carranstown bog is visible. It is noted that visual receptors travelling on the R156 would only have this view momentarily as they pass this entrance to the Proposed Development Site.



Plate 13-22 Entrance to Ballivor Bog and Carranstown Bog from the R156 Regional Road



Plate 13-23 Open views into the Proposed Development Site from the Site Entrance on the R156 regional Road.

The most sensitive visual receptors likely to have most visibility of the Proposed Development Site are local residents who live in close proximity to the site. The site visit in 2021 determined that in most instances, visibility of the Proposed Development Site was screened from view by well-established, dense boundary vegetation located both within the curtilage of local residents and along the site boundary and local field boundaries.

Views in the immediate landscape setting of the site are in general very small in scale, with short, enclosed views of open pasture farmland and grazed agriculture outlined by hedgerows and treelines as the defining landscape characteristics.



Plate 13-24: Northernly view from the Royal Canal Greenway towards the proposed Ballivor site.



Plate 13-25: Eastwards view towards site, from Bracklin.

13.4.2.2 Landscape Value and Sensitivity of the Proposed Development Site

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

Determination of landscape value considers scenic amenity designations, sensitivity and value designations found in local landscape policy (WCDP and MCDP), as well as other indications of landscape value attached to undesignated landscapes.

Table 13-5 (below) describes various factors that help identify landscape value (Page 84, GLVIA, 2013). These factors and indicators were appraised collectively to determine a landscape value for the Wind Farm Site. The landscape value and susceptibility to change were then considered to form a landscape sensitivity classification of either Low, Moderate, High or Very High for the Proposed Development Site.

Table 13-5 Indicators of Landscape Value and Sensitivity

Indicator	Description
Landscape Designations	<p>The Proposed Development is located in County Westmeath LCA 3 – River Deel Lowland and County Meath LCA 15 - South West Lowlands which is designated as having ‘Medium’ Sensitivity. The Proposed Development Site is not located in a protected landscape within any local landscape policy and no sensitive County Westmeath or County Meath landscape designations fall (High Amenity Areas) within the site itself.</p> <p>No designated scenic views are located in the Proposed Development Site, although there are many designated protected views located within the wider LVIA Study Area (to 25km). The Royal Canal Corridor is a protected landscape in the landscape policy of Westmeath, Meath and Kildare and is approximately 3.7 km south of the nearest proposed turbine.</p>
Landscape Elements Quality/Condition	<p>This refers to the physical state of the landscape and the condition of individual elements. The site is a heavily modified landscape substantially degraded by historic peat extraction activities and artificial drainage.</p>
Scenic or Aesthetic Qualities	<p>There is limited scenic or aesthetic quality to the large areas of the site where peat extraction has recently ceased and land cover comprises bare cutover peat. The Proposed Development Site has an industrial character, and features</p>

	such as the railways throughout the site are distinctive and hold some local aesthetic value and interest.
Rarity or Conservation Interests	There are some ecologically valuable areas where remnants of uncut raised bog exist within the Proposed Development Site. Pockets of bog woodland and other boundary vegetation around the site are valuable biodiversity corridors. A comprehensive description and assessment of the biodiversity within the Wind Farm Site Boundary is contained in Chapter 6 – <i>Biodiversity</i>
Wildness/Naturalness	<p>Although the Proposed Development Site comprises expansive and unpopulated lands, it is a highly managed and modified rural landscape. The anthropological influence of historic peat harvesting on this site itself, and the influence of agriculture and roads in the wider landscape setting detracts from most senses of naturalness or wildness.</p> <p>Vegetative regeneration of the site is naturally occurring, as well as rehabilitation activities under the IPC license requirements and the PCAS peatland rehabilitation measures. These measures, and The Biodiversity Enhancement Plan detailed in Appendix 6-4 will add to the wildness/naturalness of the site over the coming decades.</p>
Recreational Value	<p>The Proposed Development Site comprises privately owned land and is not used for any public recreational activities. A very small airstrip is located in Lisclogher West bog to the west of the Proposed Development Site, it is used recreationally by model aeroplane enthusiasts.</p> <p>It is noted that the Proposed Development includes for a dedicated Amenity Plan (See Appendix 4-5) will enable public access the site in the form of walking trails (and car parking facilities), enabling the local residents to retain some of their cultural connection with this landscape</p>
Cultural Meaning / Associations	The Proposed Development Site has a strong cultural association for the local communities who have a historic and generational connection to working the peatlands and cutting turf on the site and local area. Other heritage features such as the famine house on the site, Bracklyn demesne and the Royal Canal to the south (approx. 3.7km) are cultural contributors to the overall landscape setting.

In consideration of the factors detailed in Table 13-5 above, the landscape value of the Proposed Development site is deemed to be ‘Low’, particularly considering the highly modified and degraded nature of the landscape. The susceptibility of the landscape of the site to the proposed change is ‘Low’ considering local planning policy indicating the suitability of degraded cutover peatlands for wind energy development in both county Westmeath and Meath; The WCDP specifically cites cutover peatlands as suitable landscapes with capacity for wind energy development and the MCDP sites ‘*extensive areas of degraded or previously developed lands should be identified for wind farm development*’. Overall, the sensitivity of this landscape to wind farm development is deemed to be ‘**Low**’.

13.4.3 Landscape Characterisation in the WEDG’s (DoEHLG, 2006) (and with reference to The Draft Revised WEDG’s (DoHPLG, 2019))

This section considers the WEDG’s (DoEHLG, 2006) and is cognisant of the Draft Revised 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 landscape designations in the WCDDP and MCDP and site visits conducted by the MKO Landscape and Visual team, the physical characteristics of the Wind Farm Site is best described by ‘Flat Peatland’ landscape character type. Therefore, the best practice siting and design strategies prescribed for Flat Peatland (DoEHLG, 2006) were implemented for the Proposed Development.

13.4.3.1 Flat Peatland



Plate 13-26: View showing flat peatland landscape type within the Proposed Development Site.

The key characteristics of the Flat Peatland landscape type as stated in the WEDG’s (DoEHLG, 2006) are:

- *“Landscapes of this type comprise a vast planar extent of peatland and have significant potential for future wind energy development;*
- *In their relatively undisturbed and naturalistic state the wet bogs comprise a landcover mostly of heather, wild grasses and bog cotton, as well as patches of coniferous plantation;*
- *Some of these bogs have been harvested for peat and may comprise long parallel ridges of stacked milled peat and deep drains;*
- *Evidence of human habitation is sparse;*
- *Roads tend to run in straight lines over considerable distances, followed by electricity and/or telephone lines; and*
- *This landscape type is horizontal, open, extensive and also characterised by a sense of remoteness.”*

The siting and design guidance given for ‘flat peatland’ in the DoEHLG (2006) guidelines is set out below:

Location

“Wind energy developments can be placed almost anywhere in these landscapes from an aesthetic point of view. They are probably best located away from roadsides allowing a reasonable sense of separation. However, the possibility of

driving through a wind energy development closely straddling a road could prove an exciting experience”

Spatial Extent

“The vast scale of this landscape type allows for a correspondingly large spatial extent for wind energy developments.”

Spacing

“Regular spacing is generally preferred, especially in areas of mechanically harvested peat ridge”

Layout

“In open expanses, a wind energy development layout with depth, preferably comprising a grid, is more appropriate than a simple linear layout. However, where a wind energy development is located close to feature such as a river, road or escarpment, a linear or staggered linear layout would also be appropriate.”

Height

“Aesthetically, tall turbines would be most appropriate. In any case, in terms of viability they are likely to be necessary given the relatively low wind speeds available. An even profile would be preferred.”

Cumulative Effect

“The openness of vista across these landscapes will result in a clear visibility of other wind energy developments in the area. Given that the wind energy developments are likely to be extensive and high, it is important that they are not perceived to crowd and dominate the flat landscape. More than one wind energy development might be acceptable in the distant background provided it was only faintly visible under normal atmospheric conditions.”

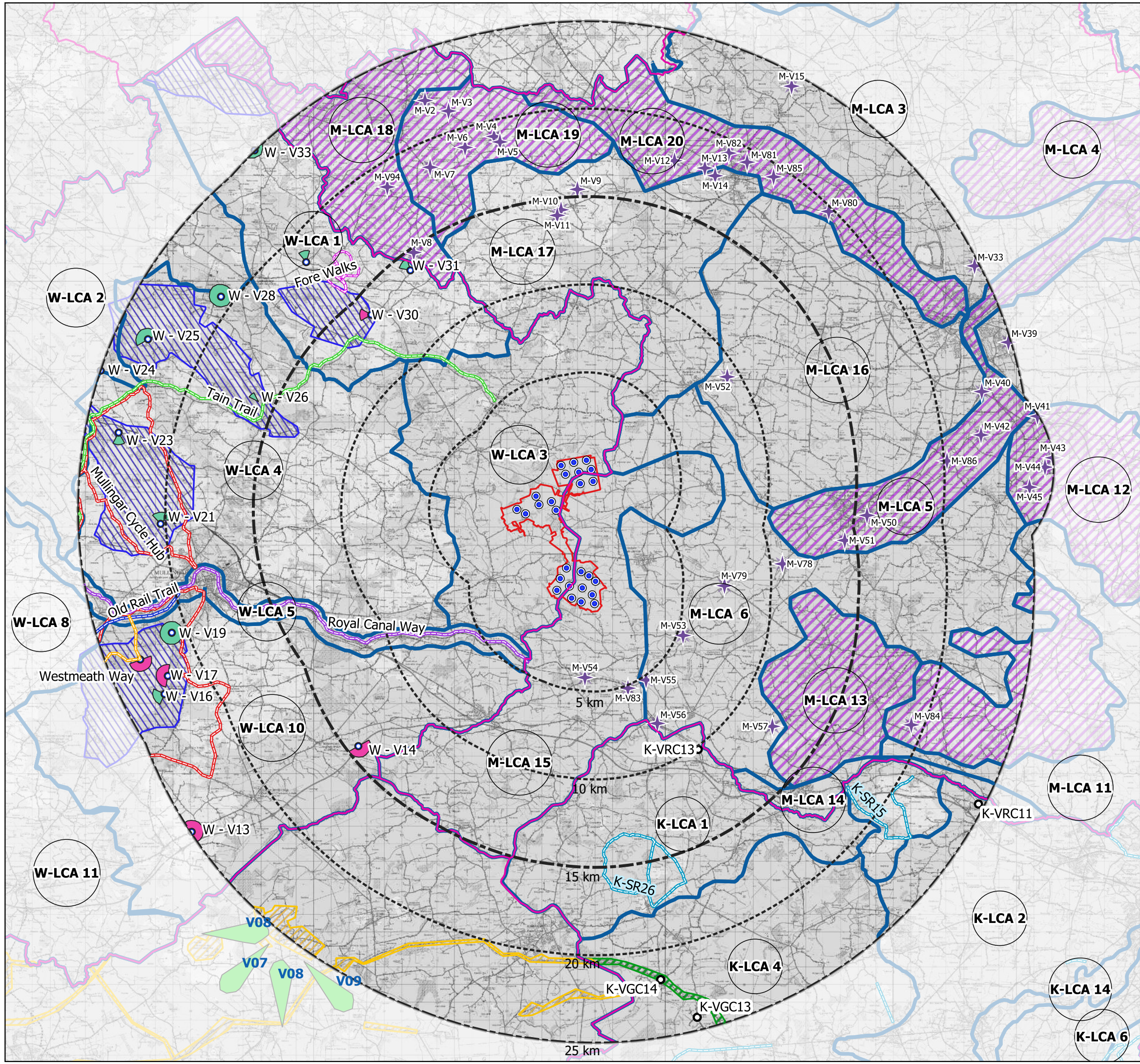
The large spatial extent, regular spacing of turbines, grid layout (non-linear) and tall turbines align with the siting and design guidance reported above for flat peatland landscape types in the WEDGs (DoEHLG, 2006).

13.4.4 Landscape Receptor Preliminary Analysis

Having identified and located the prominent and sensitive landscape receptors existent within the LVIA study area, a preliminary assessment was conducted using ZTV mapping to screen out landscape receptors that will not be impacted by the Proposed Development and identify receptors requiring further assessment. As reported previously in Section 13.2.1, High sensitivity landscape receptors and landscape designations are assessed within the 25km LVIA Study Area, whereas LCAs within are only assessed within a 15km LVIA Study Area. The focus in this Chapter is on Likely Significant effects, and from the professional judgement of the assessment team and experience from other relevant projects it is considered that the Proposed Development will not have a significant impact on the landscape character of LCAs beyond a distance of 15km.

Designated Landscape Receptors – Preliminary Analysis

Figure 13-10 below shows the ZTV map overlaid the landscape designations – *Landscape Policy Context Map and ZTV*. The mapping figure shows that most sensitive landscape designations are set back from the Proposed Development at the outer periphery of the LVIA Study Area (>10km) where there is much less theoretical visibility of the proposed turbines.



Map Legend

- Proposed Turbines
 - Wind Farm Site Boundary
 - LVIA Study Area
 - County Boundaries
 - County Landscape Character Areas
- Half Blade ZTV**
- 1 - 6 Turbines Theoretically Visible
 - 7 - 13 Turbines Theoretically Visible
 - 14 - 20 Turbines Theoretically Visible
 - 21-26 Turbines Theoretically Visible
- Landscape Designations**
- Co. Meath High Sensitivity Areas
 - Co. Westmeath Areas of High Amenity
 - Co. Offaly Areas of High Amenity
 - Co. Kildare Special Sensitive Landscape
- Designated Scenic Amenity**
- ★ Co. Meath Scenic Views
 - Co. Kildare Scenic Routes
 - Co. Kildare Scenic Views
 - Co. Westmeath Protected Views Origin
- Co. Westmeath Protected Views**
- Hill of Uisneach Panorama
 - Regional
 - County
 - Local
- Co. Westmeath Scenic Routes**
- Mullingar Cycle Hub
 - Old Rail Trail
 - Royal Canal Way
 - Tain Trail
 - Westmeath Way
 - Fore Walks
 - Co. Offaly Scenic Views

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	Drawing No.			
Figure 13-10				
Drawing Title				
Landscape Policy Context with ZTV				
Project Title				
Ballivor Wind Farm				
Scale	Project No.	Date	Drawn By	Checked By
1:210,000	191137	23.02.2023	SF	JW

Table 13-6 Designated Landscape Receptor Preliminary Assessment

Designated Landscape Receptor	Theoretical Visibility (TV)	Likely Visibility determined by on-site appraisals	Screened in for Assessment
Westmeath - Lough Lene High Amenity Area	Predominantly No TV	No visibility anticipated	No
Westmeath - Lough Owel High Amenity Area	Predominantly No TV, some partial TV	Very limited visibility of the proposed turbines anticipated	No
Westmeath - Lough Ennell High Amenity Area	Predominantly No TV, some partial TV	Very limited visibility of the proposed turbines anticipated	No
Westmeath - Lough Derravaragh High Amenity Area	Predominantly No TV, some partial TV	Very limited visibility of the proposed turbines anticipated	No
Meath Landscape Conservation Area - Loughcrew and Slieve Na Calliagh Hills (& LCA 19)	Full TV on the High elevations and southern side of the hills	Visibility Anticipated from highest elevations and south facing areas of Slieve na Calliagh Hills	Yes
Meath Landscape Conservation Area – Hill of Tara	Full to partial TV	Visibility Anticipated from highest elevations and south facing areas of Slieve na Calliagh Hills	Yes
Meath High Sensitivity LCA - LCA 5 Boyne Valley	Full TV to the west and partial TV to the east	Some minor visibility likely to occur from elevated vantage points	Yes
Meath High Sensitivity LCA – LCA 13 Rathmoylan Lowlands	Predominantly No TV Small pockets of full TV	Overall visibility likely to be very limited, no visibility from sensitive Landscape receptors in the LCA	No
Meath High Sensitivity LCA - LCA 18 Lough Sheelin Uplands	Predominantly No TV Small pockets of full TV	Overall visibility likely to be very limited, no visibility from sensitive Landscape receptors in the LCA	No
Meath High Sensitivity LCA - LCA 20 Blackwater Valley	Predominantly No TV Small pockets of full TV	Overall visibility likely to be very limited, no visibility from sensitive Landscape receptors in the LCA	No
Offaly - The Grand Canal	Predominantly No TV Small pockets of full TV	No visibility anticipated from the Grand Canal	No

Designated Landscape Receptor	Theoretical Visibility (TV)	Likely Visibility determined by on-site appraisals	Screened in for Assessment
Offaly – Croghan Hill	Areas of Full TV at the top of the Hill	Visibility anticipated from the top of the hill	Yes
Kildare – Royal and Grand Canal Corridor High amenity Areas	Full TV to the west and partial TV to the east	Due to set back distances, visibility unlikely to occur, even from elevated vantage points on bridge crossings	No

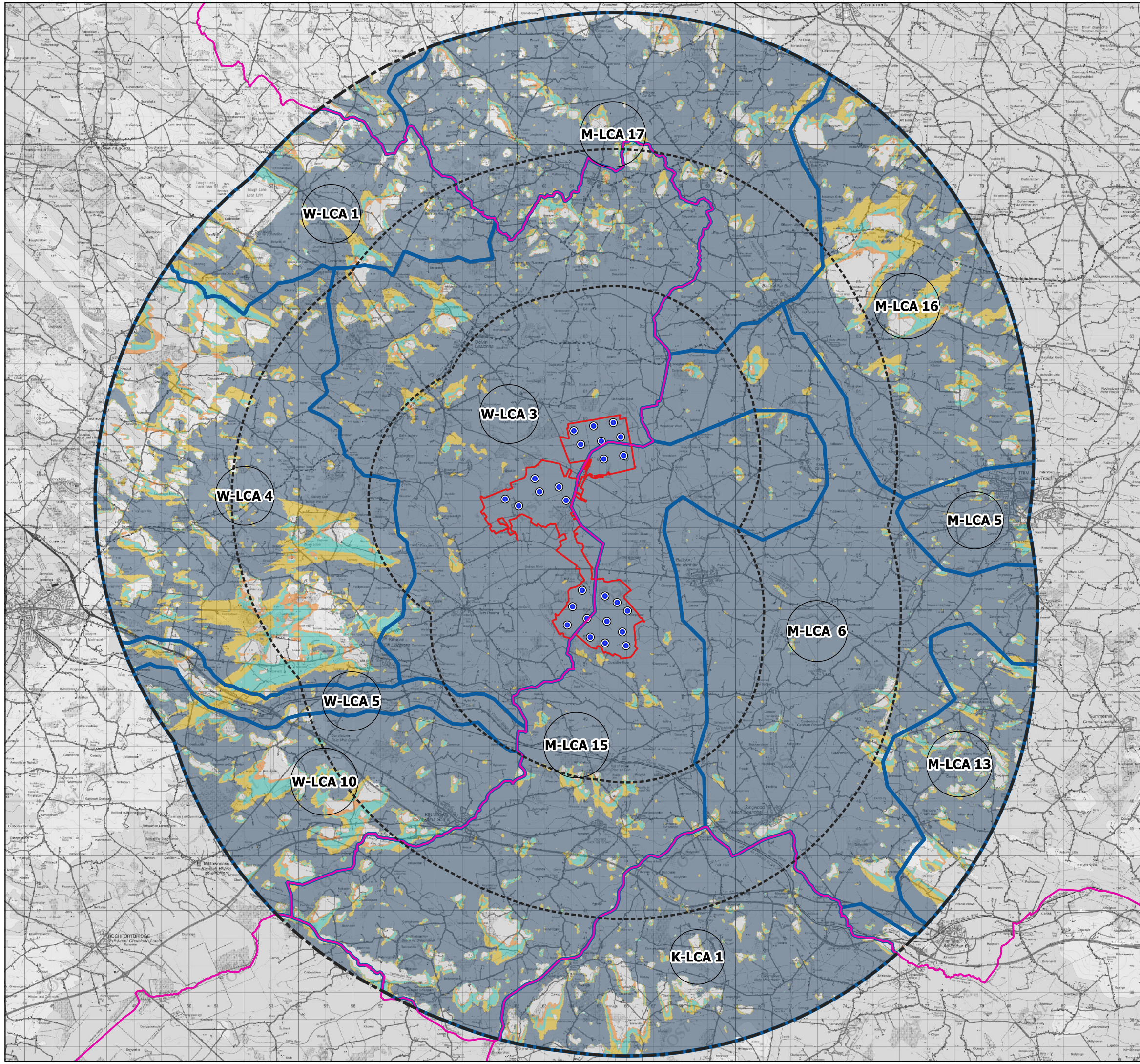
Landscape Character Areas – Preliminary Analysis

All of the LCAs located within the 15km LVIA Study Area for assessment of landscape character showed relatively wide coverage of theoretical visibility indicated by the ZTV map in Figure 13-11. Consequently, the following LCAs identified on the map and listed below were screened in for assessment as there is likely to be some visibility of the Proposed Development (W = Westmeath; M= Meath; K= Kildare).

