Environmental Impact Assessment Report (EIAR)

Ballydermot Wind Farm, Co. Offaly & Co. Kildare

Chapter 13 Landscape and Visual

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GLOSSARY OF TERMS

Term	Meaning
Draft WEDG 2019	The 2019 Draft Wind Energy Guidelines. The draft document of the updated Wind Energy Development Guidelines yet to be published.
WEDG 2006	The 2006 Wind Energy Development Guidelines. The current published wind energy development guidelines which address a variety of aspects relating to wind energy developments inclusive of noise, shadow flicker, setback distances and community obligations.
Landscape Character Area	Units of the landscape that are geographically specific and have their own character and sense of place. Each LCA has its own distinctive character, based upon patterns of geology, landform, land use, cultural, historical and ecological features.
Photomontage	These are visualisations that superimpose an image of a Proposed Project upon a photograph or series of photographs from a specific location, termed the 'viewpoint'.
Route Screen Analysis	An exercise where transport routes were driven in real-time and the level of roadside visual screening, in the direction of the Proposed Turbines, was recorded to inform actual on the ground visibility.
Viewpoint	This is typically in reference to a select location where a photomontage has been captured, which is represented in the Photomontage Booklet.
Zone of Theoretical Visibility	A map (digitally produced showing areas of land in which the Proposed Project is theoretically visible (based on topography rather than screening) to show a worst-case scenario.

GLOSSARY OF ACRONYMS

Acronym	Meaning
AHA	Areas of High Amenity
DoAHG	Department of Arts, Heritage and the Gaeltacht
DoEHLG	Department of the Environment, Heritage, and Local Government
DoHPLG	Department of Housing, Planning and Local Government
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
RSES	Eastern and Midland Regional Authority Spatial and Economic Strategy
GLVIA	Guidelines for Landscape and Visual Impact Assessment Third Edition
IEMA	Institute of Environmental Management and Assessment
KCC	Kildare County Council
KCDP	Kildare County Development Plan
KLCA	Kildare Landscape Character Assessment
KWES	Kildare Wind Energy Strategy
LCA	Landscape Character Area
LCDP	Laois County Development Plan
LCT	Landscape Character Type
LCU	Landscape Character Unit
LI	Landscape Institute
LI TGN	Landscape Institute Technical Guidance Note
LVIA	Landscape and Visual Impact Assessment
MCDP	Meath County Development Plan

MCLA	2007 County Meath Landscape Character Assessment
NMS	National Monument Service
OCC	Offaly County Council
OCDP	Offaly County Development Plan 2021-2027
OHL	Overhead Line
OSi	Ordnance Survey of Ireland
OUV	Outstanding Universal Value
PCAS	Peatland Climate Action Scheme
PWVP	Photowire Viewpoint Locations
RSA	Route Screening Analysis
RSES	Eastern and Midland Regional Authority Spatial and Economic Strategy
SOUV	Statement of Outstanding Universal Value
TAO	Transmission Asset Owner
TSO	Transmission System Operator
UNESCO	United Nations, Educational, Scientific and Cultural Organisation
VP	Viewpoint
WCDP	Westmeath County Development Plan
WES	Wind Energy Strategy
ZTV	Zone of Theoretical Visibility

13. LANDSCAPE AND VISUAL

13.1 Introduction

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

- **EIAR Volume 2 Photomontage Booklet** (Hereafter 'Photomontage Booklet'): A1 Banner Photomontage Booklet presenting verified photomontage visualisations from representative viewpoints;
- **Appendix 13-1, LVIA Methodology:** An appendix detailing the methodology and guidance used for the assessments reported in this chapter;
- **Appendix 13-2, LCA Assessment Tables:** An assessment of effects on designated Landscape Character Areas (LCAs);
- **Appendix 13-3, Photomontage Visual Impact Assessment Tables:** A visual impact assessment of the representative viewpoints included in the Photomontage Booklet;
- **Appendix 13-4, A0 LVIA Baseline Map:** A large scale (A0) map showing all baseline landscape and visual receptors and LVIA tools (e.g. Viewpoints and Visibility mapping).
- **Appendix 13-5, Design Evolution and Embedded LVIA Mitigation:** A visual record of the design evolution, illustrating how detailed surveys and assessment work undertaken since 2020 has progressively informed the turbine layout and embedded landscape and visual mitigation into the Proposed Project.

13.1.1 Statement of Authority

MKO has developed extensive expertise and experience over the last 20 years in the LVIA of large-scale infrastructure developments for Environmental Impact Assessment Reports (EIAR). The MKO Landscape and Visual team have produced LVIA across a diverse range of project types, including renewable energy and grid infrastructure; residential developments; transport infrastructure; extraction infrastructure; and a range of other projects requiring EIAR.

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

Dija Mazonaite is a Project Environmental Scientist - LVIA Specialist at MKO. Dija holds a BSc (Hons) in Geography & Geosystems from University of Galway, a Postgraduate Certificate in Marine Spatial Planning from Atlantic Technological University, and a University Certificate of Study (NFQ Level 9 Minor Award) in Landscape and Visual Impact Assessment (LVIA) from the University of Limerick, a specialist postgraduate qualification developed specifically for professionals undertaking LVIA. Dija was also recognised as a University Scholar at the University of Galway. Dija's primary role at MKO is producing and reviewing the LVIA chapter of EIA reports for large-scale infrastructure developments with over 3 years' experience writing, has responsibilities to mentor various grades of team members and project manages all aspects of LVIA for a broad range of commercial infrastructure developments including wind and solar energy projects, grid infrastructure, extraction industry and Strategic Housing Developments. Dija's key strengths include proficiency in GIS tools such as ArcGIS and QGIS, conducting landscape and visual impact assessments and capturing image data through drone surveys and photomontages. Dija is an affiliate member with the Landscape Institute and is an active participant of the Irish National Landscape Forum. Dija also regularly delivers guest lectures for students on the topic of LVIA at top third level institutions in Ireland.

Jack Workman MSc., TMLI. is the Landscape & Visual Project Director at MKO and is chartered as a Technician Member of the British Landscape Institute. Jack is an environmental scientist and an LVIA specialist with an academic background in the field of Environmental Science and Geography. Jack's primary role at MKO is scoping and writing LVIA for EIARs with over 6 years' experience directing and managing all aspects of LVIA for a broad range of large commercial infrastructure developments. Jack holds a BSc. in Psychology, and an MSc. in Coastal and Marine Environments (Physical Processes, Policy & Practice), and a University Certificate of Study (NFQ Level 9 Minor Award) in Landscape and Visual Impact Assessment (LVIA) from the University of Limerick, a specialist postgraduate qualification developed specifically for professionals undertaking LVIA of wind energy developments. Jack is an active participant in the National Landscape Forum, presenting in 2023, 2024 and 2025 on the topic of LVIA, he also regularly delivers guest lectures for students on the topic of LVIA at top third level institutions in Ireland including University of Galway, Trinity College Dublin, University College Dublin and University College Cork. Jack holds a membership with the Chartered Institute of Water and Environmental Management and is also a member of the Landscape Research Group.

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

Technical Personnel, Support and LVIA Surveys

As well as Dija, Jack and Michael, several other LVIA professionals provided technical support throughout the course of the project, such as fieldwork, GIS analysis and Graphics, these personnel included:

- Jack Smith – Project LVIA Specialist: Fieldwork and Impact Assessment (Former MKO employee)
- Maria Ines Timoteo – Project Landscape Architect: Fieldwork and Impact Assessment (Former MKO employee)
- Daniel Mulpeter – LVIA Specialist, GIS and Fieldwork (Former MKO employee)
- James Crean – LVIA Specialist, GIS and Fieldwork (Former MKO employee)
- Grace Levins – LVIA Graduate, GIS
- Brian O'Carroll – Senior Graphics/Photomontage Technician
- Pietro Salvagno – Project Drone Specialist

The content, judgements and assessments in this LVIA are strongly informed by the collective experience of the impact assessment team and the data that they gathered across 13 days of dedicated LVIA surveys between 2020 and 2026 (totalling 113 VPs), which is set out below in Table 13-1.

Table 13-1 Record of Field Work and Site Surveys

Site Survey	Year	Date Range	LVIA Personnel
Site Visit, Walkover and Driving Analysis	2020	29th July 2020	Michael Watson
Residential Visual Amenity Assessment & Photomontages (10VPs)	2020	8th August 2020	Jack Workman
Tip Height & Development Analysis - Photomontage Capture (16VPs)	2021	30th March 2021	Jack Workman
Public Information Event Photomontages (6VPs)	2021	19th May 2021	Jack Workman
Photomontage Capture (9 VPs) & Site Walkover	2022	29th April 2022	Maria Ines Timoteo
Off-site Substation Assessments	2023	17th May 2023	Jack Smith
Photomontage Capture (32VPs) & Site Walkover	2025	2nd – 4th December 2025 (3 days)	Daniel Mulpeter
Photomontage Capture (10VPs)	2026	19th March	James Crean
Photomontage Capture (15VPs)	2026	19th April	James Crean
Route Screening Analysis, Final Walkover, Photomontage Capture and Residential Receptor Analysis	2026	29th – 30th June 2026 (2 days)	Dija Mazonaite and Daniel Mulpeter
Dún Ailinne Site Visits	2026	7th August	James Crean

13.1.2 Proposed Project Description

A full and detailed description of the Proposed Project can be found in Chapter 4: 'Description' of this EIAR.

Section 4.1 of that chapter describes the Proposed Project and its component parts, including the works subject of an application for planning permission to An Coimisiún Pleanála (ACP). This planning application seeks a 10-year planning permission and 35-year operational life from the date of commissioning of the entire wind farm.

As detailed in Section 1.1.1 in Chapter 1 Introduction, for the purposes of this EIAR, the various project components are described and assessed using the following references: 'Proposed Project', 'Proposed Enhancement Areas', 'Proposed Construction Haul Routes', 'Proposed Turbine Delivery

Route', 'Project Site', 'Proposed Wind Farm', 'Proposed Turbines', 'Proposed Grid Connection', 'Proposed Onsite Substation' and 'Proposed Offsite Substation'.

In this chapter, where the 'Proposed Wind Farm site' is referred to, this refers to the 14 no. bogs of the Allen Bog Group that form part of the Project Site.

13.1.2.1 Essential Aspects of the Proposed Project and Primary Focus of the LVIA

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

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

The tall, vertical nature of the Proposed Turbines make them the most prominent elements of the Proposed Project from a landscape and visual perspective and have the most potential to give rise to significant landscape and visual effects. In this regard, the Proposed Turbines are deemed to be the 'essential aspect' of the Proposed Project which will give rise to effects on the landscape and visual amenity and are the primary focus of the LVIA reported in this chapter.

Other components of the Proposed Project are not deemed to be as visually prominent as the Proposed Turbines; however, they have the potential to give rise to localised landscape and visual effects. Although not the primary focus of this LVIA, all ancillary elements are given full consideration throughout this Chapter. Due to specific characteristics of their scale and form, the assessments in this LVIA gives particular focus to the following elements of the Proposed Project for the reasons outlined below:

- The Proposed Onsite Substation and Proposed Offsite Substation are GIS substations, they therefore read as solid, built structures of substantial massing with the largest 220kV substations both having an above ground height of 24m. The steel masts, which will carry the overhead cables to connect into the existing 220kV Overhead Line (OHL), are also tall vertical structures with an above ground height of 28.5m. The telecom towers are tall vertical structures with an above ground height of 36m. Given the height of these elements and massing of the substations, they are considered to be essential aspects of the Proposed Project from an LVIA perspective. As such, both substations and steel masts, have been included in the photomontage booklet in the *EIAR Volume 2: Photomontage Booklet* and are fully assessed throughout this chapter.
- The 2-no. proposed 40m anemometry masts (referred to as met mast) is also a tall vertical structure and thus is included in the *EIAR Volume 2: Photomontage Booklet* accompanying this chapter and is fully considered throughout this chapter. Given the height of the met mast, it is considered to be an essential aspect of the Proposed Project from an LVIA perspective. However, it will be substantially less visible than any turbine given its shorter and slender lattice form.
- The proposed 60m relay mast, which is also a tall vertical structure, thus is included in the *EIAR Volume 2: Photomontage Booklet* accompanying this chapter and is fully considered throughout this chapter. Given the height of the relay mast, it is considered to be an essential aspect of the Proposed Project from an LVIA perspective. However, it will be substantially less visible than any turbine given its shorter and slender lattice form.

Extracts from the planning pack provided as part of this application of the substations and steel masts are reproduced in *Appendix 13-5* to show the scale and mass of these infrastructure elements under assessment, as well as the mitigation applied to reduce landscape and visual impacts.

13.1.2.2 Turbine Dimensions Assessed in this Chapter

As detailed in Chapter 4 of this EIAR, there are 19 no. Proposed Turbines with a tip height of 200m and 27 no. Proposed Turbines with a tip height of 220m. The Proposed Turbines to be installed on the Project Site will have a ground-to-blade tip height, hub height and blade length with the following range of dimensions:

- Turbine tip height: Height 220 metres (turbines within the centre of the Proposed Wind Farm), Height 200 metres (turbines at the outer periphery of the Proposed Wind Farm);
- Hub height: Height 135 metres, Height 115 metres;
- Rotor diameter: 170 metres;

13.1.3 Mitigation by Design

The Proposed Project was strategically selected as a landscape highly suitable for the development of wind energy. Through the iterative project design process, various best practice tools for assessing the landscape and visual impact of a proposed wind farm development were utilised to bring forward the optimum design for the Proposed Project with respect to landscape and visual factors. These tools include landscape modelling, Zone of Theoretical Visibility (ZTV) mapping, site visits and the preparation of photomontage visualisations. *Appendix 13-5* illustrates in detail how LVIA surveys and assessment work have been undertaken across many years since 2020 to progressively inform the turbine layout and embedded landscape and visual mitigation into the Proposed Project.

The iterative design process was informed by the siting and design guidance for wind farms in specific landscape types as set out in the Wind Energy Development Guidelines for Planning Authorities (Department of the Environment, Heritage, and Local Government [DoEHLG], 2006), (hereafter 'WEDG 2006'), and regard to the Draft Revised Wind Energy Development Guidelines (Department of Housing, Planning and Local Government [DoHPLG], 2019), (hereafter 'Draft WEDG 2019').

The iterative design process commenced with an initial layout comprising 59 no. turbines. Through multiple design iterations and careful micro-siting of infrastructure, a total of 13 no. turbines were omitted from the Proposed Project to minimise the potential for unacceptable significant landscape and visual effects. Details of the various turbine layout iterations are provided in Chapter 3: 'Site Selection and Reasonable Alternatives' (see Section 3.2.5.3), while the design evolution and embedded LVIA mitigation measures are presented visually in *Appendix 13-5.* Landscape and visual 'mitigating' factors which were key to the Project Site selection and design of the Proposed Project are established below; these factors or of key relevance to the LVIA in this chapter.

Siting in a Suitable Landscape for Wind Energy Development

During the initial site selection process, landscape sensitivity through guidance (see Section 13.2.1), was identified as a key constraint and so landscapes considered to be less sensitive are preferred over sites with greater sensitivity to change. The following factors detail why the Project Site was strategically selected as a landscape highly suitable for the development of wind energy:

- The Proposed Wind Farm is sited within a large expanse of uninhabited peatland, set back from landscape and visual receptors in the wider landscape.
- The Proposed Project is strategically sited within a flat landscape of degraded cutover peatland, a brownfield landscape currently of low landscape value and low sensitivity.

- The Proposed Turbines are strategically sited in a flat peatland landscape with its perimeter bound by mature hedgerows, treelines and forestry blocks. The wider landscape is also generally flat and heavily vegetated with treelines and hedges, further restricting long-range visibility (discussed further in Section 13.3.2). As demonstrated throughout this LVIA and by the photomontage visualisations in the Photomontage Booklet, visual exposure of the Proposed Turbines quickly declines with distance in the flat landscape. This limits the potential for any landscape and visual effects from vast areas within the LVIA Study Area (see Section 13.2.2 below) and for a large number of sensitive receptors.
- The peatlands in which part of the Project Site is located form part of a larger rural working landscape setting which has undergone substantial degree of modification through peat extraction, forestry and agriculture.
- Local planning policy specifically promotes the selection of cutover peatlands as landscapes suitable for the development of wind energy and identifies this area as 'Open for Consideration' to wind energy developments in both the Offaly County Development Plan 2021-2027 (OCDP) and the Kildare County Development Plan 2023-2029 (KCDP).
    - Chapter 3 of the OCDP further outlines the county's policy relating to peatlands and wind energy developments, stating that *'The Council recognises the great potential that the circa 80,000 hectares of industrial peatlands in the midlands offer in relation to after uses ranging from amenity, tourism, biodiversity services, 'wild areas', flood management, climate mitigation, energy development, industry, education, conservation and many more'.*
    - KCDP Objective LR O13 explicitly recognises that cutaway and cutover boglands may represent degraded or brownfield landscapes that are potentially fit to absorb development, directly supporting the siting of the Proposed Turbines within the Proposed Wind Farm site.

Project Layout, Design and Embedded LVIA Mitigation

Details of the various Proposed Project layout iterations and the considerations related to potential landscape and visual effects are described in detail in Chapter 3. A full detailed demonstration of the LVIA mitigation embedded within the Proposed Project, supported by mapping and visuals is reported in *Appendix 13-5*. The Proposed Project layout that is the subject of this LVIA, already incorporates the following landscape and visual design considerations for best practice wind farm design, including measures arising from early-stage assessment since 2020:

- **Best Practice Setback from Residential Receptors:** All Proposed Turbines substantially exceed the minimum 500m set-back distance from residential properties as set out in the WEDG 2006 and also adheres to the recommended best practice 4-times-tip-height set-back distance from residential receptors explicitly set out for residential visual amenity by the Draft WEDG 2019. To note, for the purposes of identifying the greatest 4 times setback buffer, a tip height of 220m has been utilised (i.e., with 200m tip height turbines located at the outer periphery of the Proposed Wind Farm) resulting in an 880m setback from residential receptors;
- **Removal of Turbines to Avoid Surrounding Effects:** Omission of 4 no. Proposed Turbines (4 out of 13 total) which were located in Lodge Bog to mitigate the potential for any surrounding visual effects to occur on sensitive receptors in the area of Lullymore and mitigate impacts of long-ranging scenic vistas towards the Chair of Kildare to the south and south-east.
- **Two Tip Heights, with Lower Turbines around the Outer Perimeter:** The layout deliberately adopts two turbine tip heights as LVIA mitigation. The Proposed Turbines at the outer perimeter of the Proposed Wind Farm, which are closest to surrounding visual receptors, have a tip height of 200m, while those turbines toward

the centre rise to 220m. This graduated profile reduces the potential for visual dominance and allows these outer turbines to take greater advantage of existing visual screening within the landscape, such as intervening landform and vegetation. This approach is in line with Section 6.8 of the WEDG 2006, which recognises that a wind energy development *"comprising two distinct turbine heights may be acceptable provided the resulting composition is carefully considered, so as to achieve an aesthetic effect."*

- **Appropriate Setback of Proposed Turbines from the Grand Canal:** Early-stage impact assessments identified viable land for turbines nearby the Grand Canal bypassing the northern perimeter of the Proposed Wind Farm. The canal is both a landscape receptor of high sensitivity and represents visual receptors of high sensitivity using the resource in a recreational capacity. Consequently, a minimum setback distance from the Proposed Turbines was implemented to mitigate effects related to the canal, the 4x-tip-height set back distance (880m) typically used for residential amenity was deemed appropriate and was implemented for the Proposed Project, with T32 (the nearest Proposed Turbine) sited approximately 880m from the southern edge of the canal.
- **A Visually Coherent Turbine Layout:** The Proposed Turbine layout has been designed to create a visually coherent arrangement of turbines, contiguous and connected to each other visually and with consistent spacing in line with best practice guidance. Photomontage visualisations of early turbine layouts identified a number of turbines in Lodge Bog (2 no. turbines in 2020 – Iteration No. 1, and 2 no. turbines in 2021 – Iteration No. 2) visually disconnected from the Proposed Wind Farm as a whole which were consequently removed to mitigate discordant visual effects from scenic vistas and elevated vantage points to the south and east of the Proposed Wind Farm.
- **Alignment with the Design Guidance for Flat Peatlands in the WEDG:** the guidance for the design and siting of wind farms with the 'Flat Peatland' landscape type defined in the WEDG 2006 and regard to the Draft WEDG 2019. As set out in the WEDG 2006, Peatland landscape type has the capacity for a large-scale design and tall turbines. This is due to the *"vast visual openness with few, if any, dominant geometric elements provides a certain freedom in the siting and design of wind energy developments".* Where possible the Proposed Turbine layout is in alignment with the grid-like structure and rhythm of the cutover peatland landscape.
- **Horizontal Colour Palette for the Proposed Onsite GIS Substations:** The Proposed Onsite Substation is located in Lodge Bog. As the Proposed Onsite Substation is constrained, conventional screening measures such as planting or berm construction were not feasible and would compromise the Peatland Climate Action Scheme (PCAS) interventions. LVIA mitigation therefore focused on the cladding and colour treatment of the Proposed Onsite Substation, comprising a graduated palette of horizontal bands with darker, muted earth tones at the base transitioning to lighter tones above, finished in non-reflective matte materials to reduce glare (upon agreement and approval from EirGrid, county council and Transmission System Operator (TSO)/Transmission Asset Owner (TAO). This treatment is intended to break up the perceived massing of the building and assimilate it with the flat, open character of the receiving landscape.
- **Mitigation for Proposed Offsite Substation:** The Proposed Offsite Substation is located in an agricultural landscape. LVIA mitigation includes horizontal banding to the exterior cladding to break up the perceived massing of the building. The proposed Offsite substation uses a colour palette graduating from dark green at the base to light grey tones above to align and assimilate with its landscape context. (upon agreement and approval from EirGrid, county council and TSO/TAO).
- **Avoid Direct Impact on Sensitive Landscape Receptors:** The internal layout of the Proposed Project has been designed to ensure minimal loss of valuable landscape receptors such as areas of intact bog, woodland or valuable biodiversity corridors.

- **Pro-active Biodiversity Enhancement Measures:** The Proposed Project includes specific pro-active biodiversity enhancement and management measures and interventions to improve the ecological and amenity value of the landscape at the Project Site; including native tree (woodland and scrub) planting, peatland enhancement, pollinator foraging habitat enhancement, scrub mosaic creation and marsh fritillary habitat enhancement, these are all detailed in the Biodiversity Management Plan (BMP) in *Appendix 6-5*) and shown in the Ballydermot Wind Farm Amenity Map which is presented in *Appendix 4-2*.
- **New Safe Recreational Amenities and Access within the Proposed Wind Farm:** The Proposed Project includes approximately. 13km of new dedicated amenity access track, complementing the 40km of proposed site access roads that will also be available as amenity access. Together these provide a greater variety of walking loops, improved connectivity to local roads and existing offsite amenities, and new, safe public access to the large uninhabited peatland landscape of the Proposed Wind Farm. The Ballydermot Wind Farm Amenity Map is included as *Appendix 4-2* of this EIAR.

13.1.4 Scoping & Consultation

An EIAR scoping document, providing details of the Proposed Project, was prepared by MKO and circulated to statutory consultees in 2021 to determine the content, depth and extent of the topics to be addressed in the environmental information submitted to the competent authority. An updated scoping document was issued to consultees in December 2025, reflecting the time elapsed since the previous scoping exercise, updates in local and national policy, legislation and relevant EIAR guidance, changes in the environmental baseline, and refinement of the Proposed Project layout and design. A full description of the scoping and consultation exercise, including the complete list of consultees and the responses received, is provided in Section 2.8 of Chapter 2 of this EIAR. The scoping responses applicable to LVIA are summarised below.

Offaly County Council

Offaly County Council (OCC) provided a scoping response by letter dated 14th April 2021, issued by the Planning Section. No response was received from OCC to the updated scoping exercise carried out in December 2025. Pre-planning meetings were held with OCC, through pre-planning consultation as set out in Section 13.1.4.1 below.

Kildare County Council

Kildare County Council (KCC) was contacted in relation to scoping. No formal scoping response was received from KCC. Pre-planning meetings were held with KCC through pre-planning consultation, as set out in Section 13.1.4.1 below.

Failte Ireland

Failte Ireland provided a scoping response by letter dated 16th February 2021 and 23rd December 2025. Failte Ireland issued a copy of Failte Ireland EIAR Guidelines to be considered in the EIAR. The guidelines relevant to landscape have been considered in this Chapter.

13.1.4.1 Pre-planning Meetings

In addition to the statutory scoping exercise, the Applicant and members of the project team held pre-planning consultation meetings with ACP, OCC and KCC. The principal matters discussed are summarised below. Further detail on the wider pre-planning and consultation process is provided in Section 2.9 of Chapter 2 of this EIAR.

Offaly County Council

Meeting: 1st April 2021

A pre-planning meeting was held with OCC on 1st April 2021. As detailed in Chapter 2, Section 2.9.1, the Proposed Project team gave an overview of the Proposed Project with the following LVIA topics noted by the council which are addressed in this Chapter:

- Requested photomontages are used for the LVIA: *27 No. Viewpoints included in the Photomontage Booklet informing the LVIA in this Chapter.*
- Welcomed potential for amenity links and their importance: *The Proposed Project includes new dedicated amenity access tracks and other recreational amenities. The Ballydermot Wind Farm Amenity Map is included as Appendix 4-2.*
- Noted the scale and cumulative impact the development might have on the landscape: *The scale of the Proposed Project and potential for cumulative landscape effects are considered and assessed in this LVIA.*

Meeting: 22nd July 2026

A pre-planning meeting was held with OCC on 22nd July 2026. As detailed in Chapter 2, the Proposed Project team gave an overview of the Proposed Project with the following LVIA point noted by the council which is addressed in this Chapter:

- Ensure that the Landscape and Visual Chapter is robust given the scale of the project: *This LVIA has been informed by best practice spatial analysis and visualisation tools and processes, as well as extensive an iterative programme of site visits undertaken since 2020. The impact assessment and all processes follow a methodology grounded in best practice guidance for the LVIA of wind energy developments in Ireland – See Appendix 13-1.*

Kildare County Council

Meeting: 13th April 2021

A pre-planning meeting was held with KCC on 13th April 2021. As detailed in Chapter 2, Section 2.9.2, the Proposed Project team gave an overview of the Proposed Project with LVIA with the following LVIA point noted by the council which is addressed in this Chapter:

- LVIA impacts to be considered: *Landscape and visual impacts are considered and reported in this Chapter.*

Meeting: 16th September 2026

A pre-planning meeting was held with KCC on 16th September 2026. As detailed in Chapter 2, the Proposed Project team gave an overview of the Proposed Project with the following LVIA point noted by the council which is addressed in this Chapter with initial responses provided below:

- KCC identified that scenic routes should be assessed but also requested that local receptors and open landscapes also be properly represented: *Landscape and visual receptors on local receptors and open landscapes are considered in this Chapter.*
- KCC identified that the following key areas to be considered for viewpoints:
    - L3001 local road between Rathangan and Edenderry and the R403 Regional Road: *These roads are considered in this Chapter (see Route Screening Analysis Section 13.3.2 and Section 13.8 Likely Significant Landscape and Visual Effects) through the use of representative photomontage viewpoints*L3001 local road between Rathangan and Edenderry: *This road*

has been considered in this Chapter – see Route Screening Analysis (Section 13.3.2) and representative photomontage viewpoints nearby this road:
    - Photomontage Viewpoint 20 (at St. Patricks Graveyard along the L3001 local road)
    - VP09 (at Blundell Aqueduct along the L1001) – immediately north of L3001 local road
- R403 Regional Road: *This road has been considered in this Chapter – see Route Screening Analysis (Section 13.3.2) and Photowire PWVP-H captured on the road.*
- M6 Motorway: *Photomontage capture from the motorway would present significant health and safety risks, and stopping on a motorway is prohibited except in an emergency. Accordingly, a photomontage viewpoint was not captured from the motorway. The LVIA includes 27 viewpoints selected to provide a representative spread of views from a broad range of locations and receptor types, illustrating the varying nature and extent of potential visual effects, including cumulative visual effects.*
- Multiple viewpoints along scenic routes and that the LVIA should provide an open and objective assessment of effects: *This Chapter includes multiple photomontage viewpoints on designated scenic routes where appropriate. This Chapter adopts an objective assessment of effects.*

An Coimisiún Pleanála

Four on-line pre-planning meetings were held with ACP with LVIA aspects discussed as follows:

Meeting 1 - 26th July 2021

- LVIA viewpoints to be chosen carefully, taking into account worst-case scenarios: *viewpoint imagery has been captured from >100 viewpoints since 2020. The final 27 Viewpoints selected for, and presented in, the Photomontage Booklet show the worst-case scenario of impacts from the highest sensitivity receptors whilst providing a representative range of geographic perspectives from across the LVIA Study Area.*
- Focus on cumulative impacts: *This LVIA includes assessment of cumulative landscape and visual effects, focussing on in combination effects with other wind energy developments and other relevant substantial infrastructure developments.*

Meeting 2 - 10th March 2026

- Evolution of the Proposed Project to be assessed along with the proposed turbine and substation locations and alternative considerations: *Appendix 13-5 documents the evolution of the Proposed Project from an LVIA perspective and the many interventions embedded within the design to mitigate landscape and visual impacts. Alternatives are presented in Chapter 3.*
- Forward baseline assessment and future trends: *The likely future landscape baseline at the Proposed Project Site is defined in Section 13.6, and assessed with the Proposed Project in Section 13.8.3.1.1.*
- Visual impact assessment to be undertaken: *A comprehensive visual impact assessment included in this Chapter.*
- Importance of cumulative impact assessment emphasised: *This LVIA includes assessment of cumulative landscape and visual effects, focussing on in combination effects with other wind energy developments and other relevant substantial infrastructure developments.*
- Proposed Haul route and Proposed Turbine Delivery Route to be assessed for vegetation removal: *This LVIA assesses impacts of vegetation removal.*

Meeting 3 - 12th June 2026

The agenda for the meeting focused on biodiversity, ornithology, hydrology and peat, and so LVIA aspects were not discussed.

Meeting 4 – 27th August 2026

- Likely future receiving environment should be considered with respect to LVIA: *The likely future landscape baseline at the Project Site is defined in Section 13.6 and assessed with the Proposed Project in Section 13.8.*
- Cumulative landscape and visual effects with surrounding wind farms to be assessed and clearly presented: *Cumulative landscape and cumulative visual effects with other existing, proposed and permitted wind farms is included in Section 13.8.*
- The implications of the revised Nature Corridor designation as per the OCDP Variation No. 1 be considered: *This chapter considers the revised Nature Corridor designation as per the OCDP Variation No. 1.*

13.2 Brief Methodology and Assessment Criteria

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

- Visibility of the Proposed Project:
  - ZTV mapping;
  - Overview of actual visibility from site visits (including Route Screening Analysis);
- Landscape Baseline:
  - Policy Context – Relevant landscape and visual policies and designations in local planning policy documents;
  - Landscape Character and Sensitivity of the Project Site - informed by site visits, and an overview of relevant best practice siting and design guidance for wind farms appropriate to the landscape of the Project Site;
  - Landscape Character and Sensitivities of the wider landscape setting – Identify designated LCAs and high sensitivity landscape receptors scoped in for impact assessment.
- Visual Baseline:
  - Identify visual receptors scoped in for impact assessment;
  - Selection of photomontage viewpoints.
- Cumulative Context: Identification of other wind energy developments included for cumulative LVIA.
- Likely Significant Landscape and Visual Effects:
  - Impact assessment supported by *Appendix 13-2: LCA Assessment Tables*, and *Appendix 13-3: Photomontage Visual Impact Assessment Tables*
  - Landscape and Visual effects reported through the construction, operational and decommissioning phases of the Proposed Project;
  - Assessment of cumulative landscape and visual effects.

13.2.1 Guidelines

Regarding legislation and general guidance on overall Environmental Impact Assessment, please refer to Chapter 1 Introduction of this EIAR.

The methods and processes used for the LVIA reported in this chapter was guided and informed by benchmark best practice guidance specifically pertaining to LVIA and the LVIA of wind energy development. Details of the guidance used to conduct this LVIA are outlined in *Appendix 13-1: LVIA Methodology* (Section 1.3 Relevant LVIA Guidance). A summary is provided below:

- GLVIA3 (LI & IEMA, 2013).
- 'Notes and Clarifications on Aspects of GLVIA3: Landscape Institute Technical Guidance Note 2024-01' (hereafter, LI TGN 24-01) recently published by the LI (2024);
- 'Wind Energy Development Guidelines for Planning Authorities' (hereafter referred to as the '**WEDG 2006**');
- 'Draft Revised Wind Energy Development Guidelines' (Department of Housing, Planning and Local Government [DoHPLG], 2019) (hereafter referred to as the '**Draft WEDG 2019**');
- 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports' (Environmental Protection Agency of Ireland [EPA], 2022);
- 'Guidance: Assessing the Cumulative Impact of Onshore Wind Energy Developments' (Nature Scot, 2021; includes methodology published in 2012);
- 'Visual Representation of Development Proposals' (Landscape Institute Technical Guidance Note 06/19, 2019) (LI TGN 06/19);
- 'Siting and Designing Wind Farms in the Landscape, Version 3a' (Scottish Natural Heritage [SNH], 2017) (SNH Guidance v.3a);
- 'Visual Representation of Wind Farms, Version 2.2' (SNH, 2017) (SNH Guidance v.2.2);
- 'Spatial Planning for Onshore Wind Turbines: Natural Heritage Considerations' (SNH, 2015);
- 'Visual Representation of Wind Farms, Version 2' (SNH, 2014) (SNH Guidance v.2);
- 'Visual Assessment of Wind Farms: Best Practice' (SNH, 2002).

13.2.2 Scope of the LVIA and Study Areas

In this chapter, the 'Project Site' refers to the immediate landscape and environment where the Proposed Project is located including the Proposed Wind Farm and Proposed Grid Connection. The 'Proposed Wind Farm' refers to the lands where all wind farm infrastructure is proposed within a network of cutover peatlands, identified and described in detail in Section 13.4.2. The landscape and visual effects of the Proposed Project on the Project Site are assessed in this LVIA. However, the landscape baseline mapping, visual receptor mapping and viewpoint selection are based on wider study areas. Following best practice guidance and based on the experience and professional judgement of the assessment team, two study areas were defined for this LVIA and are shown on Figure 13-1 below:

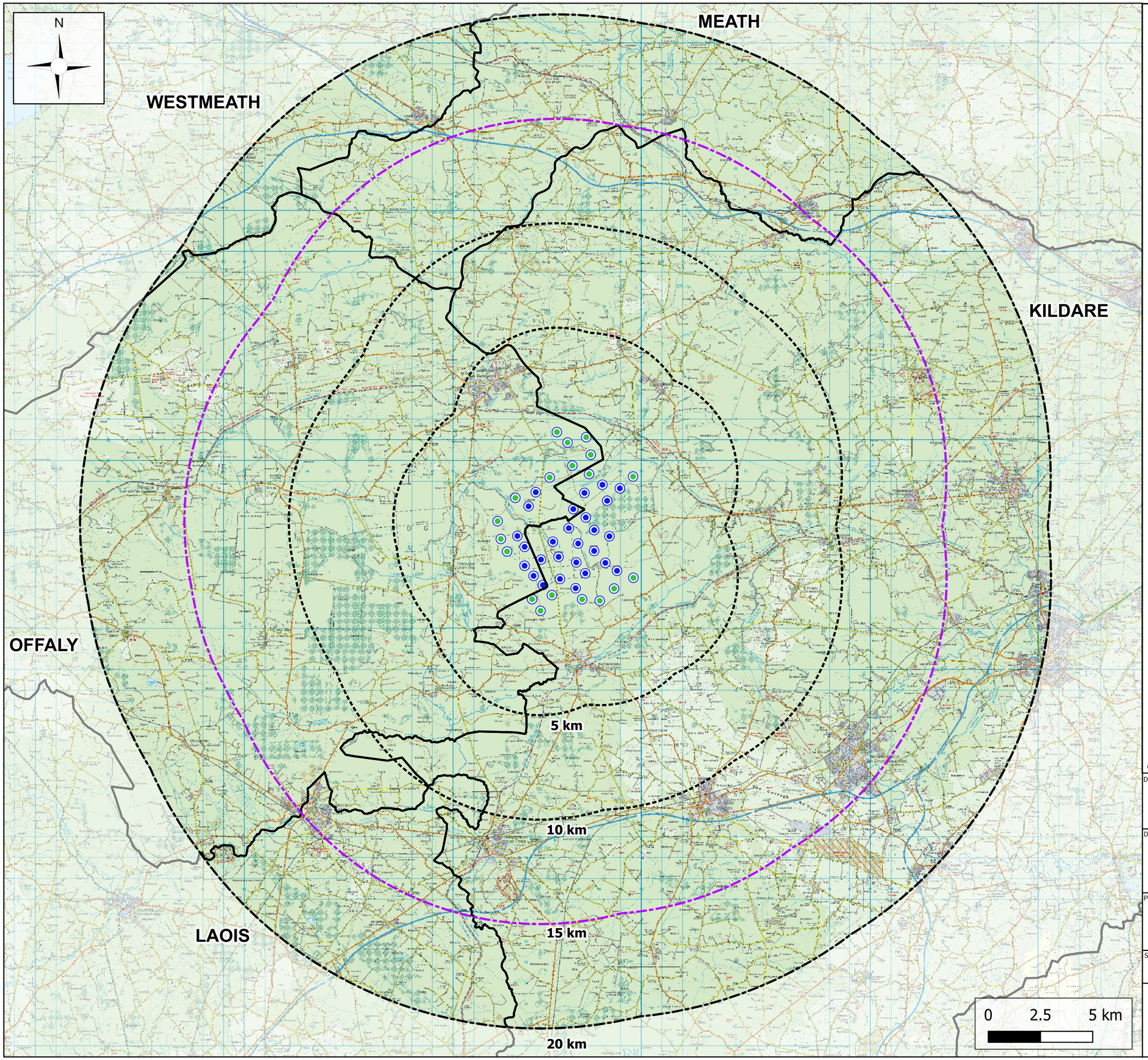
- **'LVIA Study Area':** Comprises all of the landscape within **20km** from the Proposed Turbines for assessment of effects on landscape and visual receptors and is the search area for other wind energy developments included for cumulative landscape and visual assessment;
- **'LCA Study Area':** Comprises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

The full justification and rationale for use of the LVIA Study Area for assessment of effects on landscape and visual receptors, LCA Study Area for assessment of effects on designated LCAs are presented in detail in Section 1.4 of *Appendix 13-1: LVIA Methodology*.

After defining the parameters for this LVIA, and on the basis of desk studies, survey work undertaken, professional judgement and experience of the assessment team, the following are scoped out of assessment in this LVIA:

- Effects on landscape and visual receptors with minimal or no theoretical visibility (as predicted by the ZTV mapping), and/or very distant visibility, and are therefore unlikely to be subject to significant effects;
- Effects on designated landscape receptors beyond 20km from the Proposed Turbines where it is judged that significant effects on key characteristics and/or special qualities are unlikely to occur;

- Effects on designated LCAs beyond 15km from the Proposed Turbines, where it is judged that significant effects on landscape character are unlikely to occur;
- Effects on visual receptors beyond 20km from the Proposed Turbines where it is judged that significant effects are unlikely occur;
- Cumulative landscape and visual effects beyond 20km from the Proposed Turbines where it is judged that significant effects are unlikely to occur; and
- Cumulative effects in combination with single turbines with a tip height lower than 50 metres beyond 5km from the Proposed Turbines, where it is judged that significant effects are unlikely to occur in these potential cumulative scenarios.



Map Legend

- LVIA Study Area
- LCA Study Area (15km)
- County Boundaries

Proposed Turbines

- 200m
- 220m

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Drawing No.

Figure 13-1

Drawing Title

Study Areas

Project Title

Ballydermot Wind Farm, Co. Offaly & Co. Kildare

Scale	Project No.	Date	Drawn By	Checked By
1:175,000	250708	15.10.2026	GL	DM

MKO Planning and Environmental Consultants

13.2.3 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 (LI & IEMA, 2013). This includes consideration of landscape and visual sensitivity balanced with the magnitude of change to determine the likely significance of effects (See Section 1.7.5 and Section 1.8.4 in *Appendix 13-1*). The potential for cumulative effects arising from other relevant cumulative developments are also considered and accounted when determining the magnitude of change. Mitigating factors are then taken into consideration to determine the residual landscape and visual effects. Residual landscape and visual effects are graded upon an 'impact assessment classification of significance' scale, as defined by the 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports' (EPA, 2022). The assessments have been informed by site visits conducted between 2021 and 2026 and are supported by a range of best practice tools for LVIA including ZTV mapping and verified photomontage visualisations. Further details of the methods used to produce ZTV maps and photomontages, as well as the LVIA process, including assessment of cumulative effects are presented in *Appendix 13-1*.

13.2.4 LVIA Wind Energy Context

Given the establishment of Ireland's renewable energy targets, and the subsequent requirement for onshore renewable wind energy development, wind turbines will form a new component in the working landscape in the coming decades. The focus for visual impact assessment of wind energy developments is therefore distance, arrangement, location and potential disruption to key scenic sensitivities (as detailed in WEDG 2006 and Draft WEDG 2019), rather than a commonly misconceived focus solely on whether turbines are visible or not from a particular vantage point The outcome of the visual impact assessment, with regards to the EPA (2022) definition of significance, is calibrated in the overall context of LVIA of wind energy developments in Ireland and what is acceptable in the context of emerging baseline trends and the acceptability of wind turbines within views as a result of national policy.

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

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

- The scale of the Proposed Turbines relative to the landscape as a result of setback distance.
- The number of Proposed Turbines visible.
- The degree of visibility of Proposed Turbines e.g. are they fully or partially screened from view by existing features of the landscape.
- The perceived horizontal extent of Proposed Turbines within the field of view, e.g. how wide of an extent do the Proposed Turbines occupy in terms of what is experienced by receptors.
- Overall visual coherency with regards to form and arrangement and how the Proposed Turbines correspond to the landscape from a particular vantage point as per best practice siting and design guidance.

13.3 Visibility of the Proposed Project

Determining the visibility of the Proposed Project is a fundamental component of the assessment of landscape and visual effects. Visibility has been evaluated using a combination of complementary best practice methods. While the assessment focuses primarily on the Proposed Turbines, all associated infrastructure of the Proposed Project has been considered. Visibility analysis is informed by GIS-based spatial analysis, including ZTV mapping. The nature and extent of actual visibility were verified through systematic field surveys undertaken across the LVIA Study Area between 2021 and 2026. The degree of visibility and the resulting magnitude of visual effects were further tested through the preparation of photomontages from a range of representative viewpoints, selected to reflect different geographic locations and visual receptor types.

13.3.1 ZTV: Theoretical Visibility of the Proposed Turbines

ZTV mapping is an important step in the LVIA process, showing clearly which areas of the LVIA Study Area will have theoretical visibility of the Proposed Turbines and which areas will have no theoretical visibility. The ZTV mapping methodology is outlined in *Appendix 13-1*. This methodology was used to examine the theoretical visibility of the 46 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. The WEDG 2006 (p.94) state:

> *"It is recommended that the Zone of Theoretical Visibility should assess the degree of visibility based on the numbers of turbines visible to half the blade length in addition to hub-height".*

A Half-Blade ZTV is considered more appropriate and useful than a Full-Blade ZTV for analysing visibility of the Proposed Turbines and scoping receptors in and out for assessment, particularly when using an elevation model representing a bare earth scenario (i.e., a precautionary scenario). As well as the guidance cited above, the decision to use a Half-Blade ZTV is based upon professional judgement and guided by the extensive experience the assessment team have ground truthing ZTVs against the reality of turbine visibility within landscapes where turbines already exist. As noted in *Appendix 13-1*, actual visibility on the ground is significantly less than predicted by the ZTV mapping due to intervening factors such as: on site screening from natural and man-made features, atmospheric weather and/or localised topography. Generation of the ZTV utilises large scale topographical data (interpolation across 10m contour data) and does not account for topographical variation of smaller scale (e.g., < 10 metre). Therefore, in reality, small, localised undulating topographical landscapes are likely to inhibit further visibility of the Proposed Turbines that may not be represented in the ZTV map. Other features of the landscape such as vegetation and man-made elements are also likely to obscure the Proposed Turbines from view from many areas where the ZTV indicates there is full visibility. In this regard, the ZTV is a useful tool to indicate where there is definitely no visibility of the Proposed Turbines, therefore, receptors located in these areas can be scoped out from further assessment.

The Half Blade ZTV map is shown in Figure 13-3 below. Separate colour bands are used on each ZTV map to indicate the number of Proposed Turbines of which the half blade will potentially be visible due to visual screening from landform. The legend on each map shows the number of theoretically visible turbines for each corresponding colour, which are as follows:

- Orange: 1 - 12 turbines theoretically visible
- Teal: 13 – 24 turbines theoretically visible
- Yellow: 25 – 36 turbines theoretically visible
- Navy: 37 - 46 turbines theoretically visible

Figure 13-2 (below) shows the landform features and elevation gradients existent within the landscape of the LVIA Study Area, the geography of these topographical characteristics defines the distribution of theoretical visibility illustrated in Figure 13-3.