- > W-LCA 1 - Northern Hills and Lakes
- > W-LCA 3 - River Deel Lowlands
- > W-LCA 4 - Central Hills and Lakes
- > W-LCA 5 - Royal Canal Corridor
- > W-LCA 10 - Lough Ennell and South-eastern Corridor
- > M-LCA 5 - Boyne Valley
- > M-LCA 6 - Central Lowlands
- > M-LCA 13 - Rathmoylan Lowlands
- > M-LCA 15 - South-west Lowlands
- > M-LCA 16 - West Navan
- > M-LCA 17 - South-west Kells Lowlands
- > K -LCA 1 – North Western Lowlands

The majority of M-LCA 14, M-LCA 18 and M-LCA 19 are located outside of the LVIA Study Area for effects on landscape character. Each of these show limited areas of full theoretical visibility within these LCAs and onsite appraisals found that actual visibility from these areas was very limited. These three LCAs have been screened out from further assessment.

A detailed description of the twelve LCAs screened in for assessment and the likely effects on landscape character as a result of the Proposed Development are presented in the Landscape Character Assessment Tables that form *Appendix 13-2*. A summary of landscape effects on these LCAs are reported in Section 13.7.3 of this chapter - Operational Phase Effects.



Map Legend

- Wind Farm Site Boundary
- Proposed Turbines
- County Borders
- LVIA Study Area (15km for Assessment of Effects on Landscape Character)

Landscape Character Areas

- W-LCA 1 Northern Hills and Lakes
- W-LCA 3 River Deel Lowlands
- W-LCA 4 Central Hills and Lakes
- W-LCA 5 Royal Canal Corridor
- W-LCA 10 Lough Ennell and Southeastern Corridor
- M-LCA 5 Boyne Valley
- M-LCA 6 Central Lowlands
- M-LCA 13 Rathmoylan Lowlands
- M-LCA 15 Southwest Lowlands
- M-LCA 16 West Navan Lowlands
- M-LCA 17 Southwest Kells Lowlands
- K -LCA 1 North Western Lowlands

Half Blade ZTV

- 1 - 6 Turbines Theoretically Visible
- 7 - 13 Turbines Theoretically Visible
- 14 - 20 Turbines Theoretically Visible
- 21-26 Turbines Theoretically Visible

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Drawing No.

Figure 13-11

Drawing Title

Landscape Character Areas

Project Title

Ballivor Wind Farm

Scale 1:135,000	Project No. 191137	Date 28.02.2023	Drawn By SF	Checked By JW
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13.5 Visual Baseline

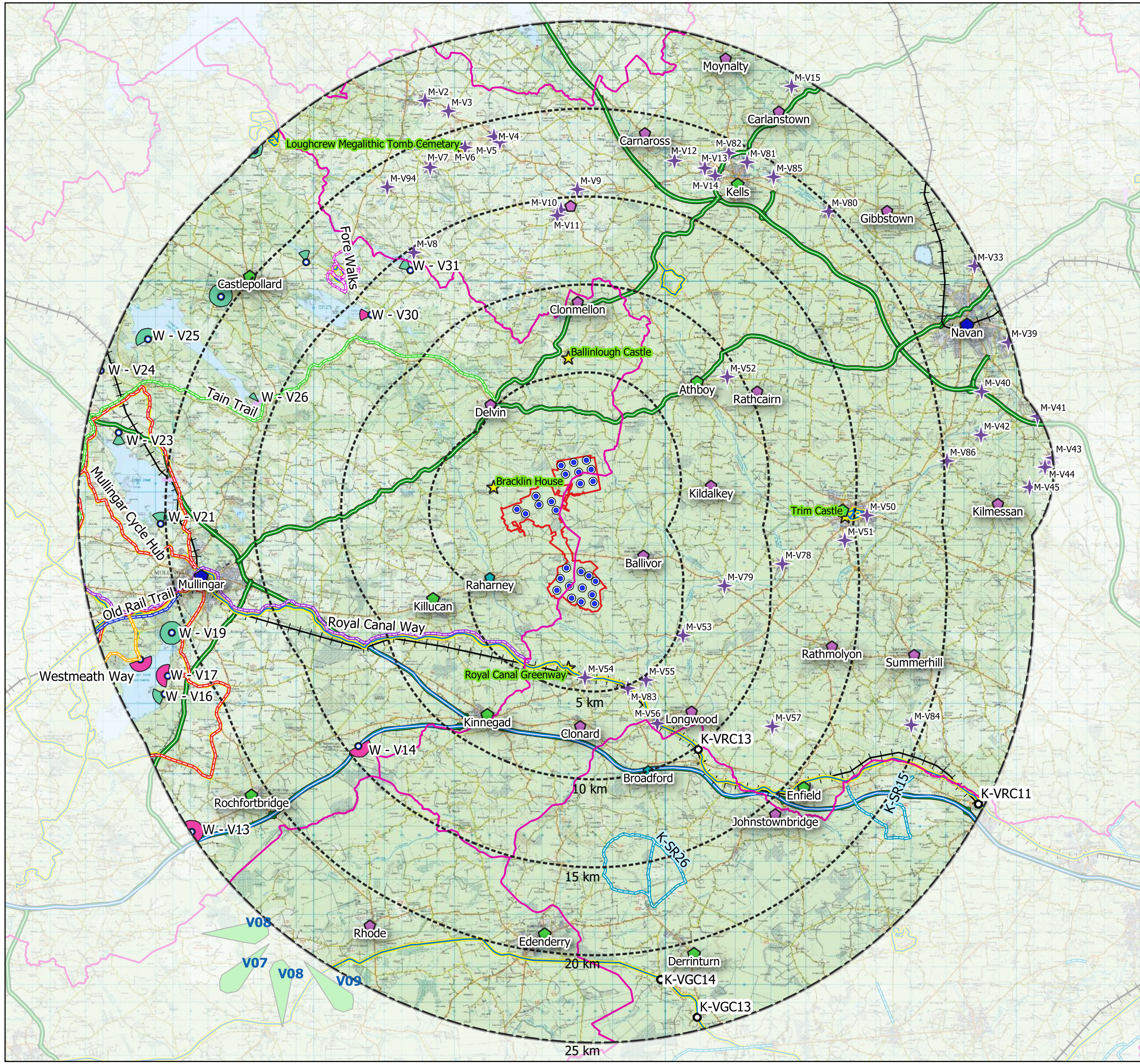
13.5.1 Visual Receptors

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

- > Designated Scenic Routes and Scenic Views
- > Settlements
- > Recreational and Tourism Designations (including Cultural Heritage Receptors)
- > Waymarked Walking Routes
- > Cycle Routes
- > Scenic Drives
- > Tourist Routes (e.g. Wild Atlantic Way)
- > Viewing Points (e.g. marked on OSi Maps)
- > Transport Routes
- > Residential Receptors

These visual receptors are identified in the visual baseline map (Figure 13-12 below) and are listed in tables in the following sections along with theoretical visibility at those locations indicated by the ZTV map in, seen below in Figure 13-13. During site visits conducted during 2020, 2021 and 2023, 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 Development Site and limited visibility of the proposed turbines beyond 5km in lowland locations, selection of photomontage viewpoints considered the potential visual impacts on local residential receptors. Selection of photomontages representative of residential visual amenity is discussed in Section 13.7.3.2.3.



Map Legend

- Proposed Turbines
- Wind Farm Site Boundary
- LVIA Study Area
- County Boundaries
- Co. Westmeath Protected Views Origin
- Co. Westmeath Protected Views**
- Hill of Uisneach Panorama
- Regional
- County
- Local
- Co. Westmeath Scenic Routes**
- Mullingar Cycle Hub
- Old Rail Trail
- Royal Canal Way
- Tain Trail
- Westmeath Way
- Fore Walks
- ★ Co. Meath Scenic Views
- Co. Kildare Scenic Views
- Co. Kildare Scenic Routes
- Co. Offaly Scenic Views
- National Roads
- Motorway
- Standardised Settlement Hierarchy**
- ▣ County Hub Town
- ▣ Town
- ▣ Village
- ▣ Small Village of Local Importance
- ★ OSi Viewing Points
- ★ Tourist Designations
- Way Marked Walking Trails

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Drawing No.

Figure 13-12

Drawing Title

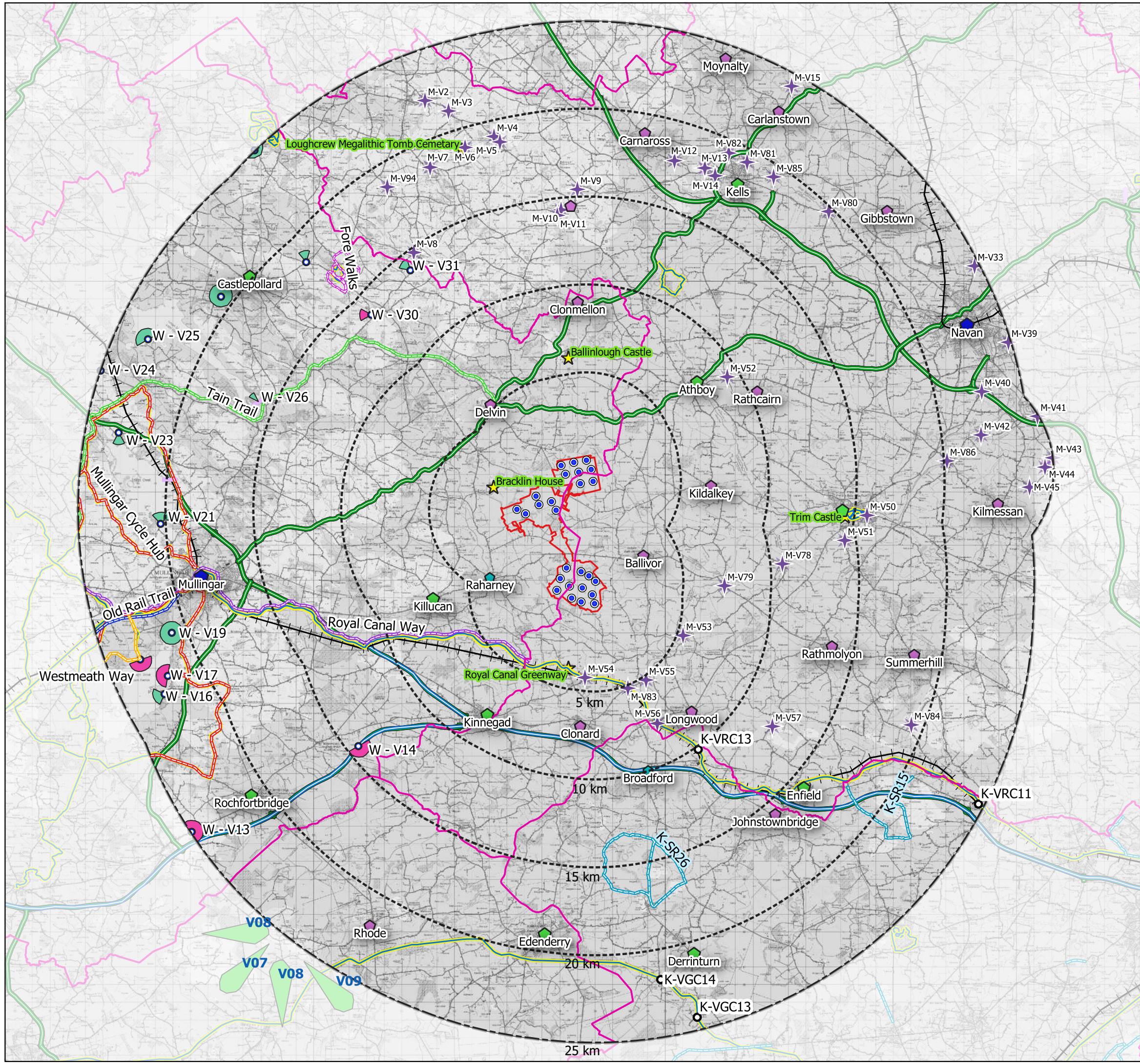
Visual Baseline

Project Title

Ballivor Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:210,000	191137	23.02.2023	SF	JW





Map Legend

- Proposed Turbines
- Wind Farm Site Boundary
- LVIA Study Area
- County Boundaries
- Co. Westmeath Protected Views Origin

Co. Westmeath Protected Views

- Hill of Uisneach Panorama
- Regional
- County
- Local

Co. Westmeath Scenic Routes

- Mullingar Cycle Hub
- Old Rail Trail
- Royal Canal Way
- Tain Trail
- Westmeath Way
- Fore Walks

- ★ Co. Meath Scenic Views
- Co. Kildare Scenic Views
- Co. Kildare Scenic Routes
- Co. Offaly Scenic Views
- Motorway
- National Roads

Standardised Settlement Hierarchy

- ◆ County Hub Town
- ◆ Town
- ◆ Village
- ◆ Small Village of Local Importance
- ↑ OSi Viewing Points
- ★ Tourist Designations
- Way Marked Walking Trails

Half Blade ZTV

- 1 - 6 Turbines Theoretically Visible
- 7 - 13 Turbines Theoretically Visible
- 14 - 20 Turbines Theoretically Visible
- 21-26 Turbines Theoretically Visible

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Drawing No.

Figure 13-13

Drawing Title

Visual Baseline and ZTV

Project Title

Ballivor Wind Farm

Scale 1:210,000	Project No. 191137	Date 23.02.2023	Drawn By SF	Checked By JW
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13.5.1.1 Designated Scenic Routes and Views

The designated scenic routes and views were taken from the respective current Development Plans of Counties of Westmeath, Meath Offaly and Kildare. All designated scenic routes and views were previously identified and fully described in Table 13-2, Table 13-3 and Table 13-4 of Section 13.4.1 – *Landscape Designations and Policy Context*. These scenic amenity designations are mapped in Figure 13-5 (seen previously in Landscape Baseline Section) and also the visual receptor map shown above – Figure 13-12. Table 13-7 (below) lists the scenic amenity designations (identified previously and their relative naming conventions assigned in Section 13.4.1) 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 13-7 and whether it is likely that the designated scenic amenity is directed towards the Proposed Development. Table 13-7 also notes the theoretical visibility of the proposed turbines from these designated locations is as indicated by the ZTV Figure 13-13.

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

Table 13-7 Designated Scenic Amenity – Preliminary Visibility Analysis

Map Ref.	Scenic Amenity Descriptor (full descriptions in Section 13.4.1)	Direction and Range of View	Directed to Turbines?	Theoretical Visibility	Screened in for further Assessment
Up to 5 km					
M-V54	Royal Canal	East & West	Partially	Full	Yes
W-SR	Royal Canal Way	Not indicated	Partially	Full	Yes
5 to 10 km					
M-V52	Hill of Ward	Panoramic	Yes	Partial	Yes
M-V53	Inchatore Bridge Royal Canal	North, North East and South	No	Full	No
M-V55	Stonyford Bridge Royal Canal	East and West	Partially	Full	Yes
M-V56	Royal Canal at Boolykeagh	South	No	Mixed	No
M-V79	Scarriff Bridge Boyne River	North-east and South-west	Partially	Full	Yes
M-V83	Blackshade Bridge Royal Canal	South-east and North-west	Yes	Full	Yes
10 to 15 km					
M-V8	Skerry Cross Roads and Ballinlough	South-west	No	Partial	No

Map Ref.	Scenic Amenity Descriptor (full in Section 13.4.1)	Direction and Range of View	Directed to Turbines?	Theoretical Visibility	Screened in for further Assessment
M-V10	Crossakeel and Ardglassan	North-west	No	Full	No
M-V11	Ardglassan and Rathniska;	South and West	Partially	Full	Yes
M-V51	R158 between Trim and Laracor	North	No	Partial	No
M-V57	County road between Rathcore and Clonguiffin	West and North-west	Yes	Full	Yes
M-V78	Derrindaly Bridge Boyne River	North and South	No	Partial	No
W-V14	Sculpture along the M6.	South	No	Partial	No
W-30	Lough Lene Parking and Picnic area	North-west	No	None	No
W-31	View of Lough Bane	West	No	None	No
W-SR	Tain Trail	Not indicated	Partially	Full/partial	Yes
K-VRC13	Moyvally on the Royal Canal	North-west-South-east	Yes	Full	Yes
K-SR26	Views of Carbury Castle and Carbury Hill from SR	South	No	Full, Partial, and None	No
15 to 20 km					
M-V4	R154 between Patrickstown and Oldcastle I	North	No	None	No
M-V5	R154 between Patrickstown and Oldcastle II;	South	Yes	Full	Yes
M-V6	Slieve na Calliagh	Panorama	Yes	Full	Yes
M-V7	County road between Rahaghy and Patrickstown	South-east	Partially	None	No

Map Ref.	Scenic Amenity Descriptor (full in Section 13.4.1)	Direction and Range of View	Directed to Turbines?	Theoretical Visibility	Screened in for further Assessment
M-V9	County road between Crossakeel and Magee's Cross	West	No	None	No
M-V12	County road between Keeran's Cross Roads	North	No	None	No
M-V13	Tower of Lloyd at Kells	Panorama	Yes	Full at Peak of Hill	Yes
M-V14	Cornadowagh, R163 between Kells and Drumbaragh	North-north-east	No	Full	No
M-V50	On R154 between Trim and Scurlockstown	North-west	Yes	Full	Yes
M-V80	Blackwater Valley Navan from R147 Kells Road	South-east	No	Full	No
M-V81	Blackwater Valley from Maudlin Bridge	South-east and North-west	No	None	No
M-V82	Blackwater Valley from Mages Bridge	East and West	Partially	None	No
M-V84	Coole Hill	West	No	Full	No
M-V85	View of River Blackwater from Headford Bridge	East and West	Partially	None	No
M-V94	Moylagh Castle from local Road	South-east	Yes	None	No
W-V26	Lough Derravaragh from parking area and pier.	North-west	No	None	No
W-V29	View of Lough Glore	North	No	None	No
W-SR	Fore Walks	Not indicated	Not likely	Mainly None	No

Map Ref.	Scenic Amenity Descriptor (full in Section 13.4.1)	Direction and Range of View	Directed to Turbines?	Theoretical Visibility	Screened in for further Assessment
W-SR	Mullingar Cycle Hub	Not indicated	Not likely	Mainly None	No
K-VH17	Carbury Hill	Panoramic	Yes	Full at peak of Hill	Yes
K-SR26	Plains of Kildare and West Central Boglands	South	No	Full, Partial, and None	No
20 to 26.1km					
M-V2	County road at Bellewstown	South	Yes	None	No
M-V3	County road from R154 at Boolies	South	Yes	None	No
M-V15	County road between Carlanstown and Ardlonan.	East	No	Full	No
M-V33	At Proudstown Cross Roads on R162	East	No	Full	No
M-V39	At Johnstown on county road	North-east	No	Full	No
M-V40	On road to south of Cannistown Church and M3	South and South-east	No	Full	No
M-V41	On county road Dowdstown Bridge and Garllow Cross Roads	South	No	Full	No
M-V42	Bective and Bellinter cross roads	East	No	Full	No
M-V43	Hill of Tara Car Park	East	No	Full/Partial	No
M-V44	Hill of Tara	Panorama	Yes	Full	Yes
M-V45	County road Kilmessan and Castleboy	North-east	No	Partial	No

Map Ref.	Scenic Amenity Descriptor (full in Section 13.4.1)	Direction and Range of View	Directed to Turbines?	Theoretical Visibility	Screened in for further Assessment
M-V86	Bective Bridge Bective Abbey and the Boyne	North-west, North-east and South-west	Yes	Partial	Yes
W-V13	Garrane Hill	Panorama	Yes	Yes	Yes
W-V16	Lough Ennell Caravan Park	West	No	None	No
W-V17	Lough Ennell from Belvedere House	West	No	None	No
W-V18	Lough Ennell	South	No	None	No
W-V19	Scenic route through forest and woodlands from Butler's Bridge/Kilpatrick Bridge	All Directions	Partially	None/Partial	No
W-V21	Lough Owel by Pitch and Putt	North	No	Partial	No
W-V22	Lough Owel from Mullingar Sailing Club	North-west	No	None	No
W-V23	Lough Owel	South	No	None	No
W-V24	Local road L-5821	North-west / Panorama	No	None/Partial	No
W-V25	Lough Derravaragh Caravan Park	North-west	No	None	No
W-V28	Scenic drive through State Forest	Various Directions	Partially	None/Partial	No
W-SR	Old Rail Trail	Not indicated	Partially	Full/Partial	Yes
K-GC13	Hamilton Bridge on the Grand Canal	North and South	Yes	Full	Yes
K-GC14	Ticknevin's Bridge on the Grand Canal	North-west-South-east	Unlikely	Partial	No
K-VRC11	Allen Bridge on the Royal Canal	North and South	No	Partial	No

Map Ref.	Scenic Amenity Descriptor (full in Section 13.4.1)	Direction and Range of View	Directed to Turbines?	Theoretical Visibility	Screened in for further Assessment
K-VH5	Hill at Ovidstown	Panorama	Yes	Full at peak of Hill	Yes
K-VH6	Hill at Killickaweeny	Panorama	Yes	Full at peak of Hill	Yes
O-V9	Grovesend and Coole views south of bog	South	No	Full/Partial	No

13.5.1.2 Settlements

In order to identify which settlements within the LVIA Study Area should be considered for assessment and viewpoint selection, the settlement strategies and hierarchy set out in the core strategy of the Development Plans of Counties Westmeath, Meath, Kildare and Offaly were consulted. The settlement hierarchies of the four 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
- > Small Village of Local Importance*

**Due to the large number of small rural villages in the LVIA Study Area, and the limited visibility of the proposed turbines beyond 10km, only small villages local to the landscape of the Proposed Development (Within 10km) are considered in the visual baseline exercise.*

Table 13-8 below lists the settlements identified from the respective CDPs within the 25km LVIA Study Area also noting their county status within the settlement strategy and whether there is theoretical visibility indicated by the ZTV.

Table 13-8 Settlements within the LVIA Study Area for Counties Westmeath, Meath, Offaly, and Kildare

Settlement	County Settlement Hierarchy (CPD)	Standardised Settlement Hierarchy	Theoretical Visibility	Screened In for further Assessment?
Up to 5km				
Raharney	Self-Sustaining Rural Consolidation	Small Village of Local Importance	Full	Yes
Ballivor	Village	Village	Full	Yes
5 to 10 km				
Delvin	Towns and Villages	Village	Full	Yes

Settlement	County Settlement Hierarchy (CPD)	Standardised Settlement Hierarchy	Theoretical Visibility	Screened In for further Assessment?
Killucan	Self-Sustaining Towns	Town	Full to Partial	Yes
Kinnegad	Self-Sustaining Growth Town	Town	Full	Yes
Clonmellon	Towns and Villages	Village	Full	Yes
Clonard	Village	Village	Full	Yes
Longwood	Village	Village	Full to Partial	Yes
Kildalkey	Village	Village	Full	Yes
Athboy	Town	Town	Full	Yes
10 to 15km				
Collinstown	Rural	Small Village of Local Importance	Partial to None	No
Trim	Self-Sustaining Growth Town	Town	Full	Yes
Archerstown	Rural Node	Small Village of Local Importance	Full	Yes
Boradford	Rural Settlement	Small Village of Local Importance	Full	Yes
Cadamstown	Rural Node	Small Village of Local Importance	Full	Yes
Clogherinka	Rural Node	Small Village of Local Importance	Full	Yes
Crossakeel	Village	Village	Full	Yes
Killina	Rural Node	Small Village of Local Importance	None	No
Moyvalley	Rural Settlement	Small Village of Local Importance	Partial	Yes
Rathcairn	Village	Village	Full	Yes
Rathmoylon	Village	Village	Full	Yes
The Downs	Rural Node	Small Village of Local Importance	Full	Yes

Settlement	County Settlement Hierarchy (CPD)	Standardised Settlement Hierarchy	Theoretical Visibility	Screened In for further Assessment?
15 to 20km				
Mullingar	Key Town	County Hub Town	Partial to None	No
Castlepollard	Self-Sustaining Growth Town	Town	None	No
Milltowpass	Rural	Small Village of Local Importance	Full to Partial	Yes
Kells	Self-Sustaining Growth Town	Town	Partial to None	No
Enfield	Self-Sustaining Town	Small Town	Partial to None	No
Carbury	Rural Node	Small Village of Local Importance	Partial to None	No
Carnaross	Village	Village	Full	Yes
Edenderry	Self-Sustaining Growth Towns	Town	Full to partial	Yes
Gainstown	Rural Node	Small Village of Local Importance	Partial to None	No
Johnstownbridge	Village	Village	Full to Partial	Yes
Kilshanchoe	Rural Node	Small Village of Local Importance	Full	Yes
Summerhill	Village	Village	Full	Yes
Taghmon	Rural Node	Small Village of Local Importance	Partial to None	No
Williamstown	Rural Node	Small Village of Local Importance	Partial to None	No
20 to 25km				
Ballinea	Rural Node	Small Village of Local Importance	Partial to None	No
Ballyteague	Rural Node	Small Village of Local Importance	None	No
Carlanstown	Village	Village	None	No

Settlement	County Settlement Hierarchy (CPD)	Standardised Settlement Hierarchy	Theoretical Visibility	Screened In for further Assessment?
Derrinturn	Small Town	Town	Partial	Yes
Gibbstown	Village	Village	Full	Yes
Kilmessan	Village	Village	Full	Yes
Moynalty	Village	Village	Partial to None	No
Multyfarnham	Rural	Small Village of Local Importance	None	No
Navan	Large Growth Town	County Hub Town	Partial to None	No
Newtown	Rural Node	Small Village of Local Importance	Partial to None	No
Newtownmoneenluggagh	Rural Node	Self-Sustaining Growth Towns	Partial to None	No
Rhode	Village	Village	Full	Yes
Rochfortbridge	Self-Sustaining Growth Towns	Town	Full	Yes
Ticknevin	Rural Node	Small Village of Local Importance	Partial	Yes
Timahoe	Rural Node	Small Village of Local Importance	Full	Yes
Tirmoghan	Rural Node	Small Village of Local Importance	None	No

13.5.1.3 Recreational, Cultural Heritage and Tourism Destinations

Recreational and tourism destinations were identified in the LVIA study area through a desktop exploration of local tourism plans as well as considering the most popular tourism destinations in Counties Westmeath, Meath, Offaly and Kildare listed on Tripadvisor.ie. Prominent outdoor tourism and recreational destinations identified in the LVIA study area are listed below in Table 13-9.

Table 13-9 Prominent outdoor Recreational and Tourism Destinations in the LVIA study Area

Destination	Description	Theoretical Visibility	On-site appraisal of Visibility	Screened in?
Up to 5km				

Destination	Description	Theoretical Visibility	On-site appraisal of Visibility	Screened in?
Bracklyn house	Historical building	Full	Visibility likely	Yes
Royal Canal Greenway	130km of level towpath, ideal for walkers, runners and cyclists	Full	Visibility along route	Yes
5 to 10km				
Ballinlough Castle	Historical tourist destination.	Full / Partial	Onsite visibility very unlikely	No
Killua Castle	Historical tourist destination	Full	Onsite visibility unlikely	No
10 to 15 km				
Trim Castle	Historical tourist destination.	Full	Visibility from parts of castle	Yes
15 to 20 km				
Loughcrew Megalithic Tomb Cemetery	Nationally important monastic site and visitor centre	Full	Visibility Likely	Yes
Spire of Loyd	Nationally important monastic site and visitor centre	Full	Visibility Likely	Yes
Kells High Cross	Historical tourist destination.	Partial	Onsite visibility very unlikely	No
Carbury Castle and Motte	Historical tourist destination	Full	Visibility likely	Yes
Wattstown Barrows (Frewin Hill)	Nationally important monastic site	Full	Visibility Likely	Yes
Fore Abbey	Historical tourist destination	None	No visibility	No
Over 25km				
Hill of Tara	Nationally important monastic site and visitor centre	Full	Visibility Likely	Yes

13.5.1.4 Recreational Routes

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

- > Waymarked walking routes (Source - Sport Ireland Designated Trails)
- > Cycle routes (Source - Sport Ireland Designated Cycle Routes)
- > Scenic drives and tourist routes (e.g. the Wild Atlantic Way)

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, only recreational routes of County or National importance were included in this LVIA. The routes are shown on Figure 13-12 and are listed in Table 13-10 below along with theoretical visibility distributed upon each route by ZTV mapping.

Table 13-10 Recreational Routes in the LVIA Study Area

Route Name	Description	Theoretical Visibility (ZTV)	On-Site Visibility Appraisal	Screened in?
Up to 5km				
Royal Canal Way	Designated greenway cycle route and walking trail from Maynooth, County Kildare to Cloondara, County Longford.	Full TV along most of the trail, where it exists in the LVIA study area.	Actual visibility will be substantially less than as indicated by the ZTV. Localised topography and screening within the vegetated landscape will screen the proposed turbines from view along much of the route	Yes
10 to 15 km				
Tain Trail	Designated scenic route within Westmeath	Full TV along the trail within 15km of the proposed turbines very little TV past 15km	Actual visibility will be substantially less than as indicated by the ZTV. Localised topography and screening within the vegetated landscape will screen the Proposed Development from view along much of the route	Yes
Kildare Scenic Route 26	Views West of Kildare Plain and towards Caureen	Patches of full TV and no TV along the route	Actual visibility will be substantially less than as indicated by the ZTV. Localised topography and screening within the	No

			vegetated landscape will screen the Proposed Development from view along much of the route	
Girley Bog Loop – Way Marked Walking Trail	Girley Bog Eco Walk is a 3.5 miles/ 5.6 km waymarked National Loop. It covers varying landscape of forest and bogland.	Mostly full TV		Yes
15 to 20 km				
Fore Walks	3km Looped Walk around the beautiful and historic landscape for Fore village	None	Unlikely to be any visibility of the Proposed Development.	No
Mullingar Cycle Hub	Designated circular cycle route from Mullingar through Loughnavalley and Rathconrath	No theoretical visibility along the majority of the route	Unlikely to be any visibility of the Proposed Development.	No
Kildare Scenic Route 15	Views of Moate & Ardscull	Full TV along the trail within 20km of the proposed turbines very little TV past 20km	Unlikely to be any visibility of the Proposed Development.	No
20 to 25km				
Grand Canal Way – Way Marked Walking Trail	117-kilometre (73 mi) long-distance trail that follows the towpath of the canal from Lucan Bridge, near Adamstown, to Shannon Harbour.	Mixed theoretical visibility along the route within the LVIA Study Area. Patches of full TV and no visibility	Actual visibility will be substantially less than as indicated by the ZTV. Localised topography and screening within the vegetated landscape will screen the Proposed Development from view along much of the route	No
Old rail trail	Designated greenway cycle route and walking trail in County Westmeath from Athlone	Full theoretical visibility between 20 to 25km	Actual visibility will be very limited due to distance and screening within Mullingar town	No

	to Mullingar. Runs south of the proposed turbines.			
Westmeath Way	Designated walking trail from Kilbeggan northeast to Mullingar past Lough Ennell.	Mixed theoretical visibility along the route within the LVIA Study Area. Patches of full TV and no visibility	Unlikely to be any visibility of the Proposed Development.	No
Mullaghmeen Forest – Way Marked Walking Trail	ancient woodland walk through Mullaghmeen Forest	Full theoretical visibility	Actual visibility will be very limited due to screening within the forest	No

13.5.1.5 Major Transport Routes

National Primary and National Secondary roads as well as train routes were identified within the LVIA Study Area. The visual baseline exercise determined that most visibility of the Proposed Development will occur in close proximity to the Proposed Development. Regional Roads and Local Road transport routes in close proximity to the Proposed Development are also assessed.

Table 13-11 Major Transport Routes in the LVIA Study Area

Transport Route	Theoretical Visibility	Screened in?
Up to 5 km		
N51 National Road	Full theoretical visibility	Yes
N52 National Road	Mostly full theoretical visibility with pockets of partial theoretical visibility	Yes
Railway – Dublin to Sligo Route	Mostly full theoretical visibility with pockets of partial theoretical visibility	Yes
5 to 10 km		
M6 Motorway	Mostly full theoretical visibility with pockets of partial theoretical visibility	Yes
M4 Motorway	Mostly full theoretical visibility with pockets of partial theoretical visibility	Yes
10 to 15km		
N4 National Road	Mostly full theoretical visibility with pockets of partial theoretical visibility between 10 to 15km and mostly no theoretical visibility between 15 to 25km	Yes
15 to 20km		

Transport Route	Theoretical Visibility	Screened in?
M3 Motorway	Patches of full and patches of no theoretical visibility	No
N3 National Road	Mostly no theoretical visibility	No

13.5.2 Visual Receptor Preliminary Analysis

In the previous section visual receptors in the LVIA Study Area were identified in several tables. Each table stated the theoretical visibility from each receptor as indicated by the ZTV mapping. Many visual receptors are scoped out from further assessment due to either lack of theoretical visibility indicated by the ZTV, or that the focus of views (as described in policy) is not directed towards the Proposed Development. All visual receptors scoped out due to these factors (ZTV and direction of view) are listed Table 13-12 below and are not considered further in this Chapter.

*Table 13-12 Visual Receptors **Scoped Out** from further Assessment due to lack of Theoretical Visibility (ZTV) or views not directed towards the Proposed Development*

Visual Receptor Category	Visual Receptor with no theoretical visibility found from ZTV mapping (or views focussed away from the proposed turbines)
Designated Scenic Amenity (Scenic Views and Scenic Routes)	M-V2; M-V3; M-V4; M-V7; M-V8; M-V9; M-V10; M-V12; M-V14; M-V15; M-V33; M-V39; M-V40; M-V41; M-V42; M-V43; M-V45; M-V51; M-V53; M-V56; M-V78; M-V80; M-V81; M-V82; M-V84; M-V85; M-V94; W-V14; W-V16; W-V17; W-V18; W-V19; W-V21; W-V22; W-V23; W-V24; W-V25; W-V26; W-V28; W-V29; W-V30; W-V31; W-SR Fore Walks; W-SR Mullingar Cycle Hub K-SR26 ; K-GC14; K-VRC11; O-V9
Settlements	Collinstown; Killina; Mullingar; Castlepollard; Kells, Enfield; Carbury; Gainstown; Taghmon; Williamstown; Ballinea; Ballyteague; Carlanstown; Moynalty; Multyfarnham; Navan; Newtown; Newtownmoneenluggagh; Tirmoghan
Recreational and Tourism Destinations	Ballinlough Castle; Kells High Cross; Fore Abbey; Killua Castle
Recreational Routes	Kildare Scenic Route 26; Fore Walks; Mullingar Cycle Hub; Kildare Scenic Route 15; Grand Canal Way – Way Marked Walking Trail; Old rail trail; Westmeath Way; Mullaghmeen Forest
Transport Route	N3 National Road; M3 Motorway

Visibility appraisals were conducted from all other receptors screened in (not scoped out in the table above) during several field surveys undertaken in 2020, 2021 and 2023.

Table 13-13 lists all of the visual receptors scoped out from further assessment as views towards the turbines were either entirely screened or substantially screened from view, as determined from field investigations. In some cases, the factor of distance to the Proposed Development as well as the directional

focus of views were contributing factors precluding receptors in the table below being brought forward for further assessment. The following receptors have been scoped out from further assessment due to the very limited visibility of the proposed turbines anticipated as determined by on-site appraisals.

*Table 13-13 Visual Receptors **Scoped Out** from further assessment due to No Visibility or very Limited Visibility as determined from appraisals conducted during field surveys.*

Visual Receptor Category	Visual Receptor with no or very limited visibility found on site
Designated Scenic Routes and Views	K-GC13; K-VRC13; M-V50; M-V86; W-V13; W-SR Old Rail Trail
Settlements	Killucan; Kinnegad; Clonmellon; Longwood; Athboy; Archerstown; Broadford; Cadamstown; Clogherinka; Moyvalley; The Downs; Timahoe; Rhode; Ticknevin; Rochfortbridge; Derrinturn; Gibbstown; Kilmessan; Summerhill; Kilshanchoe; Johnstontownbridge; Edenderry; Carnaross; Milltownpass
Major Transport Route	N4 National Road;

Following the pre-assessment exercise, the visual receptors listed in Table 13-14 below have not been scoped out for any of the reasons outlined above (lack of ZTV, Direction of view, No visibility on site). Therefore, these receptors are scoped in for assessment in this Chapter (Section 13.7.3.2). In order to inform the assessment, individual viewpoints were selected at, or representative of the receptors scoped in, from which photomontages were produced. In some instances, a visual receptor may be represented by a photomontage viewpoint that is closer to the Proposed Development but of similar geographical location and orientation.