Topographical Overview and Description of Theoretical Visibility in the LVIA Study Area

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

In a general sense, the landscape of the LVIA Study Area is very typical of the Irish midlands, comprising an extensive, flat landscape of peatlands and agricultural land. Consequently, this results in large areas of full theoretical visibility of the Proposed Turbines, particularly in the flat plains surrounding the Project Site. The most notable exception to the otherwise flat character of the wider LVIA Study Area is the 'Six Hills' which is also known as the 'Chair of Kildare'. The Six Hills comprise a group of locally prominent, elevated landforms, including Boston Hill, Allen Hill, Red Hill, Dunmurry Hill and Grange Hill, rising distinctly above the surrounding plains at approximately 4km to 8km to the southeast of the nearest Proposed Turbine (T02), limiting theoretical visibility beyond. These hills are a well-known distinctive landscape features of the central Kildare landscape and are mapped in Figure 13-2 below.

Description of Theoretical Visibility within 10km of the Proposed Turbines

As shown in the physical landscape features map (Figure 13-2) below, the Proposed Turbines are situated within a flat, low-lying peatland landscape. Within 5km of the Proposed Turbines, the predominantly open and level terrain results in primarily full theoretical visibility in all directions, with only small pockets of no theoretical visibility arising from minor, localised undulations.

Within the 5km to 10km distance band, theoretical visibility remains extensive to the west, northwest and north, where the flat midland plain continues with little to no topographical interruption. To the south and southeast, the Six Hills comprise the only notable topographical features within 10km of the Proposed Turbines, creating increasingly fragmented theoretical visibility in this direction, with pockets of no theoretical visibility on the lee side of individual hills.

Description of Theoretical Visibility within the Wider Study Area beyond 10km

As shown in Figure 13-2 and Figure 13-3 below, the wider LVIA Study Area is characterised predominantly by low-lying, gently undulating farmland, with more notable topographical features occurring to the southeast, south, northeast and far northwest.

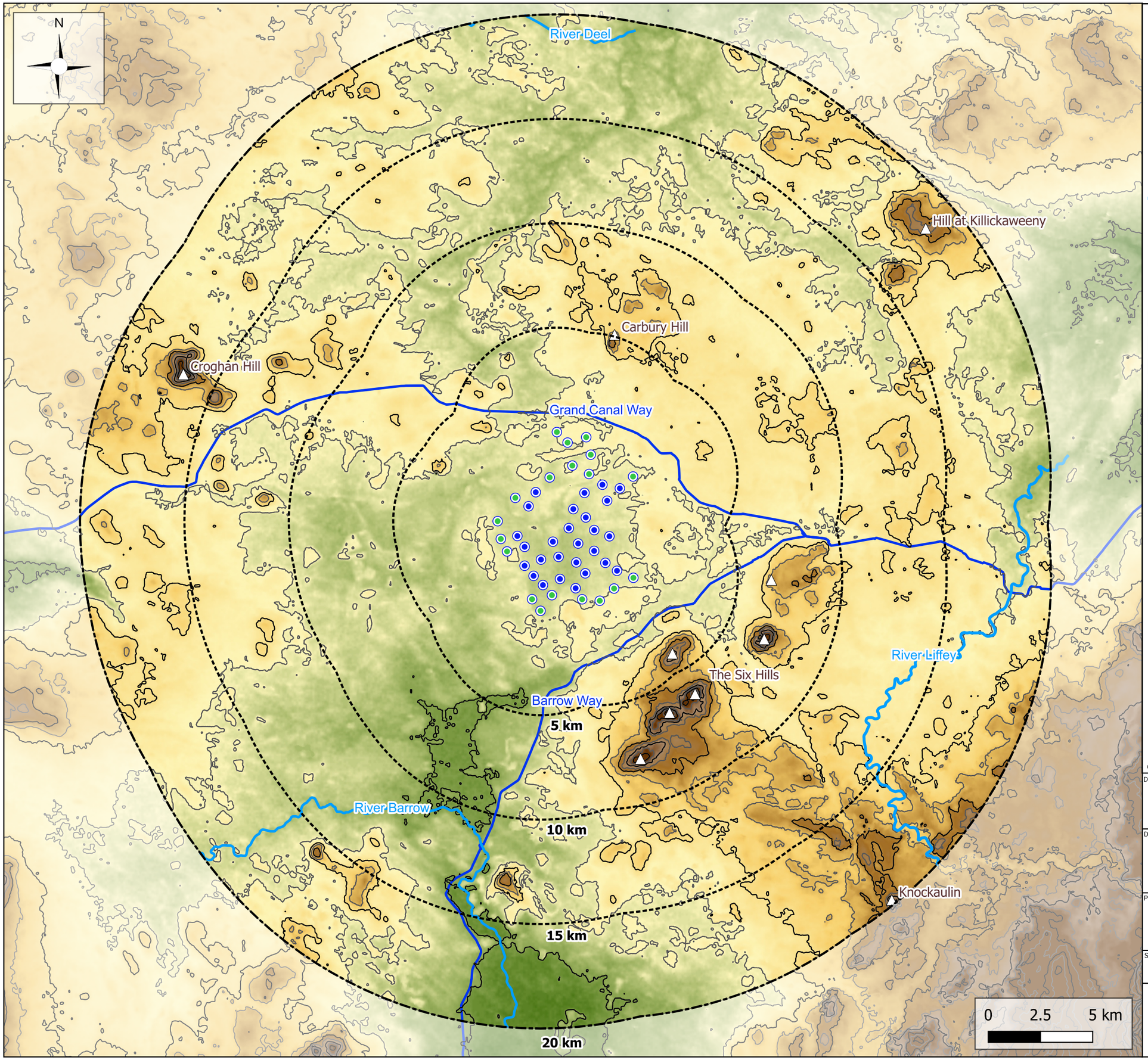
To the south and southeast, the Six Hills are the dominant topographical feature influencing theoretical visibility. Rising prominently above the surrounding plains, they create extensive areas of no theoretical visibility on their southern and southeastern flanks, as illustrated in the ZTV Map. Beyond the Six Hills, the landscape transitions across the Curragh Plains toward the foothills of the Wicklow Mountains at the southeastern extent of the LVIA Study Area, where increasing elevation creates further areas of no visibility.

To the east and northeast, theoretical visibility becomes increasingly fragmented beyond 10km, as the generally flat landscape gives way to more gently undulating farmland. A series of minor topographical elevations in this zone interrupt theoretical visibility in a dispersed pattern, resulting in increasing areas of partial and no theoretical visibility across the northeastern portion of the LVIA Study Area beyond this distance.

To the north, a cluster of topographical features located just beyond 5km from the Proposed Turbines generates notable areas of no and partial theoretical visibility within the 5km to 15km band in this direction. Beyond 15km to the north, the rolling farmland landscape produces only localised, scattered pockets of no theoretical visibility.

To the west and southwest, the flat, low-lying peatland landscape results in largely uninterrupted theoretical visibility extending to approximately 15km from the Proposed Turbines. Beyond 15km in

this direction, topographical features including esker ridges and isolated hills (such as Croghan Hill) begin to interrupt theoretical visibility, generating increasingly large areas of no theoretical visibility toward the western and southwestern extents of the LVIA Study Area.



Map Legend

- LVIA Study Area

Proposed Turbines

- 200m
- 220m

Physical Landscape Features

- Key Hills
- Key Rivers
- Key Canals
- 15m contours
- 30m contours

Elevation Above Ordnance Datum

- 50m
- 75m
- 100m
- 125m
- 150m
- 175m

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Drawing No.

Figure 13-2

Drawing Title

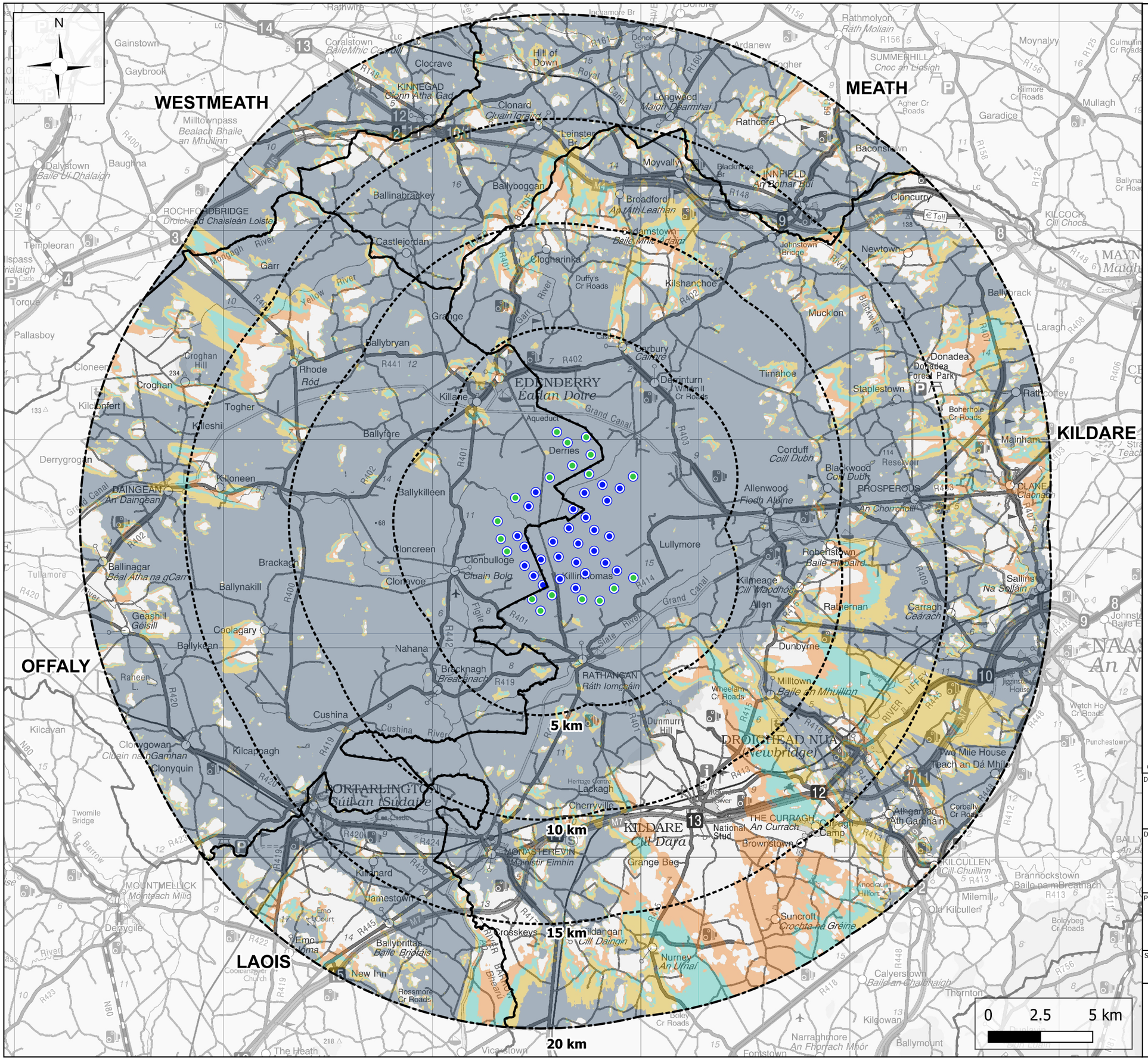
Physical Landscape Features

Project Title

Ballydermot Wind Farm,
Co. Offaly & Co. Kildare

Scale	Project No.	Date	Drawn By	Checked By
1:175,000	250708	29.09.2026	GL	DM

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Map Legend

- LVIA Study Area
- County Boundaries

Proposed Turbines

- 200m
- 220m

Zone of Theoretical Visibility

- 1-12 Turbines Theoretically Visible
- 13-24 Turbines Theoretically Visible
- 25-36 Turbines Theoretically Visible
- 37-46 Turbines Theoretically Visible

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Drawing No.

Figure 13-3

Drawing Title

Zone of Theoretical Visibility

Project Title

Ballydermot Wind Farm,
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13.3.1.2 On-Site Appraisal of Actual Visibility During Field Surveys

The ZTV map is modelled off a bare-earth scenario and is consequently a useful tool to identify 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 13-3) are likely to have no actual visibility of the Proposed Turbines due to other visual screening factors present within the landscape. Bare-earth ZTV maps typically over-exaggerate the spread of theoretical visibility in flat environments such as the receiving landscape of the LVIA Study Area.

Multiple field surveys (13 days in total) were conducted between 2020 and 2026 to determine the actual visibility from locations where the ZTV has indicated full theoretical visibility. These surveys determined that visual screening from localised undulations in topography, vegetation and man-made elements substantially reduce the likelihood of viewing the Proposed Turbines in vast areas of the LVIA Study Area.

As demonstrated and discussed throughout this LVIA, the flat terrain is a positive attribute of the receiving landscape that greatly restricts actual visibility of the Proposed Turbines in areas beyond 5km from the Proposed Wind Farm. Contrary to the ZTV, visibility appraisals and photomontage visualisations determined that long-range visibility is very limited in these flat areas of the landscape due to visual screening from above-ground elements such as vegetation and the built environment. Ultimately, very limited/no visibility of the Proposed Turbines occurs beyond 5km, excepting for occasional circumstances where a localised rise in elevation creates elevated vantage points permitting open views across the landscape. The term 'visual screening' (discussed below) is used throughout this LVIA and is an important concept to understand with respect to the exceptionally flat landscape of the LVIA Study Area and how this relates to the reality of visibility on the ground in such a flat landscape.

Various wind farms have been consented and constructed within landscape types such as this throughout Ireland (e.g., Ballivor Wind Farm, Cloncreen Wind Farm, Derrinlough Wind Farm, Mountlucas Wind Farm). A common feature of this landscape type is that 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 Proposed Turbines are not located at high elevations 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 Proposed Wind Farm 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 Project Site contribute 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 EIAR Volume 2: Photomontage Booklet and *Appendix 13-3*). Many of the photomontages illustrate that even at close distances from the Project Site, the flat topography and the screening landcover thereon serve to reduce the visibility of the Proposed Turbines.

Disproportionate Visual Screening Effect

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

The impact of visual screening elements such as vegetation (forestry, road-side hedgerows, and trees) and buildings (particularly within cities, towns, and villages) on long range visibility are accentuated in flat lowland landscapes, this is called a 'disproportionate visual screening effect'. The graphic in Figure 13-4 below best explains this disproportionate screening effect. A ZTV may indicate full theoretical visibility of the Proposed Turbines from an open field or roadway. However, when a receptor is located at the same base elevation as a turbine, a feature such as a distant treeline has the capacity to greatly

restrict or completely obscure visibility of the Proposed Turbine. Distance becomes a substantial factor determining visibility of Proposed Turbines as it is difficult to see beyond a few kilometres above visual screening within a flat landscape.

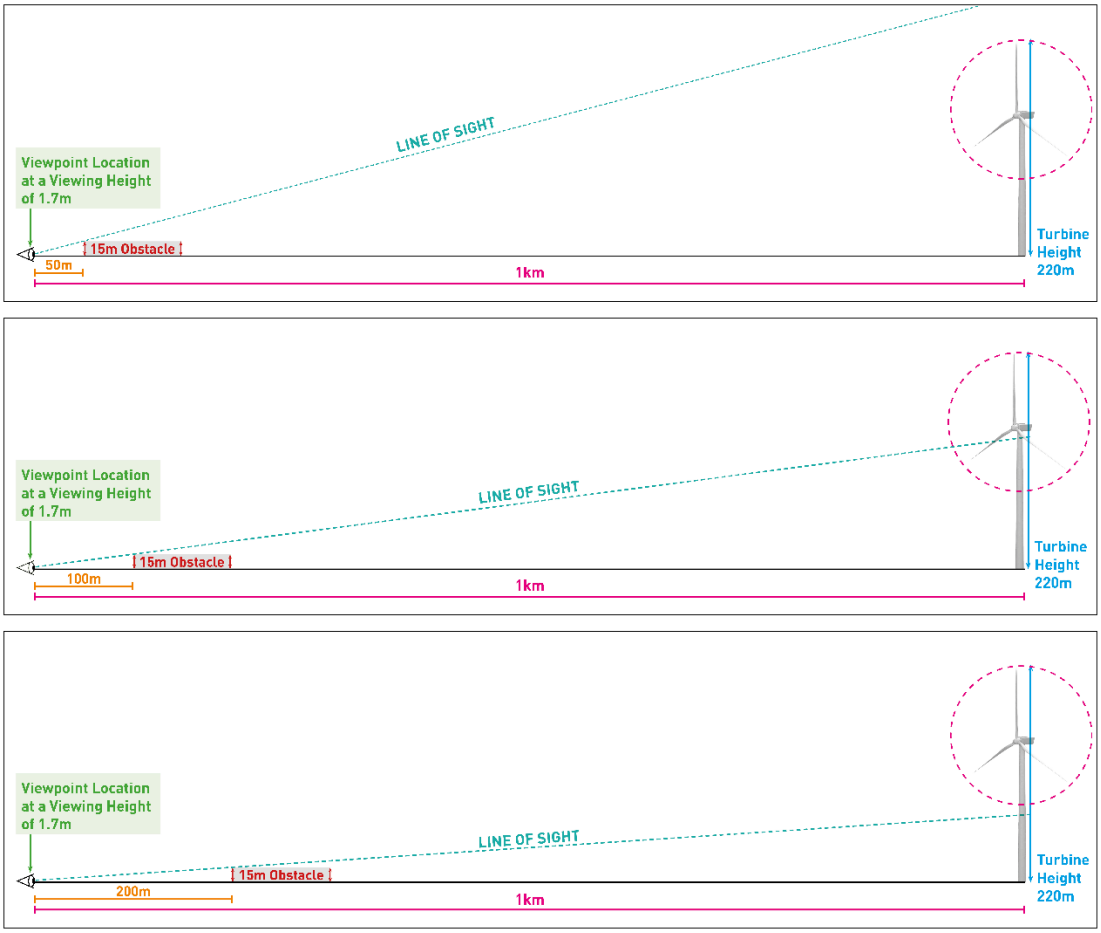


Figure 13-4 Disproportionate Visual Screening Effect

Figure 13-4shows a 220-metre-tall wind turbine located one kilometre from a viewing location. The illustration in Figure 13-4 is modelled proportionally to ensure measurement accuracy and scaled to fit this report. A 15-metre-tall obstacle, such as a treeline is used as the landscape feature giving rise to the visual screening effect. In the three examples shown, the 15-metre obstacle is shown at 50 metres, 100 metres and 200 metres from the viewing location, and the resultant line of sight is shown as a blue line running from the viewing location upwards over the top of the obstacle.

The disproportionate visual screening effect is more pronounced for shorter turbines. Through the iterative design process, the Proposed Turbines at the outer perimeter of the Proposed Wind Farm have a shorter tip height of 200m (See detail in *Appendix 13-5*), compared with larger turbines set back in the centre of the Project Site. This design intervention allows these outer turbines, which are closest to surrounding visual receptors, to take greater advantage of existing visual screening within the flat landscape, including the mature boundary vegetation surrounding the peatlands of the Proposed Wind Farm.

Importantly, acknowledging that this is a large wind energy development comprising 46 no. Proposed Turbines, the site visits and photomontages have determined that the flat landscape characteristics and disproportionate screening effect serves to ensure a very small proportion of the overall Proposed Wind Farm is ever seen and experienced from any low-lying vantage point, including those receptors in close proximity. It is only occasionally, from more elevated vantage points, that all 46 no. Proposed Turbines are experienced by a visual receptor within a single view. This LVIA includes a full impact assessment from all types of views, vantage points and receptors.

13.3.2 Visibility in Close Proximity to the Proposed Turbines: Route Screening Analysis

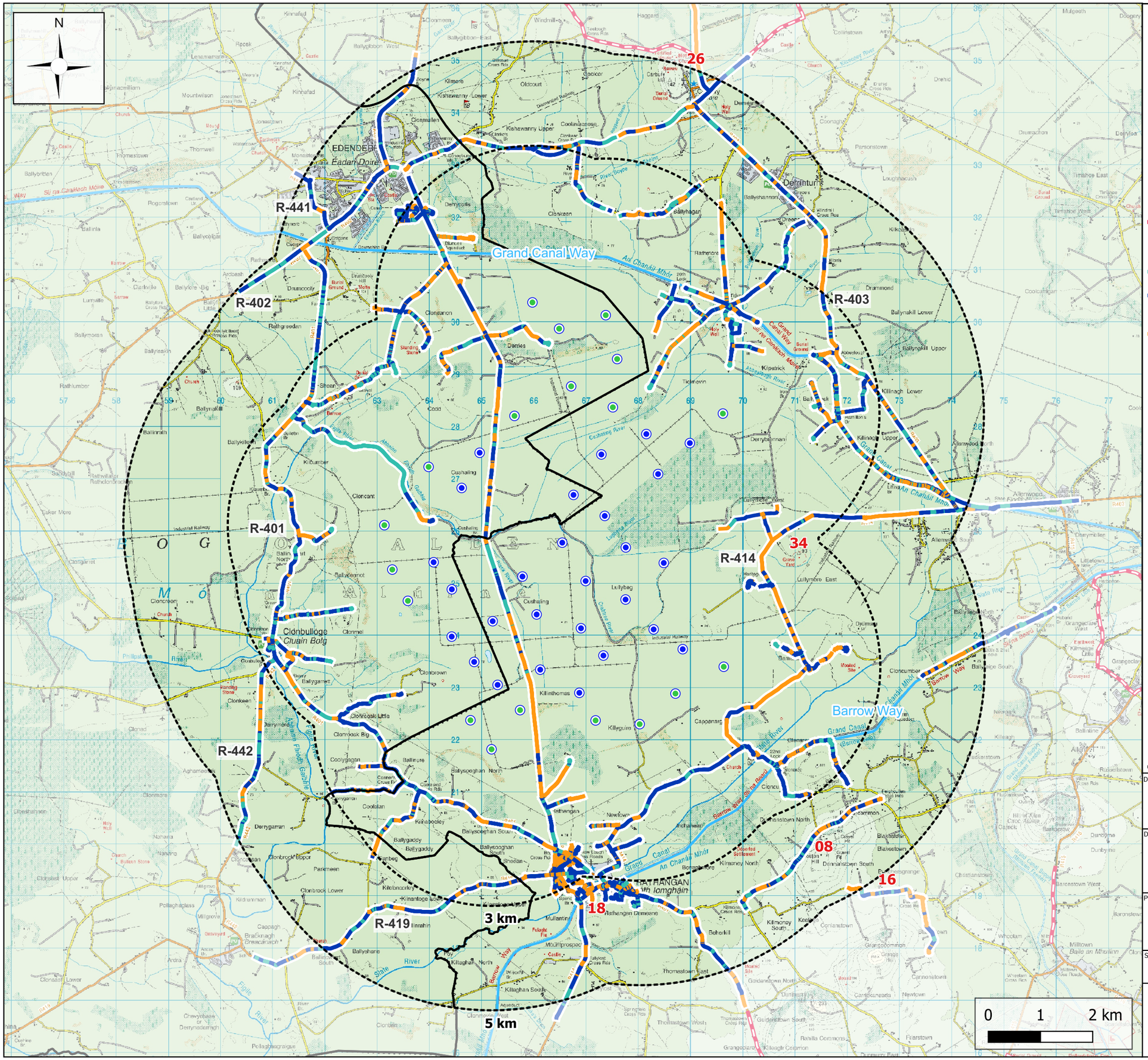
Route Screening Analysis (RSA) was conducted in June 2026 to comprehensively demonstrate the varying characteristics of the degree of visual screening existent along the local road network and to record the actual visibility of the Proposed Turbines in comparison to the theoretical visibility indicated by ZTV mapping. The full methodology is outlined in *Appendix 13-1: LVIA Methodology* (Section 1.5.3: On-Site Visibility Appraisal: RSA).

The RSA visual screening categories are:

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

The results of the RSA are mapped in Figure 13-5 below, showing the extent at which each visual screening classification is present on all prominent local roads within 3km of the Proposed Turbines. Where roads continued beyond 3km from the Proposed Turbines, the RSA survey continued to record screening until reaching an appropriate termination point or junction.

RSA was conducted along the Grand Canal, KCDP Scenic Routes 08, 16, 18, 26, 34, and the R401, R402, R403, R414, R419, R441, & R442 Regional Roads to a distance of 5km as these are considered relatively prominent and well-trafficked transport routes in close proximity to the Proposed Wind Farm site . RSA was also conducted along all prominent local roads within 3km of the Proposed Turbines.



Map Legend

- RSA Buffers
- County Boundaries

Proposed Turbines

- 200m
- 220m

Key Routes

- Key Canals
- Co. Kildare Scenic Routes

Route Screening Analysis

- Class 1 - No / Very Little Visual Screening
- Class 2 - Partial / Intermittent Visual Screening
- Class 3 - Dense / Full Visual Screening

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Drawing No.

Figure 13-5

Drawing Title

Route Screening Analysis

Project Title

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Plate 13-1 Example of 'Little/No' Visual Screening from the R414 Regional Road towards the Proposed Turbines



Plate 13-2 Example of 'Intermittent/Partial' Visual Screening of views from the L6002 Local Road towards the Proposed Turbines



Plate 13-3 Example of 'Dense/Full' Visual Screening of views from the L-50013 Local Road towards the Proposed Turbines

Grand Canal

The Grand Canal runs in a west to east direction immediately north of the Proposed Turbines and turns southeast towards Allenwood. Where accessible, the Grand Canal routes were driven and assessed as part of the Route Screening Analysis. The Grand Canal has stretches of 'Intermittent/Partial' and 'Dense/Full' Visual Screening with instances of 'Little/No' Visual Screening.

KCDP Scenic Routes 08

This KCDP Scenic Route runs in a southwest to northeast orientation, covering a length of approximately 3.3km. The route exhibits a varied screening profile, primarily comprised of 'Intermittent/Partial' and 'Dense/Full' Visual Screening with instances of 'Little/No' Visual Screening.

KCDP Scenic Routes 16

A very small stretch of this KCDP Scenic Route is located within the 5km radius of the nearest Proposed Turbine (T01), covering a length of approximately 0.27km out of a total of 2.8km. Where the route falls within the 5km radius there is 'Dense/Full' Visual Screening. Beyond the 5km radius, the road exhibits a varied screening profile, primarily comprised of 'Intermittent/Partial' and 'Dense/Full' Visual Screening with instances of 'Little/No' Visual Screening.

KCDP Scenic Routes 18

This KCDP Scenic Route is very short, approximately 608m long, orientated in a northeast to southwest direction within Rathangan between Spencer Bridge and Rathangan Bridge. There is primarily 'Intermittent/Partial' Visual Screening along this route with instances of both 'Dense/Full' and 'Little/No' Visual Screening.

KCDP Scenic Routes 26

A very small stretch of this KCDP Scenic Route is located within the 5km radius of the nearest Proposed Turbine (T01), covering a length of approximately 0.73km out of a total of 17km. Where the route falls within the 5km radius there is primarily 'Intermittent/Partial' Visual Screening.

KCDP Scenic Routes 34 / R414 Regional Road

The KCDP Scenic Route 34 is located approximately. 881m from the nearest Proposed Turbine. There are large stretches of 'Dense/Full' Visual Screening along this route immediately east of the Proposed Turbines, with some instances of 'Intermittent/Partial' Visual Screening. Further east towards Allenwood, and southeast of the Proposed Turbines just northeast of Rathangan, the route is primarily categorised as having 'Intermittent/Partial' Visual Screening. Where the R414 Regional Road exits Rathangan, orientated in a north-south direction, the road exhibits 'Intermittent/Partial' Visual Screening with instances of both 'Little/No' and 'Dense/Full' Visual Screening.

R401 Regional Road

This regional road runs in a north to south orientation, covering a length of approximately 22km within 5km of the Proposed Turbines. North of Edenderry, this route exhibits 'Intermittent/Partial' Visual Screening, while a portion of this regional road to the northwest of the Proposed Turbines exhibits equal proportionality of Little/No' and 'Intermittent/Partial' Visual Screening. The portion of this regional road immediately west, southwest and south of the Proposed Turbines exhibits primarily 'Intermittent/Partial' Visual Screening interspersed with stretches of 'Dense/Full' and 'Little/No' Visual Screening.

R402 Regional Road

This regional road runs in a northeast to southwest orientation, passing through the settlement of Edenderry, covering a length of approximately 11.4km within 5km of the Proposed Turbines. This road exhibits primarily stretches of 'Intermittent/Partial' Visual Screening with short stretches of 'Little/No' Visual Screening. There are some short stretches of 'Dense/Full' Visual Screening on some parts of this road immediately north of the Proposed Turbines.

R403 Regional Road

This regional road runs in a northwest to southeast orientation, passing through the settlement of Derrinturn and towards Allenwood, covering a length of approximately 10.5km within 5km of the Proposed Turbines. This road exhibits primarily stretches of 'Dense/Full' and 'Intermittent/Partial' Visual Screening with short stretches of 'Little/No' Visual Screening. This is also reflected within the settlement of Derrinturn. The road immediately east of the Proposed Turbines, exiting Allenwood, exhibits larger stretches of both 'Little/No' and 'Intermittent/Partial' Visual Screening.

R419 Regional Road

The R419 Regional Road is located approximately. 1.47km to the southeast from the nearest Proposed Turbine. This road exits the settlements of Rathangan and is orientated in an east to southwest direction. This road exhibits primarily 'Intermittent/Partial' Visual Screening with short instances off both 'Little/No' and 'Dense/Full' Visual Screening. Within the settlement of Rathangan there are more instances of 'Dense/Full' Visual Screening.

R441 Regional Road

Only approximately 1.16km of this road falls within 5km of the Proposed Turbines, where it passes through the west of the settlement of Edenderry. Where this road falls within 5km, it exhibits primarily 'Intermittent/Partial' Visual Screening.

R442 Regional Road

This road is located between 3km and 5km from the Proposed Turbines, orientated in a north to south direction exiting the settlement of Clonbullogue. The north portion of this road exhibits 'Dense/Full' Visual Screening, and further south along the road there are greater stretches of both 'Little/No' and 'Intermittent/Partial' Visual Screening.

Local Road Network

The local road network within and surrounding the Proposed Wind Farm exhibits a varied pattern of visual roadside screening, generally comprising a mix of 'Dense/Full', 'Intermittent/Partial', and 'Little/No' Visual Screening. The L-3001, which passes through the Proposed Wind Farm, is characterised predominantly by 'Dense/Full' Visual Screening, interspersed with sections of 'Little/No' Visual Screening within the central part of the Proposed Wind Farm. Roads around Rathangan are generally well screened, while those to the southwest, northwest, around Clonbullogue, Ticknevin, and Lullymore display a more variable pattern of roadside screening.

13.4 Landscape Baseline

This section of the LVIA establishes the baseline landscape condition of the Project Site and wider landscape setting of the LVIA Study Area. This includes identification and description of relevant landscape policy designations and sensitive landscape receptors located in the LVIA Study Area. The receiving landscape of the Project Site and surrounding areas are also described in terms of their landscape character and landscape sensitivity. This section has been informed by desk studies, GIS analysis and site visits and also includes an overview of relevant best practice siting and design guidance for wind farms appropriate to the landscape type of the Project Site.

13.4.1 Landscape Policy Context

This section provides an overview of local planning policy and identifies landscape and visual protections, designations and spatial zoning for wind energy development relevant to the LVIA of the Proposed Project. The Proposed Project is located both within Co. Kildare and Co. Offaly, therefore both the KCDP and the OCDP were the primary documents used to inform this exercise.

As demonstrated by the ZTV Map (Figure 13-3), three other counties are located within the LVIA Study Area; Meath, Westmeath and Laois. Therefore, the following county development plans were also consulted to identify relevant landscape designations within the LVIA Study Area:

- Meath County Development Plan 2021–2027 (hereafter 'MCDP')
- Westmeath County Development Plan 2021–2027 (hereafter 'WCDP')
- Laois County Development Plan 2021–2027 (hereafter 'LCDP')

Figure 13-6 and Figure 13-7 below show the designations identified in the LVIA Study Area.

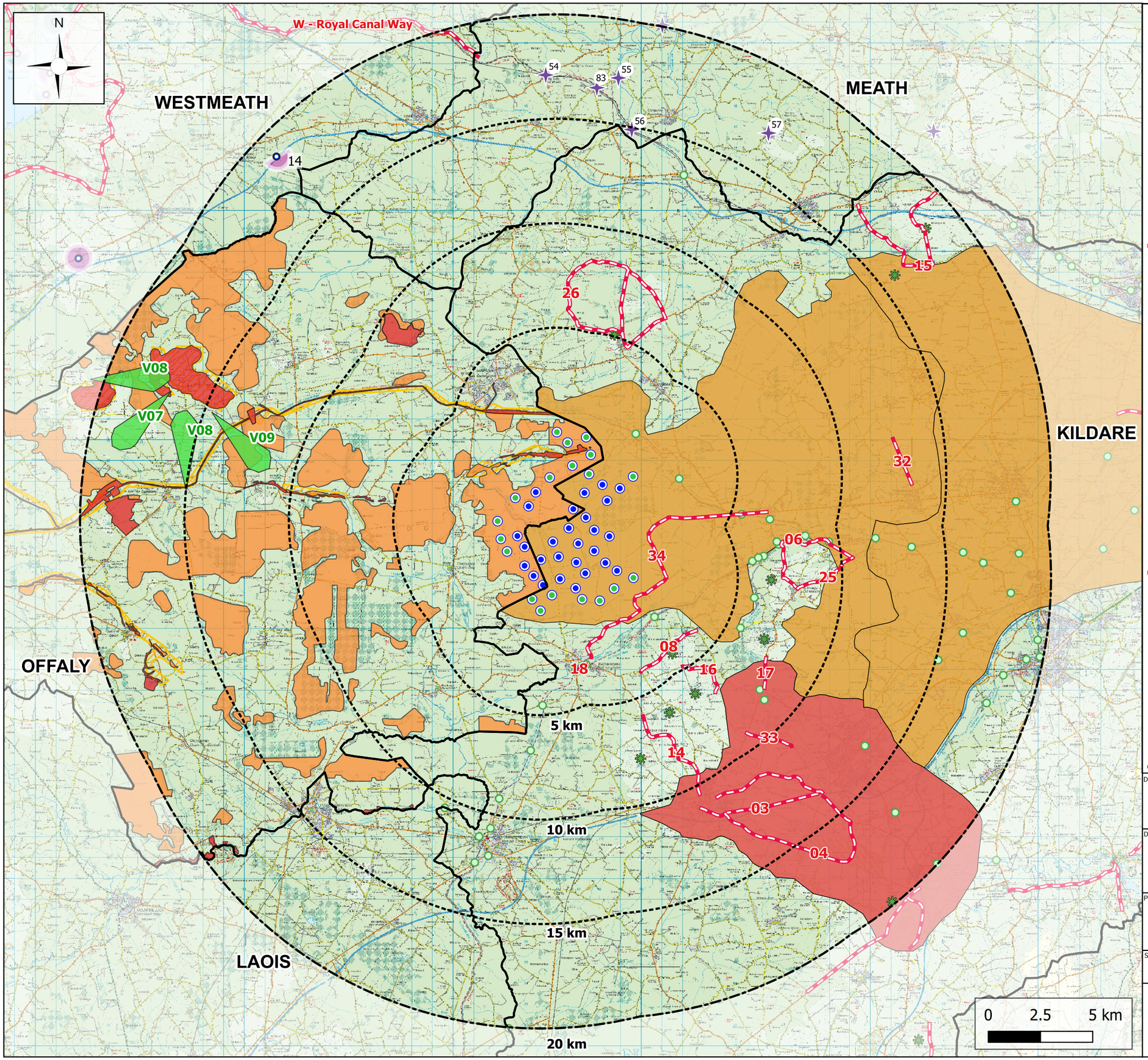
General Policy on Landscape Character Assessment in Ireland

The landscape baseline and policy review for this LVIA have been informed by the Landscape Character Assessments prepared for relevant County Development Plans identified previously. Landscape character is defined in the GLVIA3 (LI & IEMA, 2013) as *"a distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse"*. It reflects the combination of geology, landform, soils, vegetation, land use and settlement that gives each area its distinctive sense of place.

Landscape Character Assessment is the established method for identifying, classifying and describing this variation, and for characterising the value and sensitivity of the landscapes within a given area. Most local authorities in Ireland have prepared county-level assessments, which support the objectives of the National Landscape Strategy 2015–2025 (DoAHG, 2015) and reflect Ireland's commitments under the European Landscape Convention.

The GLVIA3 (LI & IEMA, 2013) distinguishes between Landscape Character Types, which are generic landscape types that may recur in different parts of the country, and Landscape Character Areas (LCAs), which are the single, unique geographical areas of a particular type. County Development Plans differ in the terminology, level of characterisation and approach to landscape sensitivity they apply. This LVIA considers the impact on all designated LCAs within 15km of the Proposed Turbines (within the LCA Study Area).

A landscape character assessment has not yet been conducted or published for County Offaly. Consequently, County Offaly does not have designated LCAs. Therefore, MKO has prepared an 'Offaly LCA' for the area of County Offaly within the LCA Study Area (15km from the Proposed Turbines for assessment of landscape character). The description and sensitivity of this Offaly LCA were determined from site visits, desk studies and designations in the OCDP.



Map Legend

- LVIA Study Area
- County Boundaries

Proposed Turbines

- 200m
- 220m

Co. Kildare

- Hilltop Views
- Scenic Viewpoints
- Scenic Routes

Landscape Sensitivities

- High
- Medium to High

Co. Offaly

- Scenic Views
- Areas of High Amenity

Landscape Sensitivities

- High
- Moderate

Co. Meath

- Scenic Views

Co. Westmeath

- Scenic Routes
- Protected Views Origin
- Protected Views: County Importance

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Drawing No.

Figure 13-6

Drawing Title

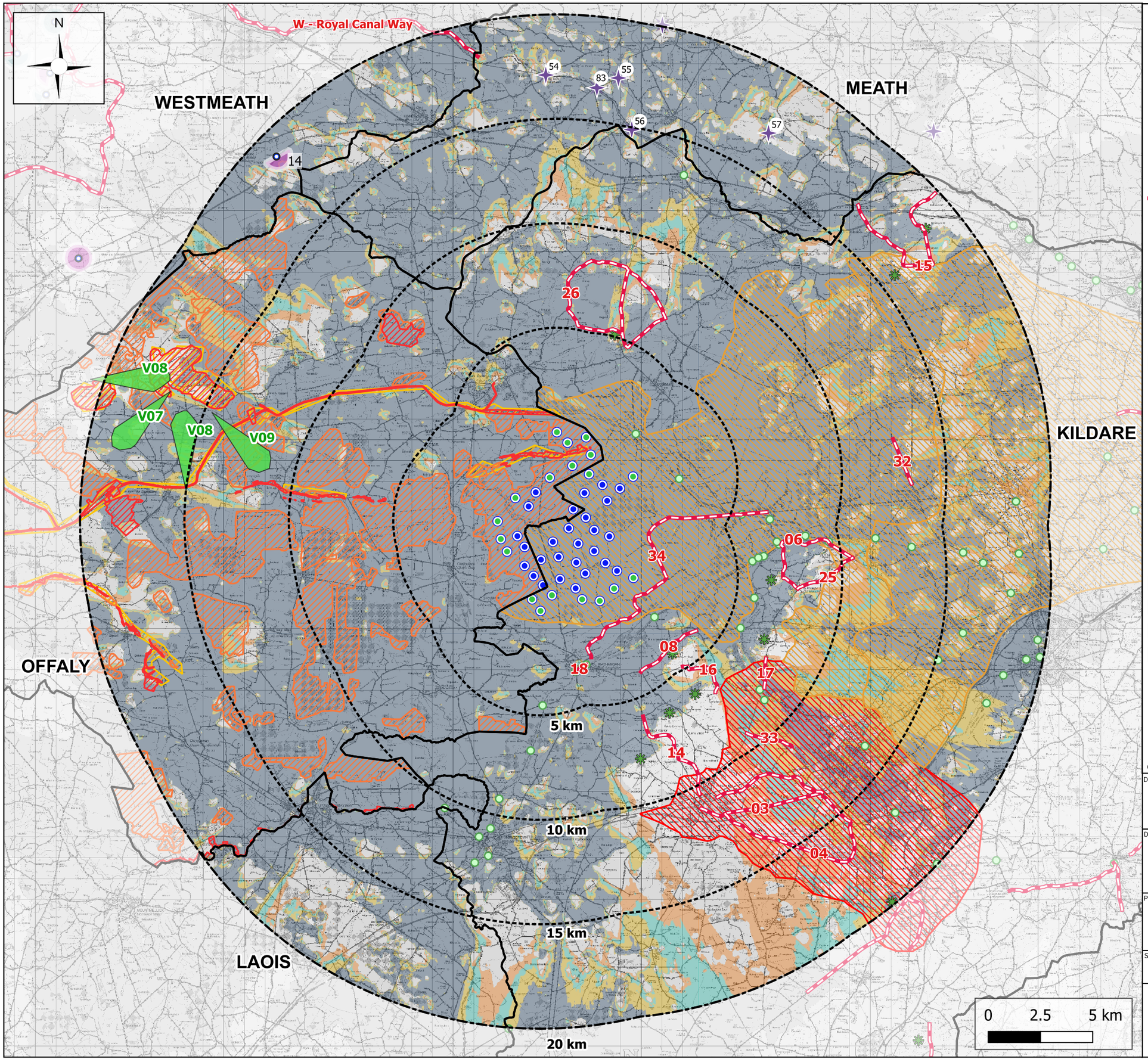
Landscape Policy Context

Project Title

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Map Legend

- LVIA Study Area
- County Boundaries

Proposed Turbines

- 200m
- 220m

Landscape Receptors

- Scenic Routes
- Co. Kildare Scenic Viewpoints
- Co. Kildare Hilltop Views
- Co. Meath Scenic Views
- Co. Westmeath Protected Views Origin
- Co. Westmeath Protected Views: County Importance
- Co. Offaly Scenic Views
- Co. Offaly Areas of High Amenity

Co. Offaly Landscape Sensitivities

- High
- Moderate

Co. Kildare Landscape Sensitivities

- High
- Medium to High

Zone of Theoretical Visibility

- 1-12 Turbines Theoretically Visible
- 13-24 Turbines Theoretically Visible
- 25-36 Turbines Theoretically Visible
- 37-46 Turbines Theoretically Visible

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Drawing No.

Figure 13-7

Drawing Title

Landscape Policy Context with Zone of Theoretical Visibility

Project Title

Ballydermot Wind Farm, Co. Offaly & Co. Kildare

Scale	Project No.	Date	Drawn By	Checked By
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13.4.1.2 Kildare County Development Plan 2023-2029

The KCDP sets out the relevant landscape and visual policies and objectives for County Kildare within Chapter 13 (Landscape, Recreation and Amenity), as amended by Variation No. 4, which is to be read in conjunction with Chapter 13. The relevant policy framework also includes Appendix 2 - Wind Energy Strategy (hereafter 'KWES'), as amended by Variation No. 4, and Appendix 13 – Kildare Landscape Character Assessment (hereafter 'KLCA'), which was introduced through Variation No. 4 and became effective on 27th April 2026. The KLCA identifies eight Landscape Character Types (LCTs) and ten Landscape Character Areas (LCAs) across the county.

Section 13.3.2 of the KCDP contains general landscape policies and objectives. Relevant landscape policies and objectives relating to the Proposed project are reproduced below:

> *"It is the policy of the Council to:*
>
> ***LR P1**: Protect and enhance the county's landscape, by ensuring that development retains, protects and, where necessary, enhances the appearance and character of the existing local landscape.*
>
> *It is an objective of the Council to:*
>
> ***LR O1**: Ensure that consideration of landscape sensitivity is an important factor in determining development uses. In areas of high landscape sensitivity, the design, type and the choice of location of proposed development in the landscape will also be critical considerations.*
>
> ***LR O2**: Require a Landscape and Visual Impact Assessment (LVIA) to accompany significant development proposals in areas of High landscape character sensitivity. A LVIA should also accompany applications for:*
>
> - *significant development proposals in other parts of the county, on a case-by-case basis (e.g., housing development, wind turbine and solar array developments, extractive industry, telecommunications infrastructure, afforestation and replanting of commercial forestry proposals); and*
> - *smaller scale developments taking account of the landscape sensitivity of an area and/or concerns regarding potential negative landscape or visual impacts.*
>
> ***LR O4**: Ensure that local landscape features, including historic features and buildings, hedgerows, shelter belts and stone walls, are retained, protected and enhanced where appropriate, so as to preserve the local landscape and character of an area.*
>
> ***LR O6:** Kildare County Council will have regard to the landscape character of adjoining counties, and any relevant regional strategies, when considering projects which may have a material impact on the landscape character of the adjoining counties.*
>
> ***LR O10:** Recognise that the lowlands and the transitional area are made up of a variety of working landscapes, which are critical resources for sustaining the economic and social well-being of the county and include areas of significant landscape and ecological value, which are worthy of protection. Such landscapes include the internationally recognised landscape of Punchestown and its environs.*
>
> ***LR O11:** Support collaboration between Kildare County Council, the Midlands Regional Transition Team and all other relevant stakeholders and the development of partnership approaches to integrated peatland management for a just transition that incorporates the management, rehabilitation and restoration/re-wetting of significant tracts of peatlands in*

conjunction with appropriate development after uses, in accordance with the guidance and recommendations for peatlands contained in Appendix 13 Landscape Character Assessment (2025) for the county.