Table 13-14 Visual Receptors Scoped in for Assessment later in this Chapter

Visual Receptor Category	Visual Receptor Name (Description)	Photomontage Appendix 13-4 Booklet	Viewpoint: Photomontage Booklet
Designated Scenic Routes	M-V54	VP16	
	W-SR Royal Canal Way	VP07	
	M-V52	VP01	
	M-V55	VP6	
	M-V79	Discussed in Section 13.7.3.2	
	M-V83	VP06	
	M-V11	VP13	
	M-V57	VP05	
	M-V5	VP12	
	M-V6	VP11	
	M-V44	VP02	

	W-SR Tain Trail	VP18
	K-VH17 – Carbury Hill	Discussed in Section 13.7.3.2
	K-VH5 - Hill at Ovidstown	Discussed in Section 13.7.3.2
	K-VH6 - Hill at Killickaweeny	Discussed in Section 13.7.3.2
Recreational, Tourism and Cultural Heritage Destinations	Bracklin House	VP10
	Royal Canal Greenway	VP7
	Trim Castle	VP19
	Loughcrew Megalithic Tomb Cemetery	VP11, VP12
	Spire of Loyd	VP14
	Wattstown Barrows (Frewin Hill)	VP8
	Hill of Tara	VP2
Recreational Routes	Royal Canal Way	VP7
	Girley Bog Walk	Discussed in Section 13.7.3.2
	Tain Trail	VP18
Settlements	Rahareny	VP17
	Ballivor	VP4
	Delvin	VP18
	Trim	VP19
	Crossakeel	Discussed in Section 13.7.3.2
	Rathmoylon	Discussed in Section 13.7.3.2
	Rathcairn	Discussed in Section 13.7.3.2
	Clonard	Discussed in Section 13.7.3.2
	Kildalkey	Discussed in Section 13.7.3.2
Transport Routes	Railway - Dublin to Sligo Route	VP6; VP7; VP16
	N51 National Road	VP1
	N52 National Road	VP18; VP9
	M6 Motorway	Discussed in Section 13.7.3.2

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

13.5.3 Visual Amenity from Residential Receptors

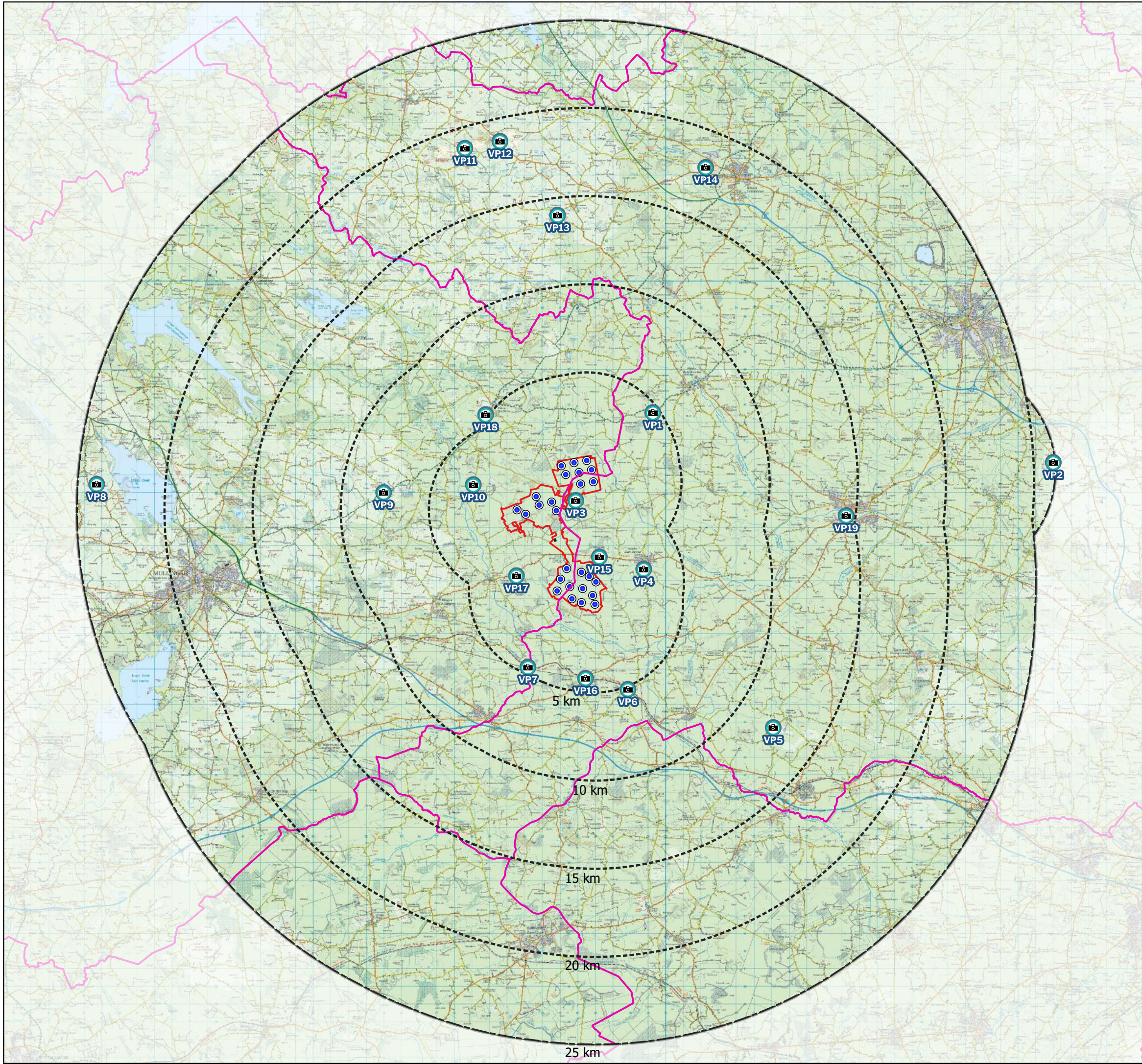
The likely visibility of the Proposed Development was appraised during multiple surveys conducted during 2020, 2021 and 2023, the field surveys determined that most visibility of the Proposed Development will occur within 5 km of the proposed turbines, excepting from elevated vantage points in the wider landscape area. The landscape surrounding the peatlands of the Proposed Development is a settled rural landscape where residential properties are arranged along the local road network. Selection of photomontage viewpoint locations aimed to represent residential properties located in close proximity to the Proposed Development. The following viewpoints are located in proximity to residential receptors within 3.5km from the Proposed Development where the greatest potential for significant visual effects on residential receptors are likely to occur:

- > Viewpoint 03
- > Viewpoint 04
- > Viewpoint 10
- > Viewpoint 15
- > Viewpoint 16
- > Viewpoint 17

13.5.4 Photomontage Viewpoint Locations

The locations of nineteen photomontage viewpoints are illustrated in Figure 13-14 below. A Photomontage produced from each viewpoint have been used to assess the significance of visual effects arising from the Proposed Development at each viewpoint location. The viewpoint locations are representative, and, in some instances, photos were not taken directly next to a visual receptor but in another location in close proximity where there may be superior line of sight towards the Proposed Development (e.g. higher elevation or less screening). A detailed description of the viewpoint selection process and photomontage assessment methodology is provided in Appendix 13-1.

The likely or significant visual effects of the proposed Ballivor development arising from each viewpoint location are reported below in Section 13.7 of this Chapter. The assessment process is extensively detailed in the photomontage assessment tables in Appendix 13-3.



Map Legend

- Proposed Turbines
- Wind Farm Site Boundary
- LVIA Study Area
- County Boundaries
- 📷 Photomontage Viewpoint Locations
(Appendix 13-4: Photomontage Booklet)

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Drawing No.

Figure 13-14

Drawing Title

Photomontage Viewpoint Locations

Project Title

Ballivor Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:210,000	191137	23.02.2023	SF	JW



13.6 Cumulative Context

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 Development, both independently, as well as in combination with all other existing and operational wind farm developments in the LVIA Study Area. This chapter also assesses the Proposed Development in combination with the 'likely future receiving environments' (EPA, 2022) which includes all existing and permitted wind farm developments in the LVIA Study Area, as well as any under construction wind farm developments. In order to consider all potential future scenarios, this Chapter was cognisant of all well-developed wind farm proposals with specific project specification information available in the public domain at the time of conducting this LVIA.

The guidance document *Guidance – Assessing the cumulative landscape and visual impact of onshore wind energy developments* (Nature Scot, 2021) states the following in relation to cumulative landscape and visual impact assessment (CLVIA):

“The key principle for all impact assessments is to focus on the likely significant impacts and those which are likely to influence the outcome of the consenting process.”

“The assessment should be proportionate to the likely impacts and all CLVIA should accord with the guidelines within GLVIA3. The emphasis should be on the production of relevant and useful information, highlighting why the proposals assessed have been included and why others have been excluded, rather than the provision of a large volume of information”

In terms of cumulative landscape and visual effects and the quote above, 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. As detailed in Section 2.7 in Chapter 2, other wind energy developments within 25km of the Wind Farm Site were identified by searching past planning applications lodged through the various planning authorities (County Councils of Westmeath, Meath, Kildare, and Offaly, as well as An Bord Pleanála) online planning portals. The information identified in the initial planning search was then used to verify, by means of a desk-based study and ground-truthing, whether the permitted wind energy developments had been constructed. The list of existing, permitted, under construction and proposed wind turbines within the LVIA study area are listed below in Table 13-15.

Table 13-15 Cumulative Context: Other Wind Farms within 25km of the Proposed Development

Wind Farm	County	Status	No. of Turbines	Turbine Tip Height (TH)
Up to 5km				
Bracklyn	Westmeath	Permitted	9	185m TH
10 to 15 km				
Milltown Pass	Westmeath	Proposed (Indicative layout at Pre-Planning)	7	193m TH
15 to 20 km				

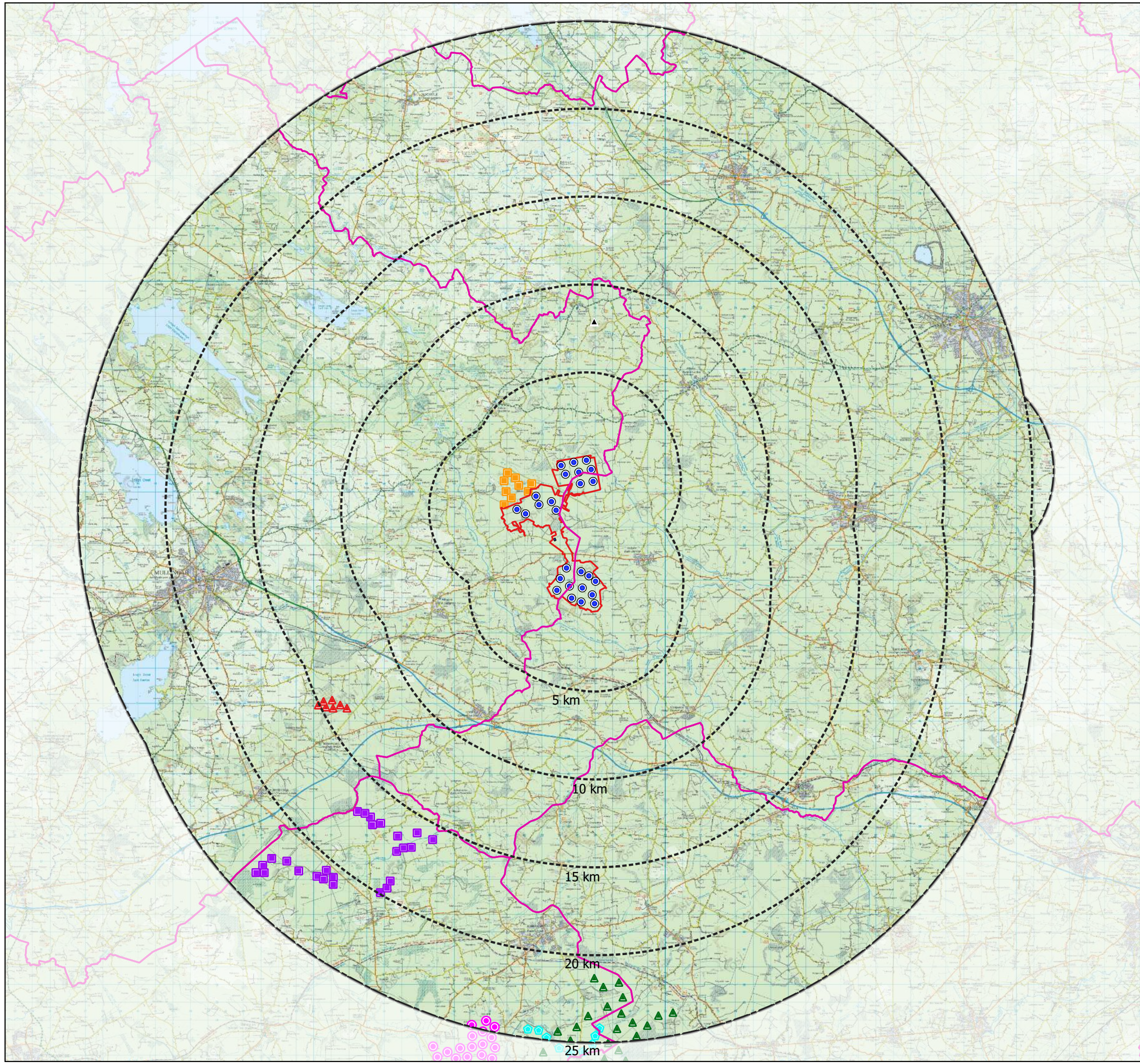
Wind Farm	County	Status	No. of Turbines	Turbine Tip Height (TH)
Yellowriver	Offaly	Permitted	25	Variety of THs': 156m TH, & 166m TH
20 to 25km				
Ballydermot	Kildare/Offaly	Proposed	47	Variety of THs': 200m TH & 220m TH
Cushaling/Cloncant	Kildare/Offaly	Under Construction	9	187m TH
Cloncreen	Offaly	Existing	21	170m TH

An 8 turbine wind farm project called Knockanarragh is proposed approximately 8km north of the Proposed Development. It is located on lands, south-west of the Clonmellon Village and north-east of Devlin Village. Whilst this project is acknowledged and considered in the cumulative landscape and visual impact assessments in this Chapter, no turbine layout or turbine specifications are currently available in the public domain at the time of writing this LVIA. Therefore, this proposed wind farm is not included in cumulative photomontages or cumulative ZTV mapping.

The 6 No. existing, permitted and proposed wind farms identified in the LVIA Study Area (Table 13-15) are mapped in Figure 13-15 - *Cumulative Context Map*. The indicative location of the proposed Knockanarragh is also illustrated on the map.

As shown in the map, due to proximity, the greatest potential for cumulative landscape and visual interactions will be between the Proposed Development and the permitted Bracklyn Wind Farm, which is located immediately to the west of the northern turbine cluster. Many of the other wind farm developments identified in the table above are set back substantial distances from the Proposed Development.

An assessment of cumulative landscape and visual effects are included in the assessment of effects detailed in Section 13.7.3 – *Operational Phase Effects*.



Map Legend

- Proposed Turbines
- Wind Farm Site Boundary
- LVIA Study Area
- County Boundaries

Cumulative Context

- Cloncreen
- ◆ Cushaling/Cloncant
- Bracklyn
- Yellowriver
- ▲ Ballydermot
- ▲ Miltown Pass
- ▲ Knockanarragh

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Drawing No.

Figure 13-15

Drawing Title

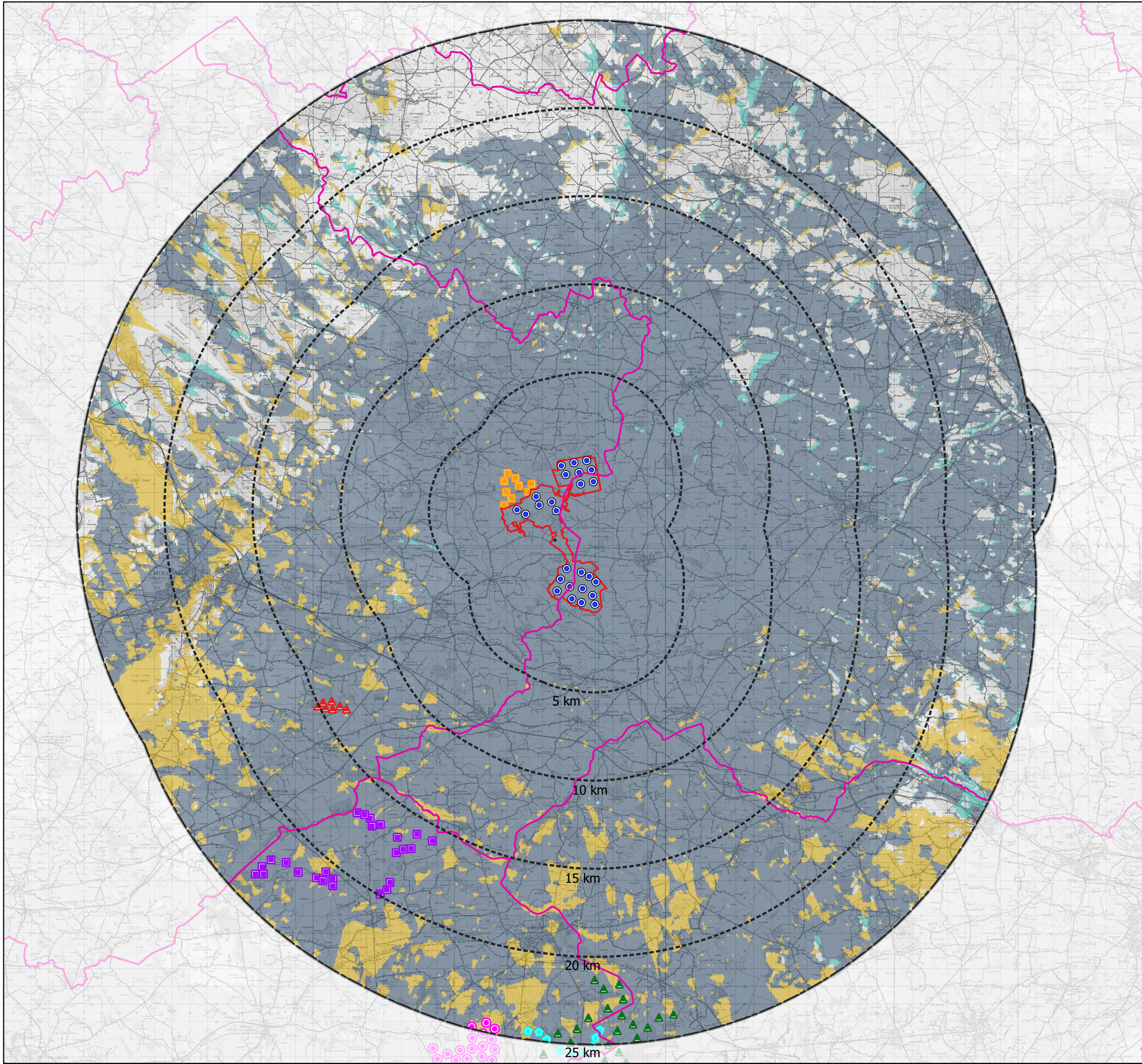
Cumulative context

Project Title

Ballivor Wind Farm

Scale 1:210,000	Project No. 191137	Date 23.02.2023	Drawn By SF	Checked By JW
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Map Legend

- Proposed Turbines
- Wind Farm Site Boundary
- LVIA Study Area
- County Boundaries

Cumulative Context

- Cloncreen
- ⬠ Cushaling/Cloncant
- Bracklyn
- Yellowriver
- ▲ Ballydermot
- ▲ Miltown Pass

Comparative Cumulative ZTV

- Only turbines from Proposed Ballivor visible
- Only turbines from Existing, Permitted and Proposed Wind Farms visible
- Turbines from Proposed Ballivor and Existing, Permitted and Proposed Wind Farms Visible

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Drawing No.