LR O12: *Recognise that boglands, including cutaway and cut-over bogs, are critical natural resources for ecological and environmental reasons, particularly for climate mitigation and adaptation. Have regard to relevant peatland landscape character areas (LCAs) and sensitivity classes in evaluating all project proposals. Development proposals for boglands that reduce biodiversity and increase greenhouse gas emissions will not be considered. Appropriate environmental assessment should be carried out for any development proposals which impact on boglands.*

LR O13: *Recognise that some cutaway and cut-over boglands may represent degraded landscapes and/or brownfield sites and thus are potentially fit to absorb a variety of development provided that the development proposals does do not increase greenhouse gas emissions or damage protected habitats or species. Refer to peatland landscape character areas (LCAs) and sensitivity classes in evaluating all project proposals. Projects or developments which would result in increased ammonia emissions to watercourses shall not be considered."*

All policies cited above have been considered in the design and assessment of the Proposed Project in this LVIA. The following subsections address some of the specific elements covered by this planning policy including the designations of Landscape Character Areas, designated scenic amenities, and Wind Energy Strategy.

13.4.1.2.1 Co. Kildare Landscape Character Areas

There are 8 no. LCAs, as identified in the KLCA within the LCA Study Area for assessment of landscape character (15 km from the Proposed Turbines), as seen in Figure 13-16 below, these are:

- K-LCA 01 – Carbury Boyne Lowlands
- K-LCA 02 – Slí Mór Corridor
- K-LCA 03 – River Liffey Valley & Plains
- K-LCA 04 – Bog of Allen
- K-LCA 05 – Barrow-Grand Canal Corridor
- K-LCA 06 – The Six Hills
- K-LCA 07 – The Curragh Plains
- K-LCA 10 – Cill Dara Lowlands

The Proposed Turbines are located within K-LCA 04 – Bog of Allen, and is described in Table 13-2 of Chapter 13 as follows:

"This large character area encompasses part of the former Bog of Allen, the largest raised peat bog in Ireland. County Offaly forms the western boundary, and the Grand Canal crosses this LCA in an east-west direction. This area is characterised by flat topography, smooth terrain and a high-water table. Long straight roads traverse the peatlands, characterised by uneven surfaces and large wide ditches on either side. The roads generally offer extensive views, which are intermittently obscured by fringe vegetation, such as wetland scrub and hedgerows. Most of this LCA is categorised as 'Rural' and settlements are sparse, with a few small villages on the periphery of the peatlands and low population density with scattered settlements such as Prosperous."

A description of the key baseline characteristics and sensitivities of K-LCA 04 and all other LCAs scoped in for assessment are included in *Appendix 13-2: LCA Assessment Tables.*

13.4.1.2.2 Landscape Character Capacity

Chapter 13 of the KCDP describes landscape capacity as *"the extent a landscape can absorb change without significantly altering its character or type. It is essentially a measure of how much a landscape can accommodate new development or activities while still retaining its unique identity".*

LCA is evaluated against Landscape Character Sensitivity, Visual Sensitivity, Landscape Sensitivity and Landscape Value, all of which together inform an overall assessment of landscape character capacity at strategic level, according to the KLCA.

For K-LCA 04 – Bog of Allen, Annex C 'Landscape Character Sensitivity Assessment' of the KLCA, assigned an overall *"Medium/High"* Landscape Character Sensitivity rating, an overall *"Medium"* Visual Sensitivity, a *"Medium to Medium/High"* Landscape Sensitivity, and a *"High"* Landscape Value, all of which corresponds to a Landscape Character Capacity of *"Medium to Low".* The KLCA continues to note that this LCA includes:

> *"important areas of bog that are of great historical, cultural and ecological importance. Recognising and retaining these values whilst supporting climate change adaptation and mitigation measures, including Just Transition initiatives is key to retaining the character of this LCA".*

The KLCA also notes the following in relation to 'LCA Guidance':

- *"The dominant open character and large skies are important features of this LCA; new development proposals should be sensitivity sited and designed to reflect and enhance the local character. Large bulky developments would require a landscape and tree plan to offer screening of large-scale buildings.*
- *Integrate any new development into the landscape setting through the appropriate use of native tree and hedge planting*
- *The establishment of bog woodland at the fringes of bogs offers a potential link to wider ecological network and similar species should be promoted in nearby developments (i.e. Downy Birch (Betula pubescens): Silver Birch (Betula pendula), Willow (Salix species) and Scots Pine (Pinus sylvestris). Shrub species may include ling heather and bilberry depending on hydrological conditions.*
- *The industrial heritage associated with peat extraction such as industrial buildings and narrow-gauge railways are important cultural and landscape features, restoration and awareness about this industry should be supported and enhanced, reflecting the strong community associated with the peatlands.*
- *Support community groups in local landscape initiatives and landscape scale proposals to improve water quality and landscape scale restoration in the LCA.*
- *Support actions including in the Just Transition programme."*

In terms of wind energy compatibility, Table 13.4 of Chapter 13 of the KCDP is reproduced in Figure 13-8 below, indicates that wind farm development within the Bog of Allen is rated 'Medium' compatibility, which is the most compatible of all the ratings as there are no LCAs with a higher compatibility ('High' or 'Most') rating to wind farm developments.

Compatibility Key	Most	High	Medium	Low	Least

LCAs	Sensitivity	Agriculture	Forestry	Rural housing	Urban expansion	Industrial projects	Tourism projects	Major powerlines	Quarrying	Wind energy	Solar
LCA 1 Carbury Boyne Lowlands	Medium										
LCA 2 Sl Mhór Corridor	Medium to low										
LCA 3 River Liffey Valley and Plains	Medium to high										
LCA 4: Bog of Allen	Medium to high										
LCA 5 Barrow Grand Canal Corridor	Medium										
LCA 6 The Six Hills	Medium										
LCA 7 Curragh Plains	High										
LCA 8 Naas and Liffey Foothills	Medium										
LCA 9 South Eastern Kildare Hills	Medium										
LCA 10 Cill Dara Lowlands	Medium										

Figure 13-8 KCDP Table 13.4 - Landscape Character Assessment Sensitivity and Land Use

13.4.1.2.3 Landscape Policy Pertaining to Wind Energy Development

The KWES is cognisant of the landscape sensitivity framework established in the KLCA, and notes that *"Landscape sensitivity is a measure of the ability of the landscape to accommodate change or intervention without suffering unacceptable effects to its character and values".*

The KWES notes that the *"Landscape Character Assessment complies with the National Landscape Strategy for Ireland 2015-2025"* and states that *"Appendix 1 of the Draft Revised Wind Energy Guidelines 2019 states this assessment should convert this map using three sensitivity classifications."* Therefore, the KWES consolidates landscape sensitivities identifies in the KLCA into three sensitivity classifications as seen in Map 2 of the KWES:

- *"Class 1 – Low Landscape Sensitivity (Medium to Low Sensitivity, Medium Sensitivity)*
- *Class 2 – Medium Landscape Sensitivity (Medium to High Sensitivity)*
- *Class 3 – High Landscape Sensitivity (High Sensitivity)"*

These landscape sensitivity classes, amongst other constraints form the wind energy designations as follow: 'Acceptable in Principle' (Zone 1), 'Open for Consideration' (Zone 2), or 'Not Normally Permissible' (Zone 3), as shown on *Map 12: Wind Energy Strategy Zones* of the KWES.

In terms of wind energy zoning, K-LCA 04 is designated as being of *"Class 2 – Medium Landscape Sensitivity (Medium to High Sensitivity)"*, which is designated as an area 'Open for Consideration' for wind energy development.

KCDP's aim as outlined in Chapter 7 of the KCDP is to *"encourage and support energy and communications efficiency and to achieve a reasonable balance between responding to EU and National Policies on climate change, renewable energy and communications and enabling resources to be harnessed in a manner consistent with the proper planning and sustainable development of the country"*. The KWES acknowledges the Eastern and Midland Regional Authority Spatial and Economic Strategy (RSES) and notes that the *"Strategy acknowledges that Bord Na Móna's Strategic Framework for the Future Use of Peatlands identifies cutaway bogs as areas which may be suitable for renewable energy as long-term alternative uses of these sites"*, in which the Proposed Wind Farm is located in.

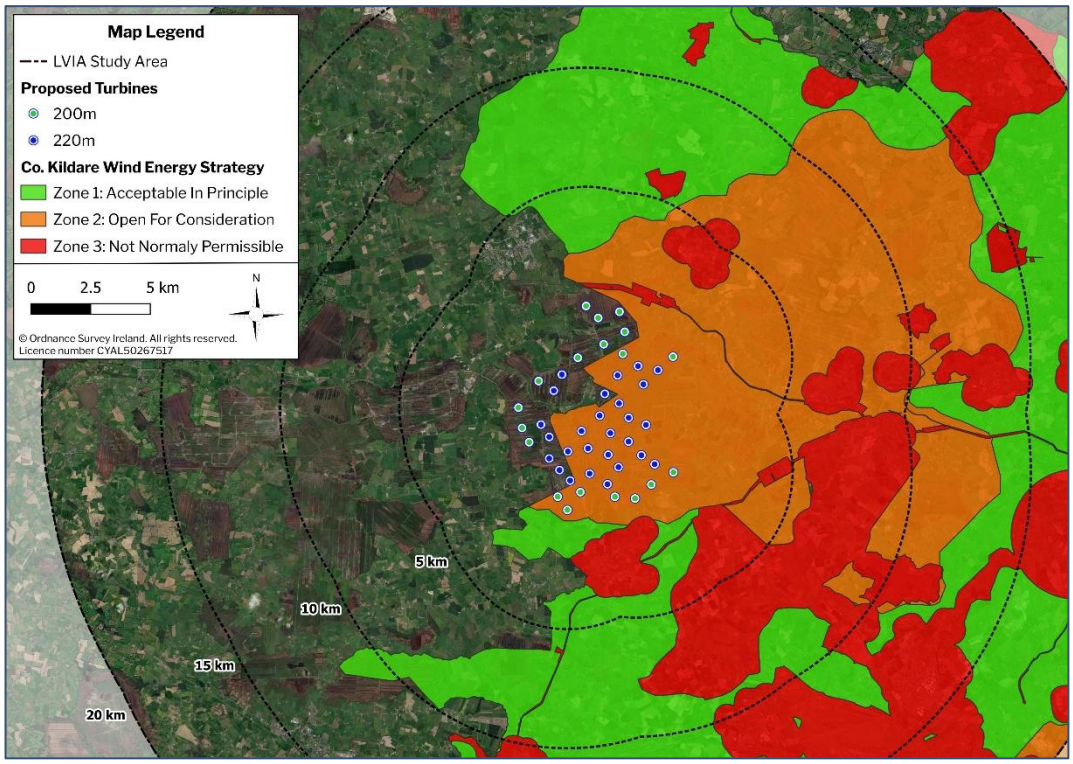


Figure 13-9 Co. Kildare Wind Energy Strategy

13.4.1.2.1 Areas of High Amenity/Areas Protected under International, European and National legislation

The KCDP designates Areas of High Amenity (AHAs) due to their *"outstanding natural beauty and/or unique interest value and are generally sensitive to the impacts of development"*. The KCDP sets out policies and objectives in relation to AHAs in Section 13.4. Relevant policies and objectives are included below:

> ***"LR P2:** Protect High Amenity areas/Areas Protected under International, European and National legislation identified in Section 13.4 of this Plan from inappropriate development and reinforce their character, distinctiveness and sense of place.*

LR O17: *(a) Control development that will adversely affect the visual integrity of Areas of High Amenity/ Areas Protected under International, European and National legislation by restricting the development of incongruous structures that are out of scale with the landscape within these Areas including advertising signs, hoardings, fencing etc., which create visual clutter and disrupt the open nature of these areas.*

(b) Require development in Areas of High Amenity/ Areas Protected under International, European and National legislation to employ high standards of design and creativity in mitigating impact on the environment.

LR O19: *Restrict the over development of the edge of the Curragh Plains and development that obtrudes on the skyline as viewed from the Plains*

In Section 13.4 of the KCDP, all AHAs are listed, relevant areas in the LVIA Study Area include: Dún Ailinne, the Curragh and Environs, and the Grand and Royal Canal Corridors. It is noted that these designations are not currently mapped by the KCDP. In line with the policies above, the Proposed Project is not located within these areas, however this chapter assesses and reports potential indirect impacts on the character of these landscape receptors, as well as visual effects on visual receptors visiting them.

13.4.1.2.2 Scenic Routes and Protected Views

The KCDP identifies 3 types of Scenic Routes and Protected Views in Section 13.5 of the KCDP: 'Scenic Routes, 'Hilltop Views', and 'Views to and from Bridges', identified in Tables 13.5, 13.6, and 13.7, respectively, within the KCDP. The KCDP also acknowledges 'Views to and from Waterways' and groups them under 'Views to and from Bridges' in Table 13.7.

Policies and objectives related to the Scenic Routes and Protected Views in Section 13.5.3 of the KCDP are as follows:

LR P3 *- Protect, sustain and enhance the established appearance and character of all important views and prospects*

LR O32: *Avoid any development that could disrupt the vistas or have a disproportionate impact on the landscape character of the area, particularly upland views, river views, canal views, views across the Curragh, views of historical or cultural significance (including buildings and townscapes), views of natural beauty and specifically those views listed in Tables 13.5 – 13.7 of this plan.*

LR O33: *Ensure developments (due to excessive bulk, scale, inappropriate siting or siting on steep slopes i.e. >10%) do not have a disproportionate visual impact or significantly interfere with or detract from scenic upland vistas when viewed from nearby areas, scenic routes, viewpoints and settlements.*

LR O34: *Control development that will adversely affect the visual integrity of distinctive linear sections of water corridors and river valleys and open floodplains.*

LR O35: *Encourage appropriate landscaping and screen planting of developments along scenic routes. Where scenic routes run through settlements, street trees and ornamental landscaping may be required.*

LR O38:

a. *To protect designated views of special amenity value identified in the Plan [see Tables 13.5 / Scenic Routes, Table 13.6: Hilltop Views, Views from Bridges / Table 13.7 Views from Bridges*

or other land use plans and ensure that development proposals do not have an undue detrimental impact on these views.

***b.** Development proposals will be assessed against their impact on the designated view if it falls within the foreground, middle ground or background of that view. New development should not harm, and where possible, should make a positive contribution to, the characteristics and composition of the designated views and their landmark elements.*

***c.** Development proposals that could affect a designated view should be accompanied by an assessment that explains, evaluates and justifies any visual impact on the view affected. The scoping process for determining whether a development proposal is likely to affect a designated view should be completed in consultation with Kildare County Council. The assessment should demonstrate that the proposal is consistent with the relevant objectives of this Plan. The assessment should form part of a landscape and visual impact assessment, design statement or townscape and visual impact assessment submitted with a planning application.*

***d.** Development in the foreground and middle ground of a designated view should not be overly intrusive, unsightly or prominent to the detriment of the view. Most designated views are seen in a 120-degree field of view. It is not expected that the view outside of this field of vision should be assessed unless specified by Kildare County Council.*

Designated views of special amenity value and views of local landmark buildings / other local views of significance will need to be considered in the scoping of views to identify the potential impacts of development proposals."

The designated scenic views and routes that fall within the LVIA Study Area are listed in Table 13-2, Table 13-3 and Table 13-4 below and are scoped in or out for further assessment in Section 13.5. There are 10 no. Hilltop Views, 14 no. Scenic Routes, and 44 no. Views to and from Bridges that fall within the LVIA Study Area. As these scenic amenity designations are of a visual nature, they are comprehensively addressed in Section 13.5 of this Chapter – Visual Baseline, where ZTV mapping and on-site appraisals determine the likely visibility of the Proposed Turbines from each Scenic Route, Bridge view and Hilltop view.

Table 13-2 Hilltop Views in County Kildare and LVIA Study Area ordered by distance to nearest Proposed Turbine

View Reference	Hilltop View	Distance to Nearest Proposed Turbine (km)	Direction to Nearest Proposed Turbine
KCDP HV-No. 14	Boston Hill	4.08	NW
KCDP HV-No. 17	Carbury Hill	5.09	S
KCDP HV-No. 05	Grange Hill	6.3	NW
KCDP HV-No. 06	Dunmurry Hill	6.32	NW
KCDP HV-No. 16	Crosspatrick Hill	6.61	W
KCDP HV-No. 04	Allen Hill	6.92	NW
KCDP HV-No. 03	Red Hill	7.81	N

View Reference	Hilltop View	Distance to Nearest Proposed Turbine (km)	Direction to Nearest Proposed Turbine
KCDP HV-No. 01	Hill at Ovidstown	15.1	SW
KCDP HV-No. 02	Hill at Killickaweeny	17.6	SW
KCDP HV-No. 15	Dún Ailinne	19.9	NW

Table 13-3 Scenic Routes in County Kildare and the LVIA Study Area

View Reference	As per Table 13.5 of the KCDP	Location
KCDP-SR 03	*"Views across Curragh Plains, north and south, along R445, from junction of R413/R445 to Colgan's Cut."*	Curragh
KCDP-SR 04	*"Views of the Curragh Plains including Little Curragh, County Road, L7034, L3006 and L6075, from Kildare Town boundary to Donnelly's Hollow, and R413 from Donnelly's Hollow to Kildare Town boundary."*	Curraghfarm, Strawhall, Curragh, Little Curragh
KCDP-SR 06	*"Views of Robertstown Countryside and Views across the Canal, along the R415, L7075 and L7078."*	Kilmeague, Grangeclare East & West, Mylerstown, Lowtown, Littletown, Robertstown East.
KCDP-SR 08	*"Views of Bogland Plains; L3002 from Kilmoney Cross Roads to Feighcullen Cross Roads at Boston Hill"*	Kilmoney North & South, Drinnanstown North & South, Boston Common and Feighcullen.
KCDP-SR 14	*"Views to and from Dunmurry Hill and Red Hill and Views of the Central Kildare Plains and Boglands on the R401 and adjoining Roads, from Thomastown Cross Roads to Kildare Town Boundary."*	Thomastown West, Guidenstown South, Grangeclare, Killeagh Commons, Redhills, Rahilla Glebe, Kildare, Crockanure Glebe and Southgreen.
KCDP-SR 15	*"Views of Plains of Kildare and West Central Boglands. Views to and from Newtown Hills (including county roads L5027, L50281, L5028, L1007)."*	Newtown, Grange, Nicholastown, Cappagh, Corocoranstown, Ballynakill, Ballyvoneen and Cloncurry.
KCDP-SR 16	*"Views of the Chair of Kildare and Views of Central Kildare Plains and Boglands from the L7004 and L70061."*	Punchersgrange, Blakestown, Conlanstown and Canonstown
KCDP-SR 17	*"Views of the Chair of Kildare and Views of Central Kildare Plains and Boglands on the R415, north 1.5km from the junction of R415/Mill lane."*	Dunbyrne, Milltown, Barnacrow, Baronstown West.
KCDP-SR 18	*"Views of the Grand Canal, River Slate and surrounding countryside from R414 at Rathangan from Rathangan Bridge to Spencer Bridge."*	Rathangan Demesne.
KCDP-SR 25	*"Views to the south of the open countryside; from L7081 Kilmeague crossroad to junction of L7081/L7078."*	Kilmeague, Coolaght, Mylerstown.

KCDP-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."*	Haggard, Calfstown, Mylerstown, Knockcor, Carbury, Coolcor, Ardkill, Balrinnet, Ballinderry, Nurney, Williamstown, Windmill, Freagh.
KCDP-SR 32	*"Views of Ballynafagh Lake along L7095 from junction with L1021 to junction with L5072."*	Ballynafagh and Curryhills
KCDP-SR 33	*"Views of Pollardstown Fen along L7032 from Fr. Moore's Well to Pollardstown Fen Carpark."*	Rathbride and Pollardstown
KCDP-SR 34	*"Views of the Bog of Allen and the Hills of Allen, Grange and Dunmurry along Roads R403 and R414 from Allenwood to Rathangan."*	Allenwood Middle, Allenwood South, Lullymore East & West, Barnaran, Drumsru, Cappanargid, Killyguire and Newtown.

Table 13-4 Views to and from bridges in Co. Kildare ordered by distance to nearest Proposed Turbine – Adopted from Table 13.7 in the KCDP

View Reference	Bridge	Location	Distance to Nearest Proposed Turbine (km)	Direction to Nearest Proposed Turbine
KCDP-GC 13	Hamilton's Bridge	Killinagh	1.41	W
KCDP-GC 14	Ticknevin Bridge	Ticknevin	2.0	S
KCDP-GC 23	Glenaree Bridge	Glenaree	2.13	NW
KCDP-GC 24	Rathangan Bridge	Rathangan	3.12	N
KCDP-GC 37	Spencer Bridge	Rathangan	3.33	NW
KCDP-GC 25	Wilson's Bridge	Kiltaghan North	4.53	N
KCDP-GC 36	Shee Bridge	Allenwood	4.8	NW
KCDP-GC 20	Pluckerstown Bridge	Pluckerstown	5.66	NW
KCDP-GC 22	Ballyteige Bridge	Ballyteige	5.76	W
KCDP-GC 19	Pim Bridge	Newpark	5.87	W
KCDP-GC 17	Skew Bridge	Ballyteige North	6.06	W
KCDP-GC 12	Bond Bridge	Derrymullen	6.14	W
KCDP-GC 18	Huband Bridge	Grangeclare West	6.33	W
KCDP-GC 26	Ummeras Bridge	Ummeras More	6.7	N
KCDP-GC 16	New Bridge	Littletown	6.89	NW

KCDP-GC 15	Harberton Bridge	Littletown	7.04	NW
KCDP-GC 11	Fenton Bridge	Lowtown	8.0	W
KCDP-GC 34	Milltown Old Bridge	Milltown	8.08	NW
KCDP-GC 21	Milltown Bridge	Milltown	8.57	NW
KCDP-GC 10	Binn's Bridge	Robertstown	9.15	W
KCDP-GC 01	Macartney's Bridge	Coolsickin or Quinsborough	9.21	N
KCDP-RB 08	Baylough Bridge	Monasterevin	10.5	NE
KCDP-GC 28	High Bridge	Old Grange	10.7	N
KCDP-RB 06	Pass Bridge	Passlands	11.2	N
KCDP-GC 09	Bonynge Bridge	Mouds	11.2	W
KCDP-RB 10	Monasterevin Bridge	Monasterevin	12.0	N
KCDP-GC 35	Clogheen Bridge	Moan	12.5	N
KCDP-GC 08	Cock Bridge	Goatstown	13.0	W
KCDP-RC 13	Moyvally Bridge	Moyvally	13.4	S
KCDP-RL 09	New Bridge	Droichead Nua (Newbridge)	13.7	NW
KCDP-RL 08	Victoria Bridge	Moortown/Yeomanstown	15.1	W
KCDP-GC 06	Landenstown Bridge	Landenstown	15.5	W
KCDP-RL 07	Carragh Bridge	Halverstown/Gingerstown	16.0	W
KCDP-GC 05	Digby Bridge	Aghpaudeen	16.5	W
KCDP-RL 10	Athgarvan Bridge	Rosetown/Athgarvan	16.8	NW
KCDP-RL 05	Alexandra Bridge	Abbeyland	17.6	W
KCDP-GC 07	Connaught Bridge	Newtown	17.9	W
KCDP-RL 06	Millicent Bridge	Castlesize	18.1	W
KCDP-GC 39	Leinster Aqueduct	Sallins	18.1	W
KCDP-GC 33	Limerick Bridge	Naas	18.3	W
KCDP-GC 32	Ploopluck Bridge	Naas	19.2	W
KCDP-GC 30	Tandy Bridge	Naas	19.6	W
KCDP-GC 31	Abbey Bridge	Naas	19.8	W

KCDP-RL 11	Kilcullen Bridge	Kilcullen	20.0	NW

13.4.1.3 Offaly County Development Plan 2021-2027

The OCDP sets out policies on landscape in *Chapter 4: Biodiversity and Landscape*. *Section 4.16* and *Section 4.17* contain the following general landscape policies and objectives:

> *"**BLP-38** It is Council policy to protect and enhance the county's landscape, by ensuring that development retains, protects and where necessary, enhances the appearance and character of the county's existing landscape.*
>
> ***BLP-39** It is Council policy to seek to ensure that local landscape features, including historic features and buildings, hedgerow, shelter belts and stone walls, are retained, protected, and enhanced where appropriate, so as to preserve the local landscape and character of an area, whilst providing for future development.*
>
> ***BLP-40** It is Council policy to ensure that consideration of landscape sensitivity is an important factor in determining development uses.*
>
> ***BLP-41** It is Council policy to require a Landscape/Visual Impact Assessment to accompany significant proposals, located within or adjacent to sensitive landscapes. This assessment will provide details of proposed mitigation measures to address likely negative impacts."*
>
> ***BLO-24** It is an objective of the Council to have regard to the Landscape Sensitivity Areas in Tables 4.18, 4.19 and 4.20 in the consideration of planning applications.*
>
> ***BLO-25** It is an objective of the Council to protect skylines and ridgelines from development where such developments will create significant visual intrusion."*

All policies cited above have been considered in the design and assessment of the Proposed Project in this LVIA. The following subsections address the specific elements covered by this planning policy including the designations of the designated Key Scenic Views and Prospects, Amenity Routes as well as AHAs.

Landscape Character Areas

A landscape character assessment has not yet been conducted or published for County Offaly. Consequently, County Offaly does not have designated LCAs. Therefore, MKO has prepared an 'Offaly LCA' for the area of County Offaly within the LCA Study Area (15km from the Proposed Turbines for assessment of landscape character). Part of the Proposed Wind Farm is located within this LCA. Its extent, key characteristics, landscape value, susceptibility and resulting sensitivity have been established through desk study, review of the policies and landscape designations contained in the OCDP, and site visits. The Offaly LCA is discussed in *Appendix 13-2* and its potential landscape effects are assessed in Section 13.4.5.

13.4.1.3.2 *Landscape Sensitivity*

Section 4.14.1 of the OCDP describes landscape sensitivity as *"the measure of its ability to accommodate change or intervention without suffering unacceptable effects to its character and values."* The sensitivity of the landscapes of County Offaly varies and is thereby classified within the following sensitivity classes: 'Low', 'Moderate' and 'High' Sensitivity and are shown in Figure 4.22 of the OCDP.

The part of the Proposed Wind Farm site that is located within County Offaly is located within an area designated of 'Moderate' Sensitivity, as shown in Figure 13-6. Table 4-19 of the OCDP describes

'Moderate Sensitivity Areas' as *"areas can accommodate development pressure but with limitations in the scale and magnitude. In this category of sensitivity, elements of the landscape can accept some changes while others are more vulnerable to change."*

The OCDP continues to note the following sensitivities in relation to Moderate Sensitive Areas (bold text emphasis by MKO):

> *"...some of these cutaway bogs may be appropriate for other sensitively designed and located developments including renewable energy (**wind farms**, biomass crops) and/or industrial use."*

Areas of High Amenity

The OCDP defines 'AHAs as *"areas worthy of special protection / enhancement due to their uniqueness and scenic / amenity value."* Table 4.17 in Section 4.13 in the OCDP designates 13 no. AHAs within the County. AHA's located within the LVIA Study Area are listed below.

- **Waterways and Wetlands:** Grand Canal;
- **Upland Areas:** Croghan Hill; and
- **Eskers**: Other Eskers

Section 4.16 and Section 4.17 of the OCDP sets out the county's policy objectives for preservation and enhancement for AHAs. Objectives relevant to the Proposed Project are set out below:

> ***"BLP-35** - It is Council policy to protect and preserve the county's Areas of High Amenity namely the Slieve Bloom Mountains, Clonmacnoise Heritage Zone, Durrow High Cross, Abbey and surrounding area, the River Shannon, Lough Boora Discovery Park, Grand Canal, Croghan Hill, Raheenmore Bog, Pallas Lake, Clara Bog, Clara eskers, Eiscir Riada and other eskers. Notwithstanding the location of certain settlements, or parts of, for which there are settlement plans (Towns, Villages, Sráids), within the Areas of High Amenity, it is not the intention of this policy to hinder appropriate sustainable levels of development (as set out in the plans and subject to proper planning).*
>
> ***BLP-36** - It is Council policy, to ensure that issues of scale, siting, design, and overall compatibility (including particular regard to environmental sensitivities) with a site's location within an Area of High Amenity are of paramount importance when assessing any application for planning permission. The merits of each proposal will be examined on a case-by case basis.*
>
> ***BLO-22** It is an objective of the Council to ensure that new development, whether individually or cumulatively, does not impinge in any significant way on the character, integrity, and distinctiveness of or the scenic value of the Areas of High Amenity listed in Table 4.17. New development in Areas of High Amenity shall not be permitted if it:*
>
> - *Causes unacceptable visual harm;*
> - *Introduces incongruous landscape elements; and*
> - *Causes the disturbance or loss of (i) landscape elements that contribute to local distinctiveness; (ii) historic elements that contribute significantly to landscape character and quality such as field or road patterns; (iii) vegetation which is a characteristic of that landscape type and (iv) the visual condition of landscape elements."*

This chapter assesses and reports potential indirect impacts on the character of these AHAs within the LVIA Study Area (Croghan Hill and the Grand Canal), as well as visual effects on visual receptors visiting them.

In the OCDP, "*esker systems"* are identified as AHAs and are protected landscape receptors due to their high geological value and sensitivity. Eskers are glacial landforms that also hold historic value as elevated pathways across the flat, boggy midland landscape, that have been historically used for the extraction of aggregates. Thus, whilst esker systems are considered as high amenity areas in the OCDP, their key sensitivities are not derived from their visual appearance; moreover, they are not generally considered landscape features of high tourism or recreational value. Esker systems provide elevated vantage points permitting open views across the flat landscape. Therefore, they were used for viewpoint selection in this LVIA.

An unnamed 'other esker' AHA sits adjacent to the Project Site boundary to the north of the Proposed Wind Farm. This is further discussed in Section 13.4.2.1.1.

Peatland & Nature Corridors

OCDP Variations, which came into effect on 20th July 2026 have replaced the term 'Wilderness Corridors' to 'Peatland & Nature Corridors' and have them identified on Figure 4.9 (b) in the OCDP (as varied) – reproduced in Figure 13-10 below. Sect6ion 4.17 of the OCDP (as varied) notes that:

> *"**BLO-28** It is an objective of the Council to protect the County's 'Peatland and Nature Corridors' as shown in Figure 4.9(b) in such a manner that any future development therein is of an appropriate scale and design that does not give rise to significant adverse impacts on the environment, biodiversity & habitats, landscape character, or visual amenity and can integrate effectively into its surroundings; to strictly direct large scale energy production projects, most particularly wind farms, onto areas that are located outside of the 'Peatland and Nature Corridors', and to integrate routes identified in the Midlands Cycling Destination - Offaly Network Map and the National Cycle Network within the corridors."*

Section 13.9.13 of the OCDP (as varied) continues to note that when assessing planning applications for wind energy developments the Council will have regard to (topics relevant to LVIA and Peatland & Nature Corridors have been extracted and quoted below):

- *"Visual and cumulative impact of the proposal with respect to protected views, scenic routes and designated scenic landscapes and 'Peatland and Nature Corridors' as detailed in Chapter 4 of this Plan;*
- *Impact on the 'Peatland and Nature Corridors' (Objective BLO-28) in terms of tranquillity, landscape, options for amenity and tourism development, biodiversity protection and enhancement, and carbon sequestration."*

These are addressed and assessed in Section 13.8 Likely Significant Landscape and Visual Effects.

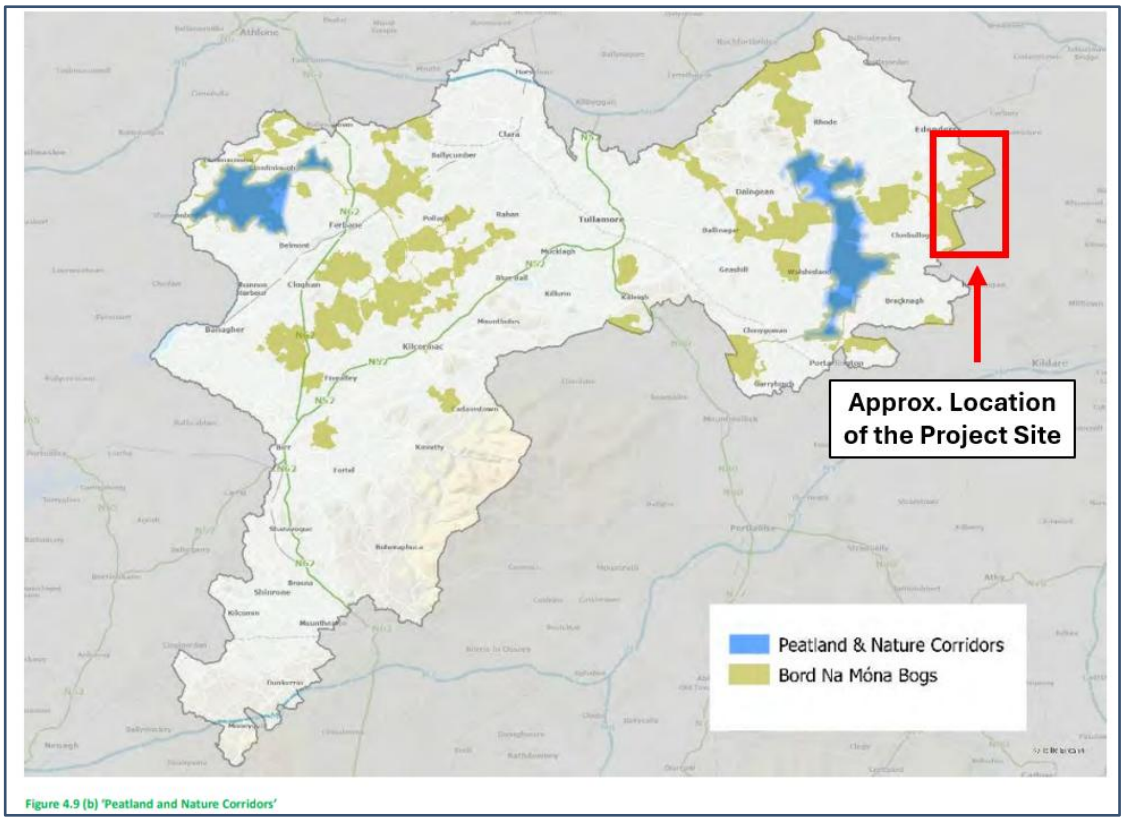


Figure 13-10 Extract from OCDP (as varied) - Figure 4.9(b) 'Peatland and Nature Corridors'

13.4.1.3.3 Green Infrastructure

Section 4.10 of the OCDP defines green infrastructure as:

> *"...integrated and interconnected networks of green space and water capable of delivering ecosystem services and quality of life benefits to people. [Green infrastructure] includes features such as parks, gardens, green roofs, green walls, rivers, lakes, canals, peatland, wetland landscapes, uplands, greenways, blueways, woodlands and farmlands in our countryside and settlements."*

The OCDP further notes that green infrastructure provides a wide variety of functions, including improving attractiveness of place and local amenity provision. Green infrastructure in County Offaly includes:

> *"Areas of High Amenity in the county, woodlands and boglands connected by walking routes, eskers, riparian ways, Bord na Móna rail links and the Grand Canal."*

County Offaly's strategic level green infrastructure is shown on Figure 4.13 of the OCDP, this map is reproduced below in Figure 13-11.

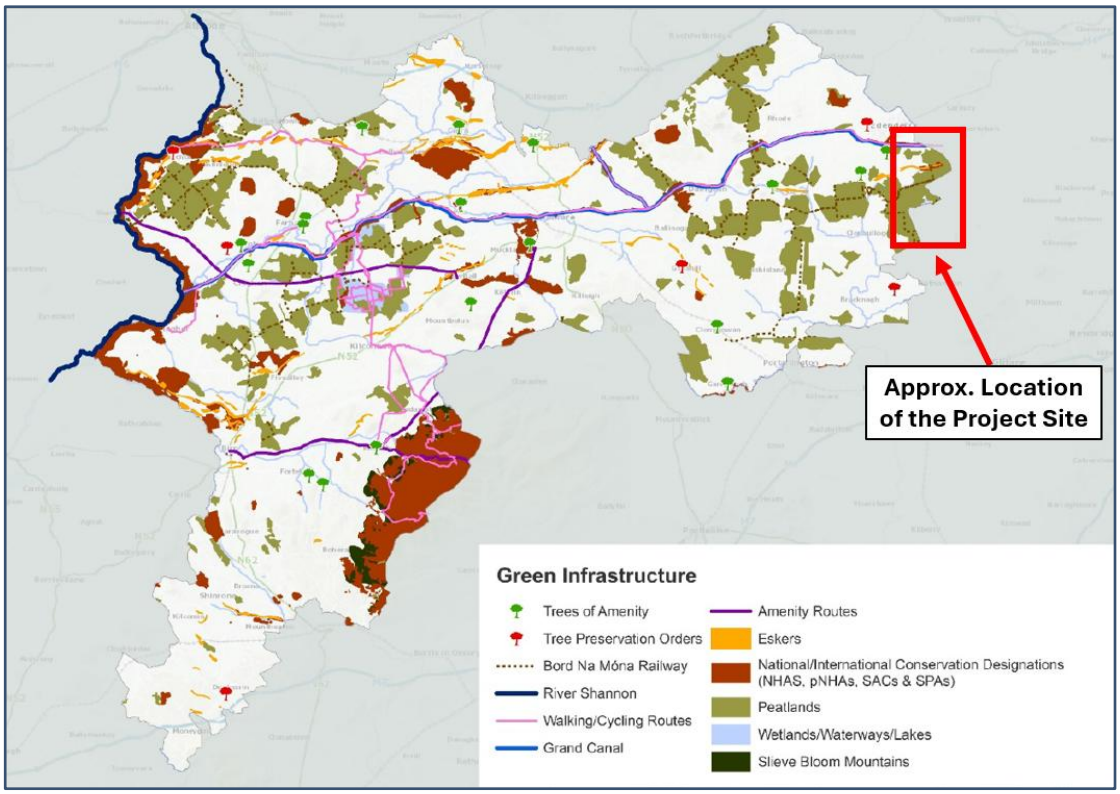


Figure 13-11 Offaly CDP Figure 4.13 County Offaly's Strategic Green Infrastructure

A number of constituent elements of green infrastructure are located within, and adjacent to, the Project Site. The Proposed Wind Farm itself consists predominantly of peatlands, and BnM railway (although now decommissioned), all of which are elements of green infrastructure.

The OCDP contains the following relevant policy related to green infrastructure:

> ***"BLP-28** It is Council policy to protect existing green infrastructure within the county, to provide additional green infrastructure where possible and to encourage green infrastructure to be spatially connected to facilitate the extension or establishment of ecological corridors.*
>
> ***BLP-30** It is Council policy to integrate the provision of green infrastructure with infrastructure provision and replacement, including walking and cycling routes, as appropriate, while protecting natural heritage."*

The OCDP contains the following polices in relation to peatlands:

> ***"BLP-14** - It is Council policy to protect the county's designated peatland areas and landscapes, including any historical walkways through bogs and to conserve their ecological, archaeological, and cultural heritage and to develop educational heritage.*
>
> ***BLP-16** It is Council policy to support the provision of outdoor pursuits, walking and cycling routes through the county's peatlands and network of industrial railways linking the River Shannon Blueway, Royal Canal, Grand Canal, and Barrow Blueway across the midlands as outlined in the 'Major Cycling Destination in the Midlands of Ireland –Feasibility Study 2016', which is a priority of the 'Outdoor Recreation Plan State Lands and Waters' (2017)".*

Public Rights of Way

Chapter 6 of the OCDP recognises 5 no. Public Rights of Way which are of *"important amenity"*. 2 no. of these falls within the LVIA Study Area: The Grand Canal, and the Slí na Sláinte: Clonbullogue. As

these scenic amenity designations are of a visual nature, they are comprehensively addressed in Section 13.5 of this Chapter – Visual Baseline, where ZTV mapping and on-site appraisals determine the likely visibility of the Proposed Turbines from these receptors.

13.4.1.3.4 Landscape Policy Pertaining to Wind Energy Development

County Offaly's policy on wind energy can be found in the WES of the OCDP (hereafter 'OWES'), as well as Chapter 3 – Climate Action and Energy of the OCDP. It is an objective of the OWES (p.2) to:

> *"Identify key areas within the county that are 'Open for Consideration for Wind Energy Developments' or 'Unsuitable for Wind Energy Developments' based on wind speed, access to the electricity grid and substations, and avoidance of adverse impacts on the landscape and designated sites."*

The WES for the OCDP was updated and amended in August 2021 as per the OCC's Chief Executive's Report on the Material Alteration Consultation Stage of the OCDP'. The designations of the OWES were arrived at through 'sieve mapping' analysis of the key environmental, landscape, technical and economic criteria, designating two types of areas within the county, as discussed within the OWES (seen below in Figure 13-12):

- Areas Open for Consideration for Wind Energy Development;
- Areas Deemed Not Suitable for Wind Energy Development.

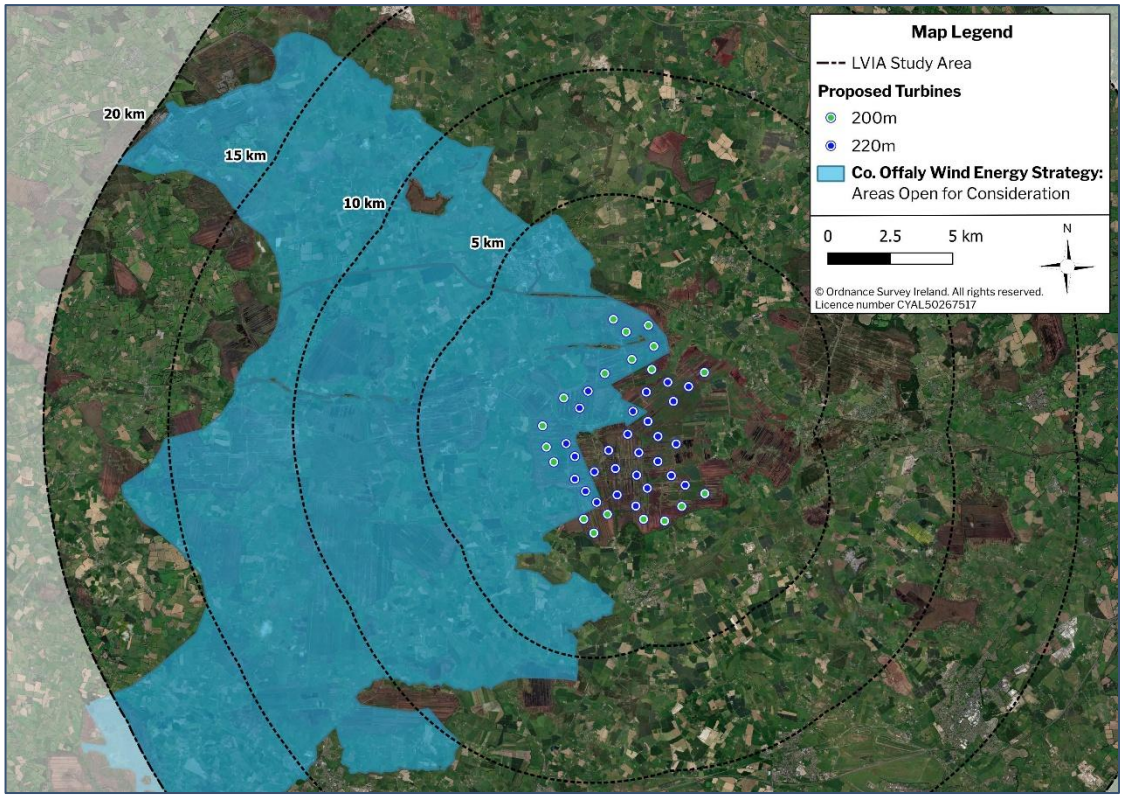


Figure 13-12 Co. Offaly Wind Energy Strategy

The part of the Project Site located in Co. Offaly is located within an area designated in the OCDP 2021-2027 as 'Open for Consideration' for wind energy development, defined in the OWES as:

> ***"Areas Open for Consideration for Wind Energy Developments** - These areas are open for consideration for wind energy development as these areas are characterised by low housing densities, do not conflict with European or National designated sites, and have the ability by virtue of their landscape characteristics to absorb wind farm developments".*

The 'Areas Open for Consideration' are further subdivided into 12 potential wind energy areas identified in Map No. 7 of the OWES (see below in Figure 13-13).

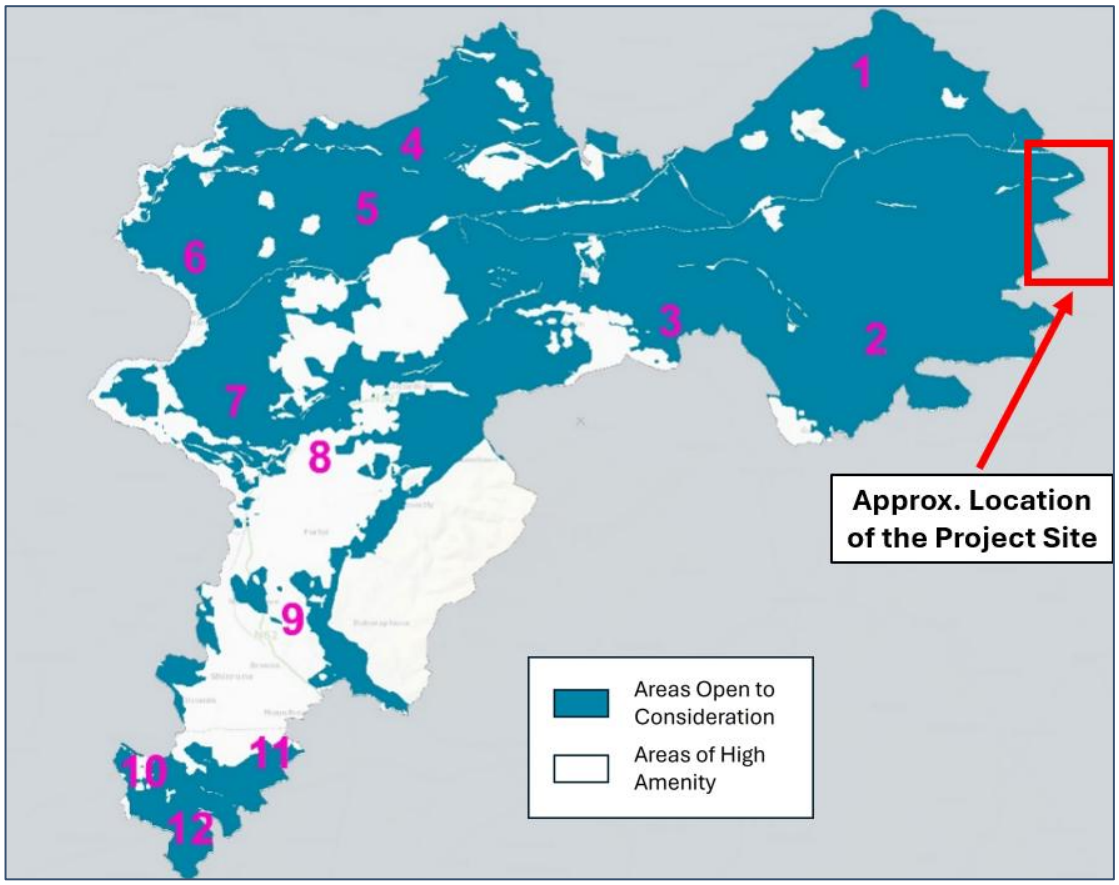


Figure 13-13 Extract of Map 7 'Potential Wind Energy Areas (12)' from Co. Offaly's WES 2021-2027

As can be seen in Figure 13-13 above, the Proposed Turbines area located within Potential Wind Energy *Area 2 – "Area generally from Cloneygowan to Clonbullogue"*. This area has the following description in Table 3 of the WES:

> *"This area is characterised by a predominantly flat and in places slightly undulating landscape with a number of significant tracts of peatlands and transitional woodlands and coniferous forestry, in particular in areas around Walsh Island, Bracknagh and Clonbullogue, along with improved agricultural land, large landholdings and a dispersed pattern of rural housing. The extensive tracts of flat peatlands in this area offer potential to accommodate a wind farm layout with depth, comprising a grid formation giving a better sense of balance and visual cohesion. In addition, there exists a precedent of windfarm and renewable energy projects developed in the area such as Mount Lucas windfarm while other projects have been deemed suitable and are awaiting commencement of development. There exists both good wind speeds and electricity infrastructure in the area."*

The Proposed Turbines are located on a cutaway peatland area in County Offaly. Chapter 3 of the OWES further outlines the county's policy relating to peatlands and wind energy developments, stating that:

> *"**CAEP-16** It is Council policy to support the preparation of a comprehensive after use framework plan for the industrial peatlands and associated workshops, office buildings and industrial sites in the midlands and adjacent parts of the north-west and southern regions, which meets the environmental, economic, and social needs of communities in these areas, and also demonstrating leadership in climate change mitigation and land stewardship. The Council recognises that the industrial peatlands in the midlands are a significant resource will*

transition to after uses ranging from amenity, tourism, biodiversity services, 'wild areas', flood management, climate mitigation, energy development, industry, education, conservation and many more."

13.4.1.3.5 Key Scenic Views, Prospects and Key Amenity Routes

Section 4.14.2 of the OCDP notes that there a *"number of valuable views and prospects which offer a very attractive cross-sectional view and overall impression of differing landscapes",* to which the Council recognises the need to *"protect the character of the county by protecting Key Scenic Views, Prospects and Key Amenity Routes within the county".* Policies and objectives related to the Key Scenic Views, Prospects and Key Amenity Routes in the OCDP are as follows:

> *"**BLP-43** It is Council policy to require a Landscape/Visual Impact Assessment to accompany significant proposals that are likely to significantly affect Key Scenic Views and Prospects as listed in Table 4.21 and Key Amenity Routes as listed in Table 4.22.*
>
> ***BLO-26** It is an objective of the Council to protect Key Scenic Views and Key Prospects contained in Table 4.21, and Key Amenity Routes as listed in Table 4.22 from inappropriate development.*
>
> ***BLO-27** It is an objective of the Council to ensure that Proposed Projects take into consideration their effects on views from Key Scenic Views and Prospects and Key Amenity Routes and are designed and located to minimise their impact on this views and prospects."*

These Key Scenic Views, Prospects and Key Amenity Routes located within the LVIA Study Area are set out in Table 13-5 below. As these scenic amenity designations are of a visual nature, they are comprehensively addressed in Section 13.5 of this Chapter – Visual Baseline, where ZTV mapping and on-site appraisals determine the likely visibility of the Proposed Turbines from each designation.

Table 13-5 Designated Offaly Key Scenic Views and Prospects – adopted from OCDP 2021-2027 Table 4.21

View No.	View From	View To	Distance to nearest Proposed Turbine (km)	Direction to nearest Proposed Turbine
OCDP-SV 09	*"Townlands of Grovesend and Coole"*	*"South to bog lands"*	14.7	E
OCDP-SV 08	*"Townlands of Barnan, Kilduff, Old Croghan, Croghan Demesne, Down"*	*"Views towards Croghan Hill and bog lands"*	15.0	E
OCDP-SV 07	*"Road No. L-01018 in the townlands of Cannakill and Croghan Demesne"*	*"Slieve Bloom Mountains"*	16.9	E

13.4.1.3.6 Archaeological and Historical Landscapes

Archaeological and historical landscapes in County Offaly are designated under AHAs in the OCDP. Table 4.20 of the OCDP states that *"County Offaly is rich in landscapes of archaeological and historic interests ranging from large ecclesiastical sites such as Clonmacnoise and Durrow Abbey to archaeological features such as Durrow High Cross".*

These landscapes, which "*primarily include Clonmacnoise, Durrow, Killeigh, Leamonaghan and Rahan",* are designated as *"highly sensitive to new developments, which could potentially damage the historical character and the cultural and social importance of the area".* None of these sites are located within the LVIA Study Area and are therefore not considered further in this LVIA Chapter.

13.4.1.4 Landscape Policy within other surrounding Counties

While the Proposed Project is located in Co. Kildare and Co. Offaly, other Counties, including Counties Laois, Meath and Westmeath are located in the LVIA Study Area. Therefore, relevant designations pertinent to the landscape and visual impact assessment conducted in this chapter are identified and listed in the below sub-sections.

13.4.1.4.1 *Landscape Character Areas*

The impact assessments on designated LCAs (See *Appendix 13-2*) uses an LCA Study Area of 15km from the Proposed Turbines (as detailed previously in Section 13.2.2).

Co. Westmeath LCAs

County Westmeath is located outside the LCA Study Area, and therefore, this LVIA does not comprise an impact assessment of LCAs in County Westmeath.

Co. Meath LCAs

MCDP 2021-2027 utilises the 2007 County Meath Landscape Character Assessment (MLCA). It identifies and designates 4 no. LCT's and 20 no. distinct LCAs. There are 4 no. LCAs within County Meath that fall within the LCA Study Area. These are listed below and are discussed further in Section 13.4.5.2.

M-LCA 6 – Central Lowlands is located 13.7km north from the nearest Proposed Turbine (T30). This LCA is designated as Medium Sensitivity in the MLCA.

M-LCA 13 – Rathmoylan Lowlands is located approximately. 15km 14.8km north from the nearest Proposed Turbine (T30). This LCA is designated as High Sensitivity in the MLCA.

M-LCA 14– Royal Canal is located 13km north from the nearest Proposed Turbine (T30). This LCA is designated as Medium Sensitivity in the MLCA.

M-LCA 15 – South West Lowlands is located 8.3km north from the nearest Proposed Turbine (T32). This LCA is designated as Medium Sensitivity in the MLCA.

Co. Laois LCAs

Chapter 11 of the LCDP 2021-2027 identified seven designated LCAs in County Laois. 3 no. County Laois LCAs fall within the LCA Study Area: Peatlands, Lowland Agricultural Areas, and Urban Fringe Areas. These are not numbered in the LCDP, therefore, for the purpose of this LVIA, they have been numbered – 1, 2, and 3 as below:

LCA 1 – Lowland Agricultural Areas is located 8.6km southwest of the nearest Proposed Turbine (T14). This LCA is designated as Low Sensitivity in Table 11.6 of the LCDP.

LCA 2 – Peatland Areas is located approximately 17km southwest of the nearest proposed turbine (T14) and is designated as High Sensitivity in Table 11.6 of the LCDP. As the Peatland Areas LCA falls outside the 15km Landscape Character Study Area, it is scoped out of the LCA preliminary assessment.

LCA 3 – Urban Fringe Areas falls within the 15km Landscape Character Study Area. Urban Fringe Areas are designated as Low Sensitivity in Table 11.6 of the LCDP.

13.4.1.4.2 Sensitive Landscape Designations

Co. Westmeath - High Amenity Areas

The WCDP designates five lake landscapes as HAAs, none of which fall within the LVIA Study Area, therefore HAAs in Co. Westmeath have been scoped out from further assessment.

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"*

The Royal Canal enters the LVIA Study Area to the north, set-back distance (13km from the nearest Proposed Turbine T30). This receptor is discussed in Section 13.8 Likely Significant Landscape and Visual Effects. No other landscape receptors are located within the LVIA Study Area and are therefore not considered further in this Chapter.

Co. Laois – Sensitive Areas

The LCDP states that the Landscape Character Assessment for County Laois identifies specific areas characterised by sensitive landscapes, noting that:

> *"Sensitive areas include upland areas, visually open and expansive areas and areas in the vicinity of natural heritage or built heritage assets or scenic views."*

The landscapes of 'High' sensitivity include *"Peatlands, River Corridors and Lakes, Mountain Areas, European Sites".* The closest area of 'High Sensitivity' is an area of peatland, located 17km southwest of the nearest Proposed Turbine (T14). Given the set-back distance, and as there is primarily no theoretical visibility within this area, this peatland has been scoped out of further assessment, as Significant landscape effects are not likely to occur.

Co. Laois – Historic Landscapes and Demesnes

The LCDP recognises the landscape value of historic country houses, gardens and designed demesne landscapes within County Laois. Section 12.3.4 of the LCDP identifies Emo Court and its associated demesne landscape as one of the two most notable historic houses and designed landscapes in the county. The LCDP policy objective TM 11 specifically requires consideration of views to and from Emo Court.

Emo Court is located approximately 20 km from the nearest Proposed Turbine. Site visibility appraisals determined that, given the separation distance and the dense mature vegetation within Emo Park, where the Proposed Turbines are visible, Significant visual effects are not likely to occur. Therefore, this receptor has been scoped out of further assessment.

13.4.1.4.3 Designated Scenic Views and Routes

Co. Westmeath – Protected Views and Scenic Routes

Section 13.26 of the WCDP contains policies and objectives relating to Co. Westmeath's 36 no. protected views. In relation to protected views, the WCDP states:

> *"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."*

1 no. Co. Westmeath protected view, WCDP-PV 14, and 1 no. scenic route along the Royal Canal corridor fall within the LVIA Study Area. The WCDP-PV 14 Protected View is of 'County' importance and is described in the WCDP as:

> *"Views of Sculpture along the M6; The foreground focus of this view is the roadside sculpture by the motorway. Another important feature is the flatness of the open landscape off to the southwest (mostly bog) which allows for a distant horizon view that draw attention to dramatic skies. Croghan Hill can be seen in the distance on a clear day and is an important feature of the view."*

Section 13.26 of the WCDP identifies the 'Royal Canal Way' as a scenic route and is considered a designated View and Prospect. As these designations are of a visual nature, they are addressed in the Section 13.5: Visual Baseline of this Chapter where ZTV mapping and on-site appraisals determine the likely visibility of the Proposed Turbines within this protected view and scenic route.

Co. Meath – Protected Views and Prospects

In relation to scenic amenity, Section 8.18 of the MCDP states that:

> *"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."*

An MCDP policy objective relating to scenic views and prospects states:

> *"It is a policy objective of the Council:*
>
> *HER OBJ 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 those located in the LVIA Study Area are listed below in Table 13-6. As the scenic amenity designations listed below in Table 13-6 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.

Table 13-6 County Meath Protected Views and Prospects in the LVIA Study Area

View Reference	Direction	Location	Description	Significance	Distance to nearest Proposed Turbine (km)	Direction to nearest Proposed Turbine
MCDP-PV 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	14.9	S
MCDP-PV 83	South East and North West	*"Clonard Blackshade"*	*"Blackshade Bridge over the Royal Canal and with views along the canal in both directions."*	Local	16.6	S
MCDP-PV 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	17.0	SW
MCDP-PV 54	East and West	*"On R161 at Royal Canal"*	*"Views along Royal Canal to the east and west at intersection with R161."*	Regional	17.1	S
MCDP-PV 55	North	*"On Stoneyford Bridge on county road*	*"View to middle distance along the River Boyne. Typical lowland*	Local	17.2	S

View Reference	Direction	Location	Description	Significance	Distance to nearest Proposed Turbine (km)	Direction to nearest Proposed Turbine
		between Blackshade and Moyfin"	*countryside. Very little development visible."*			

Co. Laois – Protected Views and Prospects

No designated scenic views or prospects within County Laois fall within the LVIA Study Area and are therefore not considered further in this LVIA Chapter.

13.4.2 Landscape Character of the Project Site

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

The Project Site was visited multiple times during the years 2020 - 2026 where an assessment of topography, drainage, landcover and land use was conducted. Information gathered during these visits has informed the following descriptions of the Project Site.

This section includes aerial images captured by a drone which are useful tools to illustrate the character, scale, context, and constituent parts of the landscape of the Project Site. However, it is important to highlight that these aerial images do not represent the views of visual receptors that would be experienced at ground level.

13.4.2.1.1 *Proposed Wind Farm Overview*

The Proposed Wind Farm occupies a large expanse of open and uninhabited peatland straddling the border of County Kildare and County Offaly, it is situated within the characteristically flat, low-lying landscape of the Irish midlands. As shown in Figure 13-14 below, the Proposed Wind Farm site is a collection of bogs with some tracts of forestry, interspersed with tracts of other forestry plantation and occasional small intermittent areas of farmland which are not within the Project Site.

The topography across the Proposed Wind Farm is predominantly level, with negligible variation in ground elevation across the surface of cutover peatland excepting drainage ditches, artificial berms and access tracks, this is consistent with the Flat Peatland landscape character type identified in the WEDG 2006 and Draft WEDG 2019. The absence of significant landform within the Proposed Wind Farm contributes to the open, unenclosed character of the landscape within the Proposed Wind Farm itself.

The peatlands were originally raised bogs which are typically found in these lowland landscapes of the Irish midlands. The current character of these peatlands forming the Proposed Wind Farm is strongly influenced by historic industrial peat extraction across all bogs where infrastructure is proposed. Due to historical peat extraction and ancillary activities which took place, the Proposed Wind Farm site has been substantially degraded and now resembles a cutover peatland landscape. Industrial elements contribute to the industrialised landcover and character of the landscape. As a result of historic peat extraction, the Proposed Wind Farm site is generally at a lower elevation than the surrounding

landscape beyond the Project Site boundary due to the removal of peat during many years of commercial extraction.

Industrial scale peat extraction has ceased across the Proposed Wind Farm site, within these areas natural revegetation is occurring with a variety of ground cover types establishing including scrub vegetation, which commonly colonises along infrastructure corridors such as drains, proposed site access roads, and extraction plot boundaries where peat banks form elevated berms. As shown in the images below (Plate 13-6, Plate 13-7, Plate 13-8), the outer perimeter of the peatlands within the Proposed Wind Farm are ringed by mature boundary vegetation which historically acted as a physical and visual buffer between historic peat extraction activity and receptors within the surrounding landscape.

Map Legend

- Project Site

Proposed Turbines

- 200m
- 220m
- Proposed Met Masts
- Proposed Telecommunications Tower
- Proposed Relay Telecommunications Mast
- Proposed Onsite 110kV GIS Substation
- Proposed Onsite 220kV GIS Substation
- Proposed non-turbine surface infrastructure

0 1 2 km

N

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Plate 13-4 Drone image captured in December 2025 showing landscape context from the centre of the Proposed Wind Farm showing a view facing southeast over Blackriver Bog and Banaran Bog – A large and expansive area of uninhabited cutover peatland.

As shown in Plate 13-5 below, the Proposed Wind Farm is already influenced by wind energy development. The existing Cushaling Wind Farm occupies a linear area of farmland which bisects the northern portion of the Proposed Wind Farm, note that the existing Cushaling Wind Farm does not overlap with the Project Site.



Plate 13-5 View southeast from Glashabaun Bog in the north of the Proposed Wind Farm, showing a degraded cutover peat landcover, a mature treeline at the perimeter of the Proposed Wind Farm, and two of the existing Cushaling turbines. Image captured in December 2025.

The lands of the Proposed Wind Farm are changing following the cessation of peat extraction activities in 2020. This includes natural revegetation of the landscape. PCAS is completed at Lodge Bog and the measures include hydrological management, extensive re-wetting and drain blocking, modifying

outfalls, creation of berms etc. to support the establishment of a mosaic of wetland, peatland and woodland habitats. Over time, these measures will contribute to a more vegetated landscape character than the predominantly bare cutaway peatland that currently characterises Lodge Bog. These measures are gradually reshaping the receiving landscape from bare industrial cutaway towards a wetter, naturally vegetated character of wetland, peatland and woodland habitats. Plate 13-6 below shows where the PCAS works are now complete at Lodge Bog (no overlap with Proposed Project infrastructure).



Plate 13-6 Drone image captured in June 2026 looking southeast over Lodge Bog from off R-414 Regional Road.

The R414 regional road crosses the eastern extent of the Proposed Wind Farm, with a disused level crossing point at this location where natural revegetation has occurred, as shown in Plate 13-7 below.



Plate 13-7 View captured in December 2025 from a historic level-crossing at the R414 regional road, looking west over Barnaran Bog in the east of the Proposed Wind Farm showing a shrubbery and forested landcover along the perimeter of the Proposed Wind Farm.

The open, flat character of the landscape in the Proposed Wind Farm provides largely uninterrupted views across the cutover peatland surface from within the Proposed Wind Farm itself. Boundary vegetation exists around the perimeter of the Proposed Wind Farm, as shown in the drone image in Plate 13-8 below, and serves to provide a visual barrier and visual screening toward the peatlands within

the Proposed Wind Farm from the surrounding road network and residential receptors. This boundary vegetation is a notable feature in the visual assessment of the Proposed Project.



Plate 13-8 Drone image captured in December 2025 facing northwest looking over the Project Site from near R-414 Regional Road.

Part of the Lullymore Heritage and Discovery Park is located at the eastern extent of Lullymore Bog, outside the Project Site. The Science and Biodiversity Observation Cabin which is part of the Discovery Parkcan be seen in Plate 13-9 below.

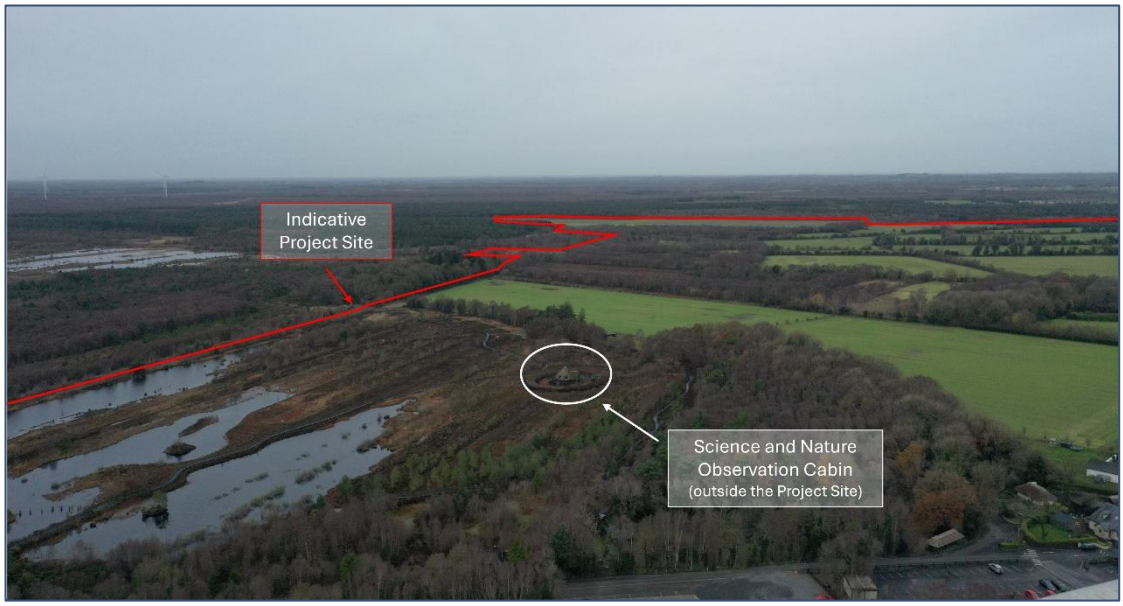


Plate 13-9 Drone image captured in December 2025 over north-facing view over Lullymore Bog with the Lullymore Heritage & Discovery Park seen in the bottom of the image (not within the Project Site)

The BMP (*Appendix 6-5*) to Chapter 6 Biodiversity of the EIAR includes the Proposed Enhancement Areas proposed within Killina Bog. The land at Killina Bog currently comprises primarily commercial forestry and its character has been highly influenced and modified by past and existing forestry land use.

Historic and Cultural Landscape Character Context of the Proposed Wind Farm and its Surrounds

The Proposed Wind Farm and its immediate surrounds form part of a landscape of historic and cultural depth, reflecting years of human interaction with the midland peatlands of Ireland. The historic peat cutting practices at the Proposed Wind Farm have strongly influenced this landscape and the people who have inhabited the surrounding area throughout history. In this regard, the landscape of the Proposed Wind Farm is culturally valuable to the local communities who have this historic connection to the peatlands. The Ballydermot Wind Farm Amenity Plan forms part of the Proposed Project which is presented in *Appendix 4-2*. The Ballydermot Wind Farm Amenity Plan will enable safe public access to the peatlands of the Proposed Wind Farm in the form of walking tracks (and car parking facilities), and equestrian tracks, enabling the local residents to retain some of their cultural connection with this landscape.

Evidence of toghers (ancient wooden trackways) have been identified within the Project Site. These features historically served as important routes across peatland areas. Such features are a common characteristic of peatland landscapes in Ireland and are considered of archaeological and cultural heritage value. Section 14.4.3.3 of Chapter 14: Cultural Heritage assesses the impact of the Proposed Project on toghers within the Project Site, which are predominantly not visibly discernible. Toghers within the Project Site are largely not currently visible.

A detailed and comprehensive description of the cultural heritage baseline of Proposed Wind Farm and its surrounds are reported in Chapter 14 of this EIAR – *Cultural Heritage*. Chapter 14 identifies various historic and culturally important features of the landscape surrounding the Proposed Wind Farm. The following two sites are strong contributors to the baseline receiving landscape and also comprehensively assessed from a landscape and visual perspective in this Chapter both as landscape receptors, and the visual receptors who visit them.

- The Lullymore Ecclesiastic Site: An ecclesiastic site to the south east of the Proposed Wind Farm, approximately 2.5km east of the nearest Proposed Turbine (T37).
- The Grand Canal: A historic transport and trade route which contributes character to the wider historic landscape setting of the area. It is now a designated AHA in both the KCDP and OCDP and provides recreational amenity. It is located approximately 880m north of the nearest Proposed Turbine (T32).

The Proposed Wind Farm has a strong cultural association with the local communities who have a historic and generational connection to peat extraction on the Project Site and local area.

Eskers nearby the Proposed Wind Farm

Eskers are glacially-formed ridges of sand and gravel deposited beneath the ice sheet during the last glaciation, approximately 10,000 years ago. A linear AHA ('AHA 11 – Other Eskers' in the OCDP) sits adjacent to the Project Site, bisecting Tickenvin bog and Glashabaun bog in the townland of Derries at the north-west of the Proposed Wind Farm. Analysis of topographic data, aerial imagery and on-site verification determined that the portion of the AHA adjacent to the Proposed Wind Farm comprises private lands of scrub, residential houses, , the remnants of the esker does not comprise a landscape receptor of any distinctive notoriety or sensitivity.

The Eiscir Riada, the most nationally significant collection of different eskers in Ireland, extends east to west across the Irish midlands through County Offaly, running broadly from Shannonbridge through Clara and eastward toward Rahugh in County Westmeath. While the Eiscir Riada does not pass through the Project Site, esker ridges are a characteristic feature of the wider Bog of Allen landscape, and localised esker formations are known to occur within the east Offaly and north Kildare area. These locally occurring esker ridges represent elevated features within an otherwise flat peatland landscape and historically served as natural overland routes across the boglands.

13.4.2.1.2 Landscape Character of the Proposed Grid Connection

As outlined in Chapter 4, the Proposed Grid Connection will facilitate the connection of the Proposed Wind Farm to the national grid. The Proposed Onsite Substation will connect to the Proposed Offsite Substation via the 13.1km of 220kV underground cabling connection and connect to the national grid via 0.12km of new OHL connecting to the existing Maynooth-Dunstown 220kV OHL in the townland of Killybegs, Co. Kildare.

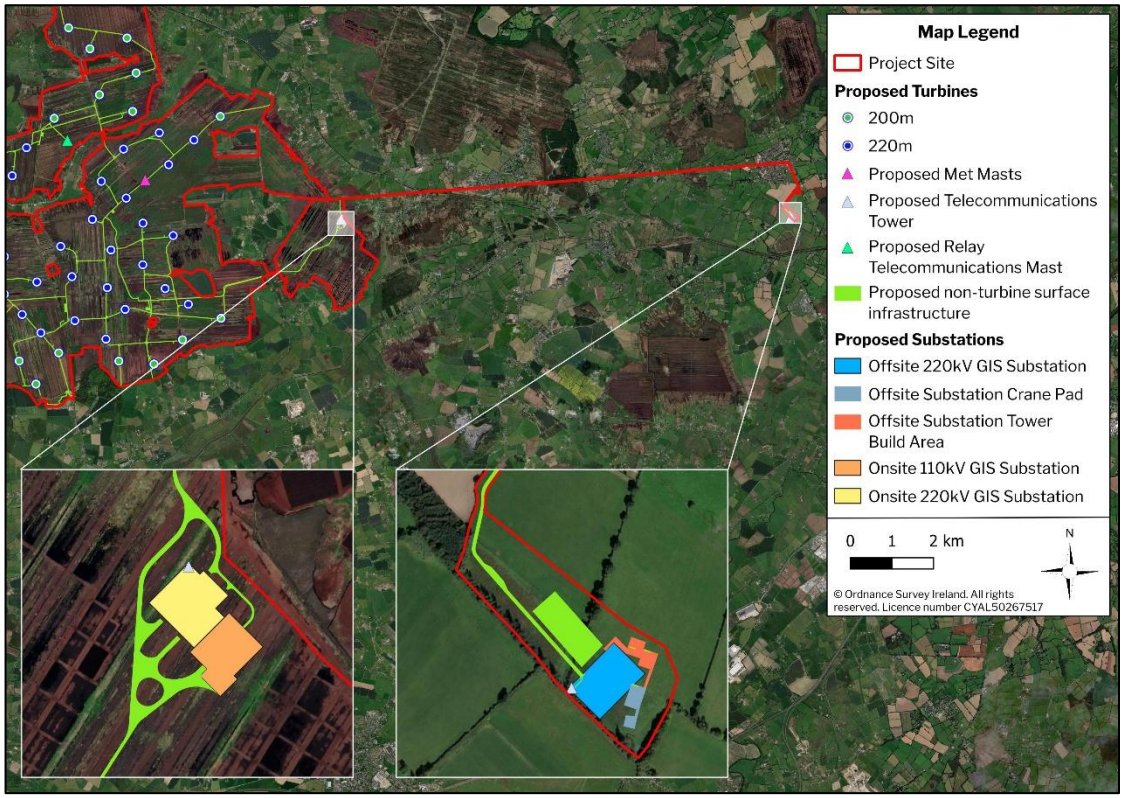


Figure 13-15 Aerial of the Proposed Onsite Substation and Proposed Offsite Substation

The Proposed Onsite Substation is sited within Lodge Bog, to the south-east of the Proposed Wind Farm. The landcover at this location comprises flat, open, cutover peatland, with vegetation establishing along drainage corridors and bog boundaries. The landform of Lodge Bog is very flat within most areas of the bog and is often at a lower elevation than the surrounding landscape beyond the Project Site due to the quantity of material that was removed during the many years of operational peat extraction (Plate 13-6). PCAS works have been completed at Lodge Bog. Areas of uncut raised bog (e.g. Lodge Bog Nature Reserve) at higher elevation, linear tracts of colonising trees within the bog, tracts of woodland of the outer perimeter of the peatland, forestry plantations and a mosaic of agricultural fields act as physical landscape buffers separating the Proposed Onsite Substation from the residential properties in Lullymore to the west and many receptors in Allenwood South to the east.

The BMP (*Appendix 6-5*) of the EIAR includes proposed enhancement measures at Lodge Bog. The land at Lodge Bog currently comprises primarily flat, open, cutover peatland, with vegetation establishing along drainage corridors and bog boundaries.

The site of the Proposed Offsite Substation is sited within agricultural fields currently used as for grazing pasture, located immediately south of the settlement of Prosperous, as seen in Figure 13-15. As shown in Plate 13-10 below, the field cells are primarily delineated by hedgerows and mature trees with a farm and a small number of residential properties to the east, most set back along the L-6002 local road. The lands to the north, west and south of the site of the Proposed Offsite Substation comprises uninhabited, undulating agricultural fields enclosed by mature boundary vegetation.

The proposed OHL will consist of approximately. 0.12km of OHL, 2 no. steel masts, and the removal of 65m of existing OHL. The steel masts will be largely similar to the existing mast seen in Plate 13-10 below.



Plate 13-10 Drone image captured in March 2026 facing west over the fields where the site of the Proposed Offsite Substation will be located

Plate 13-10 is an aerial image captured by drone to provide contextual information on the landscape surrounding the site of the Proposed Offsite Substation. It should not be interpreted as representative of views experienced by visual receptors (road users or nearby residential receptors) at ground level. Site visibility appraisals confirmed that views from the L-6002 Local Road and nearby residential receptors are largely restricted by mature boundary vegetation, resulting in substantially more limited visibility than illustrated by the drone image. A photomontage from the L-6002 Local Road (VP24) has therefore been prepared and included within the visual impact assessment to accurately represent ground-level visibility.

13.4.3 Landscape Sensitivity of the Project Site Itself

The landscape sensitivity of the Project Site is determined by combining assessments of landscape value and susceptibility to change. Landscape value considers designations, landscape quality, scenic qualities, and other indicators of how the landscape is valued by society. Susceptibility considers the ability of the landscape to accommodate the proposed type of development without undue consequences for its character. Table 13-7 below, assesses indicators of landscape value for the Project Site. The Project Site's susceptibility to change and overall sensitivity rating are then determined based on this assessment of value, the existing landscape character, and the nature of the Proposed Project.

Table 13-7 Indicators of Landscape Value on the Project Site

Indicator	Description
Landscape Designations	The Project Site is located within K-CDP LCA 04 – Bog of Allen, an LCA of 'Medium' landscape sensitivity to wind farm development. The KWES identifies this LCA as having a *"Medium to High"* sensitivity overall; and identifies the area where the Proposed Wind Farm is as having an overall 'Medium' compatibility to wind energy development, representing the highest level of compatibility identified in the KWES compared to other LCAs. The KCDP designated the area of the

	Project Site within Co. Kildare as 'Areas Open for Consideration' for wind energy development. Within Co. Offaly, the Project Site is located within an area designated of having a 'Moderate' landscape sensitivity. Cutaway bogs, which comprise the majority of this landscape type in Co. Offaly and where the Proposed Turbines are located are noted in the OCDP as appropriate for *"sensitively designed and located developments including renewable energy (**wind farms**)"*. The OCDP designated the area of the Project Site within Co. Offaly as 'Areas Open for Consideration' for wind energy development. The OCDP AHA – Other Eskers sits adjacent to the Proposed Wind Farm site bisecting Ticknevin Bog and Glashabaun Bog. It is assumed that this designation relates to the remnants of an esker that extends into the agricultural lands to the north-west of the Project Site. Analysis of topographic data, aerial imagery and on-site verification determined that the portion of the AHA adjacent to the Proposed Project comprises private lands, scrub, residential dwellings and a motocross track. The remnants of the esker do not comprise a landscape receptor of any distinctive notoriety or sensitivity.
Landscape Elements Quality / Condition	This refers to the physical state of the landscape and the condition of individual elements. The Proposed Wind Farm is a heavily modified landscape substantially degraded by historic peat extraction activities and artificial drainage. The site of the Proposed Offsite Substation is located within a modified rural landscape, characterised by agricultural fields.
Scenic / Aesthetic Qualities	There are long-ranging views within the large-scale, uninhabited lands of the Proposed Wind Farm. Although those parts of the Project Site located within the Allen Bog Group are distinctive and possess some local aesthetic value and interest, the receiving landscape is characterised by extensive areas of bare cutover peat and other industrial influences. Consequently, , given the industrial character of the bare cutover peat and degraded nature of the landscape, there is limited scenic or aesthetic quality pertaining to the landscape of the Proposed Wind Farm itself, and also the area of the Proposed Onsite Substation. The site of the Proposed Offsite Substation is located within an agricultural field, a landscape subject to ongoing human modification through agricultural land use, with very few scenic or distinctive landscape qualities.
Rarity or Conservation Interests	The vast majority of the lands encompassing the Proposed Wind Farm and the Proposed Onsite Substation comprises of cutover or open cutaway peat which have begun to recolonise with fen, grassland, heath and scrub habitats. Where areas of the cutover bog have been out of commercial peat production for a significant period of time, bog woodland occurs. Areas of remnant raised bog are also present, primarily around the margins of the Project Site. These and other mosaic habitats within the part of the Project Site located on part of the Allen Bog Group which provide valuable biodiversity corridors and habitats for rare and protected flora and fauna, including marsh fritillary and other pollinators, mammal species, amphibians and various bird species. A comprehensive description and assessment of the biodiversity within the Project site is contained in Chapter 6: Biodiversity, and an assessment of bird species within the Project Site is outlined within Chapter 7: Ornithology of this EIAR.
Wildness / Naturalness	Although the Proposed Wind Farm comprises of expansive and unpopulated lands, it is a highly managed and modified rural landscape. The anthropological

	influence of historic peat harvesting on the Proposed Wind Farm and Proposed Onsite Substation itself, agricultural land use within the site of the Proposed Offsite Substation location, and the influence of agriculture and roads in the wider landscape setting detracts from most senses of naturalness or wildness.
Recreational Value	There is little to no recreational value to the Project Site itself. The Proposed Wind Farm and the Proposed Onsite Substation location is an industrialised, degraded cutover peat site. A portion of the Lullymore Heritage & Discovery Park is existent within the east of the Proposed Wind Farm; however, views mainly consist of a heavily modified, degraded landscape. The Grand Canal, whilst not located within the Project Site, passes in close proximity to the bog and is located approximately 880m north of the nearest Proposed Turbine (T32). Kildare Scenic Route 34, follows the R417 Regional Road, partially bisecting the south-eastern extent of the Proposed Wind Farm. The route also follows part of the proposed underground cable route associated with the Proposed Grid Connection.
Cultural Meaning / Associations	There is evidence of historic togher roads traversing the peatlands within the Proposed Wind Farm. Please refer to Chapter 14: Cultural Heritage for further information.

In consideration of the factors detailed in the table above, and the designations outlined in the KCDP and the OCDP, the landscape value of the Proposed Wind Farm and Proposed Onsite Substation is deemed to be **'Low/Medium'**. There is value to the historic and cultural landscape to the setting of the Proposed Wind Farm, however it is a highly modified and degraded landscape from historic peat harvesting. The susceptibility of the landscape of the Proposed Wind Farm and Proposed Onsite Substation to the proposed change of wind energy development is '**Low'** considering local planning policy indicating that the receiving landscape is located in an area 'Open for Consideration' (KCDP and OCDP), has the highest level of compatibility for wind energy development compared to other LCAs (KCDP), recognises the suitability of degraded cutover peatlands for wind energy development (OCDP) and the general suitability of cutover peatlands (See pg. 107 of WEDG 2006) as large uninhabited areas surrounded mature boundary vegetation capable of accommodating wind energy developments. Overall, the sensitivity of the Proposed Wind Farm and Proposed Onsite Substation landscape to a wind farm development is deemed to be '**Low'**.

In relation to the site of the Proposed Offsite Substation, the landscape value is deemed to be **'Low'**. The site of the Proposed Offsite Substation is located within a modified working agricultural landscape with limited aesthetic value of remarkable quality. There are no scenic amenity or landscape designations pertaining to this landscape, and the land has no recreational value, being privately owned agricultural land. The susceptibility of the landscape to change is considered '**Low'**, reflecting its modified character and ongoing agricultural land use. The landscape has been extensively modified through agricultural activity and does not comprise a particularly sensitive, designated landscape. Overall, the sensitivity of the site of the Proposed Offsite Substation landscape is deemed to be '**Low'**.

13.4.4 Guidance for the Design of Wind Farms in Specific Landscape Types (WEDG 2006 and Draft WEDG 2019)

This section considers the context of the Proposed Wind Farm based on siting and design guidance in the WEDG 2006 and the Draft WEDG 2019 with respect to landscape and visual effects. Here, the appropriate landscape character type is identified as defined by the WEDG 2006 and describe the landscape type of the Proposed Wind Farm in that context.

Section 6.9 (*6.10*) of WEDG 2006 and the Draft WEDG 2019 is called *'Landscape Character Types as a Basis for Guidelines'* and offers guidance for the siting and design specifically of wind energy

developments in multiple landscape contexts, defining six landscape character types representing most situations where wind turbines may be proposed. These are:

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

The guidance is intended to be indicative and general and notes that it represents the 'best fit' solutions to likely situations. The guidelines note that, in the case where a wind energy development is located in one landscape character type but is visible from another, it will be necessary to decide which of the landscape types more strongly influences the approach adopted for the LVIA. Based on information gathered during site visits (see previous section) and visualisations presented in the *EIAR Volume 2: Photomontage Booklet*, as well as from other mapping and imagery present in this Chapter, the Proposed Wind Farm is best described by the 'Flat Peatland' landscape character type. Therefore, the best practice siting and design strategies prescribed for Flat Peatland (WEDG 2006) were implemented for the Proposed Wind Farm.

13.4.4.1.1 *Flat Peatland*

The key characteristics of the Flat Peatland Landscape type as stated in the WEDG 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 Landscape in the WEDG 2006 and the Draft WEDG 2019 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."*

In terms of **location**, following an iterative design process which included removal of turbines and turbine re-arrangement (See Section 13.1.3 for more detail); the 46 no. turbines of the Proposed Wind Farm are aligned to form one single cluster of turbines. One rationale for the recommendation (cited above) is to site the Proposed Turbines away from roadsides to allow a reasonable sense of separation. The L-1001 Local Road travels from a north to south direction, bisecting the Proposed Wind Farm and is located 250m west from the nearest Proposed Turbine (T25).

In terms of location, siting the Proposed Turbines on a flat plain of low-lying land within a relatively flat landscape will result in the visibility of Proposed Turbines being rapidly reduced with increased distance from the Proposed Wind Farm. As shown in the photomontages (EIAR Volume 2: Photomontage Booklet) and described throughout the photomontage assessment tables (see *Appendix 13-3*), due to the very flat landscape characteristics and disproportionate screening effect (See Section 13.3.2 previously), only a very small proportion of the overall Proposed Wind Farm is ever seen and experienced from any low-lying vantage point, including those receptors in close proximity. It is only occasionally, from more elevated vantage points where the full impact of all 46 no. Proposed Turbines are experienced by a visual receptor in one view, where they are seen as a single cluster of turbines within the landscape. Also, as described below, an optimum aesthetic effect is achieved through adherence to other recommendations in the guidelines listed below (Spatial Extent, Spacing and Layout).

Spatial Extent

> *"The vast scale of this landscape type allows for a correspondingly large spatial extent for wind energy developments."*

In terms of **spatial extent**, the expansive landscape of the area allows the landscape to accommodate the single cluster of the 46 no. Proposed Turbines within the landscape.

Spacing

> *"Regular spacing is generally preferred, especially in areas of mechanically harvested peat ridge."*

In terms of **spacing**, the Proposed Turbines are strategically sited to ensure regular and consistent spacing across the Proposed Wind Farm. This has resulted in a coherent arrangement of turbines, contiguous and connected to each other visually when viewed within the landscape. The Proposed Turbines are evenly spaced to provide a sense of order to the layout from various orientations in the immediate surroundings. Overall, given the flat topography of the Proposed Wind Farm, the strategic siting of the turbines.

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."*

In terms of **layout**, the Proposed Turbines are in alignment with the grid-like structure and rhythm of the cutover peatland landscape where possible. Furthermore, where possible, the Proposed Turbine layout has been designed to create a coherent arrangement of turbines, contiguous and connected to each other visually and with consistent spacing.

Photomontage visualisations of early turbine layouts identified 4 no. turbines in Lodge Bog visually disconnected from the Proposed Wind Farm in 2020 (resulting in an omission of 2 of the turbines in 2020), and the omission of the remaining 2 no. turbines in 2021, which were consequently removed to mitigate discordant visual effects from scenic vistas and elevated vantage points to the south and east of the Proposed Wind Farm (see *Appendix 13-5* for more information).

Additionally, it is important to note that the closest residential receptor is located approximately. 894m from the nearest Proposed Turbine, exceeding the minimum 500m set back distance from residential receptors in the current WEDG 2006 and also the recommended 4 times tip height (880m)set back distance to third party properties, explicitly set out for residential visual amenity, prescribed by the

Draft WEDG 2019. Furthermore, a minimum setback distance from the Proposed Turbines was implemented to mitigate effects related to the Grand Canal, the 4x-tip-height set back distance (880m) typically used for residential amenity was deemed appropriate and was implemented for the Proposed Project, with T32 (the nearest Proposed Turbine) sited approximately 880m from the southern edge of the canal.

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."*

In terms of **height**, the Proposed Turbines are tall vertical features within the landscape, thereby, complying with the recommendations for height stated in the above guidance. The layout deliberately adopts two turbine tip heights as LVIA mitigation. The Proposed Turbines at the outer perimeter of the Proposed Wind Farm, which are closest to surrounding visual receptors, have a tip height of 200m, while those turbines toward the centre rise to 220m. This graduated profile reduces the potential for visual dominance and allows these outer turbines to take greater advantage of existing visual screening within the landscape, such as intervening landform and vegetation, whilst maintaining an even visual profile when viewed from the surrounding landscape. This approach is in line with Section 6.8 of the WEDG 2006, which recognises that a wind energy development *"comprising two distinct turbine heights may be acceptable provided the resulting composition is carefully considered, so as to achieve an aesthetic effect."*.

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."*

In terms of **cumulative effect**, this LVIA assesses cumulative effects with other existing, permitted and proposed wind farms later in Section 13.8.

13.4.5 The Wider Landscape: Character, Sensitivity and LCA's

13.4.5.1 Character and Key Sensitivities of the Wider Landscape Setting

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, creating the sense of place found in different areas.

The landscape surrounding the Proposed Wind Farm is predominantly a rural agricultural landscape. It is a working, settled landscape with residential receptors arranged along local road network, and settlements scattered throughout the wider area. As shown in Plate 13-11 below, agricultural fields are defined by field boundaries comprised of hedgerows and treelines. Within this predominantly flat landscape, this mature boundary vegetation restricts long-range visibility and is characteristic of the wider landscape setting surrounding the Proposed Wind Farm, particularly to the north, east and west.



Plate 13-11 Drone image captured in December 2025 looking northeast near R-414 Regional Road showing wider rural agricultural landscape surrounding the Project Site.

After agricultural land, raised bogs constitute a large portion of the landcover in the LVIA Study Area, particularly to the west and east of the Proposed Wind Farm. Notably, Cloncreen Bog is located approximately 0.33km to the west, Carbury Bog is located approximately 4.5km to the north, Timahoe Bog is located approximately 2.1km northeast, and Allenwood Bog is located to 6.2km to the east. The wider peatland landscape already accommodates existing wind energy development, with operational wind farms located within Cloncreen and Mountlucas bogs (see Table 13-11 for the full cumulative wind farm list). These extensive areas of peatland form a large proportion of the landscape within the immediate wider setting, particularly within approximately 10km of the Proposed Turbines. These peatland areas are generally sparsely settled, resulting in fewer number of sensitive visual receptors within this area where the Proposed Project will have greatest visibility.