Figure 13-16

Drawing Title

Comparative Cumulative ZTV

Project Title

Ballivor Wind Farm

Scale

1:210,000

Project No.

191137

Date

23.02.2023

Drawn By

SF

Checked By

KM



13.6.1 Assessment of Cumulative Effects: ZTVs & Photomontages

Photomontages and a Comparative ZTV mapping are used as tools to aid the assessment of cumulative landscape and visual effects.

Comparative Cumulative ZTV

Figure 13-16 (above) compares the cumulative theoretical visibility of all existing, permitted, under construction and proposed wind farms (represented in yellow) with any additional theoretical visibility of the proposed Ballivor development represented in green. The ZTV map shows small areas of increased theoretical visibility of turbines in the LVIA Study Area due to the addition of the proposed Ballivor turbines. No prominent visual or landscape receptors are located within these small patches where increased theoretical visibility does occur. The small patches of additional theoretical visibility (green) where increased theoretical visibility does occur, are mainly located to the north-west, south-east and north-east of the LVIA Study Area. The very small proportion of scattered green patches in the map shows that the addition of the Proposed Development is a minor addition to the extent and pattern of theoretical visibility.

Photomontage Visualisations for Assessment of Cumulative Effects

As noted previously in Section 13.3, the ZTV does not account for localised undulations in topography and other screening factors, and actual visibility in this lowland vegetated landscape is likely to be far less than is indicated by the ZTV. Whilst the cumulative ZTV is a useful tool to aid assessment of cumulative effects and screen out areas where certain cumulative impacts will not occur, its utility is limited in the lowland landscape type of the LVIA Study Area. In this landscape type, photomontages are a more informative tool for assessing potential cumulative landscape and visual impacts. Excepting the anticipated cumulative interactions with the permitted Bracklyn wind farm, visibility appraisals and photomontage visuals show that there is in fact a very limited cumulative impacts with other wind farm developments in a vast proportion of the LVIA Study Area. Most cumulative effects will be perceived from elevated vantage points in the LVIA Study Area where long ranging views are permitted across the lowland landscape.

As detailed in Section 1.4.2 of Appendix 13-1 – *LVIA Methodology*, all other existing, permitted and proposed wind farms (excepting proposed Knockanarragh for reasons outlined previously) are included in the visualisations in the Appendix 13-4: Photomontage Booklet.

- **Existing View, and, Existing Wireline View** – Turbines of existing wind energy developments currently operational in the baseline landscape at the time of conducting this LVIA;
- **Proposed with Cumulative View, and, Proposed with Cumulative Wireline View**– As well as the Proposed Development, turbines of all other existing, permitted and under construction are presented in the photomontages and wireline views. Also, well-developed wind farm proposals* with project details in the public domain are also included in this photomontage and wireline view.

**Cumulative effects between the Proposed Development and other proposed wind farms (not permitted) is more uncertain and is reliant on an outcome of the planning and consenting system.*

An assessment of cumulative landscape and visual effects are included in the assessment of effects detailed in Section 13.7. Likely cumulative landscape effects are assessed in the landscape character assessment tables in Appendix 13-2, and likely cumulative visual effects are assessed in the photomontage assessment tables in Appendix 13-3. The results of the cumulative landscape and visual assessments are detailed in Section 13.7.3 - *Operational Phase Effects*.

Cumulative landscape and visual effects reported both in this chapter and within the assessment appendices (Appendix 13-2 - *LCA Assessment Tables*; Appendix 13-3 - *Photomontage Assessment Tables*) uses appropriate and logical narrative to discuss cumulative interactions between the Proposed Development and all other wind energy developments irrespective of whether they are existing, permitted or proposed. Whilst the categories provide clarity in presentation of visuals considering the scope of potential development in this landscape, discussion of cumulative interactions on specific landscape and visual receptors is relative to the effects on that receptor and proportionate to the likelihood of significant landscape and visual effects occurring.

13.7 Likely or Significant Landscape and Visual Effects

13.7.1 'Do-Nothing' Scenario

If the Proposed Development were not to proceed, the site would continue to be managed under the requirements of the relevant IPC licence and therefore the ongoing site management and environmental monitoring, peat stockpile removal (due to be completed by 2024), and wind measurement would continue. In addition, if the Proposed Development were not to proceed, the implementation of peatland rehabilitation plans as required under IPC License would occur. Likewise, the PCAS scheme in adjacent Bogs (where selected) would continue to be implemented. From a landscape and visual perspective, the evolution of the Proposed Development site will transition from a generally industrial cutover peatland to a more natural vegetated landscape. The potential effect of this is considered to be Slight, permanent and positive. These land uses and activities will also continue if the Proposed Development does proceed.

13.7.2 Construction Phase Effects

It is estimated that the construction phase of the Proposed Development will last approximately 24 months. The construction phase can be broken down into three main phases, 1) civil engineering works - 18 months, 2) electrical works - 18 months, and 3) turbine erection and commissioning - 9 months. There is a degree of overlap between the stages. The main task items under each of the three phases are detailed in Chapter 4 of this report.

13.7.2.1 Landscape Effects (Construction Phase)

The earthworks such as cut and fill required to facilitate construction of the Proposed Development will have the greatest potential for direct landscape effects where the physical fabric of the landscape is materially altered. 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. Where spoil arising from construction activities is managed within the Proposed Development Site, the vegetative top-soil layer will be removed and re-instated following spoil management taking place. Some construction activities may potentially cause temporary impacts on the landscape such as the creation of temporary structures, dust, minor soil erosion and very minor alterations to drainage.

In terms of landscape character, the current landscape will transition to a construction site. The construction works will be short-term in nature and completed as soon as practically possible. All construction activities will follow best practice methods to reduce impacts upon the environment and landscape of the Proposed Development Site. Further details are contained in the Construction and Environmental Management Plan (CEMP) contained in Appendix 4.3 of this EIAR.

All landscape effects occurring during the construction phase will be localised to the site itself, which is a receptor of Low sensitivity - as determined in Section 13.4.2.2. The footprint of the proposed turbines and ancillary infrastructure comprises 32.4 Ha (1.8%) of the area within the 1,770 Ha of the Proposed Development Site Boundary. There will be substantial localised change to the landscape of the site itself where construction of all infrastructure occurs. It is considered that this is a short-term, 'Moderate', negative effect in terms of landscape effects.

13.7.2.2 Visual Effects (Construction Phase)

The most substantial visual effects during the construction phase will arise from requisite construction activities such as building tower sections and erecting the turbines. There will be limited periods during

the construction phase where the proposed turbines will be partially constructed and may be seen as either stand-alone tower sections, or incomplete turbines where only one or two blades are visible. The equipment and vehicles required to transport and erect the wind farm components include large cranes and large haulage vehicles. 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. The following sections assess the visual effects associated with the construction phase of the other components of the Proposed Development other than turbines.

Proposed Substation – Construction Phase Visual effects

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 vicinity. As established in the baseline investigations, the proposed substation compound is located to the north-west of Carranstown Bog, it is enclosed to the north, west and south by a mature treeline which will be retained as part of the Proposed Development. The nearest residential receptor is located >500m west of the proposed substation location. Due to a set back distance and screening from two mature treelines, visibility of the proposed substation construction is expected to be quite limited from any nearby residential receptors. Eastbound users of the local road that connects with the R156 to the south-east may have momentary views through roadside screening, these receptors are deemed to be Low sensitivity. Therefore, visual effects are likely to be highly localised, Negative, Short-Term and will be ‘Slight’.

Site Access Roads and Hardstand Areas

The proposed access roads and hardstand areas are flat features and will be most visible within their immediate surroundings within the Proposed Development Site where there are no sensitive visual receptors. Every use will be made of the existing access tracks and machine passes on the site. Some tracks will be upgraded appropriately whilst several stretches of new internal roads will need to be constructed. Due to the very flat nature of the site and mature boundary vegetation, the visual impact of the construction of these flat 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’.

Meteorological (Met) Masts

Two met masts are proposed as part of the Proposed Development, one to the west of the northern turbine cluster (Bracklin Bog) south-west of T17 and the other at the west of the southern turbine cluster (Ballivor Bog) just north of T10. Both met masts will be a tall slender lattice structures 115 metres in height. Cranes will be required to build these structures (slightly smaller than those required to construct the proposed turbines) as well as dismantle the existing met mast currently on-site, these construction activities will cause a temporary visual impact in the local landscape. The landscape and visual effects arising from the construction of the met mast is considered to be Negative, Short-Term ‘Slight’ effect.

Junction Upgrade works

Works such as road widening are sometimes required along proposed turbine transport routes to accommodate the large vehicles used to transport turbine components to wind farm sites. As detailed in Chapter 4 of this EIAR, a new junction will be constructed on the R156 Regional Road immediately west of the existing site access to Ballivor Bog (south) and Carranstown Bog (north). These construction works will be highly localised and will only impact low sensitivity receptors travelling the regional road, causing ‘Slight’ temporary, negative visual effects.

13.7.3 Operational Phase Effects

13.7.3.1 Landscape Effects (Operational Phase)

13.7.3.1.1 Landscape of the Proposed Development Site

The landscape character of the Proposed Development Site will undergo a change in character from its current condition by the introduction of vertical man-made structures into the landscape. There will be a substantial magnitude of change to the landscape in localised areas of the Proposed Development Site where the landscape is materially altered (infrastructure footprint).

In a local context, the Proposed Development Site is located in a rural working landscape. Whilst the site has some local value it is a highly modified landscape substantially degraded by commercial peat extraction, and it is deemed to be of 'Low' Sensitivity (See Section 13.4.2.2 – *Landscape Value and Sensitivity of the Site*).

'Low' sensitivity balanced with a substantial magnitude of change amounts to long-term 'Moderate' landscape effects upon the physical fabric of the landscape of the Proposed Development Site. These direct landscape effects will be highly localised to the footprint of the proposed infrastructure. Effects on the perceptual and aesthetic qualities of the character of the Wind Farm Site are also deemed to be 'Moderate'.

Mitigation of Landscape Effects within the Landscape of the Proposed Development Site

The following measures have been included in the Proposed Development design in order to avoid or reduce direct effects on landscape receptors of the Wind Farm Site:

- The spatial configuration of the proposed infrastructure footprint has been carefully designed to minimise the loss of valuable landscape receptors on the Wind Farm Site, such as remnants of uncut raised bog, mature woodland or features of cultural heritage value (e.g. railway).
- The internal site road layout makes use of the existing access tracks and machine passes wherever possible, to minimise the requirement for new tracks within the Proposed Development Site and where possible retain the integrity of existent field boundary walls, hedgerows and trees.
- In all circumstances, excavation depths and volumes will be minimised, and excavated material will be re-used where possible.
- The Biodiversity Enhancement Plan included as part of the Proposed Development is likely to improve the biodiversity value of the landscape of the site.
- Dedicated public walking trails and car parking facilities are included in the Amenity Plan as part of the Proposed Development and will add recreational value to the landscape of the site.

Residual Landscape Effects

Once the Proposed Development is operational and construction activity is complete, the landscape will naturally re-vegetate around the Proposed Development footprint. Also, over time, with the aid of the peatland rehabilitation plans and Biodiversity Enhancement Plan the landscape of the bogs surrounding the wind farm infrastructure will improve in quality in terms of environment and biodiversity, resulting in an improved landscape character. Considering the mitigation measures above, residual effects upon the landscape of the Wind Farm Site are deemed to be long-term, negative and 'Slight'.

13.7.3.1.2 Effects on Designated Landscape Receptors of High Sensitivity

Several designated landscape receptors were identified in the landscape baseline as having high sensitivity and some theoretical visibility indicated by the ZTV, the likely landscape effects on these receptors are discussed below. The Proposed Development will not directly alter the physical fabric of these landscape receptors and therefore any landscape effects are only likely to impact their character or setting. In all instances there will be no significant impact on the sensitivities of these receptors due to the large set back distances and limited visibility of the Proposed Development from them. Where appropriate, assessment of visual effects from these landscape receptors are discussed and reported in the following section – *Visual Effects (Operational Phase)*.

Westmeath Areas of High Amenity

Lough Ennell, Lough Owel, Lough Derrvaragh and Lough Lene are the four Westmeath Areas of High Amenity located within the LVIA Study Area. The ZTV shows very little visibility of the Proposed Development from each of these lakes. From on site appraisals visibility from areas of full theoretical visibility within these Areas of High Amenity is deemed to be very limited due to distance and vegetation screening.

There will be visibility of the Proposed Turbines from areas of high elevation (Frewin Hill) on the western shore of Lough Owel within the Lough Owel Area of High Amenity. As shown in VP08 within the Appendix 13-4: Photomontage Booklet, the Proposed Turbines are visible behind Lough Owel, in the background of the image and will not alter the character, immediate setting and appearance of the High Amenity Area. There will be a negligible magnitude of change to the character and setting of these receptors and no significant landscape effects will occur.

The Royal Canal Corridor

The Royal Canal corridor runs 3.7km south of the proposed turbines at its closest point. The Royal Canal is a designated Landscape Character Area within Westmeath, a Proposed Natural Heritage Area in County Meath and a designated High Amenity Area within County Kildare. The canal provides amenity value and is a landscape receptor of high sensitivity, protected in the landscape policy of County Westmeath, County Meath and County Kildare. Whilst the ZTV indicates full theoretical visibility of the proposed turbines along the Royal Canal, actual visibility will be very limited, as determined by appraisals conducted during site visits. The Royal Canal is sited at a similar, or lower elevation than the proposed turbines. As shown in Plate 13-27 below, views towards the Wind Farm Site are screened by vegetation along the canal. Visibility of the proposed turbines is likely from areas of high elevation, such as bridges overlooking the canal as seen in VP06 within the Appendix 13-4: Photomontage Booklet. Distant woodland across the landscape reduces the visibility from open views as seen in VP07 within the Appendix 13-4: Photomontage Booklet, there will be a negligible magnitude of change to the character and setting of this landscape and No significant effects will occur.



Plate 13-27 Screening along the Royal Canal

The Boyne Valley

The Boyne Valley is a landscape of exceptional value and high sensitivity on account of the cultural heritage value and relevant designations in the MCDP as previously reported in Section 13.4.1.2. The Boyne Valley encompasses several landscapes within County Meath. The following are located within the LVIA Study Area and have been screened in for assessment: Loughcrew Cairns, Trim Castle and the Hill of Tara. Overall, there are no significant landscape effects on the Boyne Valley.

Co. Meath Landscape Conservation Areas – Loughcrew and Slieve Na Calliagh Hills

Loughcrew and Slieve Na Calliagh Hills is a landscape of exceptional value and high sensitivity on account of the cultural heritage value and relevant designations in the MCDP as previously reported in Section 13.4.1.2. The nearest proposed turbine is located approximately 18.7km from Loughcrew and Slieve Na Calliagh Hills. The Proposed Development will not alter the character, immediate setting and appearance of this landscape conservation area. The proposed turbines do not interfere with any visual connectivity between Loughcrew and other important heritage sites of prominence in the area. The impact of the turbines on this landscape is discussed further in Chapter 13 – *Cultural Heritage*. The impact on visual receptors on this landscape is assessed further in Section 13.7.3.2.5.

Co. Meath Landscape Conservation Areas – Hill of Tara

The Hill of Tara is a landscape of exceptional value and high sensitivity on account of the cultural heritage value and relevant designations in the MCDP as previously reported in Section 13.4.1.2. The nearest proposed turbine is located approximately 26.1km from the summit of the Hill of Tara. Whilst the proposed turbines will be visible from elevated vantage points on the Hill, the proposed turbines will not alter the immediate setting, appearance and context of monuments at the Hill of Tara and its immediate landscape.

Intervisibility between The Hill of Tara and Frewin Hill located in Co. Westmeath

As requested by Meath County Council, the following section addresses The Hill of Tara and intervisibility between this landscape and Frewin Hill located in Co. Westmeath. As seen in Figure 13-17 below, the Hill of Tara and Frewin Hill are on opposite sides of the LVIA Study Area. There is approximately 54km between the two Hill peaks. As seen on the elevation map below and Figure 13-18, there are areas of high elevation (Knockdrin Peak 168m, similar to that of Frewin Hill and the Hill of

Tara) to the west of the Proposed Development. This undulating landscape limits views towards the Hill of Tara from Frewin Hill as show in Figure 13-18 below.

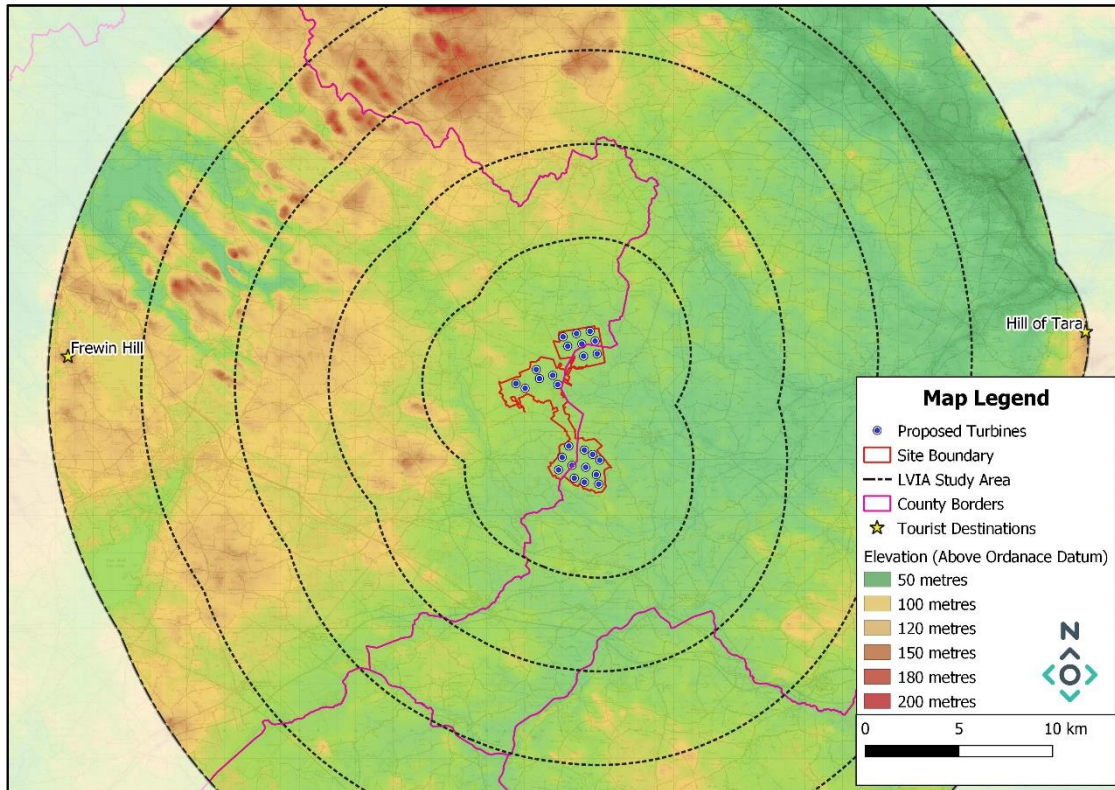


Figure 13-17 Location of Hill of Tara and Frewin Hill in the LVIA Study Area

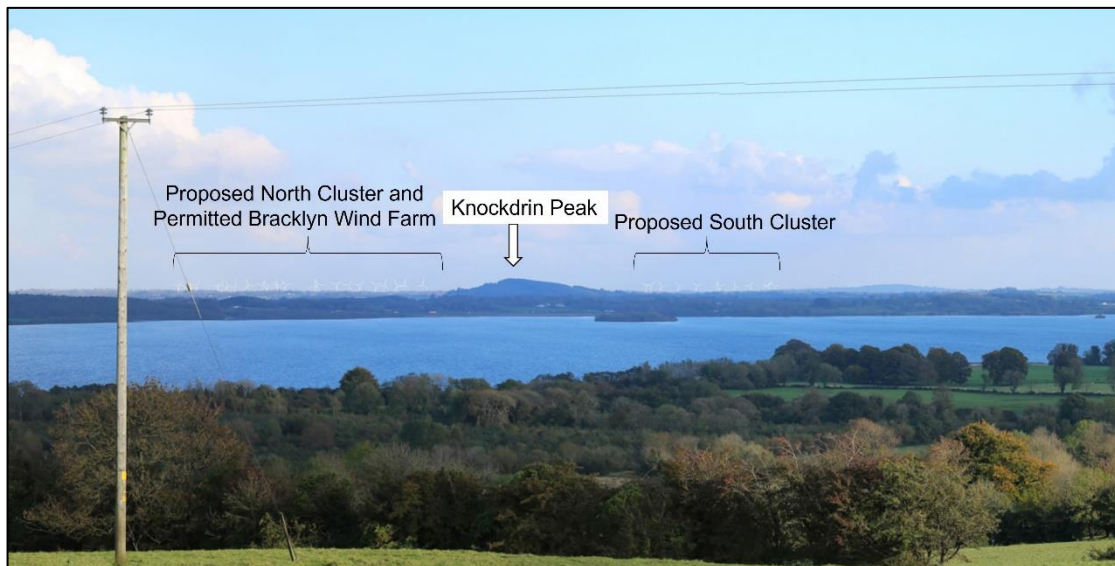


Figure 13-18 View from Frewin Hill

On clear days the proposed turbines will be visible from the peaks of Frewin Hill and the Hill of Tara. Figure 13-19 below shows a view from the Hill of Tara in the direction of Frewin Hill. Even on a clear day the likely visibility of Frewin Hill will be very limited due to distance and topographical screening. Frewin Hill is located in the direction behind the proposed north cluster and the permitted Bracklyn Wind Farm. The proposed turbines do not interfere with any visual connectivity between the Hill of Tara and Frewin Hill. On balance, it is deemed there will be a ‘Slight’ effect on the landscape character of the hill.



Figure 13-19 View from Hill of Tara towards Frewin Hill

Walled Towns

Walled towns such as Navan, Trim, Kells and Athboy are located within the LVIA Study Area. All of these towns are located more than 7.5km from the Proposed Development. Visibility of the proposed turbines from these towns is unlikely and is discussed in further detail in Section 13.7.3.2.5 below. The character of these towns will not be impacted as a result of the proposed turbines.

Bracklyn Demesne

Bracklyn Demesne, although not a designated landscape, is of local importance and has been given a 'medium' sensitivity. Due to the changes in land-use and setting, this landscape it is not deemed to be a pristine demesne landscape and it is not a receptor of unique landscape value. The estate is bound by mature woodland, as well as coniferous tree plantations. Whilst the proposed turbines may be visible from locations within the Demesne, the proposed turbines will not alter the immediate setting, appearance and context of the area and its immediate landscape. The proposed turbines do not interfere with any visual connectivity between the Demesne and other important heritage sites of prominence in the area. The magnitude of change was deemed to be 'Slight' and the residual landscape effects were deemed to be 'Slight'. Viewpoint 10 within the Appendix 13-4: Photomontage Booklet is located in close proximity to the Bracklyn Demesne. Visual effects within the Demesne and Bracklyn House are discussed further in Section 13.7.3.2.4.

The Grand Canal

The Grand Canal is a designated Area of High Amenity within County Offaly and County Kildare. At its closest point, the Canal is located approximately 20km from the nearest proposed turbine. Similar to the Royal Canal, the Grand Canal is bordered on either side by vegetation. Visibility of the proposed turbines from locations along the Grand Canal will be unlikely and No significant effects will occur.

Croghan Hill

Croghan Hill is designated in the OCDP as an Area of High Amenity. The summit of Croghan Hill is located approximately 24.9km southwest of the nearest proposed turbine in County Offaly. As seen in Figure 13-20 below, the proposed turbines will be visible in the background of the panoramic view and will not be of central focus. The Proposed Development will not alter the character, immediate setting and appearance of the Croghan Hill Area of High Amenity.

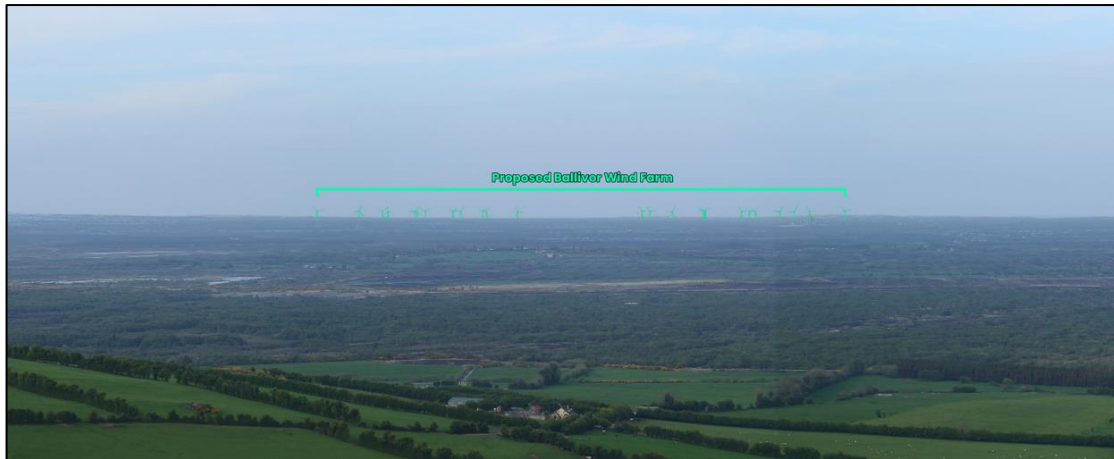


Figure 13-20 View from the summit of Croghan Hill

13.7.3.1.3 Landscape Character Areas – Landscape Effects

An assessment of the effects on landscape character was undertaken for the 12 designated Landscape Character Areas within the LVIA Study Area for Landscape Character (within 15 km from the Wind Farm Site) that were identified as having potential for visibility of the proposed turbines in the Landscape Receptor Preliminary Assessment previously in Section 13.4.4. The individual assessments for each LCA are summarised in Table 13-16 below and are included in detail in *Appendix 13-2* of 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 13-1*.

Table 13-16: Landscape Character Effects of LCAs within the LVIA Study Area.

Landscape Character Area (LCA)	LCA Sensitivity to Wind Farm Development	Magnitude of Change	Significance of Landscape Character Effect
County Westmeath - LCA 3 – River Deel Lowlands	Medium	Moderate	Moderate
County Westmeath - LCA 1 Northern Hills and Lakes	High	Negligible	Slight
County Westmeath - LCA 4 Central Hills and Lakes	High	Negligible	Slight
County Westmeath - LCA 5 Royal Canal Corridor	High	Slight	Slight
County Westmeath - LCA 10 Lough Ennell and South Eastern Corridor	High	Negligible	Slight
County Meath - LCA 15 Southwest Lowlands	Medium	Moderate	Moderate
County Meath - LCA 5 Boyne Valley	High	Negligible	Slight
County Meath - LCA 6 Central Lowlands	Medium	Slight	Slight

Landscape Character Area (LCA)	LCA Sensitivity to Wind Farm Development	Magnitude of Change	Significance of Landscape Character Effect
County Meath - LCA 13 Rathmoylan Lowlands	High	Negligible	Slight
County Meath - LCA 16 West Navan Lowlands	Medium	Slight	Slight
County Meath - LCA 17 Southwest Kells Lowlands	Medium	Slight	Slight
County Kildare - LCA 1 North-western Lowlands	Low	Slight	Not Significant

Discussion of Landscape Effects on LCAs

The largest magnitude of change will occur in Westmeath LCA 3 (River Deel Lowlands) and Meath LCA 15 (Southwest Lowlands). As the proposed turbines are located within these LCAs, they will materially change the landscape of this LCA. The proposed turbines are likely to be most visible from areas within 5km of the Wind Farm Site and elevated areas within these LCAs.

Onsite appraisals found that there was limited visibility past 5km of the Wind Farm Site due to the screening from vegetation within the flat landscape. The proposed turbines will to some degree change the visual and perceptual aesthetic qualities of some areas in these LCAs. The magnitude of change was deemed to be ‘Moderate’ as the addition of uncharacteristic new features (turbines) will likely cause a change in landscape character in a localised area but will not redefine the character of the LCAs.

16 of the proposed turbines are sited within Westmeath LCA 3, which is in an area designated as ‘Low’ for wind energy capacity. LCA 3 contains no areas of high amenity and has been designated as ‘Medium’ Landscape Sensitivity to Wind Farm Development in the Landscape Character Assessment due to the absence of High Amenity Areas and Protected Views. The residual effects on the character of this LCA are deemed to be ‘Moderate’. The remaining 10 proposed turbines are located within Meath LCA 15. Appendix 5 of the Landscape Character Assessment for Co. Meath states that LCA 15 has a “*Medium potential capacity to accommodate wind farms or single turbines because views within this LCA are generally short range and limited by topography and vegetation so there are opportunities for choosing locations where visual impacts are minimal.*” Therefore, the LCA is assigned a ‘Medium’ landscape sensitivity to wind farm development. The residual effects on the character of this LCA are deemed to be ‘Moderate’.

The Proposed Development will not materially alter any of the other LCAs in the LVIA Study Area. However, when the proposed turbines will be visible from another LCA, they will likely cause a ‘Slight’ impact on landscape character, as reported for the remaining LCAs within the LVIA Study Area for effects on landscape character in Westmeath and Meath.

13.7.3.1.4 Cumulative Landscape Effects

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 comprehensive assessment of likely effects arising from the intervisibility of the Proposed Development turbines and the other proposed wind turbines are included in Section 13.7.3.4 -*Cumulative Visual Effects*.

There is one existing wind farm located within the LVIA Study Area. Cloncreen Wind Farm is located approximately 24.3km southwest of the Proposed Development turbines. The Cushaling/Cloncant wind farm is currently under construction approximately 24.1km south of the Proposed Development turbines. No cumulative landscape effects are likely to occur with these existing wind farms and the Proposed Development. The permitted Bracklyn Wind Farm is located approximately 519m from the nearest proposed turbine. The largest cumulative effects will occur within 5km of the Proposed Development where the proposed turbines and the permitted Bracklyn wind farm will be viewed together in the landscape. The existing landscape, that has been deemed 'Low' sensitivity, will experience a 'Moderate' magnitude of change with the addition of the Proposed Development turbines to the landscape alongside the permitted Bracklyn turbines. This will result in an overall 'Slight' residual cumulative landscape effect.

In a general sense this is a large, flat and expansive landscape type with vegetation throughout the landscape, making it an acceptable area to absorb and accommodate many wind turbines. Effects on the character of the landscape will only be appreciated from elevated vantage points where there are open views across the flat lowland landscape. The Proposed Development Turbines may not always be viewed in combination with other wind farm developments, however, from elevated vantage points there may be views of turbines in different directions. The separation distance between the Proposed Development and other wind farm developments indicates that turbines may be viewed as small features in the background of landscapes and do not change the character of the landscape.

A description of the cumulative visual interactions between the proposed turbines and other cumulative projects from visual receptors is included in the photomontage assessment tables - *Appendix 13-3*. As discussed in the following text, most cumulative landscape effects are contained within the Landscape Character Areas where the Proposed Development is located.

Landscape Character Areas – Cumulative Landscape Effects

The permitted Bracklyn Wind Farm is located approximately 519m from the nearest proposed turbine within Westmeath LCA 3. The majority of the Proposed Development turbines are also located within this LCA, therefore this LCA will have largest cumulative effect. Both the Proposed Development and permitted Bracklyn development are substantially screened from large areas within this LCA by the topography and vegetation to the north of these sites. The northern cluster of turbines will be visible in combination with the permitted Bracklyn turbines from areas within Meath LCA 15. Although the majority of the southern cluster is located within this LCA, it is unlikely that there will be views of these turbines with the permitted Bracklyn turbines due to the distance and intervening screening. The permitted Yellowriver turbines are also located approximately 700m southwest of this LCA. It is unlikely that there will be visibility of the proposed turbines with the permitted Yellow River turbines due to the flat nature of this LCA and intervening vegetation. Therefore, cumulative landscape effects within this LCA are limited to the north. No significant cumulative landscape effects are likely to occur within these LCAs as a result of the Proposed Development.

Other cumulative wind farms may only be seen in combination with the Proposed Development from elevated vantage points where there are open views across the flat lowland landscape. No significant cumulative landscape effects are likely to occur in any other LCAs within the LVIA Study Area.

13.7.3.2 Visual Effects

13.7.3.2.1 Selection of Photomontage Viewpoints

Photomontages were used to aid the assessment of the visual effects arising as a result of the proposed turbines from 19 no. viewpoint locations, which are presented in Appendix 13-4: Photomontage Booklet. These 19 No. viewpoint locations are shown on Figure 13-14 above as well as the A0 Map – *Appendix 13-5 LVIA Baseline Map*. 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 proposed turbines, had complete intervening screening or were screened to such an extent that the completion of photomontages was not considered useful in terms of the assessment process i.e., little or no visibility towards the proposed turbines.

13.7.3.2.2 **Summary of Viewpoint Assessment**

Visual effects were assessed using the assessment methodology described in Appendix 13-1. Each viewpoint location is shown in Figure 13-14. A comprehensive and detailed assessment of each individual photomontage location is presented in Appendix 13-3 of this EIAR – *Photomontage Assessment Tables*. The determination of visual effects for each viewpoint is included in Appendix 13-3 as well as Table 13-17 below. Appendix 13-3, Table 13-17 and Figure 13-14 (above) should be read in conjunction with the Appendix 13-4: Photomontage Booklet.

The visual effects of the proposed turbines were 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 turbines within the LVIA Study Area informed the assessment of visual effects.

Visualisations such as photomontages are tools that can represent the likely effect of a development and are used to inform the reader's prediction of how that development will appear in the landscape. In terms of the predicted visual quality of the proposed turbines, however, whether a visual effect is deemed to be positive, negative or neutral, this involves a degree of subjectivity. What appears to be a positive effect to one viewer could be deemed to be a negative effect by another viewer. All predicted visual effects of the viewpoints below are Long Term and Direct effects.

Table 13-17: Viewpoint Assessment Summary

VP No	Description	Grid Ref.	Approx. distance & direction to nearest turbine	Visual Sensitivity of Receptor(s) (at viewpoint)	Magnitude of Change	Residual Significance of Visual Effect
VP1	View from the N51 in the townland of Chapelisland.	E 669,219 N 762,576	4.8 km NE	Medium	Slight	Slight
VP2	View from the Hill of Tara, designated as County Meath Scenic View V43 and V44, in townland of Castleboy (E.D. Tara).	E 691,935 N 759,747	22.6km E	Very High	Negligible	Slight
VP3	View from a local road in the townland of Coolronan. Photomontage 3A shows a field of view directed in a westerly direction. Photomontage 3B shows a field of view directed in a northerly direction.	E 664,841 N 757,587	975 m S	Medium	Substantial	Significant
VP4	View from The Green residential road off the L-4016 in the townland of Ballivor, on the outskirts of Ballivor Village.	E 668,696 N 753,694	2.8 km E	High	Slight	Slight
VP5	View from a local road west of the R159 in the townland of Rathcore, designated as County Meath Scenic View V57.	E 676,046 N 744,706	12.2 km SE	High	Slight	Slight
VP6	View from the L-8030 local road in the townland of Blackshade, designated as County Meath Scenic View V83.	E 667,801 N 746,874	5.1 km SE	High	Slight	Slight
VP7	View from the Royal Canal Greenway in the townland of Croboy, approximately 4.6 km south of the nearest turbine.	E 662,127 N 748,131	4.6 km S	High	Slight	Slight
VP8	View from Frewin Hill off the L5803-35 overlooking Lough Owel in the townland of Wattstown. Designated as an Area of High Amenity (Co. Westmeath)	E 637,663 N 758,511	23.8km W	Medium	Slight	Not Significant



VP No	Description	Grid Ref.	Approx. distance & direction to nearest turbine	Visual Sensitivity of Receptor(s) (at viewpoint)	Magnitude of Change	Residual Significance of Visual Effect
VP9	View from a local road just off the N52 national road in the townland of Balrath North.	E 653,941 N 758,042	7.6 km W	Medium	Slight	Not Significant
VP10	View from a local road south of the N52 in the townland of Bracklin.	E 659,029 N 758,482	2.8 km NW	Medium	Slight	Slight
VP11	View from the Loughcrew Megalithic Tomb in the townland of Corstown, designated as County Meath Scenic View V6 (Slieve na Calliagh).	E 658,552 N 777,566	18.8 km NW	Very High	Negligible	Moderate
VP12	View from the R154, designated as County Meath scenic view V5, in the townland of Patrickstown.	E 660,543 N 777,965	18.7 km N	High	Slight	Slight
VP13	View from the L-1633 local road in the townland of Ardglossan, designated as County Meath Scenic View V11.	E 663,809 N 773,771	14 km N	High	Slight	Slight
VP14	View from the Commons of Lloyd, designated as County Meath Scenic View V13, in the townland of the Commons of Lloyd.	E 672,214 N 776,482	17.9 km NE	High	Negligible	Not Significant
VP15	View from the R156 in the townland of Robinstown.	E 666,181 N 754,386	1.34 km NE	Medium	Substantial	Moderate
VP16	View from the R161 in the townland of Molerick, designated as County Meath scenic view V54.	E 665,397 N 747,501	4.2 km S	High	Slight	Slight
VP17	View from R156 in the townland of Grange More on the outskirts of Raharney.	E 661,478 N 753,319	2.4 km W	Medium	Moderate	Moderate



VP No	Description	Grid Ref.	Approx. distance & direction to nearest turbine	Visual Sensitivity of Receptor(s) (at viewpoint)	Magnitude of Change	Residual Significance of Visual Effect
VP18	View from the N52 in the townland of Clonyn, in the outskirts of Delvin.	E 659,731 N 762,458	5.4 km NW	Medium	Slight	Slight
VP19	View from Trim Castle, a tourist destination within Trim Town	E 680,187, N 756,721	14.5km east of the nearest turbine (T20)	High	Slight	Slight

The assessment of visual effects determined the residual significance of the visual effects to range from ‘Not Significant’ to ‘Significant’, with the number of findings at each level of significance listed in Table 13-18 below:

Table 13-18: Summary of Viewpoint Impact Assessment Results

Significance of Residual Visual Effect	Description	No. of Viewpoints
Profound	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment	0
Very significant	An effect which, by its character, magnitude, duration or intensity significantly 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	1
Moderate	An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends	3
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities	12
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.	3
Imperceptible	An effect capable of measurement but without significant consequences	0

The significance of the residual visual effect was not considered to be “Profound” or “Very Significant” at any of the 19 viewpoint locations. A residual effect of “Significant” was deemed to arise at Viewpoint 3 due to the intervening distance of 975m from the local residential cluster to the nearest turbine and the horizontal extent of the turbines being viewed at approximately 160 degrees. A residual effect of “Moderate” was deemed to arise at 3 of the viewpoint locations due to the intervening distance of <3km from the site and proximity to visual receptors including residents from the village of Ballivor and motor traffic along the R156 and local roads adjacent to the site boundary. A residual visual effect of “Slight” was deemed to arise at eleven of the 18 viewpoint locations. All other viewpoints were assessed as resulting in Not Significant (3). No viewpoints resulted in Imperceptible residual effects. The viewpoint assessment results (See Appendix 13-3) are summarised and discussed in more detail in the following sections.