Due to historical forestry activities on and adjacent to the peatlands in the LVIA Study Area, large tracts of commercial forestry as well as pockets of broadleaf woodland are also prominent throughout the landscape, forming a notable element of its character, as seen in Plate 13-12 below.



Plate 13-12 Drone image captured in December 2025 for landscape context: views east of the Proposed Wind Farm of pockets of woodland.

Naas, Kildare and Newbridge to the south-east of the Proposed Wind Farm and Portarlington to the south-west are the largest settlements in the LVIA Study Area, connected by a network of national and regional roads, motorways and the railway lines. This transport network also connects a number of smaller rural settlements throughout this working settled landscape. In closer proximity to the Proposed Wind Farm, settlement is comparatively sparse, particularly across the extensive peatland areas, with smaller settlements and villages generally located around their periphery, including Rathangan, Clonbullogue, Allenwood and Edenderry.

Overall, the wider landscape is typical of the characteristics of the Irish Midlands, comprising a predominantly flat to gently undulating working rural landscape of agricultural land, extensive peatlands, commercial forestry and scattered settlement. There are also a number of notable elevated landscape features and vantage points within the wider LVIA Study Area which hold historic and cultural value, as discussed further below.

Historic Landscape Characterisation

The Grand Canal and Royal Canal are historic waterways that are designated as AHAs in both the KCDP and OCDP, and are currently used as recreational amenity features. The Grand Canal extends generally in an east-west direction to the north of the Proposed Turbines within the LVIA Study Area, and is located approximately 880m from the nearest Proposed Turbine (T32) at its closest point. The Barrow Line, the southern branch of the Grand Canal stretches generally in an east-south direction to the east of the Proposed Turbines. The Royal Canal extends in an east-west direction 13.3km to the north. The walkways along these waterways are generally low-lying and enclosed by dense mature boundary and riparian vegetation, restricting long-range visibility. Both features also have an important historic and cultural associations with the wider landscape; see Chapter 14 of this EIAR for more information.

The wider LVIA Study Area also contains a number of other notable historic and cultural landscape features. Dún Ailinne, which forms part of the Royal Sites of Ireland Tentative UNESCO World Heritage Site, is located approximately 20km southeast of the nearest Proposed Turbine (T01), within the wider Curragh landscape. The Chair of Kildare (Six Hills) is located to the southeast of the Proposed Turbines, introduces localised elevation and undulation within the otherwise predominantly flat low-lying landscape of County Kildare. Croghan Hill, an elevated landscape feature of historic and cultural value, is located approximately 17km west of the Proposed Turbines, forming a distinctive landscape feature which provides panoramic views across the wider area. Other sites of more local cultural and heritage value include Lullymore Heritage & Discovery Park, located immediately east of the Proposed Wind Farm. These features contribute to the historic and cultural character of the wider landscape setting.

The impact assessments presented later in this chapter (Section 13.8) provide a comprehensive evaluation of the likely significant landscape and visual effects arising from the Proposed Project upon key landscape and visual receptors within the wider LVIA Study Area where theoretical visibility is identified. The potential effects of the Proposed Project on archaeological, architectural and cultural heritage receptors are assessed separately in Chapter 14 of this EIAR.

13.4.5.2 Landscape Receptor Preliminary Analysis – Landscape Character Areas

Having identified and located the LCAs within the LCA Study Area, a preliminary analysis was conducted using ZTV mapping to scope out LCAs that will not be impacted by the Proposed Turbines and identify LCAs requiring further assessment. Each LCA is listed below in Table 13-8, as well as a description of theoretical visibility within each LCA, as indicated by the ZTV in Figure 13-17 below. Several LCAs identified in the LCA Study Area (15km for landscape character) have very small areas of theoretical visibility indicated by the ZTV map. The potential visibility of the Proposed Turbines was appraised during site surveys from all LCAs with very limited or partial theoretical visibility. The ZTV

and on-site visibility appraisals determines which LCAs are scoped in for full assessment later in this chapter (see also *Appendix 13-2*); the results are noted in Table 13-8 below.

Table 13-8 LCAs within 15km of the Proposed Turbines

Map Ref	LCA	Theoretical Visibility (TV) as indicated by ZTV	Actual Visibility	Scoped in for Assessment
Up to 5km				
KCDP LCA 04	Bog of Allen	Full TV indicated throughout this LCA, with pockets of no TV beyond 10km.	The Proposed Turbines are located within this LCA and visibility will occur. However, visibility will be limited beyond 5km due to visual screening form above ground features in the very flat landscape.	Yes
Offaly LCA	Offaly LCA	Full TV indicated throughout this LCA, with pockets of no TV.	The Proposed Turbines are located within this LCA and visibility will occur. However, visibility will be limited beyond 5km due to visual screening form above ground features in the very flat landscape.	Yes
KCDP LCA 01	Carbury Boyne Lowlands	Full TV indicated within majority of this LCA. Localised hills at approximately. 10km create pockets of no TV.	Visibility will occur; however, there will be limited visibility beyond the 5km of the Proposed Turbines as a result of visual screening from vegetation in the flat landscape.	Yes
KCDP LCA 05	Barrow-Grand Canal Corridor	Primary full TV with patches of no TV due to localised undulations.	Visibility will occur; however, there will be limited visibility beyond the 5km of the Proposed Turbines as a result of screening from vegetation in the flat landscape.	Yes
KCDP LCA 06	The Six Hills	Full TV is indicated along the northwestern extent of this LCA. There are a number of hills that stretch in a northeast to southwest direction in this LCA	Visibility will occur from elevated vantage points within this LCA.	Yes

		which limit TV beyond them.		
5 to 10km				
KCDP LCA 7	The Curragh Plains	Stretches of full and partial TV with areas of no TV.	Visibility may occur from elevated vantage points. Where visibility does occur, the Proposed Turbines will be seen as distant features relative of the landscape.	Yes Given the sensitivity of this LCA, this has been scoped in for further assessment.
LCDP LCA 02	Lowland Agricultural Areas	Full TV indicated throughout this LCA, with pockets of no TV.	Given the distance (approximately. 8km) from the Proposed Turbines, there is likely to be no or very limited background views of the Proposed Turbines from the small part of this LCA located within the LCA Study Area.	No Given the small section of the LCA within the LCA Study Area, given the distance and low-lying landscape, significant effects are not likely to occur on the landscape character of this LCA as a result of the Proposed Project.
MCDP LCA 15	South West Lowlands	Full TV primarily indicated within this LCA. There are portions of Partial TV indicated along the east boundaries of this LCA.	Given the distance (approximately. 8.5km) from the Proposed Turbines, there is likely to be no or very limited background views of the Proposed Turbines from the small part of this LCA located within the LCA Study Area.	No Given the small section of the LCA within the LCA Study Area, given the distance and low-lying landscape, significant effects are not likely to occur on the landscape character of this LCA arising as a result of the Proposed Project.
10 to 15km				
KCDP LCA 02	Slí Mór Corridor	Full to partial TV indicated within the very small portion of this	Visibility in the direction of the Proposed Turbines are primarily limited due to the flat landscape and	No Given the very small portion of

		LCA within the LCA Study Area.	mature boundary vegetation within this LCA.	this LCA within the LCA Study Area, and mature boundary vegetation within the flat landscape, significant landscape effects are not likely to occur.
KCDP LCA 03	River Liffey Valley & Plains	Full TV is primarily indicated in this LCA where it falls within the LCA Study Area, with pockets of partial and no TV.	Visibility in the direction of the Proposed Turbines are primarily limited due to the flat landscape and mature boundary vegetation within this LCA and the intervening LCAs.	Yes This LCA is scoped in considering the site of the Proposed Offsite Substation is sited within this LCA.
KCDP LCA 10	Cill Dara Lowlands	Small stretches of partial TV within this LCA that is within the LCA Study Area.	Actual visibility will be limited to few locations where mature boundary vegetation is lower within this LCA, where visibility is generally limited as a result of screening from vegetation in the flat landscape.	No, significant landscape effects are not likely to occur
LCDP LCA 05	Urban Fringe Areas	Predominantly Full TV indicated with small areas of No TV indicated along the river corridor.	Where visibility occurs, it would be on the outskirts where the built environment screen views. In general views are heavily screened by the intervening boundary vegetation within the flat landscape.	No, significant landscape effects are not likely to occur
MCDP LCA 06	Central Lowlands	Full TV indicated within the small portion of this LCA that falls within the LCA Study Area.	The flat landscape and mature boundary vegetation limits visibility of the Proposed Turbines at this distance within the very small portion of this LCA that falls within the LCA Study Area.	No, significant landscape effects are not likely to occur
MCDP LCA 13	Rathmoylan Lowlands	Full TV indicated within the very small portion of this LCA that falls within the LCA Study Area.	The flat landscape and mature boundary vegetation limits visibility of the Proposed Turbines at this distance within the	No, significant landscape effects

			very small portion of this LCA that falls within the LCA Study Area.	are not likely to occur
MCDP LCA 14	Royal Canal	Full TV indicated with small portions of partial TV indicated along the borders of the LCA	The flat landscape and mature boundary vegetation limits visibility of the Proposed Turbines at this distance	No Given the set-back distance and low-lying landscape with mature boundary vegetation, visibility is likely to be limited. Significant landscape effects are not likely to occur.

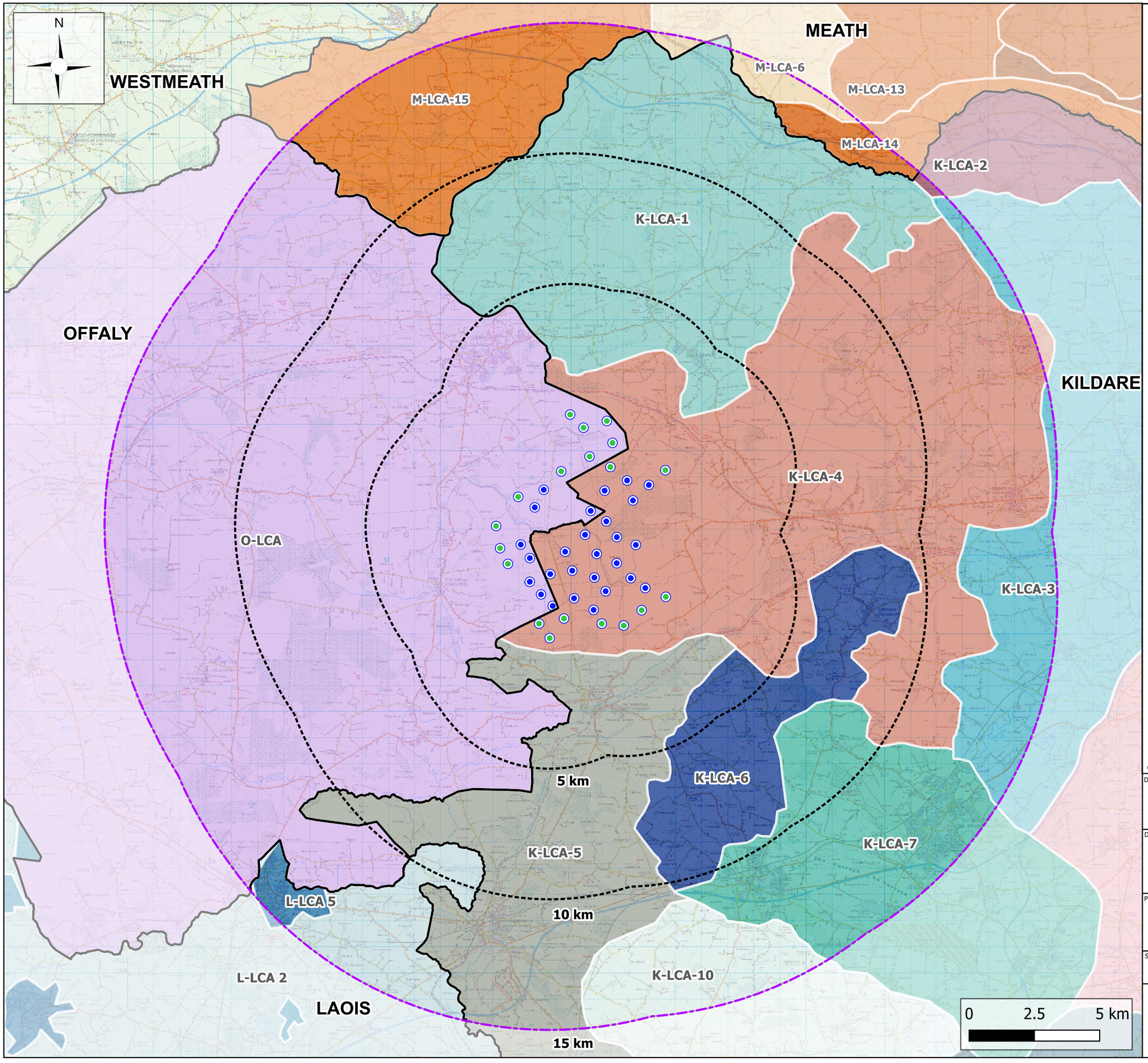
Following the pre-assessment exercise, the LCAs shown in

Table 13-9 below have been scoped in for assessment. As some of the Proposed Turbines are likely to be visible from some areas within these LCAs, potential landscape effects may arise as a result of the Proposed Project.

Table 13-9 LCAs Scoped In for further assessment

Map Ref.	LCA
KCDP LCA 01	Carbury Boyne Lowlands
Offaly LCA	Offaly LCA
KCDP LCA 03	River Liffey Valley & Plains
KCDP LCA 04	Bog of Allen
KCDP LCA 05	Barrow-Grand Canal Corridor
KCDP LCA 06	The Six Hills
KCDP LCA 07	The Curragh Plains

A detailed description of the 7 no. LCAs scoped in for assessment and the likely effects on landscape character as a result of the Proposed Project are presented in the Landscape Character Assessment Tables that form *Appendix 13-2*. A summary of landscape effects on these LCAs is reported in Section 13.8.3 of this chapter - Operational Phase.



Map Legend

- LCA Study Area (15km)
- County Boundaries

Proposed Turbines

- 200m
- 220m

Co. Offaly LCA

Co. Meath LCAs

- M-LCA-6: Central Lowlands
- M-LCA-13: Rathmoylan Lowlands
- M-LCA-14: Royal Canal
- M-LCA-15: South West Lowlands

Co. Kildare LCAs

- K-LCA-1: Carbury Boyne Lowlands
- K-LCA-2: Slí Mór Corridor
- K-LCA-3: River Liffey Valley & Plains
- K-LCA-4: Bog of Allen
- K-LCA-5: Barrow-Grand Canal Corridor
- K-LCA-6: The Six Hills
- K-LCA-7: The Curragh Plains
- K-LCA-10: Cill Dara Lowlands

Co. Laois LCAs

- L-LCA 2: Lowland Agricultural Areas
- L-LCA 5: Urban Fringe Area

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Drawing No.

Figure 13-16

Drawing Title

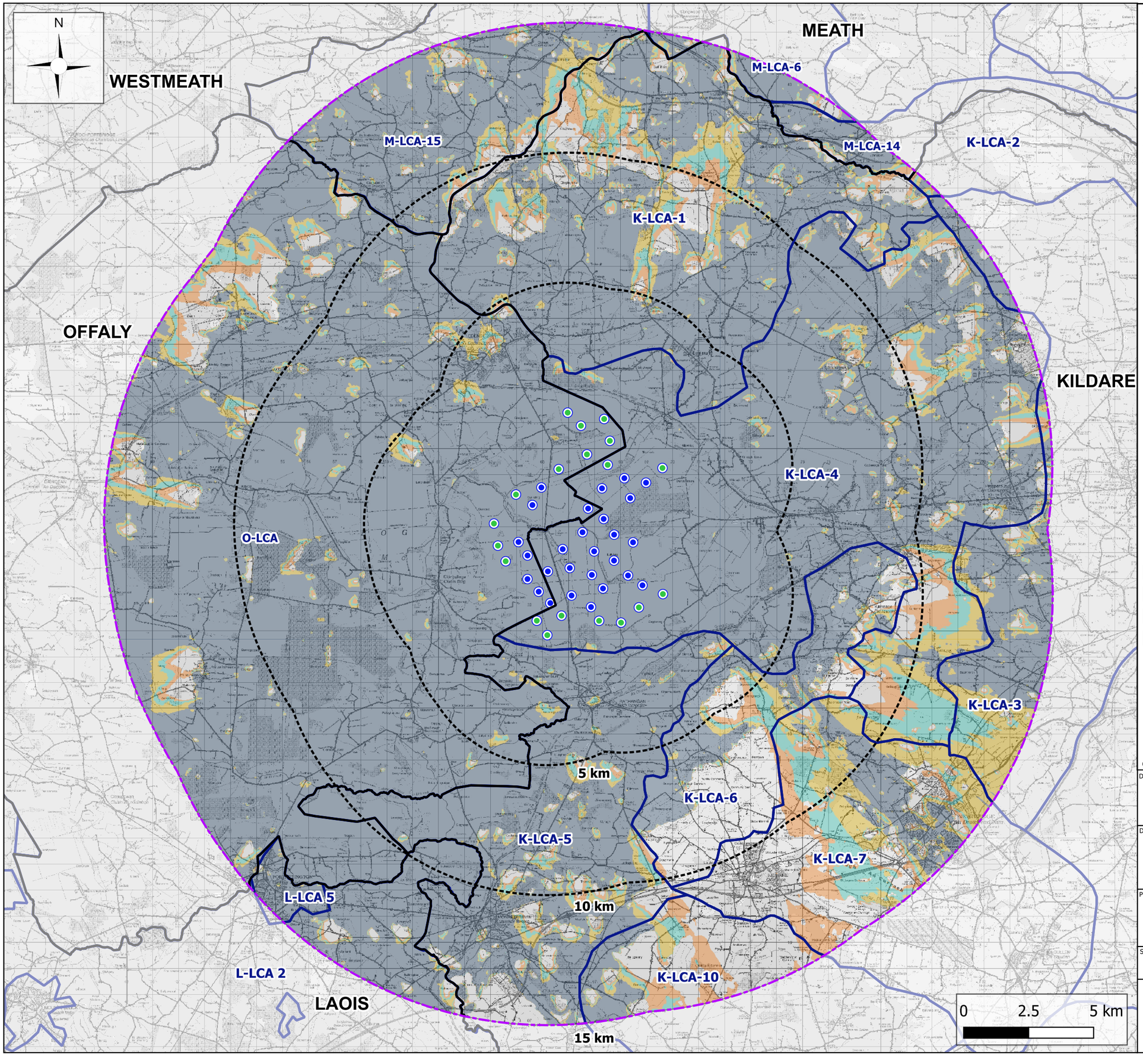
Landscape Character Areas

Project Title

Ballydermot Wind Farm,
Co. Offaly & Co. Kildare

Scale	Project No.	Date	Drawn By	Checked By
1:140,000	250708	29.09.2026	GL	DM

MKO Planning and Environmental Consultants



Map Legend

- LCA Study Area (15km)
- County Boundaries

Proposed Turbines

- 200m
- 220m
- **Co. Offaly LCA**

Co. Meath LCAs

- M-LCA-6: Central Lowlands
- M-LCA-13: Rathmoylan Lowlands
- M-LCA-14: Royal Canal
- M-LCA-15: South West Lowlands

Co. Kildare LCAs

- K-LCA-1: Carbury Boyne Lowlands
- K-LCA-2: Slí Mór Corridor
- K-LCA-3: River Liffey Valley & Plains
- K-LCA-4: Bog of Allen
- K-LCA-5: Barrow-Grand Canal Corridor
- K-LCA-6: The Six Hills
- K-LCA-7: The Curragh Plains
- K-LCA-10: Cill Dara Lowlands

Co. Laois LCAs

- L-LCA 2: Lowland Agricultural Areas
- L-LCA 5: Urban Fringe Area

Zone of Theoretical Visibility

- 1-12 Turbines Theoretically Visible
- 13-24 Turbines Theoretically Visible
- 25-36 Turbines Theoretically Visible
- 37-46 Turbines Theoretically Visible

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Drawing No.

Figure 13-17

Drawing Title

Landscape Character Areas with Zone of Theoretical Visibility

Project Title

Ballydermot Wind Farm,
Co. Offaly & Co. Kildare

Scale	Project No.	Date	Drawn By	Checked By
1:140,000	250708	29.09.2026	GL	DM

MKO Planning and Environmental Consultants

13.5 Visual Baseline

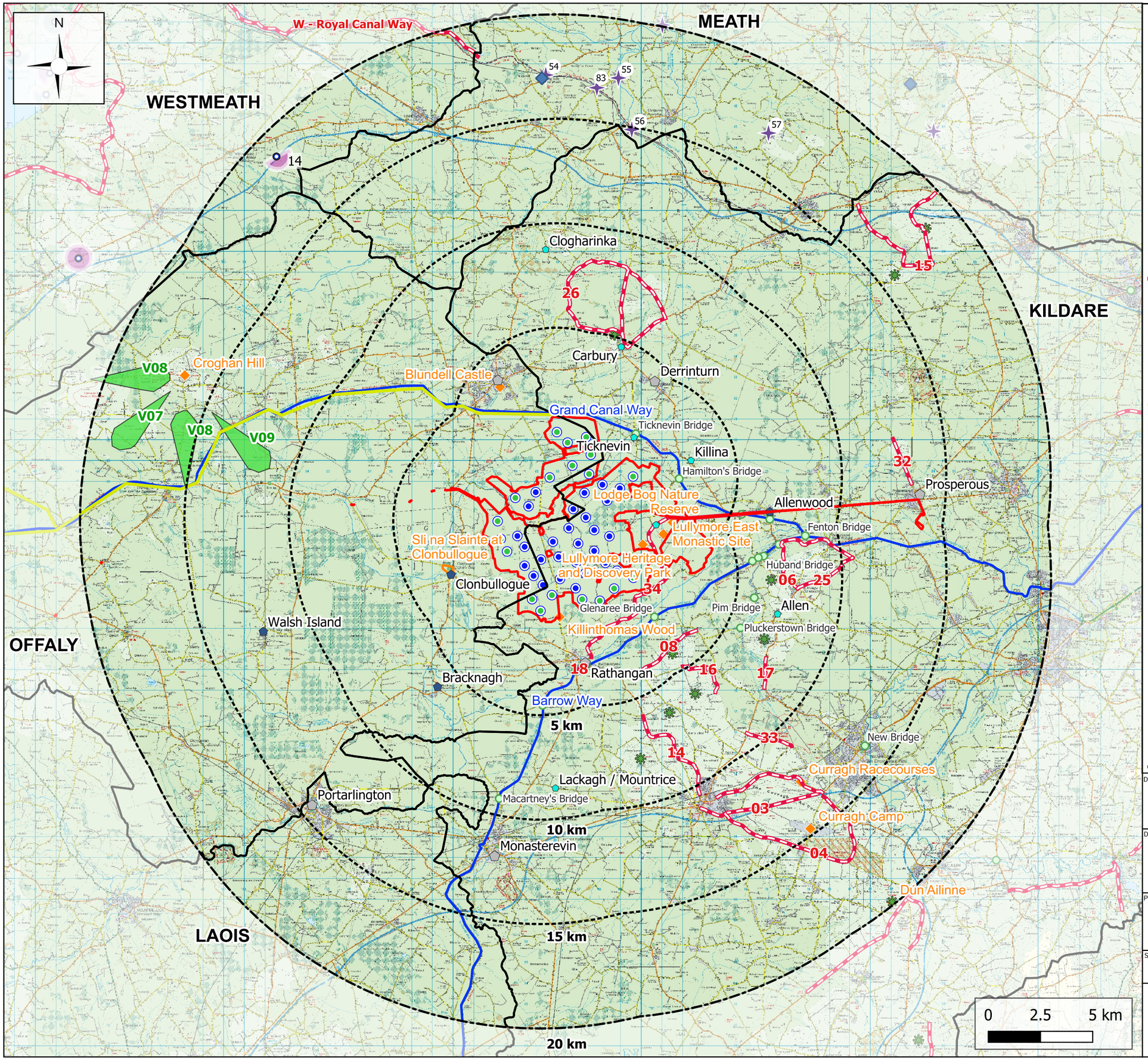
13.5.1 Visual Receptors

The main purpose of establishing the visual baseline is to identify the key visual receptors to be considered for viewpoint selection, viewpoints are locations from which visual effects are assessed using photomontages (see *Appendix 13-1: LVIA Methodology*). To this end, the following visual receptors have been identified within the LVIA Study Area and are listed below:

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

All visual receptors are listed in tables in the following sections along with theoretical visibility at those locations indicated by the Visual Baseline and Half-Blade ZTV map (Figure 13-18 and Figure 13-19 below).

During site visits conducted between 2021 and 2026 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.



Map Legend

- LVIA Study Area
- County Boundaries
- Project Site

Proposed Turbines

- 200m
- 220m

Visual Receptors

- Recreational, Cultural Heritage, and Tourist Destinations
- Key Canals
- Scenic Routes
- Co. Meath Secondary Tourist Attractions
- Co. Meath Scenic Views
- Co. Kildare Hilltop Views
- Co. Kildare Scenic Viewpoints
- Co. Offaly Walking-Cycling Routes
- Co. Offaly Scenic Views
- Co. Westmeath Protected Views Origin
- Co. Westmeath Protected Views: County Importance

Settlement Hierarchy

- Town
- Village
- Small Village of Local Importance

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Drawing No.

Figure 13-18

Drawing Title

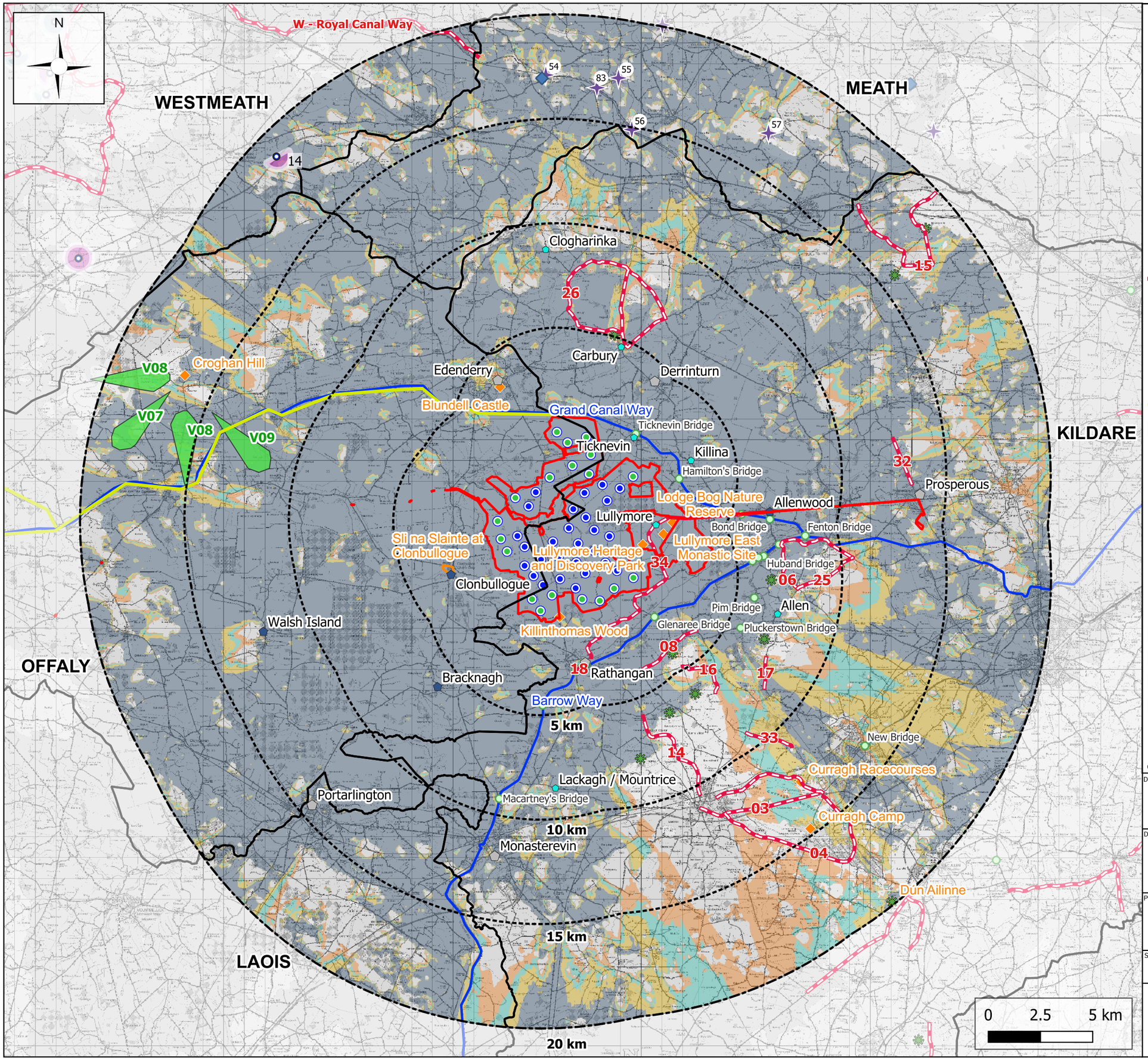
Visual Baseline

Project Title

Ballydermot Wind Farm,
Co. Offaly & Co. Kildare

Scale	Project No.	Date	Drawn By	Checked By
1:175,000	250708	29.09.2026	GL	DM

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Map Legend

- LVIA Study Area
- County Boundaries
- Project Site

Proposed Turbines

- 200m
- 220m

Visual Receptors

- Recreational, Cultural Heritage, and Tourist Destinations
- Key Canals
- Scenic Routes
- Co. Meath Secondary Tourist Attractions
- Co. Meath Scenic Views
- Co. Kildare Hilltop Views
- Co. Kildare Scenic Viewpoints
- Co. Offaly Walking-Cycling Routes
- Co. Offaly Scenic Views
- Co. Westmeath Protected Views Origin
- Co. Westmeath Protected Views: County Importance

Settlement Hierarchy

- Town
- Village
- Small Village of Local Importance

Zone of Theoretical Visibility

- 1-12 Turbines Theoretically Visible
- 13-24 Turbines Theoretically Visible
- 25-36 Turbines Theoretically Visible
- 37-46 Turbines Theoretically Visible

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Drawing No.

Figure 13-19

Drawing Title

Visual Baseline with Zone of Theoretical Visibility

Project Title

Ballydermot Wind Farm, Co. Offaly & Co. Kildare

Scale	Project No.	Date	Drawn By	Checked By
1:175,000	250708	29.09.2026	GL	DM

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13.5.1.1 Designated Scenic Routes and Views

As reported previously in Section 13.4.1, and shown in Figure 13-19, there are 68 no. scenic designations within Co. Kildare (10 no. Hilltop Views, 44 no. Scenic Views, 14 no. Scenic Routes), 3 no. Scenic Views within Co. Offaly, 5 no. Scenic Views within Co. Meath, 2 no. scenic designations within Co. Westmeath (1 no. Protected View, 1 no. Scenic Route), and Co. Laois has none within LVIA Study Area. See the scoping of all the following receptors in Section 13.5.2.

It is noted that the KCDP designates nearly every bridge as a designated scenic view, resulting in 44 designated scenic views within the LVIA Study Area in County Kildare alone. It would not be proportionate or practical to prepare photomontages from every designated bridge. In the interest of keeping the EIAR *"as concise as possible"* (EPA, 2022, Section 4.5, p.66), whilst focusing on *"'Likely' and 'Significant' as the principal criteria for determining what should be addressed",* and in accordance with GLVIA3, which states that *"the emphasis must always be on proportionality in relation to the scale and nature of the development proposal and its likely significant effects",* the viewpoint selection adopts a representative approach.

The selected viewpoints may therefore be representative of a number of designated bridge viewpoints within the vicinity that share similar viewing characteristics. Particular emphasis has been placed on designated bridge viewpoints in closer proximity to the Proposed Wind Farm, where the potential for significant visual effects is most likely to occur as per best practice guidance. Site appraisals determined that, whilst the Proposed Turbines may potentially be visible from designated bridge viewpoints beyond 10km, significant visual effects are unlikely to occur.

13.5.1.2 Tailte Éireann Viewpoints

There are no Tailte Éireann Viewing areas located within the LVIA Study Area.

13.5.1.3 Settlements

The settlement hierarchy reported in the respective county development plans (Counties Kildare, Offaly, Westmeath, Laois, and Meath) were consulted to identify the settlements within the LVIA Study Area. This LVIA focuses on key settlements and population centre within the LVIA Study Area such as large towns and villages within 20km and smaller rural settlements of local importance within 10km. See the scoping of all the following receptors in Section 13.5.2.

13.5.1.4 Recreational Routes

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

- Waymarked walking routes;
- Cycle routes;
- Scenic drives and tourist routes.

According to sources including such as Tailte Éireann maps and Sport Ireland Designated Cycle Routes and Trails, 15 no. designated routes were identified in the LVIA Study Area. In general, many such routes exist of differing scale and prominence, thus only the recreational routes of county- or national-level importance which are featured on the available websites or are designated in county-level policies were included in this LVIA. See the scoping of recreational routes in Section 13.5.2.

13.5.1.5 Recreational, Cultural Heritage and Tourist Destinations

Popular recreational, cultural heritage and tourist destinations in the LVIA Study Area were investigated through a desktop exploration of localised tourism plans as well as considering the most popular tourism destinations in Counties Kildare, Offaly, Westmeath, Laois, and Meath posted on Tripadvisor.ie. Note that 'cultural heritage' destinations in this section refers to those of popular renown in the sense of general tourism; a detailed assessment of archaeological cultural heritage sites in relation to the Proposed Project is provided in this EIAR, Chapter 14: Cultural Heritage. See the scoping of all the following receptors in Section 13.5.2.

13.5.1.6 Transport Routes

Onsite visibility appraisal determined that most visibility of the Proposed Turbines will occur within 3-5km of the Proposed Wind Farm from the local road network surrounding the Proposed Turbines, and there is also potential for visibility to occur for users of R401, R402, R403, R414, R419, R441, R442 Regional Roads. These are considered in Section 13.3.2 Route Screening Analysis and Section 13.8Likely Significant Landscape and Visual Effects.

13.5.2 Preliminary Analysis: Visual Receptors

13.5.2.1 Visual Receptors Scoped In for Further Assessment

The receptors in Table 13-10 identified in the LVIA Study Area were scoped in for assessment in the LVIA and are mapped above in Figure 13-19 ; see the full detailed methodology in *Appendix 13-1: LVIA Methodology* for the analysis of scoping receptors in and out of assessment.

Table 13-10 Visual Receptors Scoped in for Further Assessment

Receptor	Description	Direction of View	Directed to Turbines	Theoretical Visibility	Photomontage Viewpoint No.
Up to 5km					
Scenic Routes and Views	KCDP-GC 13: Hamilton's Bridge	N/A	N/A	Full	VP18
	KCDP-GC 25: Wilson's Bridge	N/A	N/A	Full	PWVP-A
	KCDP-GC 37: Spencer Bridge	N/A	N/A	Full	PWVP-C
	KCDP–GC 18: Rathangan Bridge	N/A	N/A	Full	PWVP-C
	KCDP–GC 14: Ticknevin Bridge	N/A	N/A	Full	VP18, PWVP-A, PWVP-B

	KCDP–GC 36: Shee Bridge	N/A	N/A	Full	VP18, PWVP-A, PWVP-B
	KCDP–GC 23 Glenaree Bridge	N/A	N/A	Full	VP18, PWVP-A, PWVP-B
	KCDP HV - No. 14: Boston Hill	N/A	N/A	Full	VP12
	KCDP-SR 08	N/A	N/A	Full	VP12
	KCDP-SR 18	N/A	N/A	Full	PWVP-C
	KCDP-SR 26	N/A	N/A	Full/Partial	VP25
	KCDP-SR 34	N/A	N/A	Full	VP02, VP03
Settlements	Clonbullogue, Co. Offaly - Village	N/A	N/A	Full	VP04
	Edenderry, Co. Offaly – Self Sustaining Town	N/A	N/A	Full	VP15
	Carbury, Co. Kildare – Rural Node	N/A	N/A	Partial	VP25
	Derrinturn, Co. Kildare – Small Town	N/A	N/A	Full	VP25
	Ticknevin, Co. Kildare – Rural Node	N/A	N/A	Full	VP06
	Lullymore, Co. Kildare – Rural Node	N/A	N/A	Full	VP02, VP03
	Rathangan, Co. Kildare – Small Town	N/A	N/A	Full	VP20
	Killina, Co. Kildare – Rural Node	N/A	N/A	Full	VP18
Recreational Routes	Grand Canal Way / Barrow-Grand Canal Way	N/A	N/A	Full	VP07, VP09, VP18, VP26
	Riverwalk / Slí na Slainte at Clonbullogue	N/A	N/A	Full	VP04
Recreational, Cultural	Lullymore Heritage and Discovery Park	N/A	N/A	Full	VP02, VP03

Heritage and Tourist Destinations					
	Lodge Bog Nature Reserve	N/A	N/A	Full	VP21
	Lullymore East Ecclesiastic Site	N/A	N/A	Full	VP19
	Killinthomas Woods	N/A	N/A	Full	VP20
5 to 10km					
Scenic Routes and Views	KCDP-GC 26: Macartney's Bridge	N/A	N/A	Full	VP07, VP26
	KCDP-GC 11: Fenton Bridge	N/A	N/A	Full	VP07, VP26
	KCDP-GC 12: Bond Bridge	N/A	N/A	Full	VP07
	KCDP-GC 16: New Bridge	N/A	N/A	Full	VP07, VP26
	KCDP-GC 15: Harberton Bridge	N/A	N/A	Full	VP07, VP26
	KCDP-GC 18: Huband Bridge	N/A	N/A	Full	VP07, VP26
	KCDP-GC 17: Skew Bridge	N/A	N/A	Full	VP07, VP26
	KCDP-GC 22: Ballyteige Bridge	N/A	N/A	Full	VP07, VP26
	KCDP-GC 19: Pim Bridge	N/A	N/A	Full	VP07, VP26
	KCDP-GC20: Pluckerstown Bridge	N/A	N/A	Full	VP07, VP26
	KCDP HV - No. 03: Red Hill	N/A	N/A	Full	VP01/VP12
	KCDP HV - No. 04: Allen Hill	N/A	N/A	Full	VP01/VP12
	KCDP HV - No. 06: Dunmurry Hill	N/A	N/A	Full	VP01/VP12
	KCDP HV - No. 05: Grange Hill	N/A	N/A	Full	VP01/VP12

	KCDP HV - No. 16: Crosspatrick Hill	N/A	N/A	Full	VP01
	KCDP HV – No. 28 High Bridge	N/A	N/A	Full	VP26
	KCDP HV - No. 17: Carbury Hill	N/A	N/A	Full	VP01
	KCDP-SR 06	N/A	N/A	Full/Partial	VP01
Settlements	Bracknagh, Co, Offaly – Village	N/A	N/A	Full	VP11, VP17, VP07, VP16, VP26
	Clogharinka, Co. Kildare – Rural Node	N/A	N/A	Full	VP11, VP17, VP07, VP16, VP26
	Allenwood, Co. Kildare – Village	N/A	N/A	Full	VP07
	Allen, Co. Kildare – Rural Settlement	N/A	N/A	Full	VP01
	Lackagh/ Mountrice, Co. Kildare – Rural Settlement	N/A	N/A	Full	VP11, VP17, VP07, VP16, VP26
Recreational, Cultural Heritage, and Tourist Destinations	The Curragh and Curragh Racecourse	N/A	N/A	Partial	VP08
	Blundell Castle	N/A	N/A	Full	VP15
10 to 15km					
Scenic Routes and Views	OCDP-SV 09	Southeast	Yes	Full	VP10
	KCDP-SR 32	N/A	N/A	Full	VP17
Settlements	Walsh Island, Co. Offaly – Village	N/A	N/A	Full	VP11
	Monasterevin, Co. Kildare – Moderate Growth Town	N/A	N/A	Full	VP26
	Portarlington, Co. Laois – Self Sustaining Town	N/A	N/A	Full	VP16

	Prosperous, Co. Kildare – Small Town	N/A	N/A	Full	VP17
Recreational Routes	Royal Canal Way	N/A	N/A	Full	VP14
15 to 20km					
Scenic Route and Views	MCDP-PV 83	Southeast and Northwest	Yes	Full	VP14
	MCDP-PV 56	Southeast and Northwest	Yes	Full	VP14
	WCDP-PV 14	Southeast	Yes	Full	VP14
Recreational, Cultural Heritage and Tourist Destinations	Dún Ailinne – Tentative UNESCO Heritage Site	N/A	N/A	Full	VP27
	Croghan Hill	N/A	N/A	Full	VP10

13.5.2.2 Visual Receptors Scoped Out for Further Assessment

In some cases, specific receptors are scoped out where there is no potential for significant visual effects to occur on account of combination of factors such as distance, visual screening, direction of views and the nature and sensitivity of the receptors at a particular location (see Section 1.4.3 of *Appendix 13-1* for further information). Landscape and visual receptors not listed in Table 13-10 above have been scoped out of further assessment in this chapter. This is on the basis that, following ZTV mapping and on-site appraisal, these receptors either have no theoretical visibility of the Proposed Turbines, or are located at a sufficient distance and in a direction where any theoretical visibility is considered negligible and where significant landscape or visual effects are not anticipated. Receptors scoped out of assessment are not considered further in this chapter

13.5.3 Residential Receptors

During site visits conducted in 2025 and 2026, visibility appraisals determined that most visibility of the Proposed Turbines will occur within 5km. It is a settled landscape, with residential housing being organised along the local road network as well as in small settlement clusters around local crossroads and junctions. Some residential receptors located in close proximity to the Project Site will likely have views of the Proposed Turbines and are likely to have the greatest visual effects arising as a result of the Proposed Project.

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

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

- VP-02 – Lullymore West
- VP-03 – Lullymore East
- VP-04 – Clonbullogue
- VP-05 – Ballydermot
- VP-06 – Ticknevin
- VP-09 – Blundell Aqueduct
- VP-12 – Boston Hill
- VP-13 – Coolygagan
- VP-15 – Edenderry
- VP-18 – Hamilton Bridge
- VP-19 – Lullymore Cemetery
- VP-20 – Rathangan
- VP-21 – Lodge Bog Nature Reserve
- VP-22 – Allenwood South
- VP-25 – Carbury

13.6 Likely Future Receiving Environment

This section identifies the future receiving environment relating to the landscape likely to exist at the Proposed Wind Farm site at the commencement of the construction phase. In accordance with the approach set out in Section 1.8.4 of Chapter 1, the likely future receiving environment has been established having regard to the existing landscape and visual baseline described in Sections 13.4 and 13.5, and the observed changes recorded from 2020 to 2026 across the Proposed Wind Farm site.

The Proposed Wind Farm site is located predominantly on former industrial peat extraction lands within part of the Allen Bog Group. Industrial peat extraction ceased in June 2020. Since then, natural revegetation has continued across the lands, alongside ongoing site management, decommissioning works and environmental monitoring undertaken in accordance with IPC Licence P0503-01.

The majority of the Proposed Wind Farm site; the landform is very flat and is often at a lower elevation than the surrounding landscape due to the large quantity of material that was removed during the extraction of peat. Under the existing baseline, landcover within the Proposed Wind Farm site comprises primarily a mix of bare cutaway peat, re-vegetated peat, degraded bog, and scrub vegetation. The landscape will continue to naturally revegetate, and with the continuation of existing site management and environmental monitoring, would not introduce new features within the landscape that will alter the character of the receiving landscape. These effects will be localised to the Proposed Wind Farm site itself due to the flat nature of the landscape and enclosure by boundary vegetation, which provide a visual barrier and visual screening toward the peatlands within the Proposed Wind Farm site from the surrounding road network, residential receptors and other visual receptors (as discussed in Section 13.4.2.1.1 above). Continued natural revegetation may result in localised changes to vegetation cover and reduce visibility into the Proposed Wind Farm site.

Accordingly, the likely future receiving environment at commencement of the construction phase will remain materially comparable to the existing baseline environment with respect to landscape and visual receptors.

The assessment of Likely Significant Landscape and Visual Effects presented in Section 13.8 has therefore been undertaken against this likely future receiving environment. As the landscape conditions predicted at commencement of construction are materially comparable to those described in the existing baseline environment, the information presented in Section 13.8 remains representative of the landscape receiving environment against which the Proposed Project is assessed.

13.6.1 Future Environmental Trends

This section identifies the future environment trends relating to landscape and visual likely to exist following implementation of the Draft Rehabilitation Plans throughout the operational phase.

Continued natural revegetation, ongoing site management, decommissioning works, and environmental monitoring, and implementation of the targeted rehabilitation measures outlined in the Draft Rehabilitation Plans are anticipated to result in a more vegetated landscape character than the predominantly bare cutaway peatland, (an example of the final vegetated wetland is Lodge Bog). The receiving landscape is being gradually shaped from bare industrial cutaway peatland towards a wetter, naturally vegetated character of wetland, peatland and woodland habitats (see Plate 13-13 below for an example of the different phases of transition).