13.7.3.2.3 **Local Residential Visual Amenity**

The Proposed Development design process has been aware of set-back distances, with regard to the siting of turbines in proximity to residential dwellings, the Proposed Development adheres to the recommended 500m set back distance in the Guidelines (DoEHLG, 2006) and also the 4 times tip height set-back distance set out for residential visual amenity prescribed by the draft Guidelines (DOHPLG, 2019).

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).

8 of the 19 viewpoints were taken within 5km of the Proposed Development Site. 5 viewpoints are located within 3km of the proposed turbines. VP03, VP04, VP10, VP15 and VP17 were all taken from local roads in townlands adjoining the Wind Farm Site. VP03 is located <1km from the nearest proposed turbine. These viewpoints were specifically selected to assess the visual effects on residential amenity and receptors of local community importance in close proximity to the Wind Farm Site. Visual effects are rated of relatively high significance (‘Significant’ and ‘Moderate’) 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. ‘Slight’ Residual visual effects were recorded for VP04 and VP10. ‘Moderate’ residual visual effects were recorded for VP15 and VP17 which are also viewpoints located in very close proximity to the Wind Farm Site (<2.5km) and are representative of local residential amenity. A residual effect of ‘Significant’ only deems to arise at Viewpoint 3 due to the separation distance from the local residences (975m) and the nearest proposed turbines.

The following discussion of effects on residential visual amenity is informed by the viewpoints mentioned above, the mapping outcome of the Route Screening Analysis and other information gathered during site surveys. It is also informed by the 4 times tip height separation distance, set out in the Draft WEGS, to explicitly address the potential for residential amenity effects.

Residential Receptors to the East of the Wind Farm Site

Viewpoint 03: This photomontage assesses the visual effects from the townland of Coolronan. This image was taken from a local road adjacent to the proposed site boundary. This view is representative of visual receptors with open views towards the site in close proximity (<1km from the site). For effects on residential visual amenity a relatively large horizontal extent of turbines is visible to both the west and north (shown in both an 3A view and 3B view) a substantial change will occur for these locally sensitive receptors. However, this will be the only location where there are such open views towards the turbines and these views will not be afforded to most receptors in this area. Plate 13-28 below displays a view from east of VP03 where vegetation screens views towards the Proposed Development. Many residential properties in this area (road east of this viewpoint) have mature boundary vegetation surrounding their properties, which will reduce visibility of the proposed turbines and effects on residential visual amenity.

As seen in both views of VP03 there are mature treelines that border the field around the residential dwelling shown in the image. The bases of the proposed turbines are screened from view by this vegetation. This provides a sense that the turbines are set-back in relation to the viewpoint, reducing visual prominence. Residential visual amenity effects are mitigated by strategic siting, greater than 4x tip height separation and appropriate scaling. From this location there are no views of the southern cluster, views to the east and south will have no visibility of turbines.



Plate 13-28 Screening along the road to the east of VP03

Viewpoint 15: Moderate residual visual effects were recorded from this viewpoint, due to the Substantial magnitude of change and sensitivity of residential receptors which are located <2km from the nearest proposed turbine. This viewpoint is representative of residential amenity in areas immediately north-east of the southern cluster. The view within which the turbines are visible is not considered to have unique or sensitive aesthetic qualities. Landscape elements such as mature vegetation accentuate the effect of screening, causing a disproportionate screening effect which reduces visibility of the proposed turbines in the landscape. Vegetation limits views of the northern cluster from this viewpoint so there is limited surrounding effect.

Viewpoint 04: The photomontage from this viewpoint shows a ‘Slight’ visual impact from residences in Ballivor village where the infrastructure and vegetation provide relatively substantial screening of the proposed turbines. Views from Ballivor are discussed in further detail in Section 13.7.3.2.5.

Residential Receptors to the South of the Wind Farm Site

Viewpoint 16: ‘Slight’ residual visual impacts were recorded from this receptor. This viewpoint was given a ‘High’ sensitivity rating on account of its designation as a Meath Scenic View along the Royal Canal. There are very few residencies at this location who will have views of the proposed turbines. This photomontage was taken from an elevated location on a bridge over the Royal Canal. Views from the residential properties in this location will not be as open due to the vegetation screening.

Residential Receptors to the West of the Wind Farm Site

Viewpoint 10: The photomontage from this viewpoint shows a ‘Slight’ visual impact from residences in the Bracklyn townland. The location of this viewpoint was taken outside of a row of residential dwellings facing east towards the proposed turbines. Four of the proposed turbine hubs and blades are visible behind the permitted Bracklyn turbines. The other 22 proposed turbines and towers of the visible 4 proposed turbines and are mostly screened by the intervening topography and vegetation.

Viewpoint 17: ‘Moderate’ residual visual effects were recorded from this location due to the Moderate magnitude of change and sensitivity of residential receptors which are located <2km from the nearest proposed turbine. The photomontage suggests that the majority of proposed turbines in the southern cluster will only be visible from half-hub upwards due to the prominence of vegetation screening in the view.

13.7.3.2.4 Visual Effects in County Westmeath

Designated Scenic Routes

Royal Canal Way

The Royal Canal Way is a designated Scenic Route within the WCDP and therefore has been given a 'High' sensitivity. The canal is situated at a similar elevation to that of the Wind Farm Site and as seen in Plate 13-27 above, there is mature vegetation along the majority of the route that screens views in the direction of the proposed turbines. Viewpoint 7 within the Appendix 13-4; Photomontage Booklet presents a view from the Royal Canal within 5km of the proposed turbines, where there is a break in the screening. From this view the hub and blades of two turbines are visible above the mature treeline delineating the open views of the field and blade tips are visible for 14 other turbines. The remaining 12 turbines are fully screened by this vegetation. The magnitude of change was deemed to be 'Slight' and residual visual effects were deemed to be 'Slight'. No visual effects are likely to occur along much of this route, is visibility does occur from any locations not assessed, visual effects are not likely to be significant.

Tain Trail

The views along this designated scenic route are directed towards Lough Lene and Lough Derravaragh. There are limited views of the proposed turbines from these locations due to the screening from vegetation along the roadside in the direction of the Wind Farm Site. No significant visual effects are likely to occur from receptors on this route.

Recreational, Cultural Heritage and Tourism Destinations

Bracklyn House

Bracklyn House is located approximately 1.7km from the nearest proposed turbine. Viewpoint 10 was taken 1km west of Bracklin house. As seen in Figure 13-22 below, the intervening topography visible in Viewpoint 10 surrounds the location of Bracklin House. From desktop studies and site visits in the area, it was recorded that mature vegetation surrounds a lot of the area around Bracklin House. These landscape elements accentuate the effect of screening, causing a disproportionate screening effect which reduces visibility of the proposed turbines in this location. No significant visual effects are likely to occur from this location. The permitted Bracklyn Wind Farm is located to the east of the house and in closer proximity to the proposed turbines.

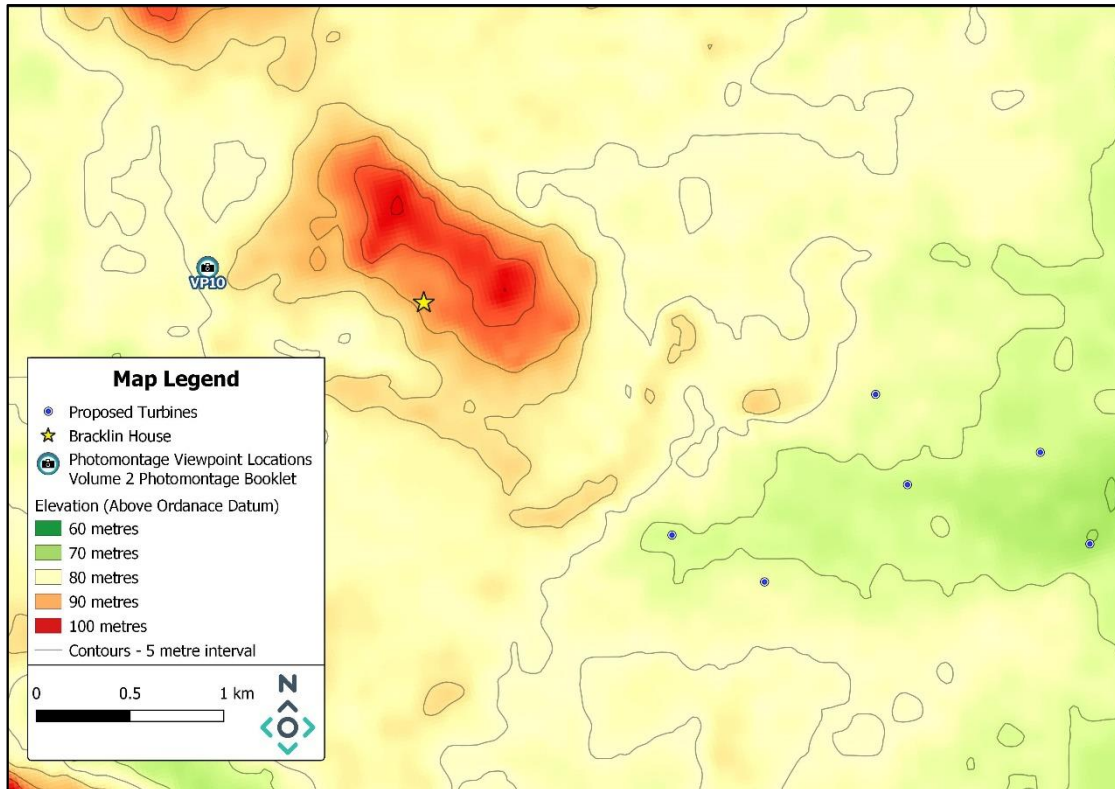


Figure 13-22 Elevation surrounding Bracklin House

Wattstown Barrows (Frewin Hill)

Viewpoint 8 within the Appendix 13-4: Photomontage Booklet presents a view from the summit of Frewin Hill and Wattstown Barrows monument. This viewpoint was given a 'Medium' sensitivity rating as this location is not a designated scenic view but does have recreation use. The long-ranging view is of a reasonably scenic quality across Lough Owel. The nearest proposed turbine is approximately 23.8km from this location. Landform rises on the opposite side of Lough Owel to a dense treeline, this landform and vegetation is likely to partially screen views of the proposed turbines. The proposed turbines will have a 'Slight' change to the character of views at this location considering the substantial set back distance from the Wind Farm Site and limited locations where these views are available. Residual visual effects were deemed to be 'Not Significant'.

Settlements

Ratharney

Ratharney rural node is located approximately 3.9km west of the nearest proposed turbine. The route screening analysis shown in Figure 13-4 and Figure 13-21 shows that the roads within Ratharney are either classed as 'Dense' or 'Partial'. From site visits it is apparent that there are very limited views from Ratharney as the screening from residential dwellings and infrastructure limits views. VP17 within the Appendix 13-4: Photomontage Booklet is located 1.5km east of Ratharney along the R156 regional road. 'Moderate' residual visual effects were recorded from this location, effects from Ratharney will be reduced further due to the distance and screening. No significant visual effects are likely to occur from receptors within Ratharney.

Delvin

The village of Delvin is located approximately 5.3km northwest of the nearest proposed turbine. Route screening analysis indicates mostly no visibility from within Delvin. There are two short sections of road along the N51 in the east of Delvin that indicate there are open views towards the proposed turbines.

VP18 within the Appendix 13-4: Photomontage Booklet was captured from just outside Delvin to the south where there are open views towards the site. As seen within the photomontage there are several mature hedgerows and treelines delineating fields within the view. This vegetation reduces open views towards the site and limits views of the proposed turbines. Residual visual effects were deemed to be 'Slight' however the effects on the visual receptors within the Delvin will be significantly less due to infrastructure and vegetation screening. No significant visual effects will occur from the village of Delvin.

13.7.3.2.5 Visual Effects in County Meath

Designated Scenic Views

Hill of Tara

Meath designated Scenic View 44 is located on the summit of the Hill of Tara. The nearest proposed turbine is located approximately 26.1km from this location. VP02 within the Appendix 13-4: Photomontage Booklet displays a view from this location. This viewpoint has been given a 'Very High' sensitivity rating as it is a popular tourist destination and on account of its designation within the MCDP. The proposed turbines are visible in the background of the photomontage. The turbines present as two coherent clusters in the background of the expansive landscape view. The distance of this location to the site means that the turbines will not be incongruous or domineering from this location. Landscape elements consisting of agricultural fields outlined by hedgerows and treelines add to the aesthetic quality of this view, allowing the turbines to not be of central focus and can readily be absorbed into the view. The magnitude of change was deemed 'Negligible' and the residual visual effect was deemed to be 'Slight'.

Slieve na Calliagh and Loughcrew Megalithic Tomb

VP11 within the Appendix 13-4: Photomontage Booklet displays a view from Slieve na Calliagh, Meath Designated Scenic View 6. This viewpoint has been given a sensitivity rating of 'Very High' as it is a designated scenic view within the MCDP and is the location of Loughcrew Megalithic Tomb, a popular tourist destination. This viewpoint is located 18.9km northwest of the closest turbine. The Proposed Turbines appear as a linear feature in the background of the view. The vast, open expanse of the view allows for the assimilation of the projects into the landscape without causing a domineering effect. The magnitude of change was deemed 'Slight' and the residual effect was deemed to be 'Moderate' as the proposed turbines read coherently and are effectively absorbed in the expansive and long ranging landscape view.

Royal Canal Way

The Meath County Development Plan has several designated views along the Royal Canal. Views 54, 55, 56 and 83 along the canal are located within the LVIA Study Area. Within the Appendix 13-4: Photomontage Booklet, VP06 and VP16 represent views along the Royal Canal Way. The ZTV indicates full theoretical visibility of the proposed turbines along the Royal Canal however, actual visibility will be very limited, as determined by appraisals conducted during site visits and shown in Plate 13-27 previously. The Royal Canal is sited at a similar, or lower elevation than the proposed turbines, visibility of the proposed turbines is likely from areas of areas of high elevation, such as bridges overlooking the canal as seen in VP06 and VP16. The magnitude of change was deemed to be 'Slight' and residual visual effects were deemed to be 'Slight'.

Hill of Ward

Designated as View 52 in the MCDP, this viewpoint is a panoramic view of the surrounding landscape and has been given a High sensitivity rating. This designated view is one of the slightly elevated locations within 10km of the Proposed Development. Figure 13-23 below was taken from the top of the hill. As shown in Figure 13-23 below, there is vegetation screening views to the southwest from this location in the direction of the turbines. This screening limits views of the turbines from this location. One turbine is

visible in the gap of vegetation to the right of the image. The magnitude of change was deemed 'Negligible' as there are views of a higher scenic quality in the opposite direction of the proposed turbines and the proposed turbines are barely distinguishable within the panoramic view. The residual visual effects were deemed to be 'Slight' from this viewpoint.



Figure 13-23 Photowire from the top of the Hill of Ward towards the Proposed Development

Scenic Views to the North of the Proposed Development

Viewpoint 12 within the Appendix 13-4: Photomontage Booklet shows an elevated view from Meath Designated Scenic View 5 along the R154, 18.8km north of the nearest proposed turbine. It has been given a High sensitivity rating on account of its scenic view designation in the MCDP. The photomontage shows open and clear open views of the Proposed Development in the background of the view. The magnitude of change was deemed 'Slight' as the proposed turbines are visible in the background within the designated view. The residual visual effects were deemed to be 'Moderate' from this viewpoint.

Meath designated Scenic View 11 is located approximately 14km north of the nearest proposed turbine. VP13 within the Appendix 13-4: Photomontage Booklet displays a view from this location towards the Proposed Development. This viewpoint has been given a 'High' sensitivity rating on account of its designation within the MCDP. The hubs and blades of the turbines are visible above the vegetation screening the towers of the turbines. The magnitude of change was deemed to be 'Slight' and the residual visual effects were deemed to be 'Slight' due to the vegetation screening.

Scenic Views to the South of the Proposed Development

Meath designated Scenic view 79, Scarriff Bridge, is located 7.3km southeast of the nearest proposed turbine. The scenic views from this location are in the northeast and southwest direction and are not directed towards the turbines. As seen in Figure 13-24 below, from this location views towards the turbines are screened by roadside vegetation and vegetation delineating field boundaries in the area. No significant visual effects are likely to occur from receptors at this location.



Figure 13-24 View towards the proposed turbines from Meath designated Scenic view 79

Meath designated Scenic view 57 is located 12.3km from the nearest proposed turbine. It has been given a High sensitivity rating on account of its scenic view designation in the MCDP. The turbines are visible from this viewpoint as presented in VP05 in the Appendix 13-4: Photomontage Booklet. They appear as coherent clusters in the background of the view and do not obstruct the scenic view of the landscape. The magnitude of change was deemed ‘Moderate’ and the residual visual effects were deemed to be ‘Moderate’ from this viewpoint, as the proposed turbines read coherently and are effectively absorbed in the expansive and landscape view.

Recreational, Cultural Heritage and Tourism Destinations

Trim Castle

Trim Castle has been given a ‘High’ sensitivity rating as it is a popular tourist destination. As shown above in Plate 13-29, there is no visibility towards the Proposed Development from the grounds of the Trim Castle due to screening by vegetation and built infrastructure from the castle wall and Trim settlement. VP19 within the Appendix 13-4: Photomontage Booklet shows a view of the proposed turbines from the top of the castle. This viewpoint is located 14.5km from the closest turbine. As seen in VP19, the proposed turbines are visible within the photomontage from this elevated location. They appear as two neat clusters on either side of two topographical features in the background of the view. The addition of the proposed turbines adds to the rural-urban characterisation of the existing view. The magnitude of change was deemed to be ‘Slight’ and the residual visual effect was deemed to be ‘Slight’ from this location.



Plate 13-29 View taken from the grounds of the Trim Castle looking west, showing no visibility of the Proposed Development.

Spire of Lloyd

The Spire of Lloyd is designated as Scenic View 13 within the MCDP on this account it has been given a 'High' sensitivity rating. VP14 within the Appendix 13-4: Photomontage Booklet displays a view from this location, it is located 17.9km from the nearest proposed turbine. Only three of the proposed turbines are fully visible from this location, the remaining 23 turbine blades are visible over the top of the forestry in the background of the view. The magnitude of change was deemed to be 'Negligible', and the residual visual effect was deemed to be 'Not Significant' due to the distance and screening from this viewpoint.

Settlements

Ballivor

The village of Ballivor is located approximately 3km east of the nearest proposed turbine. The intervening landscape between the Wind Farm Site and Ballivor is very flat. As seen in Figure 13-25 below there are very limited views from Ballivor as the screening from residential dwellings and infrastructure limits views. VP04 within the Appendix 13-4: Photomontage Booklet was captured from a residential road within the village. Residents were given a 'High' sensitivity rating from this location due to their proximity to the Proposed Development. From this viewpoint, 7 of the 26 proposed turbines are visible in the background of the photomontage. Residential dwellings and vegetation screen the majority of the proposed turbines. The magnitude of change was deemed to be 'Slight' and the residual visual effect was deemed to be 'Slight'.



Figure 13-25 Streetscape within Ballivor Village

Settlements outside 5km

The town of Trim is located 14.3km east of the nearest proposed turbine. As mentioned above, views from Trim will be very limited due to the vegetation and built infrastructure. Views towards the Proposed Development from this location are only likely from areas of high elevation (eg. Top of Trim Castle). No significant visual effects will occur from the town of Trim.

Crossakeel village is located approximately 14.5km north of the nearest proposed turbine. The ZTV shows full visibility from the village however site visits determined that visibility of the Proposed Development will only be likely from limited areas of open visibility within the village. VP13 within the Appendix 13-4: Photomontage Booklet shows an view from a local road leading in to Crossakeel. Residual visual effects were deemed to be 'Slight' from this location, however the effects on the visual receptors within the Crossakeel village will be significantly less. No significant visual effects will occur from the village of Crossakeel.

Rathmoylon, Rathcairn, Clonard and Kildalkey are all located further than 5km from the Proposed Development. The ZTV shows full visibility of the proposed turbines in each of these villages, onsite appraisals determined that there would be some visibility of the proposed turbines from areas within these villages. Overall, the distance and screening from built infrastructure and vegetation in the majority of locations within these villages determined that no significant effects will arise because of the Proposed Development in these settlements.

13.7.3.2.6 Visual Effects in County Kildare

Designated Scenic Route, Scenic Views and Hilltop Views

Carbury Hill and Carbury Castle & Motte

Carbury Castle & Motte, located atop of Carbury Hill is located 17.2km southeast of the nearest proposed turbine. Figure 13-26 shows a view from a location, 3.5km northeast of Carbury Hill, along Kildare Scenic Route 26 which is located at a slightly lower elevation than Carbury Hill. From this location the turbines are screened by vegetation. The photowire below shows that the proposed turbines would appear as small features if visible from this location. From Carbury Carbury Hill there are open views in the direction of the Proposed Development, however, due to distance the proposed turbines may appear in the back of the view as very small features embedded in the landscape. No significant visual effects are expected to arise from this location.



Figure 13-26 Photowire view from Kildare Scenic Route 26

Hill at Killickaweeny and Hill at Ovidstown

Both Kildare Hilltop views on top of the Hill at Killickaweeny and the Hill at Ovidstown are located further than 20km southeast of the proposed turbines. Desktop studies and site visits determined that the scenic views from these locations are to the south, in the opposite direction of the proposed turbines. Any views in the direction of the turbines will be screened by topography, vegetation and distance. No significant visual effects are likely to occur from these locations.

13.7.3.2.7 Visual Effects from Major Transport Routes

Dublin to Sligo Railway

The Dublin to Sligo Railway runs parallel to the Royal Canal Way within the LVIA Study Area. Visual effects on receptors travelling along this route are likely to be similar of those travelling along the Royal Canal Way. Views in the direction of the proposed development are screened along the majority of the railway route. Visibility of the proposed turbines from any open views along the route will be brief as the train will be travelling at a high speed. No significant visual effects are likely to occur from receptors on this route.

N51 National Road

The N51 runs north of the Proposed Development within 5km of the site. VP01 within the Appendix 13-4: Photomontage Booklet presents a view from the N51 located approximately 4.8 km north-east of the nearest proposed turbine. The proposed turbines will be visible from along this route at a distance. There is intervening vegetation delineating field boundaries between the N51 and the Proposed Development providing screening of the proposed turbines. The northern cluster of turbines is visible from along this transport route, views of the southern cluster will be very limited from this route due to the distance and screening. A 'Slight' residual visual effect was recorded for VP01 due to the medium sensitivity given to the receptors in this location and the 'Slight' magnitude of change given for this view. Views along the rest of this route are likely to be less due to the nature of the receptors travelling along this route, open views of the proposed turbines will be intermittent.

N52 National Road

Viewpoint 18 within the Appendix 13-4: Photomontage Booklet is located along the N52 approximately 5.1km northeast of the nearest proposed turbine. Mature hedgerows and treelines delineate fields within the view. This vegetation reduces open views towards the site and limits views of the proposed turbines. Residual visual effects were deemed to be 'Slight' however the effects on the visual receptors along this route will be significantly less due to receptors travelling at speed along the road and not having focused views in the direction of the Proposed Development. No significant visual effects will occur from the N52 National Road.

M6 Motorway

The M6 Motorway is located 8.6km south of the nearest turbine at its closest point. As seen in Plate 13-30 below there is screening from vegetation in the direction of the proposed turbines. The majority of the route is screened on either side of the road by vegetation. Visibility of the proposed turbines from any open views along the route will be brief as cars will be travelling at a high speed. No significant visual effects are likely to occur from receptors on this route.



Plate 13-30 Views towards the proposed turbines from the M6 Motorway

M4 Motorway

The M4 Motorway is located 7.7km south of the nearest turbine at its closest point. Similar to the M6 motorway, there is vegetation screening on either side of the M4 motorway. No significant visual effects are likely to occur from receptors on this route as open views towards the proposed turbines will be limited and receptors travelling along this route will not be focused in the direction of the Proposed Development.

13.7.3.3 Other (non-turbine) Components of the Proposed Development – Landscape and Visual Effects

For the purposes of this LVIA, a number of individual elements of the Proposed Development, ancillary to the proposed wind turbines, have been grouped together for the assessment of effects, given the similar nature of the works required. These operational project elements that are part of the Proposed Development, include the access roads, turbine hardstand areas, met mast and Grid Connection components including the onsite substation and underground electrical cabling route may all give rise to potentially similar landscape and visual effects. Details of these components of the Proposed Development and the required works to construct them are contained in Chapter 4 of this EIAR.

Due to the screening from hedgerows, treelines and undulating landform surrounding the Wind Farm Site, most visibility of the lower (shorter), less visually prominent Proposed Development components will occur in their immediate surroundings; hence, visual effects will be localised and are predominantly confined to within the Wind Farm Site itself.

Proposed Substation

The proposed onsite substation and its compound are one of the larger and more visually prominent elements of the ancillary infrastructure. As shown in previously in Plate 13-13 (Section 13.4 – *Landscape Baseline*) the proposed onsite substation is located to the northwest of the Wind Farm Site. Plate 13-13 shows that the proposed onsite substation is sited in a location enclosed by vegetation, reducing visibility from receptors in the surrounding landscape to the west, south and north. The nearest residential receptor is located >500m west of the proposed substation location. Due to a set back distance and screening from two mature treelines, visibility of the proposed substation construction is expected to be quite limited from any nearby residential receptors. Eastbound users of the local road that connects with the R157 to the south-east may have momentary views through roadside screening, these receptors are deemed to be Low sensitivity. Any landscape and visual effects are likely to be highly localised, long-term and will be ‘Slight’.

Site Access Roads and Hardstand Areas

The proposed access roads and hardstand areas are flat features. They will be most visible within their immediate surroundings; therefore, any landscape and visual effects will be very localised. Every use will be made of the existing farm and access tracks on the Wind Farm Site. Some tracks will be upgraded appropriately whilst several stretches of new internal roads will need to be constructed. Landscape and visual effects are likely to be highly localised, long-term and will be ‘Slight’.

Meteorological (Met) Mast

Two met masts are proposed as a part of the Wind Farm Site. They will be slender structures, 115 metres in height, and will not be an imposing structure in terms of visual impact. The landscape and visual effects of the proposed met mast will be localised, considering that it will be significantly less visible than any turbine given its shorter and slender lattice form and will fade from view at a distance of anything more than a few kilometres (approx. 2km) where it will have little to no impact. As shown in the Appendix 13-4: Photomontage Booklet, the met mast is not actually likely to be visible from any of the photomontage viewpoints. Within the Wind Farm Site and its immediate landscape setting, the landscape and visual effects arising from the met mast is considered to be ‘Slight’.

13.7.3.4 Cumulative Visual Effects

As detailed in the methodology in Appendix 13-1 the cumulative visual effects assessed were visual separation from other wind farms and visual disparity caused by other turbines of a different scale and design being seen alongside the proposed turbines. Cumulative visual effects were assessed as part of the Photomontage Viewpoint Assessment Tables found in Appendix 13-3.

There are 6 No existing, permitted and proposed wind farms within the LVIA Study Area. The majority of these are located to the south and southwest of the Proposed Development. The permitted Bracklyn wind farm is located approximately 519m west of the northern cluster of the Proposed Development. The largest cumulative visual effects will occur within 5km of the Proposed Development where the proposed turbines and the permitted Bracklyn wind farm will be viewed together. Views beyond 5km of the proposed turbines are limited due to the intervening vegetation within the flat landscape. As the northern cluster of the Proposed Development and the permitted Bracklyn turbines are located in close proximity, from beyond 5km the two wind farm developments will be viewed as one coherent wind farm (as seen in VP02, VP05, VP08, VP11, VP12, VP13 and VP19) limiting cumulative effects.

Residents in close proximity to the northern cluster, presented in VP01, VP03 and VP10, will have views of additional turbines in combination with the permitted Bracklyn turbines as a result of the Proposed

Development. The majority of the Proposed Development and permitted Bracklyn turbines are screened from views to the north of the site. As seen in VP01 and VP18, from the north of the site the majority of turbines are screened from view due to the screening from vegetation within the landscape. The Proposed Development turbines, when visible with the permitted Bracklyn turbines in some cases will increase the horizontal extent of turbines in the view, as seen in VP03. However, the proposed turbines are a similar height to the permitted Bracklyn turbines and will appear as a coherent addition to the permitted Bracklyn wind farm. From the west, the Bracklyn turbines appear more prominent, and the Proposed Development turbines are viewed as additional features behind. As seen in VP10, the permitted Bracklyn turbines are visible behind the hill, due to the screening from the topography and vegetation in this location, only a small number of the Proposed Development turbines are visible and appear as turbines within the Bracklyn wind farm.

The proposed turbines and permitted Bracklyn turbines appear as one coherent northern cluster from elevated vantage points within the LVIA Study Area. VP02 presents a view from the Hill of Tara, the proposed turbines appear as two coherent clusters in the background of the view with the permitted Bracklyn turbines contained in the northern cluster. The proposed Miltown Pass and permitted Yellow River turbines may also be visible in this view to the south of the Proposed Development. Due to the expansive nature of the view all turbines within this view will be barely distinguishable due to distance, therefore no significant cumulative visual effects will occur from this location. It is unlikely that there will be views of the Proposed Development in combination with other wind farm developments (excluding the permitted Bracklyn turbines) from other elevated vantage points within the LVIA Study Area due to the distance and screening. From the south there are very limited visual cumulative effects due to the nature of the flat landscape and distance between the southern cluster and other cumulative developments. Any elevated vantage points to the south of the Proposed Development may have views of other turbines in a different field of view from the Proposed Development turbines. Due to the distances between the Proposed Development and other developments it is deemed that no significant cumulative landscape effects will occur.

A comparative ZTV (Figure 13-13 above) shows that the cumulative visibility over that of the existing and permitted turbines within the LVIA study area only increased in a small number of areas due to the addition of the Proposed Development, and therefore it is considered that the Proposed Development will not have a significant impact on the extent of cumulative visibility within the LVIA study area.

In a general sense this is a large, flat and expansive landscape type with vegetation throughout the landscape, making it an acceptable area to absorb and accommodate a large number of wind turbines, which a detailed visual assessment outlined here and in the photomontage assessment tables contained in Appendix 13-3 has covered in detail. Cumulative visual effects will occur between the Proposed Development and the permitted Bracklyn wind farm. Overall, it is deemed that Long Term, Slight Cumulative Visual Effect are to arise as a result of the Proposed Development.

13.7.4 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 predominately involve cranes adjacent to the turbines during the dismantling process. Upon decommissioning of the Wind Farm Site, the wind turbines will be disassembled in reverse order to how they were erected. The turbines will be disassembled with a similar model of crane that was used for their erection. The turbine components will likely be removed from the Wind Farm Site using either the same transport methodology adopted for delivery to the Wind Farm Site initially or in smaller sections and transported by standard methodologies.

Turbine foundations would remain in place underground and would be covered with earth and reseeded as appropriate. This naturalisation process would revert the landscape of the Wind Farm Site to a condition similar to the current landscape baseline. Removal of the turbines and ancillary infrastructure from the Wind Farm Site will result in a Short-term, Slight, Negative visual effect.

13.8

Conclusion

This Chapter assesses the likely significant landscape and visual impacts arising as a result of the Proposed Development. Although all elements of the Proposed Development are assessed, the Chapter focusses upon the proposed turbines, as they are deemed to be the essential aspects of the proposal under assessment from a landscape and visual perspective. The Chapter describes the baseline landscape and assesses the direct effects on the landscape of the Wind Farm Site, as well as effects on landscape character and the impact on sensitive landscape receptors and Landscape Character Areas (LCAs). Visibility of the proposed turbines was assessed from receptors within a study area extending 25km (and 26.1km for the Hill of Tara) from the proposed turbines; and visual effects were determined from information gathered during multiple site visits as well as other tools such as ZTV mapping and photomontages.

The Proposed Development Site is located in a flat lowland landscape with an expansive network of open peatlands located at the Westmeath-Meath County boundary. The character of these peatlands forming the Proposed Development Site is now strongly influenced by the industrial peat extraction practices historically conducted at the site. The bogs of the Proposed Development Site include: Ballivor Bog, Carranstown Bog, Bracklin Bog and Lisclogher Bog. Due to extensive peat harvesting operations in the 20th Century, the Proposed Development Site has been degraded and now resembles a cutover peatland landscape. Selection of the Wind Farm Site considered landscape and visual designations in the Westmeath and Meath County Development Plan(s). 16 of the proposed turbines are sited within Westmeath Landscape Character Area 3 (River Deel Lowlands), this LCA is deemed to be 'Low' sensitivity as there are no High Amenity Areas located within this LCA and does not comprise any unique landscape features of county or national interest. The LCA was designated as an area with 'Low' capacity for wind energy, as are all other LCAs in Co. Westmeath. The remaining 10 proposed turbines are located within Meath LCA 15 (South-west Lowlands), this LCA was designated to have 'Medium' potential for wind energy development. In terms of location, spatial extent, spacing and layout, the siting and design of the Proposed Development adheres to the guidance for the siting of wind farms in Flat Peatland Landscape Types, as set out in the Guidelines for Planning Authorities (DoEHLG, 2006).

On-site visibility appraisals, ZTV mapping, a Route Screening Analysis and assessment viewpoint locations determined that visibility of the proposed turbines will be very limited from locations beyond 5 km from the Wind Farm Site. Siting of the proposed turbines at low base elevation in a flat landscape with highly vegetated working fields surrounding the site, largely restricts visual exposure in the wider landscape. Visibility of the proposed turbines beyond the immediate landscape setting of the Proposed Development Site is limited to localised areas of high elevation where open views across the flat and highly vegetated landscape are available from elevated vantage points, which is in general not a common occurrence in the LVIA Study Area.

The landscape value of the Wind Farm Site is deemed to be of 'Low' value and the sensitivity of the landscape to wind farm development is deemed to be 'Medium'. The introduction of vertical man-made structures and ancillary infrastructure will substantially alter the landscape comprising the proposed infrastructure footprint at the Wind Farm Site. In terms of landscape character, the only LCAs to experience 'Moderate' landscape effects will be Westmeath LCA 3 and Meath LCA 15 in which the proposed site is located. These LCAs will experience direct effects on landscape character as a result of the project. Any other effects on other LCAs are indirect, as the Proposed Development will be visible from within these LCAs but located outside of them. The site is not located within or close to any designated High Amenity Areas within County Westmeath, Kildare or Offaly or any areas of High Landscape Sensitivity (Co. Meath) and has not had any significant effect on these areas.

Photomontages were used to assess the visual effects arising as a result of the Proposed Development from 19 No. viewpoint locations. The assessment concluded that no 'Profound' or 'Very Significant' effects occurred at any of the 19 viewpoints. Residual effects of 'Significant' occurred at one viewpoint location (VP03) as the turbines are in close proximity <1km. However, the Proposed Development adheres to the recommended 500m set back distance in the Guidelines (DoEHLG, 2006) and also the 4 times tip height set-back distance set out for residential visual amenity prescribed by the draft Guidelines (DOHPLG, 2019). No significant effects occurred from any other residences or settlements within 5km of the site.

'Moderate' effects occurred at 3 of the 19 No. viewpoints. All other viewpoints were assessed as resulting in 'Slight' residual effects (12) or 'Not Significant' (3). Slieve na Calliagh and Loughcrew Megalithic Tomb, a designated Meath Scenic view, is located approximately 18.9km northwest of the closest turbine. Residual effects were deemed to be 'Moderate' as the proposed turbines read coherently in the expansive and long ranging landscape view. The Hill of Tara is located approximately 26.1km from the nearest proposed turbine and is a designated view within County Meath and was given 'Very High' sensitivity. Residual visual effect was deemed to be 'Slight' given the distance and character of the view, the turbines appear as two coherent clusters in the background of the expansive view.

The assessments determined that no significant cumulative landscape and visual effects will occur with any other existing or permitted or proposed wind farm development. The Proposed Development turbines will be seen in combination with turbines of the permitted Bracklyn wind farm. However, due to the proximity of the two developments, the Proposed Development turbines and the permitted Bracklyn turbines appear as one coherent wind farm development.

From a landscape and visual perspective, the Proposed Development turbines are considered appropriate with regards to the scale and layout from sensitive visual receptors in the study area. Although the spatial extent is increased with the addition of the Proposed Development turbines (as outlined in Appendix 13-3 *Photomontages Assessment Tables*) from several viewpoints, the visual separation between permitted and proposed turbines and the difference in scale is considered Low-Medium visual effects respectfully.

As shown in the Appendix 13-4: Photomontage Booklet and photomontage assessment tables (Appendix 13-3), the turbine locations, spacing and heights have been appropriately selected for the Ballivor site. This appropriate siting and uniform spacing allow for the two turbine clusters to be read visually as one contiguous development in the landscape. The distance between the nearest turbines in the clusters is sufficient to ensure that the potential for cumulative visual effects for receptors located between the clusters is limited. The strategic siting ensures the wind farm will be viewed as a spatially coherent development, with minimal occurrence of visual confusion and overlapping, significantly mitigating the impact of likely visual effects.