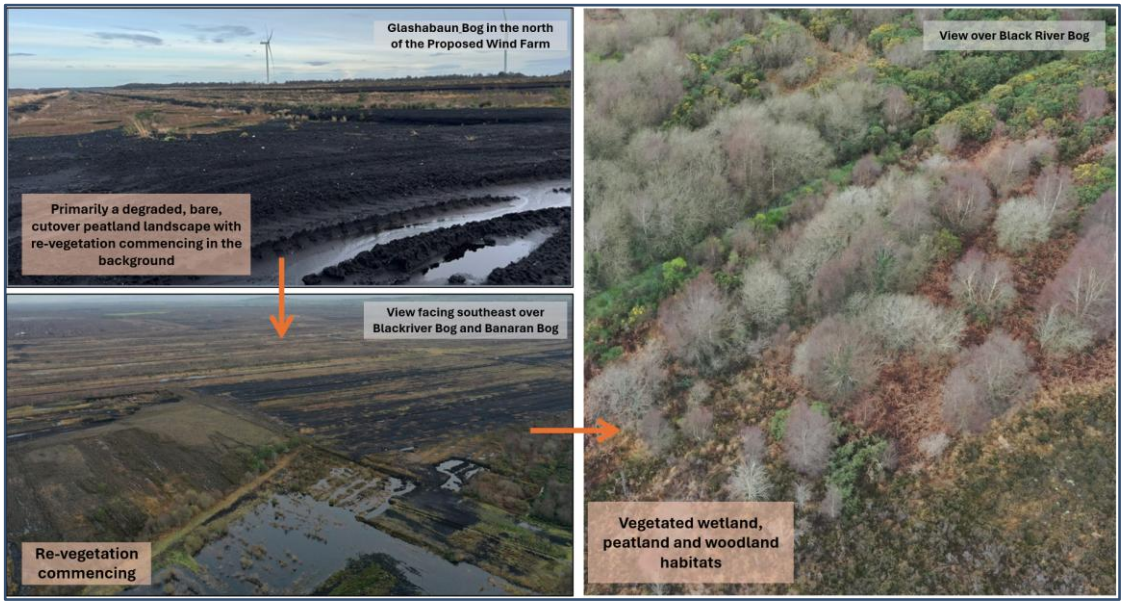


Plate 13-13 An example of the transition of the receiving landscape from bare industrial cutaway towards a wetter, naturally vegetated character of wetland, peatland and woodland habitats

These future environmental trends are anticipated to progressively alter the landscape character described above and have therefore been taken into account, where relevant, in the assessment of operational landscape effects presented in Section 13.8.3.1.

The anticipated changes associated with natural revegetation and targeted rehabilitation measures implementation of the Draft Rehabilitation Plans are predominantly ground-level changes in landcover. Having regard to the flat nature of the receiving landscape and the existing boundary vegetation surrounding the Proposed Wind Farm site, these changes are not anticipated to materially alter the visual baseline experienced by ground-based receptors in the surrounding landscape. Accordingly, separate consideration of these longer-term trends is not required within the operational visual effects assessment. The continuation of the aforementioned activities in the absence of the Proposed Project is considered in the Do-Nothing Scenario in Section 13.8.1, and cumulatively in Section 13.8.3.1.6.

13.7 Cumulative Context

Potential cumulative effects between the Proposed Project and other permitted or proposed plans in the area, (wind energy or otherwise), as set out in Section 2.10 in Chapter 2 of this EIAR, were considered as part of this LVIA. The developments considered as part of the cumulative effect assessment are described in Section 2.10 of this EIAR and presented in *Appendix 2-3*; please see Table 2-6 of Chapter 2 for the relevant cumulative assessment boundary justification.

In terms of cumulative landscape and visual effects, other wind energy projects are of primary focus, as these are very tall, vertical elements in the landscape (i.e. turbines) and therefore have the most potential to give rise to 'Significant' cumulative landscape and visual effects. Other wind energy developments within 20km of the Proposed Turbines (i.e. the LVIA Study Area – see Section 1.4 of *Appendix 13-1 LVIA Methodology*) were identified by searching past planning applications lodged through the online planning portals of relevant planning authorities (i.e. ACP, and Kildare, Offaly, Westmeath, Meath and Laois County Councils).

Other infrastructure developments (not wind energy development) of substantial scale or which have relevant landscape and visual connection with the Project Site have been taken forward for the cumulative landscape and visual assessments and discussion in relation to specific landscape and visual receptors, where relevant. This includes the proposed Eastern and Midlands Region Water Supply Project (Case Ref: PA92.323980) which transects the Project Site.

Cumulative Context: Other Wind Energy Developments

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

All wind farm developments in the LVIA Study Area are identified in this section and each is categorised as one of the following:

- **Existing**: Wind energy developments that are currently operational in the baseline landscape at the time of conducting this LVIA;
- **Permitted**: Wind energy developments that are permitted (consented) at the time of conducting this LVIA. These developments have a high probability of being operational in a future receiving environment;
- **Proposed**: All well-developed wind farm proposals with project specifications in the public domain at the time of conducting this LVIA. Cumulative effects between the Proposed Project and other proposed projects within this category are inherently uncertain and are reliant on the outcome of the planning and consenting system (amongst other factors).

A description of the various cumulative categories is presented in the EIAR Volume 2: Photomontage Booklet is comprehensively reported in *Appendix 13-1: LVIA Methodology* (Section 1.6: Photomontage Visualisations). The above categories are a useful guide to enable understanding and structure when viewing the Photomontage Booklet and identification of the developments listed in this section. However, irrespective of how a development is categorised, the assessments of cumulative landscape and visual effects include all other wind farm developments.

The effects reported both in this Chapter and within the assessment appendices (*Appendix 13-2: LCA Assessment Tables* and *Appendix 13-3: Photomontage Visual Impact Assessment Tables*) uses appropriate and logical narrative to discuss cumulative interactions between the Proposed Turbines and all other wind energy developments irrespective of which category they occur. Whilst the categories provide clarity in the presentation of visuals with respect to the scope of potential development in this landscape, discussion of cumulative interactions on specific landscape and visual receptors is relative to the effects on each receptor and is proportionate to the likelihood of significant landscape and visual effects occurring on that receptor.

Table 13-11 Cumulative Wind Farms within the LVIA Study Area

Other Wind Farms	Status	No. of Turbines	Distance from Nearest Proposed Turbine
Up to 5 km			
Existing Cushaling Wind Farm	Existing	9	0.7 km south from the nearest Proposed Turbine T25
Existing Cloncreen Wind Farm	Existing	21	2.9 km west from the nearest Proposed Turbine T22
Up to 10 km			
Proposed Drehid Wind Farm	Proposed	11	7.4 km north-east from the nearest Proposed Turbine T46
Proposed Ballinla Wind Farm*	Permitted	7	7.3 km north-west from the nearest Proposed Turbine T22
Proposed Derrynadarragh Wind Farm	Proposed	9	7.7 km south-west from the nearest Proposed Turbine T14
Proposed Cushina Wind Farm	Proposed	11	9.3 km south-west from the nearest Proposed Turbine T13
Up to 15 km			
Existing Mountlucas Wind Farm	Existing	28	10.4 km west from the nearest Proposed Turbine T22
Existing Yellow River Wind Farm	Existing	29	12.1 km north-west from the nearest Proposed Turbine T32
Permitted Clonarrow Wind Farm	Permitted	4	12.9 km west from the nearest Proposed Turbine T22
Existing Moanvane Wind Farm	Existing	12	13.9 km south-west from the nearest Proposed Turbine T13
Up to 20 km			
Proposed Garryhinch Wind Farm	Proposed	12	20.0 km south-west from the nearest Proposed Turbine T13

*Ballinla Wind Farm was granted planning permission on 12th October 2026 (Pl Ref: PAX19.323579). As the final cumulative run for the Proposed Project was completed in September 2026, the granted turbines have therefore been modelled as 'Proposed' within Volume 2 Photomontage Booklet

There are 5 no. existing, 1 no. permitted, and 5 no. proposed wind farms within a 20km radius of the Proposed Turbines. The locations of these 11 no. wind farms are shown on the Cumulative Context Map, Figure 13-20 below. The cumulative turbines are primarily located to the west and northwest of the Proposed Turbines. In the case of cumulative turbines being theoretically visible from the selected viewpoints of this LVIA, then all turbines were included within the proposed photomontage imagery in the Photomontage Booklet. The cumulative comparative theoretical visibility of these cumulative turbines and the Proposed Turbines are illustrated in Figure 13-21 and discussed below in Section 13.8.3.2.6.

An assessment of cumulative landscape and visual effects is included in the assessment of effects detailed in Section 13.8 - Likely Significant Landscape and Visual Effects.

N

Yellow River Wind Farm

Drehid Wind Farm

Ballinla Wind Farm

Cushaling Wind Farm

Clonarrow Wind Farm

Cloncreen Wind Farm

Mountlucas Wind Farm

Cushina Wind Farm

Moanvane Wind Farm

Derrynadarragh Wind Farm

Garryhinch Wind Farm

5 km

10 km

15 km

20 km

0 2.5 5 km

Map Legend

LVIA Study Area

Proposed Turbines

- 200m
- 220m

Cumulative Developments

- Eastern and Midlands Region Water Supply Project (Case Ref: PA92.323980)

Cumulative Wind Farms

- Ballinla Wind Farm — Permitted
- Clonarrow Wind Farm — Permitted
- Cloncreen Wind Farm — Existing
- Cushaling Wind Farm — Existing
- Cushina Wind Farm — Proposed
- Derrynadarragh Wind Farm — Proposed
- Drehid Wind Farm — Proposed
- Garryhinch Wind Farm — Proposed
- Moanvane Wind Farm — Existing
- Mountlucas Wind Farm — Existing
- Yellow River Wind Farm — Existing

Cumulative Zone of Theoretical Visibility

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

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Drawing No.

Figure 13-20

Drawing Title

Cumulative Context

Project Title

Ballydermot Wind Farm, Co. Offaly & Co. Kildare

Scale	Project No.	Date	Drawn By	Checked By
1:175,000	250708	29.09.2026	GL	DM

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N

Yellow River Wind Farm

Drehid Wind Farm

Ballinla Wind Farm

Cushaling Wind Farm

Clonarrow Wind Farm

Cloncreen Wind Farm

Mountlucas Wind Farm

Cushina Wind Farm

Moanvane Wind Farm

Derrynadarragh Wind Farm

Garryhinch Wind Farm

5 km

10 km

15 km

20 km

0 2.5 5 km

Map Legend

LVIA Study Area

Proposed Turbines

- 200m
- 220m

Cumulative Developments

- Eastern and Midlands Region Water Supply Project (Case Ref: PA92.323980)

Cumulative Wind Farms

- Ballinla Wind Farm — Permitted
- Clonarrow Wind Farm — Permitted
- Cloncreen Wind Farm — Existing
- Cushaling Wind Farm — Existing
- Cushina Wind Farm — Proposed
- Derrynadarragh Wind Farm — Proposed
- Drehid Wind Farm — Proposed
- Garryhinch Wind Farm — Proposed
- Moanvane Wind Farm — Existing
- Mountlucas Wind Farm — Existing
- Yellow River Wind Farm — Existing

Cumulative Zone of Theoretical Visibility

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

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Drawing No.

Figure 13-21

Drawing Title

Cumulative Context

Project Title

Ballydermot Wind Farm, Co. Offaly & Co. Kildare

Scale	Project No.	Date	Drawn By	Checked By
1:175,000	250708	29.09.2026	GL	DM

MKO Planning and Environmental Consultants

13.8 Likely Significant Landscape and Visual Effects

13.8.1 'Do-Nothing' Scenario

If the Proposed Project were not to proceed, the part of the Project Site located within part of the Allen Bog Group would continue to be managed under the requirements of the IPC licence (P0503-01) and therefore the ongoing decommissioning activities, site management and environmental monitoring would continue.

In the absence of the Proposed Project, natural revegetation processes would continue across the proposed wind farm site. Areas of bare peat would progressively revegetate and transition through successional stages, potentially developing into heath communities, scrub or bog woodland over time, depending on local hydrological conditions. Therefore, the existing baseline of the landscape will transition from a predominantly industrial cutover peatland landscape, with open exposed peat surfaces and drainage features, to a more natural mosaic landscape of cutaway peatland, wetland and regenerating bog habitats. Scrub encroachment and woodland revegetation would also continue in the drier areas of the Proposed Wind Farm site

Therefore, under a 'Do-Nothing' scenario, the proposed wind farm site would continue to be managed as per the requirements of the IPC licence as detailed in Chapter 4 section 4.6.7.' is only reference to draft rehabilitation plans.

If the Proposed Project were not to proceed, the opportunity to capture a significant part of County Offaly's, County Kildare's and Ireland's valuable renewable energy resources would be lost. This would reduce the contribution of the Proposed Project towards national and EU renewable energy and climate objectives, as well as the renewable energy, climate action and decarbonisation objectives of the OCDP and the KCDP. Consequently, the associated benefits arising from the displacement of fossil fuel-based electricity generation, including reductions in greenhouse gas emissions and air pollutant emissions, would not be realised.

Furthermore, as this application includes a Biodiversity Management Plan (Appendix 6-5) to be implemented during the operation phase, the opportunity to enhance the Proposed Wind Farm for biodiversity, separate to the requirements of the IPC License, at a local scale, would also be lost. This would be a long-term slight negative effect and is Not Significant.

13.8.2 Construction Phase Effects

It is estimated that the construction phase of the Proposed Project will last between 30-36 months and will be Short-Term. The construction phase will involve the erection of 46 no. Proposed Turbines with a tip height of 220m at the centre of the Proposed Wind Farm and a tip height of 200m at the outer perimeter of the Proposed Wind Farm, Proposed Enhancement Areas, tree felling, and all associated works, as well as the Proposed Onsite Substation, Proposed Offsite Substation and associated works, including new proposed steel masts breaking the existing OHL.

Construction phase effects also include the associated effects from the movement of construction and turbine transport vehicles along the Proposed Construction Haul Routes and Proposed Turbine Delivery Route to and from the Project Site to allow the construction of the Proposed Project elements.

13.8.2.1 Landscape Effects during the Construction Phase

13.8.2.1.1 *Pre-Mitigation Effects*

Associated earthworks, such as the cut and fill required to facilitate construction of the Proposed Project, have the greatest potential for landscape effects. Where excavation is required, the existing landcover, vegetation, peat and spoil will be removed during the construction phase. In most instances, groundworks and excavation trenches will be re-instated upon completion of the construction. Where peat and spoil arising from construction activities is managed within the Project Site, the vegetative top-soil layer will be removed and reinstated following the completion of works. All remaining peat and spoil will be transported to the designated peat and spoil areas or landscaped locally to the Proposed Project infrastructure, as per the PSMP (*Appendix 4-3*). The construction activities may potentially cause effects on the landscape from the creation of temporary structures, dust, minor soil erosion and minor alterations to drainage. the construction phase will have a 'Moderate', 'Short-term', 'Negative' landscape effect. On balance, these effects are not considered significant.

The 13.1km of 220kV underground cabling connection which forms part of the Proposed Grid Connection will be underground; therefore, the greatest landscape effects attributed to this element of the Proposed Project will occur during the construction phase when the landscape is materially altered to facilitate underground installation. The Proposed Grid Connection underground electrical cabling route will exit the Proposed Onsite Substation via the proposed internal access track onto the R414, and will require Horizontal Directional Drilling (HDD) at 1 no. location, beneath the Grand Canal west of the Shee Bridge, before continuing along the R403 through Allenwood, and turning south along the L6002 at Prosperous to connect to the Proposed Offsite Substation in the townland of Killybegs, Co. Kildare.

The construction phase of this aspect of the Proposed Grid Connection underground electrical cabling route will be temporary, localised, and transient in nature, as the works proceed along the Proposed Grid Connection underground electrical cabling route. The works will include roadside vegetation removal, soil stripping, excavation, and other associated construction activities. The Proposed Grid Connection underground electrical cabling route will utilise HDD to cross the Grand Canal and will not interact with the Shee Bridge. These activities will cause temporary change to the physical landscape along the Proposed Grid Connection underground electrical cabling route, including a very localised part of the Grand Canal AHA (a landscape of High sensitivity); however, these changes will be localised to the immediate environment surrounding the Proposed Grid Connection underground electrical cabling connection and will not affect the character of the landscape setting or visual amenity of the wider area. The construction works will be short-term in nature and completed as soon as practically possible. The underground cabling construction works are likely to result in 'Slight', 'Short-term', 'Negative' landscape effects. On balance, these effects are not considered significant. The Proposed Grid Connection underground electrical cabling route will only cause perceptible effects on the landscape during the construction phase only. No landscape effects will occur during the operational phase, and is therefore not discussed in the Operational Phase Effects.

13.8.2.1.2 Mitigation Measures for Landscape Effects during Construction

All construction activities will follow best practice methods to reduce impacts upon the environment and landscape of the Proposed Project. Further details are presented in the *Construction and Environmental Management Plan* (CEMP) contained in *Appendix 4-4* of this EIAR. The following measures will be implemented to mitigate landscape effects during the construction phase of the Proposed Project:

- In all circumstances, excavation depths and volumes will be minimised, and excavated material will be re-used where possible.
- Any areas of bare soil remaining after the landscaping phase will be seeded as soon as possible with a grass-seed mix to minimise sediment run-off.

13.8.2.1.3 Residual Landscape Effects

Following the implementation of the mitigation measures, residual direct landscape effects as a result of the Proposed Project during the Construction Phase will range from 'Moderate' to 'Slight'. On balance, these effects are not considered significant.

13.8.2.2 Visual Effects during the Construction Phase

13.8.2.2.1 *Pre-Mitigation Effects*

Proposed Wind Farm

The most substantial visual effects will arise from construction activities at the Proposed Wind Farm, such as assembling tower sections and erecting the Proposed Turbines, proposed met masts, and the proposed relay mast. There will be temporary occasions during the construction phase in which the Proposed Turbines will be partially constructed and may be seen as either stand-alone tower sections, or incomplete turbines where only one or two blades are visible. The equipment and vehicles required to transport and erect the wind farm components include large cranes and large haulage vehicles. The visual effects arising from the construction of the Proposed Turbines and the ancillary infrastructure such a site access roads and hardstands to service and build turbines T01 to T46 will be experienced by a range of visual receptors in the landscape surrounding the Proposed Wind Farm. These effects will be localised to the Proposed Wind Farm itself due to the flat nature of the landscape and enclosure by boundary vegetation, therefore visual effects on visual receptors outside of the Project Site will be 'Short-Term', 'Negative' and 'Slight' for the majority of the visual effect during the construction phase, excepting for the temporary works required to build and erect the Proposed Turbines.

Proposed Turbine Delivery Route Accommodation Works

Works such as road widening are required along the Proposed Turbine Delivery Route to accommodate the large vehicles used to transport turbine components to the Proposed Wind Farm. In some instances, minor temporary alterations will be required to the existing streetscape, temporary local road widening, temporary relocation of some signs and street furniture. Full details of the assessment are included as part of the traffic impact assessment set out in Chapter 15 of this EIAR. The areas of accommodation works are deemed to have a 'Slight' sensitivity and the change to occur will be concentrated along the local road network. These works are likely to be 'Temporary', 'Slight', 'Negative' visual effects during the construction phase. On balance, these effects are not considered significant.

Temporary Construction Compounds

There will be 10 no. temporary construction compounds proposed as part of the Proposed Project, located along the newly proposed internal site access roads. A detailed description of the construction compounds is provided in Section 4.4.1.5 of Chapter 4.

The visual effects of the construction compounds will be localised, considering that construction activities related to them will be most visible within their immediate surroundings. Within the Project Site and its immediate landscape setting, the visual effects on nearby visual receptors arising from the temporary construction compounds are considered to be of localised 'Negative,' 'Short-Term', 'Slight' effects. On balance, these effects are not considered to be significant.

Proposed Grid Connection

The Proposed Grid Connection will connect to the national electricity grid via the Proposed Onsite Substation located in Lodge Bog within the Project Site. The Proposed Grid Connection will comprise of the:

- Proposed Onsite Substation comprising: one 220kV Gas-Insulated Substation (GIS) building, and one 110kV GIS building, one control building, a 36m telecommunications tower, and underground cabling; and
- Proposed Offsite Substation comprising: one 220kV GIS building, one 36m telecommunications tower, 2 no. steel masts, 2 no. new gantry structures.

220kV Underground Cabling Connection - Construction Phase Effects Only

The 13.1km 220kV underground cabling works will consist of the installation of ducts in an excavated trench to accommodate electrical and fibre communications cables to facilitate a connection between the Proposed Onsite Substation and the Proposed Offsite Substation. The underground cabling will be located underground, therefore the greatest effects attributed to this element of the Proposed Project will occur during the construction phase. The underground cabling will be laid predominantly beneath the surface of the public road corridor, with an HDD occurring at 1 no. location, i.e., beneath the Grand Canal west of the Shee Bridge.

The construction phase of all underground cabling will be 'Short-term'. However, due to the localised, and transient nature of the works moving along the cabling route, impacts on any visual receptors along the local road network or the Grand Canal will be 'Temporary'. The works will include roadside vegetation removal, soil/road surface stripping, excavation, and other associated construction activities. Should any medium planting be removed, it will be replaced with the same or similar species whenever it is not possible to salvage and reinstate. Any areas of bare soil remaining after the landscaping phase will be seeded as soon as possible with a grass seed mix. Regarding the underground cabling, changes will be localised to the immediate environment surrounding the cabling route and will not permanently affect the visual amenity of the wider area.

The underground cabling connection works are likely to cause 'Slight' 'Temporary', 'Negative' visual effects on nearby visual receptors. On balance, these effects are not considered significant. The underground cabling will only cause perceptible effects on visual amenity during the construction phase only. No visual effects will occur during the operational phase ,and is therefore not assessed further in this Chapter.

Proposed Onsite Substation and Proposed Offsite Substation

Visual effects will occur as the Proposed Onsite Substation and Proposed Offsite Substation are 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 Onsite Substation is within Lodge Bog and Proposed Offsite Substation is located in agricultural fields in the townland of Killybegs. The nearest residential receptor is located approximately. 394mfrom the Proposed Onsite Substation and approximately. 260m from the Proposed Offsite Substation.

Intermittent visibility of both the Proposed Onsite Substation and Proposed Offsite Substation construction will occur from nearby residential receptors, particularly from the receptors located along the R414 in Lullymore East, immediately east of the Proposed Onsite Substation, as well as residential receptors to the east of the Proposed Offsite Substation along the L-6002 local road. However, many of these residential receptors, as well as the road themselves, are surrounded by treelines and hedgerows that will provide visual screening towards the proposed substations.

The visual effects arising from the construction of the Proposed Onsite Substation and Proposed Offsite Substation are considered to be 'Negative', 'Short-Term', 'Slight' effects. On balance, these effects are not considered significant.

Connection to OHL

The Proposed Offsite Substation will connect to the existing Maynooth–Dunstown 220kV OHL through 0.06km of loop in OHL (0.12km in total), incorporating 2 no. new steel masts and 2 no. new gantry

structures. The OHL conductor will be broken between Towers 46 and 47, with no removal of existing infrastructure.

The addition of the additional steel masts will add to the density of the existing masts within the area; however, they will be of similar scale to the existing masts within the wider landscape (as discussed in Section 13.4.2.1.2). Overall, the 2 no. new steel masts and 2 no. new gantry structures will not substantially alter the visual amenity of the wider landscape. The proposed addition of the steel masts and gantry structures to facilitate the connection to the OHL is likely to cause 'Permanent' 'Slight' 'Negative' visual effects for nearby visual receptors. On balance, these effects are not considered significant.

13.8.2.2.2 Mitigation Measures/Mitigating Factors for Visual Effects

All construction activities will follow best practice methods to reduce impacts upon the environment and landscape of the Proposed Project. Further details are presented in the *Construction and Environmental Management Plan* (CEMP) contained in *Appendix 4-5* of this EIAR. The following mitigation measures and existing mitigating factors have been taken into account in determining the residual construction-phase visual effects:

- General housekeeping measures, necessary for Health and Safety requirements, will ensure that the active construction areas will be kept tidy, further mitigating localised visual impacts during the construction phase.
- Many residential receptors, as well as the roads themselves, are surrounded by treelines and hedgerows that will provide visual screening towards the proposed substations.

13.8.2.2.3 Residual Effects

Following implementation of the mitigation measures described above, and having regard to the existing mitigating factors within the receiving environment, residual visual effects during the construction phase will range from 'Not Significant' to 'Slight', will be 'Short-term' and 'Negative', and on balance, are not considered significant.

13.8.2.3 Proposed Enhancement Areas – Landscape and Visual Effects

Section 13.4.2 above describes the character of the enhancement areas, the lands in Killina Bog are highly influenced and modified by past and existing forestry land use, whilst the lands at Lodge Bog have PCAS completed and re-vegetation has now been established. Therefore, the landscape sensitivity of the Proposed Enhancement Areas at Killina Bog is deemed to be 'Low', whilst the landscape sensitivity at Lodge Bog is deemed to be 'High'. The character of the Proposed Enhancement Areas will be altered by the removal of approximately 60.7ha of forestry and woodland and the establishment of a mosaic of open peatland and grassland habitat in Killina Bog, and the removal of existing widespread scrub vegetation at Lodge Bog. The magnitude of change is deemed to be 'Slight' and highly localised. The landscape and visual effects that will arise will be highly localised, 'Negative', 'Short-Term', and 'Slight' at Killina Bog and highly localised, 'Negative', 'Short-Term', and 'Moderate' at Lodge Bog. On balance, these effects are not considered significant.

13.8.3 Operational Phase Effects

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

- **Landscape Effects**: Reporting landscape effects for the Proposed Project;
- **LCA Assessment Outcomes:** A summary of the landscape impact assessment outcomes for each LCA in the (15km) LCA Study Area as is comprehensively reported in *Appendix 13-2: LCA Assessment Tables*;

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

13.8.3.1 Landscape Effects during the Operational Phase

13.8.3.1.1 *Landscape of the Project Site*

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

In a local context, the Project Site is primarily located in a modified, remote, degraded peatland landscape of local value. Degraded peatland and cutover bog are the dominant landcover of the flat, low-lying landscape within the Proposed Wind Farm itself. The Proposed Offsite Substation which forms part of the Proposed Grid Connection is located within a human-modified landscape where agricultural fields are the dominant landcover. As outlined in Section 13.6.1.1 above, continued natural revegetation, ongoing site management, decommissioning works, and environmental monitoring, and implementation of the targeted rehabilitation measures set out in the Draft Rehabilitation Plans are anticipated to progressively alter areas of former industrial cutaway peatland and contribute to a wetter and more vegetated landscape character.

The landscape value and sensitivity of the Project Site is deemed to be Low in Section 13.4.3 above. 'Low' sensitivity balanced with a 'Substantial' magnitude of change amounts to 'Long-term' landscape effects of 'Moderate' significance upon the physical fabric of the landscape of the Project Site (see LVIA Methodology, *Appendix 13-1*). On balance, these effects are not considered significant. These direct landscape effects will be localised to the footprint of the Proposed Project. The assessment has had regard to the future landscape trends as described in Section 13.6.1.1. The current landscape sensitivity is considered to be 'Low'. Over the operational life of the Proposed Wind Farm, continued natural revegetation, ongoing site management, decommissioning works, environmental monitoring and the implementation of the targeted rehabilitation measures set out in the Draft Rehabilitation Plans are anticipated to improve the landscape character and condition of the proposed Wind Farm site. However, having regard to the Proposed Wind Farm in conjunction with the character of the receiving landscape, the overall landscape sensitivity is considered to remain 'Low'. A 'Low' landscape sensitivity, balanced against a 'Substantial' magnitude of change, results in a 'Moderate' 'Long-term' landscape effect upon the physical fabric of the landscape within the Project Site when considering the future landscape trends.

Mitigation of Landscape Effects within the Landscape of the Proposed Site

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

- The spatial configuration of the Proposed Project infrastructure footprint has been carefully designed to minimise the loss of valuable landscape receptors on the Project Site, such as remnants of uncut raised bog, mature woodland or features of cultural heritage value.
- The internal site access road layout makes use of the existing roads wherever possible, to minimise the requirement for new tracks within the Project Site.
- To minimise cut and fill activities required to construct the Proposed Project, the proposed site access roads, and other infrastructure such as hardstands have been designed to align with the existing terrain within the landscape of the Project Site.
- In all circumstances, excavation depths and volumes will be minimised, and excavated material will be re-used where possible.
- Dedicated amenity and equestrian tracks are included in the Amenity Plan as part of the Proposed Wind Farm and will add recreational value to the landscape of the Proposed Wind Farm.
- Proposed Enhancement Areas are included within the Proposed Wind Farm site to enhance, mitigate and offset existing habitats.

Once the Proposed Project is operational and the construction activity is complete, the landscape will naturally re-vegetate around the Proposed Project footprint. Also, over time, with aid of the rehabilitation plans and the BMP (*Appendix 6-5*), 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.

13.8.3.1.2 LCA Assessment Outcomes

An assessment of the effects on landscape character based on designated LCAs was undertaken for the 7 no. LCAs within the LCA Study Area selected for assessment; these were mapped previously in Figure 13-16 and in Figure 13-17. The individual assessments for each LCA are summarised below in Table 13-12 and presented in detail in *Appendix 13-2: LCA Assessment Tables*. The assessment criteria and grading scales which aided the assessment of landscape character effects are detailed in *Appendix 13-1: LVIA Methodology* (Section 1.7: Assessing Landscape Effects).

Table 13-12 LCA Assessment Summary

LCA Ref.	Name	LCA Sensitivity to Wind Farm Development (Appendix 13-2)	Magnitude of Change in LCA (Appendix 13-2)	Residual Significance of Effect (Appendix 13-2)	Significance
KCDP LCA 04	Bog of Allen	Medium	Moderate	**Moderate**	not significant
KCDP LCA 01	Carbury Boyne Lowlands	Low	Slight	**Not Significant**	not significant
KCDP LCA 03	River Liffey Valley and Plains	Medium	Slight	**Slight**	not significant
KCDP LCA 05	Barrow Grand Canal Corridor	Low	Slight	**Not Significant**	not significant
KCDP LCA 06	The Six Hills	Low	Slight	**Not Significant**	not significant

LCA Ref.	Name	LCA Sensitivity to Wind Farm Development (Appendix 13-2)	Magnitude of Change in LCA (Appendix 13-2)	Residual Significance of Effect (Appendix 13-2)	Significance
KCDP LCA 07	The Curragh Plains	High	Slight	**Slight**	not significant
Offaly LCA	Offaly LCA	Medium	Moderate	**Moderate**	not significant

The largest magnitude of change ('Moderate') will occur within Offaly LCA, as the Proposed Turbines will materially alter the physical fabric of the landscape of this LCA, and within KCDP LCA 04 – Bog of Allen as the Proposed Turbines, all ancillary elements of the Proposed Wind Farm, and the Proposed Onsite Substation will materially alter the physical fabric of the landscape of this LCA. The Proposed Turbines, the most visually prominent elements of the Proposed Project are likely to be most visible within 5km, as well as from elevated vantage points within the Offaly LCA and the KCDP LCA 04. On-site appraisals determined that there will be more limited visibility of the Proposed Turbines in parts of these two LCA's beyond 5km due to the visual screening from intervening vegetation in the landscape which limits views of the Proposed Turbines in these flat landscapes. Furthermore, due to the very flat landscape characteristics and disproportionate screening effect (See Section 13.3.2 previously), only a very small proportion of the overall Proposed Wind Farm is ever seen and experienced from any low-lying vantage point, including those receptors in close proximity. It is only occasionally, from more elevated vantage points where the full impact of all 46 no. Proposed Turbines are experienced by a visual receptor in one view, where they are seen as a single cluster of turbines within the landscape.

Review of landscape policy reported above (Section 13.4.1), and in *Appendix 13-2* concludes that the Proposed Wind Farm is located within an area designated as 'Open to Consideration' and is of 'Medium' sensitivity (as per the KCDP), which has the capacity to accommodate wind energy development, particularly when compared to other LCAs in County Kildare. Table 13.4 of KCDP Chapter 13 identifies LCA 4 as having a *"Medium to High"* sensitivity and has an overall 'Medium' compatibility to Wind Energy development, which is the most compatible of all the ratings as there are no LCAs with a higher compatibility.

In relation to the OCDP, the Proposed Turbines are situated within an area classified as having 'Moderate' landscape sensitivity as outlined in the OCDP. The OCDP notes that such areas *"can accommodate development pressure but with limitations in scale and magnitude."* Furthermore, the OCDP specifically acknowledges that cutaway bogs within these moderately sensitive areas *"may be appropriate for other sensitively designed and located developments, including* ***renewable energy****."* The Proposed Turbines are located within an area designated as 'Open to Consideration' in the OWES, within Potential Wind Energy *Area 2.*

The Proposed Project will have a 'Long-term', 'Negative', 'Moderate' residual effect on KCDP LCA 04 – Bog of Allen and Offaly LCA. On balance, these effects are not considered significant.

The Proposed Wind Farm will not materially alter any of the other LCA's in the LCA Study Area. When the Proposed Turbines will be visible from another LCA, they will give rise to a 'Long-term', 'Negative', 'Slight' residual landscape effect on the landscape character of these other LCAs. On balance, these effects are not considered significant.

The Proposed Offsite Substation and part of the Proposed Grid Connection is also located within KCDP LCA 03 – River Liffey Valley and Plains. The magnitude of change was deemed to be 'Slight' as the change to the physical fabric of the landscape will be confined to a very small portion of this LCA,

where changes to the landscape are more evident at a local level and not over a wide geographical area. Residual landscape effects on KCDP LCA 03 – River Liffey Valley and Plains were deemed to be 'Long-term', 'Negative', and 'Slight'. On balance, these effects are not considered significant.

13.8.3.1.3 *Effects on Designated Landscape Receptors of Areas of High Amenity*

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.

KCDP and OCDP AHA - Grand Canal (including Barrow Line)

The Grand Canal is a designated AHA within County Offaly and County Kildare. It stretches generally in an east-west direction to the north of the Proposed Turbines within the LVIA Study Area and is located approximately 880m from the nearest Proposed Turbine (T32) at its closest point. The Barrow Line, the southern branch of the Grand Canal stretches generally in an east-south direction to the south-east of the Proposed Turbines. The canal provides amenity value and is a landscape receptor of 'High' sensitivity, protected in the landscape policy of both counties Kildare and Offaly.

Within the LVIA Study Area, the entirety of the Grand Canal AHA falls within an area of full theoretical visibility. However, on-site appraisals determined that visibility is far less, given the localised undulations and vegetation within the landscape. The canal following the low-lying contours of the landscape, with dense vegetation along its banks, provides dense screening along the majority of the route. Long-ranging visibility of the Proposed Turbines is primarily confined to elevated vantage points, such as bridges along the canal, where, even then, views are intermittent. This can be seen at VP26 (residual 'Not Significant' visual effects), VP07 (residual 'Slight' visual effects), and VP09 (residual 'Slight' visual effects), where the Proposed Turbines are seen but are largely screened by intervening vegetation. VP18 is one of the few locations along the Grand Canal where a residual 'Moderate' visual effect was deemed to arise due to the open unenclosed views towards the Proposed Turbines in very close proximity. For the majority of the Grand Canal, even at bridge crossings, visibility is typically limited, with only a limited number of the 46 no. Proposed Turbines clearly visible from any one given point (e.g. VP26, VP07, VP09).

Perceptual effects on the character and setting of this landscape receptor will occur. However, the Proposed Turbines adopt the 4x-tip-height set back distance from all turbines (220m tip height x 4 = 880m) typically used for residential amenity for the Grand Canal (see Section 13.1.3 Mitigation by Design) and are therefore set-back greater than 880m from the southern edge of the canal at its nearest point. The Proposed Turbines will be mostly screened from view along the majority of the canal due to dense vegetation providing visual enclosure within the canal corridor. Where intermittent visibility does occur, from elevated vantage points (i.e. bridges) or through breaks in vegetation, the Proposed Turbines will not be seen within the immediate visual context of this AHA, but rather in the background of views, beyond distant treelines, and visually set-back from the Grand Canal. As such, the Proposed Turbines do not significantly impact the integrity of the immediate landscape setting, landscape character and visual qualities along the canal corridor.

The Grand Canal AHA extends for approximately. 132km, whilst the Barrow Line accounts for another 45km. Given the considerable extent of the Grand Canal AHA, the perceptual landscape effects that do occur on the character and setting of this AHA are confined to a localised section of the AHA in the vicinity of the Proposed Turbines. Therefore, the overall magnitude of change on this AHA as a whole is considered to be 'Slight'. An overall residual landscape effect of 'Long-term', 'Negative' 'Slight' is deemed to arise in relation to the Grand Canal. On balance, these effects are not considered significant. An assessment of visual effects on the scenic amenity at a recreational capacity along the Grand Canal is discussed and reported separately in Section 13.8.3.2.3 below.

Furthermore, the Grand Canal already features views of existing wind energy developments along its extent, including the existing Cushaling and Cloncreen Wind Farms (as seen in VP07, VP09, and VP18). As such, it is clear that the wider landscape has the capacity to accommodate nearby wind energy developments in a manner that is consistent with existing and emerging baseline trends.

KCDP / Westmeath / Meath AHA - Royal Canal Corridor

The Royal Canal is a designated AHA in the KCDP located 12.6km north from the nearest Proposed Turbine (T30) and runs generally in an east-to-west direction to the north of the Proposed Turbines traversing Co. Kildare, Co. Westmeath and Co. Meath. 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. The ZTV primarily indicates large stretches of full ZTV with pockets of no visibility.

On-site appraisals determined that given the distance and the low-lying nature of the canal, which is enclosed by dense vegetation, visibility of the Proposed Turbines is only likely to occur from elevated vantage points, such as bridges along the canal. An example of this is VP14, where residual visual effects were deemed to be 'Slight'. From these locations, the Proposed Turbines are seen as in the background of views, occupying a relatively short horizontal extent. Given the set-back, and limited visibility, the magnitude of change to the character and setting of the landscape on the Royal Canal is deemed to be 'Negligible'. The Proposed Turbines do not significantly impact the integrity of the immediate landscape setting, landscape character and visual qualities along the canal corridor. An overall residual landscape effect of 'Long-term', 'Negative' 'Not Significant' is deemed to arise in relation to the Royal Canal Corridor.

KCDP AHA - The Curragh and Environs

The Curragh and Environs are designated as an AHA and an LCA (KLCA 7) in the KCDP and are located approximately 7.3km southeast of the nearest Proposed Turbine (T02). The Curragh is an extensive open plain of natural grassland of high archaeological, ecological, amenity and recreational value, containing the Curragh Camp and Curragh Racecourse. It is therefore considered a landscape of 'High' sensitivity.

The Proposed Turbines and the ancillary infrastructure of the Proposed Project are not located within this AHA, and as such will not materially alter the physical fabric of this AHA, and only perceptual effects on the character of the landscape as a result of the Proposed Turbines is likely to occur.

Large sections of the AHA exhibit large areas of partial theoretical visibility of the Proposed Turbines, with pockets of no visibility as demonstrated on the ZTV (Figure 13-22), primarily due to the well-defined localised undulations within the landscape. Where visibility does occur, the Proposed Turbines will be seen within the immediate visual context of the Curragh plains, but rather beyond distant treelines within the wider receiving landscape. As such, the Proposed Turbines, will not alter the immediate setting, appearance and context of cultural heritage monuments and the Curragh's immediate landscape setting.

Whilst the Proposed Turbines will introduce a perceptual change to the wider landscape where visible, they will not alter the defining characteristics of the Curragh, including its expansive open grassland character and gently undulating plains. The Proposed Turbines will be perceived as distant elements within the wider receiving landscape, consistent with the existing and emerging baseline trends of renewable energy developments.

Overall, the magnitude of change to the landscape character of the Curragh and Environs is 'Slight', with an overall residual landscape effect of 'Long-term', 'Negative' and 'Slight'. On balance, these effects are not considered significant. An assessment of visual effects on the scenic amenity at the Curragh from a visitor's perspective is discussed and reported separately in Section 13.8.3.2.3 below.

Dún Ailinne, a landscape on Ireland's tentative UNESCO heritage list, which is located within the Curragh, is discussed separately in Section 13.8.3.1.5 below.

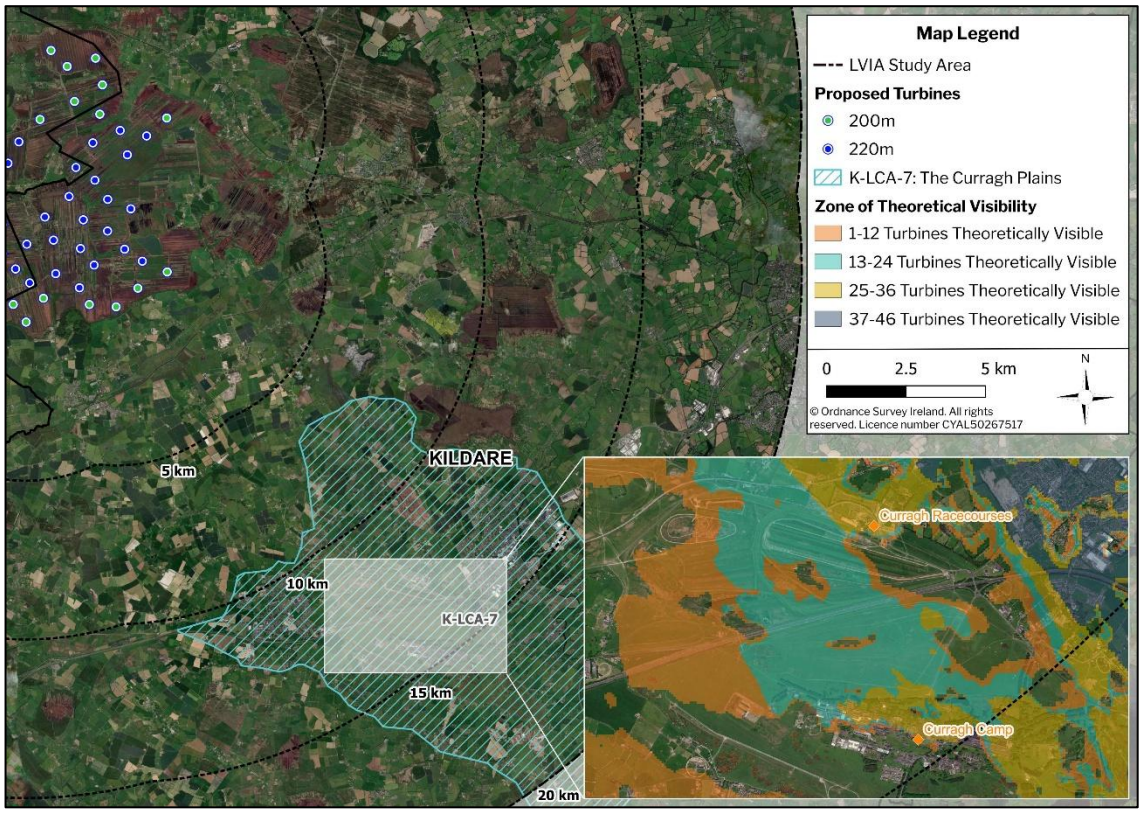


Figure 13-22 Half Blade Zone of Theoretical Visibility for receptors in the Curragh, Co. Kildare.

OCDP AHA – Croghan Hill

Croghan Hill is designated AHA in the OCDP and is a landscape receptor of 'High' sensitivity. The summit of Croghan Hill is located approximately 16.5km northwest of the nearest Proposed Turbine (T22) in County Offaly. As the nearest Proposed Turbine is located 16.5km from the summit, the Proposed Turbines will not alter the physical fabric of Croghan Hill itself and only perceptual effects on the character of the landscape of the Croghan Hill have any potential to occur. Whilst the Proposed Turbines will be visible from elevated vantage points on the Hill (e.g. see VP10 – residual visual effects of 'Moderate') and will increase the extent of wind energy developments seen from the hill, the Proposed Turbines will not alter the immediate landscape setting, appearance and context of cultural heritage monuments at Croghan Hill and its immediate landscape. The magnitude of change on the landscape character of the hill was therefore deemed to be 'Slight'. An overall residual landscape effect of 'Long-term', 'Negative' 'Not Significant' is deemed to arise for Croghan Hill. An assessment of visual effects on the scenic amenity at Croghan Hill is discussed and reported separately in Section 13.8.3.2.3 below.

OCDP AHA – Eskers

As discussed in Section 13.4.2.1.1 previously, an esker which is designated as an AHA in the OCDP sits adjacent to the Project Site boundary, bisecting Tickenvin bog and Glashabaun bog in the townland of Derries. It is considered a landscape of 'High' sensitivity. The AHA is not located within the Project Site or in close proximity to any infrastructure and as such will not materially alter its physical fabric. Landscape effects on the character of the esker will occur given the proximity of the Proposed Turbines to the esker. As discussed previously, it is assumed that the AHA designation relates to this area forming part of the wider esker system that extends into the surrounding agricultural landscape to the north-west of the Proposed Wind Farm. However, analysis of topographic data, aerial imagery and on-

site appraisals determined that the portion of the designated AHA is predominantly located in private lands containing scrub vegetation, residential properties and an established motocross track. As such, these remnants of the esker does not comprise a landscape receptor of any distinctive notoriety or sensitivity.

Accordingly, whilst localised landscape effects on the landscape character of this AHA will occur, the defining characteristics of the wider esker landscape will not be materially altered. An overall residual landscape effect of 'Long-term', 'Negative' and 'Not Significant' will occur.

OCDP - Peatland & Nature Corridors

A collection of bogs to the west of the Proposed Wind Farm in Co. Offaly are identified as a 'Peatland & Nature Corridor' in the OCDP (as varied) – see Section 13.4.1.3.2 previously. These are large linear areas of bogs that are primarily comprised of natural habitats and regenerated peatlands. Whilst not a designated 'AHA', this landscape designation is assigned a 'High' landscape sensitivity based on the new designations in the OCDP. The Proposed Turbines are set-back from this Peatland & Nature Corridor and will not alter the physical fabric of this landscape receptor. Only perceptual effects on the character of the landscape is likely to occur.

As detailed in Section 13.3.1.2 previously, due to the exceptionally flat landscape characteristics of the LVIA Study Area, the disproportionate screening effect serves to ensure a very small proportion of the overall Proposed Wind Farm is ever seen and experienced from any low-lying vantage point (such as these peatlands that comprise the Peatland & Nature Corridor). A photomontage viewpoint was captured nearby this Peatland & Nature Corridor (VP11). Visual effects arising at VP11 are discussed in *Appendix 13-3*, where the Proposed Turbines are largely screened from view by intervening vegetation. Turbine T14 is primarily the only visible turbine within the view. An overall 'Negligible' magnitude of change was deemed to arise, with an overall 'Not Significant' visual effect. Overall, given the set-back, and limited visibility, the magnitude of change to the character and setting of the landscape on the Peatland & Nature Corridor is deemed to be 'Negligible'. The Proposed Turbines do not significantly impact the integrity of the immediate landscape setting, landscape character and visual qualities along the Peatland & Nature Corridor. An overall residual landscape effect of 'Long-term', 'Negative' 'Not Significant' is therefore deemed to arise in relation to the Peatland & Nature Corridor.

13.8.3.1.4 *Effects on Local Landscape Receptors*

Lodge Bog Nature Reserve

Lodge Bog is a nature reserve within Co. Kildare and is a landscape of 'High' sensitivity as it is an intact raised bog, currently in use for recreational purposes. Lodge Bog Nature Reserve is located approximately 2.9km south-east from the nearest Proposed Turbine T46, and 1km west from the Proposed Onsite Substation, and falls within an area of full theoretical visibility. No elements of the Proposed Project are located within the Lodge Bog Nature Reserve, and will therefore not alter the physical fabric of this landscape receptor.

VP21 was captured from within Lodge Bog Nature Reserve, along the publicly accessible boardwalk. An impact assessment from a visual receptor perspective is included in *Appendix 13-3*; the Proposed Onsite Substation and towers are visible in the centre background of this image, beyond the tract of shrub vegetation within this peatland, set-back from the viewpoint and beyond the lands designated as the nature reserve, resulting in low-level changes to the overall aesthetics of the landscape views from Lodge Bog. The Proposed Turbines are largely screened from view at this location due to dense intervening vegetation, and are also located in the opposing direction than that presented in VP21 (See PWVP-G below). Overall, 'Long-Term', 'Negative', 'Slight' residual effects on landscape character are deemed to arise on this landscape receptor. On balance, these effects are not considered significant.



Plate 13-14 Photowire of Dense visual screening in the direction of the Proposed Turbines from Lodge Bog Nature Reserve

Ecclesiastical site at Lullymore East (KD012-006----)

The ecclesiastical site at Lullymore East is located 2.56km east from the nearest Proposed Turbine T37 and is a cultural heritage receptor of 'High' sensitivity. As seen in the drone image in Plate 13-15 and Plate 13-16 below, the ecclesiastical site is physically set-back from the location of the Proposed Turbines and the Proposed Onsite Substation by multiple agricultural fields, farms, tracts of woodland and in-tact raised bog. The Proposed Project will not directly impact the physical fabric of the landscape of the ecclesiastical site at Lullymore East. Site investigations determined effects on this landscape will only be in relation to landscape character and setting of monuments.



Plate 13-15 Drone view captured in June 2026 of Lullymore East Ecclesiastic Site in relation to the nearest Proposed Turbine (T01).

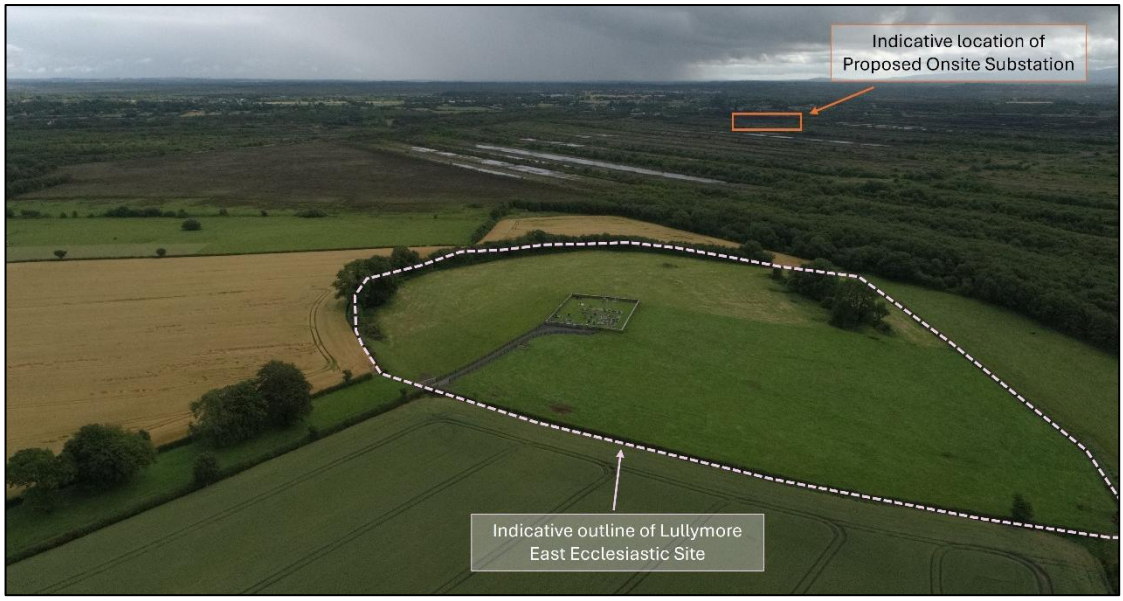


Plate 13-16 Drone view captured in June 2026 looking northwest over Lullymore East Ecclesiastic Site towards the Proposed Onsite Substation.

As seen in the imagery above (and as discussed in Section 13.8.3.2.3 later) – the Proposed Turbines are not situated within the immediate visual context of the ecclesiastical site. Given the setback of 2.56km at its closest point, the Proposed Turbines will not alter the physical fabric of the cultural heritage features within the ecclesiastical site. As such, the Proposed Turbines will not materially affect the landscape of the ecclesiastical site.

VP19 was produced to show the impact on the landscape setting of the ecclesiastical site. The landscape setting is of 'High' sensitivity, and the magnitude of change to the setting is deemed to be 'Moderate' by the photomontage. The Proposed Onsite Substation is not visible from the ecclesiastical site. Whilst there is a degree of change to the landscape setting, these are short-range views of heritage monuments within a setting already characterised by agricultural pasture fields. It is not a landscape specifically recognised as a landscape of regional or international renown. Overall residual effects on the landscape setting of the ecclesiastical are 'Long-Term', 'Negative' and 'Moderate'. On balance, these effects are not considered significant.

Chair of Kildare / Six Hills

The Chair of Kildare is the locally recognised name given to the group of Six Hills, identified as LCA 06 – Six Hills in the KCDP, which form a distinctive landscape feature within north County Kildare. While the Chair of Kildare is not designated as an AHA or afforded any specific landscape protection within the KCDP, it is a well-known local feature and is therefore considered in this assessment. As detailed in *Appendix 13-2*, the Six Hills are assigned a 'Low' sensitivity to wind energy development. Notwithstanding this, the Chair of Kildare is considered to be of local landscape importance due to its prominence as one of the few elevated landforms within the otherwise flat landscape.

The Proposed Turbines and the ancillary infrastructure of the Proposed Project are not located within this landscape receptor and will therefore not materially alter the physical fabric of this landscape, only perceptual effects on the character of the landscape as a result of the Proposed Turbines is likely to occur.

VP01, captured from Crosspatrick Hill, and VP12, captured from Boston Hill, represent panoramic views from the Chair of Kildare overlooking the surrounding flat, low-lying landscape. 'Significant' residual visual effects were identified at both viewpoints due to the significant changes to the composition of the panoramic views arising from the 46 no. Proposed Turbines. Whilst the Proposed Turbines will introduce a perceptual change to the wider landscape where visible, they will not alter the

defining characteristics of the Chair of Kildare, including its expansive open panoramic views over peatlands. Overall, a 'Long-Term', 'Negative' and 'Moderate' residual effect on the landscape character of the Chair of Kildare is deemed to arise. On balance, this effect is not considered significant. Visual effects experienced by receptors at the hilltops are considered further in Section 13.8.3.2.3.

13.8.3.1.5 *Effects on Tentative UNESCO Landscape Receptors*

One site of cultural heritage significance, Dún Ailinne, is located on Ireland's tentative list as a potential UNESCO World Heritage Site. An individual impact assessment on the landscapes of this site is included below. Firstly, some context is provided to provide clarity on the status of a site on the tentative list and the appropriate and proportionate level of impact assessment which can or cannot be conducted for sites on the UNESCO tentative list. The following documents provide guidance for the impact assessment of wind energy developments on UNESCO world heritage:

- Guidance and Toolkit for Impact Assessments in a World Heritage Context (UNESCO, 2022) Hereafter referred to as 'UNESCO Toolkit Guidance'
- Guidance for Wind Energy Projects in a World Heritage Context (UNESCO, 2022) – Hereafter referred to as 'UNESCO Wind Guidance'

The UNESCO Toolkit Guidance is specifically designed to assess impacts on properties that are already inscribed on the UNESCO World Heritage List or those with formally adopted Statements of Outstanding Universal Value (OUV). World Heritage properties are inscribed on the World Heritage List for their exceptional cultural and/or natural values for all humanity. This importance is expressed through the OUV of a site. The OUV is endorsed by the World Heritage Committee in the Statement of Outstanding Universal Value (SOUV), usually at the time of inscription. The OUV is established at the time of inscription and can only be changed by a new nomination process with approval by the World Heritage Committee.

Dún Ailinne, as one of the 'Royal Sites of Ireland' is currently proposed for nomination for UNESCO World Heritage status. A nominated tentative property, such as Dún Ailinne, does not have an officially recognised OUV by the World Heritage Committee. The UNESCO guidance has been developed to assess potential impacts on properties that:

- Have been formally inscribed on the World Heritage List
- Have an adopted Statement of OUV
- Are already subject to the requirements of the World Heritage Convention.

The UNESCO guidance for impact assessment comprises an approach tailored to protect sites whose OUV is recognised and binding. In contrast, tentative sites are not yet inscribed, meaning they do not have formal protection under the Operational Guidelines for the Implementation of the World Heritage Convention. Tentative sites do not have a formally adopted OUV, meaning there is no agreed framework against which to assess the impact of a development. The tentative list status means a country has proposed a site for potential future nomination, but it has no legal or procedural standing under the World Heritage Convention. Assessing the Proposed Project in accordance with the UNESCO Guidance is not applicable in the case of Dún Ailinne, however, the assessment process can be informed by the guidelines, along with the UNESCO Guidance for Wind Energy Projects in a World Heritage Context.

Currently, there is **no** definitive statement of what constitutes OUV for Dún Ailinne, therefore complete alignment with the UNESCO guidance is not currently possible. However, there are suggested frameworks and technical tools within the guidance which have been considered and adopted in the assessments of this Chapter to ensure a robust and proportionate assessment in the absence any defined OUV.

The Toolkit Guidance quotes EIA as being an appropriate mechanism for conducting impact assessments. The key distinction between the Toolkit and EIA is the requirement to assess impacts on

OUV of a site. As part of evaluating potential impacts on World Heritage Sites, it is important to define the type of change that will occur and if this change is reversible, temporary or permanent. In the context of the Proposed Project, it is only the Proposed Turbines which have the potential to impact Dún Ailinne (located approximately. 19.8km from the nearest Proposed Turbine T02). The effects are therefore reversible as it is proposed that the Proposed Turbines will be decommissioned and removed at the end of their operational life.

Note 5 of the UNESCO Wind Guidance relates to Visual Impact Assessment. The methodology, tools and process for visual impact assessment in Note 5 are very much aligned with the methods used for this LVIA which follow best practice guidelines for the LVIA of wind energy developments in Ireland. The main differences would arise in the concept of assessing OUV, which is not possible in this case. Landscape effects are reported below, and visual effects on visual receptors from Dún Ailinne are reported separately in Section 13.8.3.2.3.

Landscape Effects – Dún Ailinne

Dún Ailinne, located approximately. 19.8km south-east from the nearest Proposed Turbine, has full theoretical visibility of the Proposed Turbines from the peak of the hill. It is a landscape receptor of Very High sensitivity on account of its position on Ireland's tentative UNESCO heritage list.



Plate 13-17 Drone image captured in August 2026 from over Dun Ailinne looking southeast towards the Proposed Turbines.

As the nearest Proposed Turbine is located 19.8km from the peak of Dún Ailinne, the Proposed Turbines will not alter the physical fabric of Dún Ailinne itself and only perceptual effects on the character of the landscape of Dún Ailinne have any potential to occur. Whilst the Proposed Turbines will be visible from elevated vantage points on Dún Ailinne (Plate 13-17), the Proposed Turbines will not alter the immediate setting, appearance and context of cultural heritage monuments at Dún Ailinne and its immediate landscape. Any landscape effects that occur to the character of Dún Ailinne are deemed to be 'Negligible'. Overall, a 'Long-Term', 'Negative' and 'Slight' residual effect on the landscape character of Dún Ailinne is deemed to arise. On balance, this effect is not considered significant. An assessment of visual effects on the scenic amenity at Dún Ailinne is discussed and reported in the Section 0 below.

13.8.3.1.6 *Cumulative Landscape Effects*

The wider landscape of the LVIA Study Area comprises an extensive network of peatlands and includes a number of other existing, permitted, and proposed wind energy developments that contribute to the cumulative baseline. These other developments are listed and mapped previously in Section 13.7, and Figure 13-20. It is highlighted that although the LVIA Study Area includes many

cumulative wind farms, many of which are existing and permitted, the likelihood of proposed or pre-application wind farms (e.g. Proposed Ballinla, Derrynadarragh, Drehid Wind Farms) cumulatively impacting specific landscape receptors is uncertain and is dependent on a range of factors, most notably the outcome of the planning process. This section describes the cumulative effects on relevant landscape receptors (LCAs and AHAs).

The Proposed Turbines, collectively with the other wind energy developments will increase the extent and scale of wind energy development within the peatland landscape. The greatest cumulative landscape effects will be confined to the immediate landscape of the Bog of Allen, where the concentration of wind energy developments will cumulatively alter the character of the peatland landscape at the part of the Project Site located on part of the Allen Bog Group. Beyond this area, only perceptual cumulative landscape effects on the character of the wider landscape will occur from elevated vantage points, where the Proposed Turbines will increase the extent of wind energy development visible within the wider landscape.

The LVIA Study Area is characterised by a large, flat, and expansive lowland landscape, with extensive tracts of woodland, coniferous forestry, and mature boundary vegetation providing visual screening throughout much of the area. Any cumulative effects on the overall character of the landscape are therefore generally limited to elevated vantage points which offer open views over the flat peatland lowlands. From these elevated locations, the Proposed Turbines are mostly seen in combination with other wind farm developments (e.g. VP01 – Crosspatrick Hill, VP12 – Boston Hill, VP10 – Croghan Hill, VP15 – Edenderry), where the expansive character of the flat landscape can absorb a wind energy development of this scale and others.

Cumulative landscape effects will occur where the Proposed Turbines are seen with other wind energy developments either from or against other landscape receptors, as discussed below.

KLCA 04 – Bog of Allen: The highest level of cumulative landscape effect on a landscape receptor was identified in relation to KLCA 04 – Bog of Allen as the Proposed Turbines will physically add to the cumulative turbines within the wider landscape, particularly as viewed from within this LCA. As detailed in *Appendix 13-2*, an overall 'Long-Term', 'Negative', 'Moderate' landscape effects were deemed to arise. On balance, these effects are not considered significant.

Grand Canal: Whilst the Proposed Turbines are not located within the Grand Canal itself, they are in close proximity (approximately. 911m) to the Grand Canal and will become a noticeable component of the distant landscape amongst other existing, permitted, and proposed wind energy developments and would therefore contribute to cumulative perceptual change in overall landscape character when viewed from along the Grand Canal. They would not cumulatively alter the physical character, integrity or setting of the Grand Canal landscape itself.

Chair of Kildare (the Six Hills): Whilst the Proposed Turbines are not located within the Chair of Kildare itself, they are in proximity to it (approximately. 6.3km). As seen in VP15, the Proposed Turbines would become a noticeable component of the distant landscape amongst other existing, permitted, and proposed wind energy developments seen against the backdrop of the Chair of Kildare and would therefore contribute to cumulative perceptual change in overall landscape character of the Chair of Kildare but do not affect the landscape character of the Chair of Kildare itself.

Other landscape receptors are located at greater distances from the Proposed Wind Farm. At these locations, any cumulative landscape effects that do occur are limited to perceptual changes arising where the Proposed Turbines are experienced either in combination with other wind energy developments or in succession, where different wind farms are viewed in opposing direction. In these instances, the Proposed Turbines become a noticeable component of the distant landscape but do not alter the landscape character of the receptors themselves. Cumulative visual effects are assessed separately in Section 13.8.3.2.6.

Cumulative Landscape Effects Overview with other Wind Energy Developments

The Proposed Turbines contribute to the cumulative number of turbines within the landscape. However, the landscape is of large scale, comprising large, flat, and expansive lowland landscape and a sparse settlement pattern. The large-scale, expansive landscape is effectively capable of accommodating the Proposed Wind Farm, as well as other wind energy developments.

While the Proposed Turbines will introduce some additional areas and locations where the Proposed Turbines are now visible, views will generally be confined to elevated vantage points, where long-ranging expansive views over the flat landscape allow for the Proposed Wind Farm to be seen in combination with other wind farms. However, as seen in the photomontages presented in Volume 2: Photomontage Booklet, the scale and character of the receiving low-lying flat landscape is such that it can absorb a wind energy development of this scale along with other wind energy developments.

Cumulative Landscape Effects with other Infrastructure Developments (Not Wind Energy Developments)

The proposed Eastern and Midlands Region Water Supply Project (Case Ref. PA92.323980), hereafter referred to as the proposed WSP, transects the Project Site within KLCA 04 – Bog of Allen. Cumulative landscape effects will occur within the Proposed Wind Farm as the Proposed Turbines, in combination with the proposed WSP will alter the physical fabric of the landscape of the Project Site.

The proposed WSP will comprise primarily underground infrastructure, with landscape effects largely confined to the pipeline corridor where the change to the physical fabric of the landscape will actually occur. Consequently, in combination cumulative landscape effects of the proposed WSP with the Proposed Project will be primarily localised to the areas where the proposed WSP corridor overlaps with the Project Site and will not materially increase the geographical extent of landscape effects associated with the Proposed Project across the wider KLCA 04.

As the proposed WSP would be primarily underground and would not introduce any notable above-ground infrastructure within the Project Site during its operational phase, cumulative visual effects are not likely to occur. The proposed WSP is therefore not considered further in Section 13.8.3.2.6, Discussion of Cumulative Visual Effects.

Cumulative Landscape Effects with Substitute Consent

As identified in Section 2.10.2.1 in Chapter 2, an application for substitute consent was submitted to An Coimisiún Pleanála (Case Ref: SU09.324604) on 20 August 2026, for peat extraction and ancillary works from 1988 to the present day that have been carried out within the Allen Bog Group. A Remedial Natura Impact Statement (rNIS) and rEIAR was submitted with that application.

Cumulative landscape effects will likely occur on the Proposed Wind Farm site in a potential future receiving environment. The natural re vegetation and the implementation of the targeted rehabilitation measures listed within the Cutaway Bog Decommissioning and Rehabilitation Plan will alter the physical fabric and character of the receiving landscape and will gradually improve the landscape quality of the Proposed Wind Farm site. This will be a positive intervention, causing positive change to the landscape of the Wind Farm site, as over time, it returns to a functioning wetland. The overall infrastructure footprint of the Proposed Wind Farm will be very small relative to the large-scale and extensive nature of the natural recolonisation which will not be compromised by the Proposed Project through careful design and mitigation measures.

Cumulative Landscape Effects with the EPA Licence Activities

There is no cumulative landscape effect with the ongoing IPC licence activities onsite.

Proposed Wind Farm site.

Cumulative landscape effects will likely occur on the Wind Farm site in a potential future receiving environment. Both the Proposed Project and the implementation Draft Rehabilitation Plans will alter the physical fabric and character of the landscape of the Proposed Wind Farm. The Draft Rehabilitation Plans are a positive intervention, causing positive change to the landscape of the Proposed Wind Farm site, as over time, it returns to a functioning wetland. The overall infrastructure footprint of the Proposed Wind Farm will be very small relative to the large-scale and extensive nature of the rehabilitation initiatives which will not be compromised by the Proposed Project through careful design and mitigation measures.

13.8.3.2 Visual Effects (Operational Phase)

13.8.3.2.1 *Selection of Photomontage Viewpoints*

Photomontages were used to assess the visual effects arising as a result of the Proposed Project from 27 no. viewpoint locations, which are presented in EIAR Volume 2: Photomontage Booklet. These 27 no. viewpoint locations are on the A0 Map (*Appendix 13-4: LVIA Baseline Map*) and on Figure 13-23 below. The locations chosen for photomontages follow a detailed and extensive process including review of baseline information, site visits and high-quality photo taking at multiple locations within the LVIA Study Area. Many locations, which based on a desktop review had the potential for views of the Proposed Turbines, had complete intervening visual screening or were screened to such an extent that the development of photomontages was not considered useful in terms of the assessment process i.e., little or no visibility towards the Proposed Turbines.

Multiple on-site surveys and visibility appraisals conducted throughout the years 2020-2026 determined that visibility of the Proposed Turbines is greatest from the locations in close proximity to the Proposed Wind Farm due to the characteristics of the surrounding landscape. Due to this, viewpoint selection was particularly focused on locations proximate to the Proposed Turbines. In this regard, it is important to note that the visual impact of the Proposed Turbines shown in the photomontages selected for the EIAR Volume 2: Photomontage Booklet is not entirely representative of visual effects in the wider landscape of the 20km LVIA Study Area, where in reality very little visibility occurs.

Alternative Photomontage Viewpoints - Photowires

Photomontage imagery was captured from other locations in the LVIA Study Area other than the 27 VPs that are in the EIAR Volume 2: Photomontage Booklet. Photowires are early-stage, non-verifiable photomontage visualisations comprising panoramic photos with overlaid wirelines (Classified as Type 3 Visualisations in the Landscape Institute Technical Guidance Note, 2019). Photowires were produced from 8 other viewpoint locations in the LVIA Study Area. These viewpoints were not selected for inclusion in the EIAR Volume 2: Photomontage Booklet due to limited visibility of the Proposed Turbines or a more appropriate nearby location being included in Volume 2 instead. These Photowires do not form part of the assessment of visual effects included in *Appendix 13-3*. However, 8 no. Photowires are presented within this chapter, and are reproduced (scaled to fit within an A4 page) and discussed later in this section of the Chapter to illustrate certain points. The location of Photowire viewpoints are marked as orange icons in Figure 13-23 and are discussed throughout the chapter as Photowire Viewpoint Locations (referred to as PWs (e.g., PWVP-A, etc.)

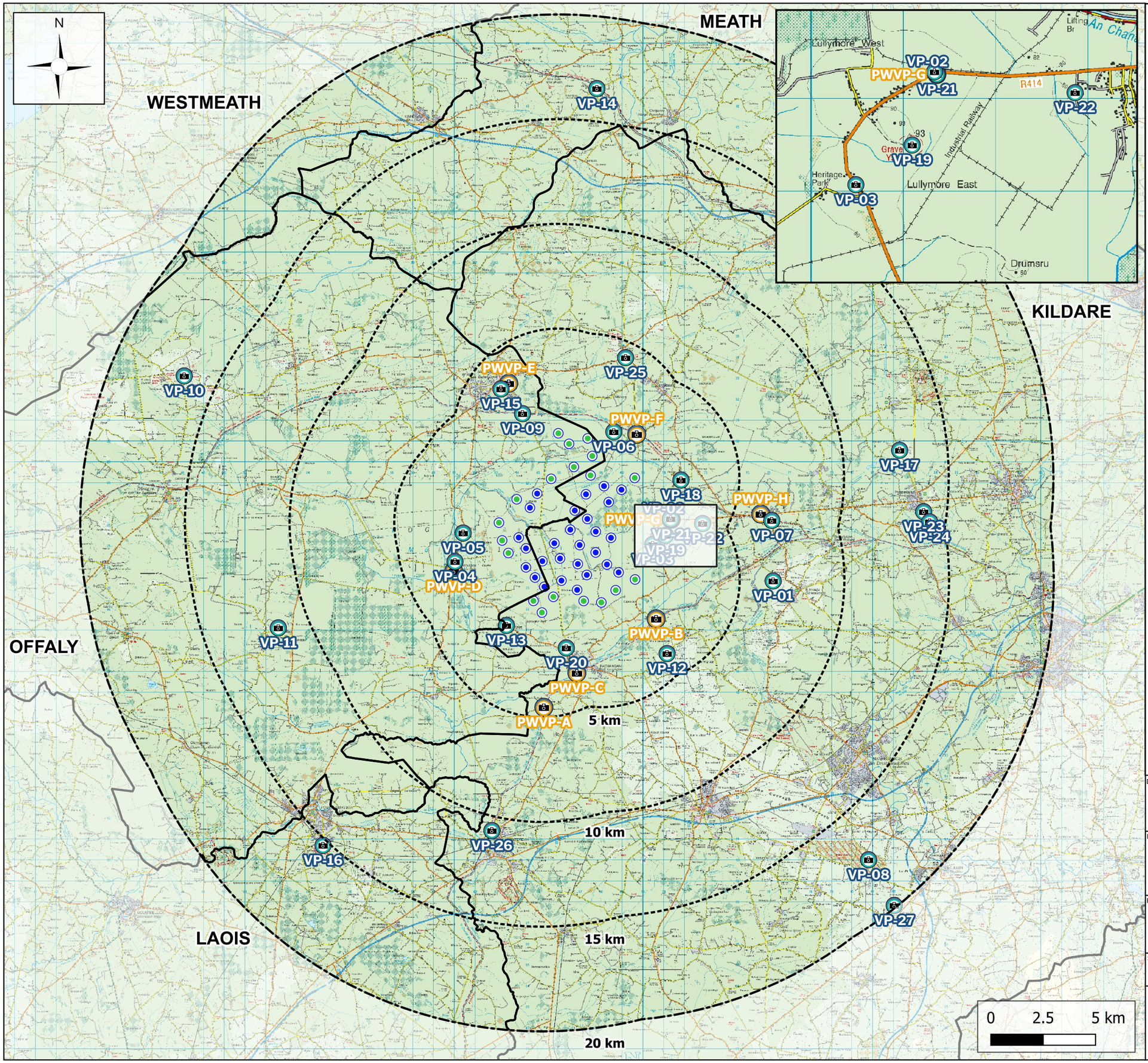
13.8.3.2.2 *Photomontage Viewpoint Assessment Outcomes*

Visual Effects were assessed using the assessment methodology described in *Appendix 13-1*. Each Viewpoint location is shown in Figure 13-23 below. The individual, comprehensive and detailed assessment from the 27 no. viewpoints are presented in *Appendix 13-3* of this and summarised in Table

13-13 below. *Appendix 13-3* should be read in conjunction with the Photomontage Booklet forming Volume 2 of the EIAR.

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

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



Map Legend

- LVIA Study Area
- County Boundaries

Proposed Turbines

- 200m
- 220m

Imagery

- Photomontage Viewpoint Locations
- Photowire Viewpoint Locations

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Drawing No.

Figure 13-23

Drawing Title

Photomontage & Photowire Viewpoint Locations

Project Title

Ballydermot Wind Farm, Co. Offaly & Co. Kildare

Scale	Project No.	Date	Drawn By	Checked By
1:175,000	250708	29.09.2026	GL	DM

MKO Planning and Environmental Consultants

Table 13-13 Summary of Appendix 13-3 Photomontage Assessment Tables

VP No.	Description	Grid Ref. (ITM)	Sensitivity of Receptor(s) (at Viewpoint)	Magnitude of Change	Significance of Residual Visual Effect
VP01	View from a local road in front of Crosspatrick Cemetery in the townland of Ballintine, near the summit of Crosspatrick Hill, and is located approximately 6.60km east of the nearest Proposed Turbine (T01). The summit of Crosspatrick Hill is designated KCDP Hilltop View No. 16.	E: 676,173 N: 723,348	High	Moderate	**Significant**
VP02	View from the R414 Regional Road in the townland of Lullymore West, located approximately 2.6km southeast of the nearest Proposed Turbine (T46). The viewpoint is located on KCDP Scenic Route 34.	E: 671,278 N: 726,315	High	Slight	**Slight**
VP03	View from the R414 Regional Road in the townland of Lullymore East, located approximately 1.88km northeast of the nearest Proposed Turbine (T01). The viewpoint is located on KCDP Scenic Route 34.	E: 670,425 N: 725,091	High	Moderate	**Moderate**
VP04	View from the R401 Regional Road exiting the settlement of Clonbullogue, located approximately 2.47km west of the nearest Proposed Turbine (T20).	E: 660,978 N: 724,271	High	Slight	**Slight**
VP05	View from the R401 Regional Road in the townland of Ballydermot, located approximately 1.78km west of the nearest Proposed Turbine (T22).	E: 661,367 N: 725,635	High	Substantial	**Significant**
VP06	View from the intersection of the L50210 and L50211 Local Roads in the townland of Ticknevin, located approximately 1.29km east of the nearest Proposed Turbine (T30).	E: 668,563 N: 730,469	High	Moderate	**Moderate**
VP07	View from Bond Bridge, along the R415 Regional Road, in the townland of Allenwood Middle, immediately south of the settlement of Allenwood, and is located approximately 6.9km southeast of the	E: 676,109 N: 726,234	High	Slight	**Slight**

VP No.	Description	Grid Ref. (ITM)	Sensitivity of Receptor(s) (at Viewpoint)	Magnitude of Change	Significance of Residual Visual Effect
	nearest Proposed Turbine (T46). Bond Bridge is a designated KCDP Scenic View GC12, over the Grand Canal.				
VP08	View from Flagstaff Hill at the Curragh, located approximately 17.4km southeast of the nearest Proposed Turbine (T01). The viewpoint is located approximately 2.46km northwest of Dún Ailinne, a tentative UNESCO World Heritage Site and KCDP Hilltop View No. 15.	E: 680,731 N: 710,035	High	Slight	**Slight**
VP09	View from the Blundell Aqueduct on the Grand Canal in the townland of Edenderry, located approximately 1.95km northwest of the nearest Proposed Turbine (T32). The viewpoint is located within an OCDP Area of High Amenity.	E: 664,204 N: 731,335	High	Slight	**Slight**
VP10	View from Croghan Hill in the townland of Croghan Hill, located approximately 16.6km northwest of the nearest Proposed Turbine (T22).	E: 648,045 N: 733,136	High	Moderate	**Moderate**
VP11	View from a local access road in the settlement of Walsh Island, in the townland of Coolagary, located approximately 11.5km west of the nearest Proposed Turbine (T20).	E: 652,540 N: 721,106	Medium	Negligible	**Not Significant**
VP12	View from the L3002 Local Road in the townland of Drinnanstown North, located approximately 3.86km southeast of the nearest Proposed Turbine (T01). The viewpoint is located on KCDP Scenic Route 08, near the summit of Boston Hill, KCDP Hilltop View No. 14.	E: 671,108 N: 719,879	High	Moderate	**Significant**
VP13	View from the R401 Regional Road in the townland of Coolygagan, located approximately 1.74km southwest of the nearest Proposed Turbine (T13).	E: 663,435 N: 721,222	High	Moderate	**Moderate**
VP14	View from Blackshade Bridge on the Royal Canal, along the L8030 Local Road, in the townland of Blackshade, and is located approximately 16.6km north of the nearest Proposed Turbine (T32).	E: 667,755 N: 746,857	High	Negligible	**Slight**

VP No.	Description	Grid Ref. (ITM)	Sensitivity of Receptor(s) (at Viewpoint)	Magnitude of Change	Significance of Residual Visual Effect
	Blackshade Bridge is a designated MCDP Protected View M-V83, over the Royal Canal.				
VP15	View from Edenderry skate park, near Blundell Castle, in the settlement of Edenderry, located approximately 3.46km northwest of the nearest Proposed Turbine (T32).	E: 663,174 N: 732,515	Medium	Substantial	**Significant**
VP16	View from the L3170 Local Road, south of the settlement of Portarlington, located approximately 15.3km southwest of the nearest Proposed Turbine (T14).	E: 654,675 N: 710,722	Medium	Slight	**Not Significant**
VP17	View from the L3002 Local Road in the townland of Ballyfanagh, located approximately 12.7km east of the nearest Proposed Turbine (T46). The viewpoint is located on KCDP Scenic Route 32.	E: 682,214 N: 729,588	High	Slight	**Slight**
VP18	View from Hamilton Bridge, along the L5026 Local Road, in the townland of Killinagh Lower, and is located approximately 2.2km east of the nearest Proposed Turbine (T46). Hamilton Bridge is a designated KCDP Scenic View GC13, over the Grand Canal.	E: 671,771 N: 728,164	High	Moderate	**Moderate**
VP19	View from the Lullymore Cemetery in the townland of Lullymore East, located approximately 2.56km northeast of the nearest Proposed Turbine (T01). The viewpoint is located within the Ecclesiastical site at Lullymore East (KD012-006—).	E: 671,035 N: 725,521	High	Moderate	**Moderate**
VP20	View from St Patricks Graveyard, beside the L3001 Local Road on the northern outskirts of the settlement of Rathangan, located approximately 2.05km south of the nearest Proposed Turbine (T14).	E: 666,295 N: 720,149	High	Moderate	**Moderate**
VP21	View from the Lodge Bog Nature Reserve Boardwalk in the townland of Lullymore East, located approximately 2.2km southeast of the	E: 671,304 N: 726,286	High	Slight	**Slight**

VP No.	Description	Grid Ref. (ITM)	Sensitivity of Receptor(s) (at Viewpoint)	Magnitude of Change	Significance of Residual Visual Effect
	nearest Proposed Turbine (T46). The viewpoint is representative of the nearby KCDP Scenic Route 34.				
VP22	View from Spainway Road, a local access road at the northeast perimeter of Lodge Bog in the townland of Allenwood South, located approximately approximately 3.9km southeast of the nearest Proposed Turbine (T46), and approximately 419m northeast of the Proposed Onsite Substation. The viewpoint is representative of the nearby KCDP Scenic Route 34, located 250m to the north.	E: 672,803 N: 726,089	High	Moderate	**Moderate**
VP23	View from the L6001 Local Road, immediately south of the settlement of Prosperous, in the townland of Curryhills, located approximately 13.9km east of the nearest Proposed Turbine (T46), and approximately 699m north of the Proposed Offsite Substation.	E: 683,362 N: 726,652	High	Slight	**Slight**
VP24	View from the L6002 Local Road, immediately south of the settlement of Prosperous, in the townland of Killybegs, located approximately 14.2km east of the nearest Proposed Turbine (T46), and approximately 330m northeast of the Proposed Offsite Substation.	E: 683,648 N: 726,166	High	Slight	**Slight**
VP25	View from the L70742 Local Road, south of the settlement of Carbury, in the townland of Ballyhagan, located approximately 4.26km north of the nearest Proposed Turbine (T30). The viewpoint is representative of KCDP Scenic Route 26, located 465m to the southwest.	E: 669,129 N: 734,007	High	Slight	**Slight**
VP26	View from High Bridge, along the L7049 Local Road, in the settlement of Monasterevin, located approximately 10.7km south of the nearest Proposed Turbine (T14). High Bridge is a designated KCDP Scenic View GC28, overlooking the Grand Canal (Barrow Line).	E: 662,740 N: 711,429	High	Negligible	**Not Significant**
VP27	View from above the summit of Dún Ailinne which is designated as KCDP Hilltop View 15, located approximately 19.9km southeast of the	E: 681,955 N: 707,855	High	Slight	**Slight**

VP No.	Description	Grid Ref. (ITM)	Sensitivity of Receptor(s) (at Viewpoint)	Magnitude of Change	Significance of Residual Visual Effect
	nearest Proposed Turbine (T01). The viewpoint is not representative of the views experienced by ground-based receptors.				

The significance of the residual visual effect was not considered to be Profound or Very Significant, at any of the 27 viewpoint locations. The residual effects were found to be Significant (4) Moderate (8), Slight (12) and Not Significant (3). The viewpoint assessment results (see *Appendix 13-3*) will be summarised and discussed in more detail in the following sections.

Wind farms inevitably cause some 'Significant' visual effects on proximate sensitive visual receptors due to the prominence of the Proposed Turbines within landscape views and the 'Substantial' magnitude of change which will arise in close proximity to a wind farm development. A key focus in this LVIA is identifying the scenarios where the greatest likelihood of significant visual effects occurs. Significant residual visual impacts have been determined from 4 no. photomontage viewpoint representing visual receptors in closest proximity to the Proposed Turbines (see Appendix 13-3). It is key to note that the residual significant impacts only occur for a small number of receptors within small geographic areas (due to the close proximity of these receptors to the Proposed Turbines, where a greater magnitude of visual change is to be expected) and are not representative of effects on receptors across the vast proportion of the wider LVIA Study Area.

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

The assessment of visual effects uses photomontages shown in the Volume 2 Photomontage Booklet, and discussion of these effects is aided by the photowires presented in this chapter. ZTV mapping is also a useful tool for scoping receptors in and out (based on bare-ground topography) and the selection of photomontage viewpoints. The following section discusses the visual effects arising at key sensitive visual receptors within the ZTV and scoped in for assessment previously in Section 13.5 – Visual Baseline.

KCDP – 'Views to and from Bridges'

As discussed in Section 13.5.1.1 previously, there are 44 designated scenic views 'to and from' bridges in Co. Kildare in the LVIA Study Area. 17 of those are located within 10km of the nearest Proposed Turbines and have been scoped in for further assessment. This includes seven bridges within 5 km and ten bridges between 5km and 10km.

VP18 at Hamilton Bridge is located within 5km of the nearest Proposed Turbines and is one of the closest designated bridges to the Proposed Turbines, located 2.2km east of the nearest Proposed Turbine T46. A 'High' sensitivity was assigned to this viewpoint on account of its designation as a scenic view. The turbines are seen beyond the distant treelines. The field structure, vegetation, and other landscape elements seen throughout the view acting as a physical landscape buffer which provide a sense of scale in relation to the setback distance of the Proposed Turbines. Furthermore, views from bridges over canals are typically directed along the corridor of the canal itself (north-to-south from this viewpoint), which are in a direction perpendicular to the Proposed Turbines. An overall 'Moderate' visual effect was deemed to arise at this viewpoint.

On site appraisals determined that other bridges within 5km are further set-back from the Proposed Turbines, and would therefore experience more visual screening from intervening vegetation and built form. As seen in photowire PWVP-A and photowire PWVP-B below, there are instances within 5km where dense intervening vegetation fully obscure the Proposed Turbines from view.



Plate 13-18 Photowire Example of Dense Screening from Wilson's Bridge, approximately. 2.5km south from the nearest Proposed Turbine T14



Plate 13-19 Photowire Example of Dense Screening along the Barrow Blue Way, approximately. 2km from the nearest Proposed Turbine T01

As detailed in Section 13.1.4, the design of the Proposed Wind Farm incorporates a number of measures that mitigate visual effects from surrounding visual receptors. These include:

- The layout of the Proposed Wind Farm adopts two turbine tip heights to mitigate visual effects from surrounding visual receptors. The Proposed Turbines at the outer perimeter of the Proposed Wind Farm, which are closest to surrounding visual receptors, have a tip height of 200m, while those turbines toward the centre rise to 220m. This graduated profile reduces the potential for visual dominance and allows these outer turbines to take greater advantage of existing visual screening within the landscape, such as intervening landform and vegetation.
- Photomontage visualisations of early turbine layouts identified 4 No. turbines in Lodge Bog visually disconnected from the Proposed Wind Farm when viewed from elevated vantage points (including designated views from bridges in Co. Kildare). These turbines were consequently removed to mitigate discordant visual effects and reduce the horizontal extent of turbines when viewed from these bridges and other elevated vantage points to the south and east of the Proposed Wind Farm (See *Appendix 13-5* for more detail).

Residual visual effects at **Wilson's Bridge**, **Spencer Bridge**, **Rathangan Bridge**, **Glenaree Bridge**, **Shee Bridge**, **Hamilton Bridge**, and **Ticknevin Bridge** range from 'Long-Term', 'Negative' and 'Imperceptible' (where no visibility occurs) to 'Moderate'. On balance, these effects are not considered significant. While the Proposed Turbines introduce new elements within the landscape, they will be

viewed beyond multiple treelines and will not be seen within the immediate visual context of the Grand Canal corridor.

Beyond 5km, the apparent scale and visual prominence of the Proposed Turbines will be further reduced with increased set-back distance. This can be seen at VP07 (Bond Bridge), and VP26 (High Bridge). As detailed in *Appendix 13-3*, the majority of the Proposed Turbines at both of these locations are seen as small-scale elements relative to the landscape in the distant background, occupying a short horizontal extent, and are largely screened by intervening vegetation in the flat landscape. Residual visual effects at both these locations were deemed to be 'Slight' and 'Not Significant', respectively.

On-site visibility appraisals determined that similar visibility would occur from the designated bridges between 5-10km from the Proposed Turbines, including **Bond Bridge**, **Fenton Bridge**, **Haberton Bridge**, **Skew Bridge**, **Hubard Bridge**, **Pim Bridge**, **Pluckerstown Bridge** and **Macartney's Bridge**. At these locations, the Proposed Turbines will generally be viewed as distant background elements, with their perceived scale gradually reducing in height as they recede into the distance. Overall, residual visual effects at these bridges would be 'Long-Term', 'Negative', and range from residual 'Not Significant' visual effects to residual 'Slight' visual effects. On balance, these effects are not considered to be significant.

KCDP – 'Hilltop Views' and associated Scenic Routes

A number of hills designated as 'Hilltop Views' in the KCDP are located to the south-east of the Proposed Turbines and were scoped in for assessment previously in Section 1.5. Views from these hills within the **Chair of Kildare / Six Hills** are broadly similar in character, comprising elevated, long-ranging and expansive panoramic views across the predominantly flat and open landscape. Therefore, the impact from these hills are going to be very similar.

'Long-Term', 'Negative', 'Significant' visual effects will occur from hills to the south-east of the Proposed Turbines due to the significant changes to the composition of the panoramic views arising from the 46 no. Proposed Turbines. These include **Boston Hill** (represented by VP12 – 'Significant' residual visual effect) and **Crosspatrick Hill** (represented by VP01 - 'Significant' residual visual effect). VP01 and VP12 are also representative of the views experienced from nearby hills, including **Red Hill**, **Allen Hill**, **Dunmurry Hill**, **Grange Hill** and **Carbury Hill**.

Whilst Significant residual visual effects do occur for these hills, the following factors, including embedded design measures (see *Appendix 13-5 for further detail*) mitigate visual effects:

- The layout adopts two turbine tip heights. The Proposed Turbines at the outer perimeter of the Proposed Wind Farm, which are closest to surrounding visual receptors, have a tip height of 200m, while those turbines toward the centre rise to 220m. This graduated profile reduces the potential for visual dominance when viewed from elevated vantage points.
- Photomontage visualisations of early turbine layouts identified 4 No. turbines in Lodge Bog which were visually disconnected from the Proposed Wind Farm. These turbines were consequently removed to mitigate discordant visual effects and reduce the horizontal extent of turbines seen from scenic vistas and these elevated vantage points to the south and east of the Proposed Turbines.
- The perceived scale (i.e. height and breadth) of the Proposed Turbines diminishes quickly with increasing distance owing to the flat, planar nature of the Proposed Wind Farm and surrounding landscape, thereby reducing the scale of visual impact from this vantage point.
- As set out in the WEDG 2006, Peatland landscape type has the capacity for a large-scale design and tall turbines. This is due to the *"visual openness with few, dominant geometric elements which provides a certain freedom in the siting and design of wind energy developments"*. Where possible, the Proposed Turbine layout is in alignment with the grid-like structure and rhythm of the cutover peatland landscape.

- The field structure and hedgerows seen throughout the view are a physical landscape buffer and provide a sense of scale in relation to the setback distance of the Proposed Turbines, with turbines viewed as sited beyond a distant treeline. The Proposed Project is strategically sited within a flat landscape of degraded cutover peatland, a landscape currently of low value and low sensitivity.

KCDP Scenic Route 08, which is located along the L-3002 local road is located immediately adjacent Boston Hill, located approximately. 3.6km south-east from the nearest Proposed Turbine T01. This scenic route is also represented by VP12. There is full theoretical visibility along the stretch of route, however on-site visibility appraisals determined that the majority of the route has dense intervening vegetation. VP12 was captured along one of the few locations along this scenic route where the absence of roadside vegetation permitted momentary views in the direction of the Proposed Turbines (see Section 13.3.2 – Route Screening Analysis). As detailed in *Appendix 13-3*, residual 'Significant' visual effects were deemed to arise at this viewpoint. For visual receptors travelling along this scenic route, these visual impacts experienced at VP12 occur for a short duration and comprise a relatively small portion of the overall scenic route. Overall, due to intermittent instances of visibility, visual effects on this scenic route are 'Long-Term', 'Negative', and ranges from 'Imperceptible' (where the Proposed Turbines are not visible due to dense intervening vegetation) to 'Significant' (for a very short portion of the overall route).

KCDP Scenic Route 06 is located approximately. 7.1km east from the nearest Proposed Turbine T01 and is in close proximity to Carbury Hill. As VP01 is at similar elevation and geographical orientation, it also represents this scenic route, as well as Carbury Hill. Visibility from this scenic route will be greatest from the elevated vantage points and will be similar to those views shown in VP01, where a residual 'Significant' visual effect was deemed to arise. The lower-lying sections of this scenic route will not have comparable levels of visibility and views will be further restricted by intervening vegetation within the flat landscape. For visual receptors travelling along this scenic route, these visual impacts experienced at VP01 occur for only a very short duration and comprise a very small portion of the overall scenic route. Overall, due to intermittent instances of visibility, visual effects on this scenic route are 'Long-Term', 'Negative', and ranges from 'Imperceptible' (where the Proposed Turbines are not visible due to dense intervening vegetation) to 'Significant' (for a very short portion of the overall route).

OCDP – Croghan Hill / OCDP Scenic View 09

The summit of **Croghan Hill** is located approximately 16.5km northwest of the nearest Proposed Turbine (T22) in County Offaly. Visual receptors at Croghan Hill are considered to be 'High' sensitivity receptors as they would be visiting it in a recreational capacity to experience its landscape setting, as well as to take in the panoramic views available from the elevated vantage point. The OCDP does not identify any designated views from Croghan Hill. Instead, it protects views towards Croghan Hill, and the Proposed Turbines will not be visible within these protected views.

VP10 was captured at the summit of Croghan Hill. As detailed in *Appendix 13-3*, the Proposed Turbines are seen as small-scale elements relative to the landscape in the distant background, amongst the existing Cushaling and Cloncreen Wind Farms, occupying a relatively short horizontal extent. The magnitude of change was deemed to be 'Moderate', resulting in an overall 'Moderate' residual visual effect.

OCDP Scenic View 09 is located at similar distance, elevation and geographical orientation as Croghan Hill, and is therefore also represented by VP10.

The substantial set-back distance, in combination with intervening features of the landscape such as the varied field patterns within the flat landscape, and the abundance of mature vegetation provide a physical landscape buffer between the Proposed Turbines and the Croghan Hill landscape and the setting of the cultural heritage monuments at this location. Whilst seen, the Proposed Turbines do not obstruct intervisibility between any heritage sites and Croghan Hill and do not compromise the integrity of any visual links between the Hill and the wider cultural landscape.

The Proposed Turbines, while they add to the extent of turbines visible from this viewpoint, they will not fundamentally detract from the visitor experience of the Hill, its landscape and monuments, or any visual connectivity with other landmarks or places of significance elsewhere in the wider landscape. Overall, residual visual effects were deemed to be 'Long-Term', 'Negative' and 'Moderate' for Croghan Hill, as well as OCDP Scenic View 09. On balance, these effects are not considered significant.

KCDP Scenic Routes

KCDP Scenic Route 34 is described in the KCDP as *"Views along Roads R403 and R414 from Allenwood to Rathangan."* On-site visibility appraisals determined that there are large stretches of both 'Dense/Full' and 'Partial/Intermittent' visual screening along the majority of the road, with very few instances of 'No/Very Little' visual screening in the direction of the Proposed Turbines. Furthermore, site appraisals determined that the key scenic views from this scenic route are directed away from the Proposed Turbines, with open, long-ranging views focused in the opposing direction to the south-east, towards the Six Hills in County Kildare along the stretch of this route.

VP02 and VP03 were captured along this scenic route, in Lullymore where a gap in roadside vegetation permitted open views in the direction of the Proposed Turbines. The sensitivity was deemed to be 'High' for both of these viewpoints. In both of these viewpoints, given that the Proposed Turbines are sited within a flat, low-lying landscape, where turbine visibility diminishes with distance together with mature hedgerows and treelines further restrict visibility, only a limited number of the 46 Proposed Turbines are clearly visible from this viewpoint. Embedded design measures further mitigate visual effects:

- The layout adopts two turbine tip heights. The Proposed Turbines at the outer perimeter of the Proposed Wind Farm, which are closest to surrounding visual receptors, have a tip height of 200m, while those turbines toward the centre rise to 220m. This graduated profile reduces the potential for visual dominance and allows these outer turbines to take greater advantage of existing visual screening within the landscape, such as intervening landform and vegetation.
- Photomontage visualisations of early turbine layouts at this location identified 4 No. turbines in Lodge Bog (to the south-east of these viewpoints) visually disconnected from the Proposed Wind Farm, which were consequently removed to mitigate discordant and surrounding visual effects arising from turbines for visual receptors at Lullymore, as well as receptors along this designated scenic route.

Residual visual effects of 'Slight' was deemed to arise for VP02, and a residual visual effect of 'Moderate' was deemed to arise for VP03. Overall, due to intermittent instances of visibility, visual effects on this scenic route are 'Long-Term', 'Negative', and ranges from 'Imperceptible' (where the Proposed Turbines are not visible due to dense intervening vegetation) to 'Moderate'. On balance, these effects are not considered to be significant.

KCDP Scenic Route 18 is located within the settlement of Rathangan and is described as *"Views of the Grand Canal, River Slate and surrounding countryside from R414 at Rathangan from Rathangan Bridge to Spencer Bridge."* Photowire PWVP-C was captured at Spencer Bridge and is a representative viewpoint for this scenic route. As illustrated by Photowire PWVP-C, the Proposed Turbines are just about discernible in the distant background, beyond distant treelines and the intervening-built form. Visibility from the scenic route will be further reduced due to the low-lying nature of this road adjacent the Grand Canal, combined with visual screening from the mature boundary vegetation along the Canal (see Route Screening Analysis – Section 13.3.2). Significant visual effects are not likely to occur.



Plate 13-20 Photowire Example of Dense Screening from Spencer's Bridge at Rathangan, approximately. 3.3km south from the nearest Proposed Turbine T14

KCDP Scenic Route 26 is located approximately. 4.7km north from the nearest Proposed Turbine (T30) and pockets of full theoretical visibility on the western extent of the route. It is described in the KCDP as *"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."* VP25 was captured 465m south from this scenic route, from a more open location, closer to the Proposed Turbines than the designated scenic route. On-site visibility appraisals determined that views from the scenic route itself are generally more restricted in the direction of the Proposed Turbines due to intervening landform and vegetation. This viewpoint was given a High sensitivity on account of the nearby KCDP Scenic Route 26, and an overall residual 'Slight' magnitude of change was deemed to arise for this viewpoint. Overall, visual effects on this scenic route are 'Long-Term', 'Negative', and ranges from 'Imperceptible' (where the Proposed Turbines are not visible due to dense intervening vegetation) to 'Slight'. On balance, these effects are not considered to be significant.

KCDP Scenic Route 32 is located approximately 12.6km east from the nearest Proposed Turbine (T46). It is described in the KCDP as *"Views of Ballynafagh Lake along L7095 from junction with L1021 to junction with L5072."* VP17 was captured along this scenic route and is representative of the views experienced along this road. This viewpoint was assigned a 'High' sensitivity. As detailed in *Appendix 13-3*, the Proposed Turbines are seen as small-scale elements relevant to the landscape, in the background of views, occupying a relatively short horizontal extent. A residual 'Slight' visual effect was deemed to arise for this viewpoint. Site visits determined that this is one of few locations along the scenic route with open visibility in the direction of the Proposed Turbines. Overall, visual effects on this scenic route are deemed to be 'Long-Term', 'Negative', and 'Slight'. On balance, these effects are not considered to be significant.

MCDP and WCDP Protected Views

MCDP Protected View 83 is located approximately. 16.6km north from the nearest Proposed Turbine T32, whilst **MCDP Protected View 56** is located approximately. 15km north from Proposed Turbine T32. VP14 was captured near MCDP Protected View 83 at Blackshade Bridge and is representative of both MCDP Protected View 83 and MCDP Protected View 56. This viewpoint was assigned a 'High' sensitivity. As discussed in *Appendix 13-3*, the Proposed Turbines are seen as small features relative to the landscape, in the background of views, occupying a relatively short horizontal extent. A 'Negligible' magnitude of change was deemed to arise. Overall, visual effects on both MCDP Protected View 83 and MCDP Protected View 56 are deemed to be 'Long-Term', 'Negative', and 'Slight'. On balance, these effects are not considered to be significant.

Westmeath Protected View 14 is located 18.7km north-west from the nearest Proposed Turbine T32 and is directed towards the Proposed Turbines. The protected view is located along the M6 motorway

and, due to safety constraints, imagery could not be captured from this location. VP14 is located at a comparable distance and is considered broadly representative of the likely visibility from this protected view. A 'Negligible' magnitude of change was deemed to arise for this viewpoint. The protected view is associated with the 'Passage' sculpture and is experienced by visual receptors travelling along the motorway at speeds of up to 120 km/h. Any views towards the Proposed Turbines would therefore be brief and momentary. Given the substantial separation distance, the extent of intervening vegetation along the motorway and the speed of travel, significant visual effects are not likely to occur.

Blueways - Grand Canal Way / Barrow Way / Royal Canal Way

As discussed previously, the **Grand Canal** stretches generally in an east-west direction to the north of the Proposed Turbines within the LVIA Study Area and is located approximately 880m from the nearest Proposed Turbine (T32) at its closest point while the **Barrow Way** along the Barrow Line stretches generally in an east-south direction to the south-east of the Proposed Turbines. Visual receptors along the canal are considered to be 'High' sensitivity receptors as they would be visiting it in a recreational capacity. As discussed previously, the canal following the low-lying contours of the landscape, with dense vegetation along its banks, provides dense screening along the majority of the route. Long-ranging visibility of the Proposed Turbines is primarily confined to elevated vantage points, such as bridges along the canal, where, even then, views are intermittent. This can be seen at VP26 (residual 'Not Significant' visual effects), VP07 (residual 'Slight visual effects), and VP09 (residual 'Slight' visual effects), where the Proposed Turbines are seen but are largely screened by intervening vegetation. At VP18, is one of the few locations along the Grand Canal where a residual 'Moderate' visual effects was deemed to arise due to the open unenclosed views towards the Proposed Turbines in very close proximity. For the majority of the Grand Canal, even at bridge crossing, visibility is typically limited, with only a limited number of the 46 Proposed Turbines clearly visible from any one given point (e.g. VP26, VP07, VP09, PWVP-B). Overall, visual effects on the Grand Canal (including Barrow Way) are 'Long-Term', 'Negative', and ranges from 'Imperceptible' (where the Proposed Turbines are not visible due to dense intervening vegetation) to 'Moderate'. On balance, these effects are not considered to be significant.

The **Royal Canal Way** follows the Royal Canal, which as discussed previously, is located 12.6km north from the nearest Proposed Turbine (T30). On-site appraisals determined that given the distance and the low-lying nature of the canal, which is enclosed by dense vegetation, visibility of the Proposed Turbines is only likely to occur from elevated vantage points, such as bridges along the canal, such as VP14, where residual visual effects were deemed to be 'Slight'. Overall, visual effects on the Royal Canal are 'Long-Term', 'Negative', and ranges from 'Imperceptible' (where the Proposed Turbines are not visible due to dense intervening vegetation) to 'Slight'. On balance, these effects are not considered to be significant.

Settlements with 5km

All settlements discussed in this sub-section are discussed as a high-level overview, with the focus placed on the settlement as a whole. Effects on residential receptors and residential areas within these settlements located in closer proximity to the Proposed Turbines are discussed in detail in Section 13.8.3.2.4 Residential Receptors, separately.

Visual effects within and around settlements are mitigated by a number of embedded design measures (see *Appendix 13-5* for more information), which are further discussed in Section 13.8.3.2.4. These are:

- All Proposed Turbines exceed the minimum 500m set-back distance from residential properties as set out in the WEDG 2006 and also adheres to the recommended best practice 4-times-tip-height set-back distance from residential receptors explicitly set out for residential visual amenity by the Draft WEDG 2019.
- The layout adopts two turbine tip heights. The Proposed Turbines at the outer perimeter of the Proposed Wind Farm, which are closest to surrounding visual

receptors, have a tip height of 200m, while those turbines toward the centre rise to 220m. This graduated profile reduces the potential for visual dominance and allows these outer turbines to take greater advantage of existing visual screening within the landscape, such as intervening landform and vegetation.

- Photomontage visualisations of early turbine layouts identified 4 No. turbines in Lodge Bog visually disconnected from the Proposed Wind Farm, which were consequently removed to mitigate discordant and surrounding visual effects arising from turbines for visual receptors, particularly residential receptors and settlements in close proximity to the Proposed Turbines.

Clonbullogue: The centre of the settlement of Clonbullogue is located approximately 2.7km west from the nearest Proposed Turbine T19. While the ZTV indicates full theoretical visibility of the Proposed Turbines, on-site appraisals determined that actual visibility within the settlement is far less. Figure 13-5 within the Route Screening Analysis shows that the majority of roads within the settlement of Clonbullogue, as well as those on the periphery of the settlement, are classified as having 'Full/Dense' Visual Screening or 'Partial/Intermittent' Visual Screening. As a result, visibility of the Proposed Turbines within the low-lying streetscapes and street level receptors (including residential receptors, as well as recreational receptors along the **Sli na Slainte Clonbullogue)** within the centre area of Clonbullogue will be limited. This is primarily due to the visual screening occurring from the built environment and intervening vegetation within this low-lying settlement, which can be seen from Photowire PWVP-D below, which was captured from within the settlement itself.



Plate 13-21 Photowire Example of Visual Screening from Woodlawn Drive within Clonbullogue, approximately. 2.7km west from the nearest Proposed Turbine T19

As a result, 'Not Significant' residual visual effects occur from the streetscape and street level receptors within the centre area of Clonbullogue. However, there will likely be greater visibility of the Proposed Turbines on the outskirts of the settlement, where more open views towards the Proposed Turbines occur. VP04 was captured to the north of Clonbullogue along the R401 Regional Road as it exists Clonbullogue, within an area with 'Little/No' visual screening. As discussed in *Appendix 13-3*, only a limited number of the 46 Proposed Turbines are clearly visible, illustrating how the visibility of the Proposed Turbines diminishes with distance in this very flat landscape. As detailed in *Appendix 13-3*, a 'Slight' magnitude of change was assigned to this viewpoint, and an overall residual effect of 'Slight' was deemed to occur. Overall, visual effects in the settlement of Clonbullogue are 'Long-Term', 'Negative', and ranges from 'Not Significant' to 'Slight'. On balance, these effects are not considered significant.

Edenderry: The centre of the settlement of Edenderry is located approximately. 3.7km north-west from the nearest Proposed Turbine, T32. The settlement has some patches of no theoretical visibility due to localised undulations. Similar to Clonbullogue, the Route Screening Analysis shows that the majority of roads within the settlement of Edenderry, as well as those on the periphery of the settlement, are primarily classified as having 'Full/Dense' Visual Screening or 'Partial/Intermittent' Visual Screening,

restricting visibility in the direction of the Proposed Turbines - see Photowire PWVP-E below along the L-1001 local road within the settlement of Edenderry.



Plate 13-22 Example of Dense Visual Screening / No Visibility from Father Paul Murphy Street within Edenderry, approximately. 3.3km north from the nearest Proposed Turbine T32

There are some elevated vantage points within Edenderry providing long-ranging open views in the direction of the Proposed Turbines. VP15 was captured at one of such viewpoints, at Blundell Park, adjacent to Blundell Castle overlooking the 'Church View Heights' residential estate. As detailed in *Appendix 13-3*, 43 no. of the Proposed Turbines are seen to their full extent, beyond the mature woodland, amongst the existing Cushaling and existing Cloncreen Wind Farms, occupying a large horizontal extent within the view. A 'Substantial' magnitude of change was deemed to arise at this viewpoint, resulting in a 'Significant' residual visual effect.

However, VP15 represents one of the few elevated and open views towards the Proposed Turbines from within Edenderry. It is not representative of the majority of the settlement, which is lower lying and enclosed by intervening vegetation and built form. Visibility from residential areas and from most roads within Edenderry will therefore be considerably more restricted. Significant visual effects will be confined to a very limited number of elevated locations and will not occur across the settlement as a whole. Overall, visual effects in the settlement of Edenderry are 'Long-Term', 'Negative', and ranges from 'Slight' to 'Significant'.

Blundell Castle, located approximately. 3.5km north-west from the nearest Proposed Turbine T32 is a recreational receptor, is also represented by VP15. Residual visual effects at Blundell Castle are also deemed to be 'Long-Term', 'Negative', and 'Significant'.

Derrinturn and Carbury: The settlements of Derrinturn and Carbury are located 4.6km and 4.2km north-east of the nearest Proposed Turbine, T30, respectively. These settlements have primarily full theoretical visibility of the Proposed Turbines, with some pockets of no visibility in Derrinturn. VP25 was captured on the outskirts of Carbury and is representative of views from both of these settlements. As discussed in *Appendix 13-3*, from this viewpoint the Proposed Turbines are visible across a moderate horizontal extent of the view, beyond the distant treeline, with varying setback distances, partially screened by intervening vegetation. An overall 'Slight' magnitude of change was deemed to occur, with an overall 'Slight' residual visual effect. Visual effects at the settlements of Derrinturn and Carbury are deemed to be 'Long-Term', 'Negative', and 'Slight'. On balance, these effects are not considered significant.

Killina: The settlement of Killina is located approximately 2.9km east of the nearest Proposed Turbine, T46, and has full theoretical visibility of the Proposed Turbines. VP18 was captured on the outskirts of Killina and is representative of views from this settlement. As discussed previously, the Proposed Turbines are seen over a large horizontal extent, resulting in a 'Moderate' magnitude of change and an overall 'Moderate' residual visual effect. It is important to note that VP18 is located closer to the

Proposed Turbines than the settlement of Killina and is from an elevated vantage point on a bridge. As such, the level of visibility and visual effects from within Killina, particularly from street level will be further mitigated due to distance and additional screening from the built environment. Overall, visual effects in the settlement of Killina ranges from 'Slight' to 'Moderate'. On balance, these effects are not considered significant.

Ticknevin: The settlement of Ticknevin is located approximately 1.9km north from the nearest Proposed Turbine, T46, and is one of the closest settlements to the Proposed Turbines. Similar to previous settlements, the Route Screening Analysis shows that the majority of the roads within this settlement have either 'Full/Dense' Visual Screening or 'Partial/Intermittent' Visual Screening, with some small stretches of 'No/Partial' Visual Screening. As a result, visibility of the Proposed Turbines within the low-lying streetscapes and street level receptors within the centre area of Ticknevin will be limited.

VP06 was captured on the outskirts of Ticknevin, within an area of 'No/Partial' Visual Screening. As discussed in *Appendix 13-3*, the closest Proposed Turbine (T29) is a prominent feature, while the remaining turbines appear as moderately scaled features within the view relative to the landscape. The Proposed Turbines are sited within a flat, low-lying landscape. Consequently, a limited number of the 46 Proposed Turbines are clearly visible from this viewpoint. A 'Moderate' magnitude of change was deemed to arise, with an overall 'Moderate' residual visual effect. Overall, visual effects within the centre of the settlement Ticknevin are deemed to be 'Long-Term', 'Negative', and 'Moderate'. On balance, these effects are not considered significant.

Lullymore: The centre of Lullymore is located approximately. 2.1km east from the nearest Proposed Turbine, T37. Lullymore comprises a small settlement cluster, with residential dwellings arranged in a linear array along the R414 Regional Road, that is primarily classified as having 'Dense/Full' Visual Screening. Two viewpoints, VP02 and VP03 have been captured to represent views from this settlement cluster. As detailed in *Appendix 13-3*, only a limited number of the Proposed Turbines are clearly seen beyond the treeline, occupying a relatively short horizontal extent in VP02, whilst in VP03 – the closest Proposed Turbine, T37, appears as a large and prominent feature within the view. The remaining visible turbines in VP03 appear as moderately scaled features relative to the landscape beyond the distant treeline, partially screened by the intervening vegetation.

At both viewpoints, only a limited number of the 46 no. Proposed Turbines are clearly visible, illustrating how the visibility of the Proposed Turbines quickly diminishes with distance in this very flat landscape. A 'Slight' magnitude of change and residual 'Slight' visual effect were identified at VP02, while a 'Moderate' magnitude of change and residual 'Moderate' visual effect were identified at VP03. These effects have been further mitigated by the embedded design mitigation measures. As detailed in *Appendix 13-3*, visualisations of early turbine layouts at Lullymore identified 4 No. turbines in Lodge Bog (to the east of Lullymore) which appeared visually disconnected from the Proposed Wind Farm and had a surrounding visual effect on visual receptors at Lullymore. Consequently, these turbines were removed to mitigate discordant and surrounding visual effects for receptors at Lullymore.

Overall, where visibility occurs from Lullymore, only a limited proportion of the Proposed Wind Farm will generally be experienced at any one location due to the very flat landscape characteristics and disproportionate screening effect (See Section 13.3.2 previously). Overall, visual effects in the settlement of Lullymore are 'Long-Term' and 'Negative' and ranges from 'Slight' to 'Moderate'. On balance, these effects are not considered significant.

Lullymore Heritage and Discovery Park, a recreational receptor located approximately. 1.6km east from the nearest Proposed Turbine T32, is also represented by these viewpoints. Residual visual effects at Lullymore Heritage and Discovery Park are also deemed to be 'Long-Term', 'Negative', ranging from 'Slight' to 'Moderate'. On balance, these effects are not considered significant.

Rathangan: The centre of the settlement of Rathangan is located approximately. 3km south from the nearest Proposed Turbine, T04. Similar to other settlements within 5km, the Route Screening Analysis

shows that the majority of roads within the settlement of Rathangan, as well as those on the periphery of the settlement, are primarily classified as having 'Full/Dense' Visual Screening or 'Partial/Intermittent' Visual Screening. As a result, visibility of the Proposed Turbines within the low-lying streetscapes and street level receptors within the centre area of Rathangan will be limited. This is primarily due to the visual screening occurring from the built environment and intervening vegetation within this low-lying settlement, which can be seen from Photowire PWVP-C below, which was captured from within the settlement itself.



Plate 13-23 Photowire Example of Dense Screening from Spencer's Bridge at Rathangan, approximately. 3.3km south from the nearest Proposed Turbine T14

As a result, 'Not Significant' residual visual effects occur from the streetscape and street level receptors within the centre area of Rathangan. However, there will likely be greater visibility of the Proposed Turbines on the outskirts of the settlement, where more open views towards the Proposed Turbines occur. VP20 was captured to the north of Rathangan, at St/ Patrick's Graveyard. As discussed in *Appendix 13-3*, the closest Proposed Turbines, T05 and T04 appear as a prominent feature within the landscape, while the remaining turbines appear smaller in size and scale relative to the landscape as they recede into the distance. A 'Moderate' magnitude of change was deemed to arise, and an overall residual effect of 'Moderate' was deemed to occur. Overall, visual effects in the settlement of Rathangan are 'Long-Term', 'Negative', and ranges from 'Not Significant' to 'Moderate'. On balance, these effects are not considered significant.

Killinthomas Woods, a recreational receptor is also represented by VP20. However, visibility within Killinthomas Woods will be far less, due to visual screening form the mature vegetation within the woods. Residual visual effects at Killinthomas Woods are deemed to be 'Long-Term', 'Negative', and 'Not Significant'.

Settlements Beyond 5km

Beyond 5km from the Proposed Turbines, the apparent scale and visual prominence of the Proposed Turbines will be further reduced with increased set-back distance. This can be seen at:

- VP11, captured within the settlement of **Walsh Island** (approximately. 13km west from the nearest Proposed Turbine T13), where the magnitude of change was deemed to be 'Negligible', with a 'Not Significant' residual visual effect.
- VP17, captured just north of the settlement of **Prosperous** (approximately. 13.8km east from the nearest Proposed Turbine T46), where the magnitude of change was deemed to be 'Slight', with a 'Slight' residual visual effect.
- VP16, captured within the settlement of **Portarlington** (approximately. 15km south-west from the nearest Proposed Turbine T14), where the magnitude of change was deemed to be 'Slight', with a 'Not Significant' residual visual effect.

- VP26, within the settlement of **Monastervin** (approximately. 12km south from the nearest Proposed Turbine T14), where the magnitude of change was deemed to be 'Negligible', with a 'Not Significant' residual visual effect.
- VP07, captured just north of the settlement of **Allenwood** (approximately. 6.8km east from the nearest Proposed Turbine T46), where the magnitude of change was deemed to be 'Slight', with a 'Slight' residual visual effect.
- PWVP-H captured existing **Allenwood** to the west, where the majority of the Proposed Turbines are visually screened from view due to the dense intervening vegetation.



Plate 13-24 Photowire Example of dense visual screening of the Proposed Turbines. Captured on the exit from Allenwood along the R403 Regional Road. Captured in the Winter

On-site visibility appraisals determined that similar visibility would occur from other settlements in the wider landscape that were scoped in for further assessment in Section 13.5.2 previously, including **Bracknagh, Clogharinka** and **Lackagh/Mountrice.** At these locations, the Proposed Turbines will generally be viewed as distant background elements, with their perceived scale gradually reducing in height as they recede into the distance. Overall, residual visual effects at all these settlements would be 'Long-Term', 'Negative', and range from residual 'Not Significant' visual effects to residual 'Slight' visual effects. On balance, these effects are not considered to be significant.

The Curragh

Visual receptors at the Curragh are considered to be of 'High' sensitivity, as visitors are likely to experience the area for its recreational capacity to experience its landscape setting, as well as to take in the panoramic views available from the elevated vantage point.

VP08 was captured from Flagstaff Hill at the Curragh. As detailed in *Appendix 13-3*, are primarily situated within a saddle of lower ground enclosed by Dunmurry Hill and Grange Hill either side of the Proposed Turbines. The Proposed Turbines are seen as small-scale elements in the distant background of the view relative to the landscape, occupying an overall short horizontal extent. The magnitude of change was deemed to be 'Slight', with an overall 'Slight' residual visual effect. The substantial set back distance in combination with intervening features of the landscape such as the rolling landform, varied field patterns and the abundance of mature vegetation provide a physical landscape buffer between the Proposed Turbines and the Curragh landscape. The Proposed Turbines will not fundamentally detract from the visitor experience of the Curragh, its landscape and monuments, or any visual connectivity with other landmarks (e.g. Dún Ailinne) or places of significance elsewhere in the wider landscape. Furthermore, there will be areas where there the Proposed Turbines will not be visible from the Curragh (see ZTV Map – Figure 13-22). Overall, residual visual effects at the Curragh would be 'Long-

Term', 'Negative', and range from 'Imperceptible' (where the Proposed Turbines are not visible) to 'Slight'. On balance, these effects are not considered to be significant.

Dún Ailinne

Dún Ailinne, which is on the Tentative UNESCO List is located approximately. 19.8km south-east of the nearest Proposed Turbine. Dún Ailinne, as a landscape receptor is considered to be of 'Very High' sensitivity (See Section 13.8.3.1.5 previously). The sensitivity of visual receptors visiting Dún Ailinne must balance the value and quality of the view with the activity of people involved. This location is identified as a hilltop view in the KCDP and affords wide-ranging panoramic views across the surrounding landscape (although these views are already influenced by human modification, including agricultural land uses and nearby development such as the existing quarry). It is to be noted that this viewpoint is located on **private land**, has **no safe public access** and is neither a recognised tourist destination nor a well-frequented location, with attendance estimated at approximately one day per year (annual Open Day hosted by the landowner). As such, given the designation in the KCDP, this viewpoint was assigned a 'High' sensitivity.

As set out in *Appendix 13-3*, no permission was granted to access the hill to capture data for photomontage production. Therefore, a drone photomontage was produced from atop of the hill (VP27) and is included in the Photomontage Booklet and assessed in *Appendix 13-3*. This is an adequate visual aid to inform the impact assessment showing the scale, form, and arrangement of the Proposed Turbines as experienced from the summit of the hill at a distance of 19.8km away.

As shown by the drone photomontage, the Proposed Turbines are seen as very small features relative to the landscape in a linear array across the background of this view, comprising an overall small horizontal extent in the panoramic landscape view. The hubs of the Proposed Turbines are vertically aligned in the landscape giving the Proposed Turbines an organised and coherent form. The magnitude of change was deemed to be 'Slight'.

The substantial set back distance in combination with intervening features of the landscape such as the varied field patterns and the abundance of mature vegetation provide a physical landscape buffer between the proposed turbines and Dún Ailinne landscape and the setting of the important cultural heritage monuments at this location. The Proposed Turbines do not obstruct intervisibility between any heritage sites and Dún Ailinne and do not compromise the integrity of any visual links between the Hill and the wider cultural landscape.

The Proposed Turbines will not fundamentally detract from the visitor experience of Dún Ailinne, its landscape and monuments, or any visual connectivity with other landmarks (e.g. the Curragh) or places of significance elsewhere in the wider landscape. Overall, residual visual effects were deemed to be 'Long-Term', 'Negative' and 'Slight'. On balance, these effects are not considered significant.

Local Cultural Heritage Receptors - Lullymore Ecclesiastic Site

Lullymore East Ecclesiastic Site is a cultural heritage receptor of 'High' sensitivity and is located 2.56km northeast of the nearest Proposed Turbine (T01). As seen in Plate 13-25 below, the ecclesiastic site is physically set back from the location of the Proposed Turbines by multiple agricultural fields, peatlands, tracts of woodland and is enclosed by mature vegetation and boundary walls.



Plate 13-25 Drone view captured in June 2026 of Lullymore East Ecclesiastic Site in relation to the nearest Proposed Turbine (T01).

VP19 was captured within the Lullymore East Ecclesiastic Site itself. As discussed in *Appendix 13-3*, the closest turbine, Proposed Turbine T37 appears as tall vertical features within the landscape, while the remaining turbines appear as moderately scaled elements relative to the landscape, reducing in scale and height as they recede into the distance. Turbines T25, T40, T26, T41, T24, and T27 are screened from view by the intervening trees and elevated terrain. The Proposed Turbines are not situated within the immediate visual context of the ecclesiastical site, and are seen beyond the intervening treelines. Given the nature of views, the setback distance, and existing vegetative screening, the Proposed Turbines will not materially alter the key characteristics of this sensitive receptor and as a result, will not result in significant visual impacts. Furthermore, it is important to note, that as detailed in *Appendix 13-5*, visualisations of early turbine layouts identified 4 No. turbines in Lodge Bog visually disconnected from the Proposed Wind Farm which were consequently removed to mitigate discordant and surrounding visual effects from nearby visual receptors, such as Lullymore Ecclesiastic Site (Lullymore Cemetery). A 'Moderate' magnitude of change was deemed to arise for VP19, resulting in an overall 'Moderate' residual visual effect. Overall, residual visual effects were deemed to be 'Long-Term', 'Negative' and 'Moderate'. On balance, these effects are not considered significant.

13.8.3.2.4 Residential Receptors

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

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

- All Proposed Turbines exceed the mandatory 500m set-back distance from residential receptors set out in the WEDG 2006.
- All Proposed Turbines adhere to the recommended 4-times-tip-height set-back distance from third-party receptors for residential visual amenity as prescribed by the Draft WEDG 2019.

The design of the Proposed Wind Farm has been subject to a number of embedded design mitigation measures (detailed in *Appendix 13-5* of this EIAR), including:

- The layout adopts two turbine tip heights. The Proposed Turbines at the outer perimeter of the Proposed Wind Farm, which are closest to surrounding visual receptors, have a tip height of 200m, while those turbines toward the centre rise to 220m. This graduated profile reduces the potential for visual dominance and allows these outer turbines to take greater advantage of existing visual screening within the landscape, such as intervening landform and vegetation.
- Photomontage visualisations of early turbine layouts identified 4 No. turbines in Lodge Bog visually disconnected from the Proposed Wind Farm, which were consequently removed to mitigate discordant and surrounding visual effects arising from turbines for visual receptors, particularly residential receptors and settlements in close proximity to the Proposed Turbines.

Residential Context: Population Density and Arrangement of Dwellings

As previously reported in the landscape baseline (see previous Section 13.4.2 Landscape Character of the Proposed Wind Farm), the Proposed Wind Farm itself is located within a large, uninhabited area of peatland. The surrounding area, where the Proposed Turbines are actually visible is a sparsely settled rural landscape. It is not a densely populated area, and as established previously, very limited visibility occurs from the vast majority of residential receptors within 5km of the Proposed Turbines. The below Residential Receptors Map (Figure 13-24) illustrates how the Proposed Turbines are set-back from residential receptors in the surrounding landscape with respect to distances compliant with guidance in the WEDG 2006 and Draft WEDG 2019. There are 33 no. residential receptors located within 1 km of Proposed Turbines. The closest residential receptor is located approximately 894m from the nearest Proposed Turbine (T16) i.e. greater than the minimum recommended setback as identified in the WEDG 2006 (500m) and greater 4x tip height set back (880m) as identified in the Draft WEDG 2019.

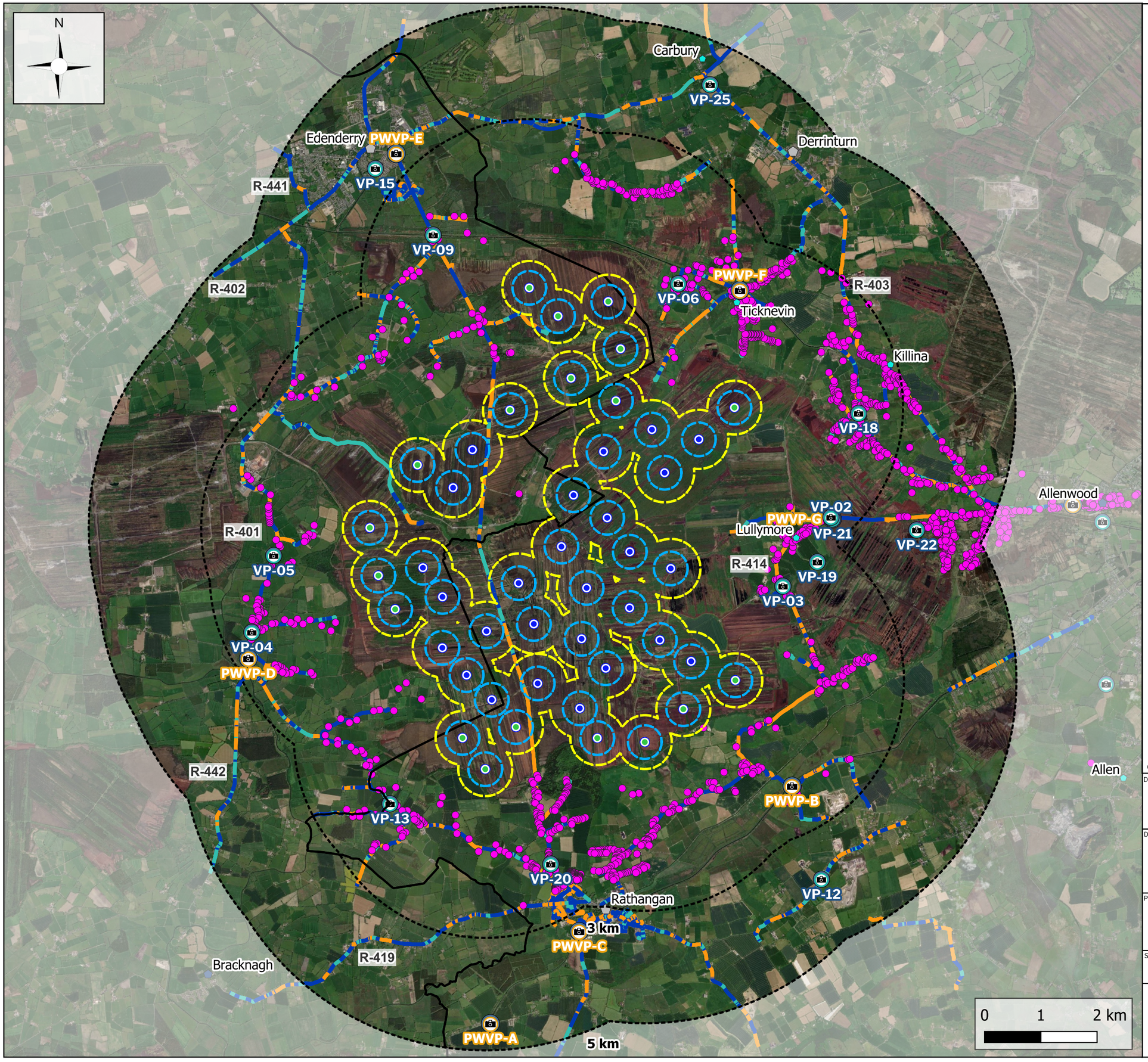
It is to be anticipated that wind farms inevitably cause some 'Significant' visual effects on proximate sensitive visual receptors due to the prominence of turbines within landscape views and the 'Substantial' magnitude of change which will arise in close proximity to a wind farm development. A key focus in this LVIA is identifying the scenarios where the greatest likelihood of significant effects occurs. Significant residual visual impacts have been identified at 2 photomontage viewpoint representing residential receptors in proximity to the Proposed Turbines (see *Appendix 13-3*). Residual significant impacts only occur for a small number of receptors and are not representative of effects experienced across the wider LVIA Study Area, where visibility and the resulting magnitude of change generally diminish with distance or are reduced by intervening landform, vegetation, forestry and built form.

Assessment of Residential Amenity – Photomontages

12 photomontage viewpoints were taken within 5km of the Proposed Turbines to represent the residential receptors in close proximity to the Proposed Wind Farm, along with 8 no. photowire viewpoints, which were not ultimately brought forward as photomontages due to lesser visibility.

Photomontages are just one of the tools employed during the LVIA that was conducted in order to inform the assessment of landscape and visual effects. The visual impact assessment is strongly informed by site visits and the reading of the landscape on the ground. It would be a disproportionate measure to include an individual photomontage from every residential receptor, and this is not required to conduct

a thorough and robust assessment of landscape and visual effects. In line with the guidance laid out in GLVIA3, the viewpoints selected for the LVIA conducted were informed by a range of factors including the *"ZTV analysis, by fieldwork, and by desk research"* (para 6.18, GLVIA3). Furthermore, GLVIA3 states that representative viewpoints are *"selected to represent the experience of different types of visual receptor, where larger numbers of viewpoints cannot all be included individually and where the significant effects are unlikely to differ"* (para 6.19 GLVIA3). The large number of viewpoints used in the conduct of the LVIA particularly in very close proximity to the proposed turbines are sufficient to represent the residential receptors within the LVIA Study Area, including the *"distribution of population"* (para 6.18, GLVIA3).



Map Legend

- Buffers from Proposed Turbines
- County Boundaries
- 4-times-tip-height buffer (Draft WEDG 2019)
- 500m buffer (WEDG 2006)
- Residential Receptors

Proposed Turbines

- 200m
- 220m

Imagery

- Photomontage Viewpoint Locations
- Photowire Viewpoint Locations

Settlement Hierarchy

- Town
- Village
- Small Village of Local Importance

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Drawing No.

Figure 13-24

Drawing Title

Residential Receptors

Project Title

Ballydermot Wind Farm,
Co. Offaly & Co. Kildare

Scale	Project No.	Date	Drawn By	Checked By
1:65,000	250708	29.09.2026	GL	DM

MKO Planning and Environmental Consultants

Assessment of Residential Receptors to the West and North-West of the Proposed Turbines

To the west of the Proposed Turbines (north of Clonbullogue), and north-west of the Proposed Turbines (south of Edenderry), the rural character of the landscape is primarily defined by agricultural fields enclosed by dense shrub vegetation. Where residential receptors are present, they are typically located along the local road network (R401 Regional Road) or grouped in clusters enclosed by agricultural fields. The Route Screening Analysis (See Section 13.3.3 previously) notes that the road network to the west of the Proposed Turbines is primarily classified with 'Partial/Intermittent Screening' Visual Screening or 'Dense/Full Screening' Visual Screening, with some stretches of 'No/Very Little Screening'.

VP04, located along the R401 Regional Road, within the townland of Clonbullogue is representative of typical views towards the Proposed Turbines experienced by residential receptors to the west of the Proposed Turbines. This viewpoint was taken from a regional road adjacent the Proposed Wind Farm and illustrates a relatively open view towards the Proposed Turbines. Despite the proximity (2.47km from the nearest Proposed Turbine T20), only a limited number of the 46 no. Proposed Turbines are clearly visible at this location. This demonstrates how turbine visibility diminishes with distance and highlights the disproportionate screening effect of above-ground landscape features within this very flat landscape (see Section 13.3.1.2 previously). Furthermore, the variations in scrub and tree vegetation in the foreground softens the visual impact of the Proposed Turbines within the view as they provide varying levels of visual screening. In actuality, many residential properties in this area have mature boundary vegetation surrounding their properties, which will reduce visibility of the Proposed Turbines and effects on residential visual amenity. Residential visual amenity effects are further mitigated by strategic siting, greater than 4x tip height separation and the adoption of a graduated two turbine tip heights (Proposed Turbines at the outer perimeter of the Proposed Wind Farm, closest to surrounding visual receptors, have a tip height of 200m, while those turbines toward the centre rise to 220m), resulting in a reduced potential for potential for visual dominance and allows these outer turbines to take greater advantage of existing visual screening within the landscape, such as intervening landform and vegetation. As discussed in *Appendix 13-3*, a 'Slight' magnitude of change was deemed to arise at VP04 with an overall 'Slight' residual visual effect. On balance, these effects are not considered significant. As discussed previously in Section 13.8.3.2.3, visibility the low-lying streetscapes within the centre area of Clonbullogue itself will be limited. This is primarily due to the visual screening occurring from the built environment and intervening vegetation within this low-lying settlement, as seen in Photowire PWVP-D .



Plate 13-26 Photowire Example of Visual Screening from Woodlawn Drive within Clonbullogue, approximately. 2.7km west from the nearest Proposed Turbine T19

VP05 within the townland of Ballydermot, was captured 1.4km north of VP04 to represent views where there will be turbines in opposing directions – with the Proposed Turbines and existing Cushaling

turbines to the east, and the existing Cloncreen Wind Farm to the west. Similar to VP04, despite the viewpoint's proximity (1.78km from the nearest Proposed Turbine T22), only a limited number of the 46 Proposed Turbines are clearly visible at this location. As discussed in *Appendix 13-3*, views of either wind farms in either direction will inherently be intermittent due to the dense roadside vegetation that is characteristic of this very flat landscape. A 'Substantial' magnitude of change was deemed to arise at VP05 (considering cumulative effects with the existing Cushaling and existing Cloncreen Wind Farms), with an overall 'Significant' residual visual effect. Many residential properties in this area have mature boundary vegetation surrounding their properties, which will reduce visibility of the Proposed Turbines and effects on residential visual amenity. Furthermore, residential visual amenity effects are further mitigated by strategic siting, greater than 4x tip height separation and the adoption of a graduated two turbine tip height approach, resulting in a reduced potential for visual dominance of the Proposed Turbines.

As discussed previously in Section 13.8.3.2.3, visibility within the streetscapes of Edenderry will be limited, as seen by Photowire PWVP-E previously. There will be some instances, from limited elevated vantage points, where the Proposed Turbines will be seen to their full extent (for e.g. VP15 – where 'Significant' residual visual effects were deemed to arise). For residential receptors south of Edenderry, within the low-lying agricultural plains, visibility towards the Proposed Turbines will generally be more limited due to intervening vegetation within the flat landscape. VP09, captured at the Blundell Aqueduct along the Grand Canal, is representative of views experienced by residential receptors in this general direction.



Plate 13-27 Example of Dense Visual Screening / No Visibility from Father Paul Murphy Street within Edenderry, approximately. 3.3km north from the nearest Proposed Turbine T32

As detailed in *Appendix 13-3*, from VP09, the closest Proposed Turbine (T32) is seen as a prominent feature within the view, while the remaining turbines appear as moderately scaled features relative to the landscape. Turbine T32, T31, T45, T28, T43, T27, T42, T37, T36 and T40 are seen from half tower upwards, whilst the remaining turbines are either partially or fully screened from view due to the dense woodland. A 'Slight' magnitude of change was deemed to arise at VP04 with an overall 'Slight' residual visual effect. On balance, these effects are not considered significant. It is important to note that this viewpoint is captured at an elevated vantage point at a bridge. Residential receptors, which are located at lower elevation will experience further visual screening from mature boundary vegetation surrounding their properties, as well as other intervening vegetation within the flat landscape.

Assessment of Residential Receptors to the North and North-East of the Proposed Turbines

Similar to the west, the rural character of the landscape to the north and north-east is primarily defined by agricultural fields enclosed by dense shrub and tree vegetation (Plate 13-28). Where residential receptors are present, they are typically arranged in small clusters along the local road network. As outlined in the Route Screening Analysis (see Section 13.3.3), the road network to the north and north-

east of the Proposed Turbines is predominantly classified with 'Partial/Intermittent Screening' Visual Screening or 'Dense/Full Screening' Visual Screening, with some instances of 'No/Very Little Screening'.



Plate 13-28 Representative drone view captured in June 2026, looking north-west over dense bounding vegetation around residential receptors.

VP18, located at Hamilton Bridge near Killina, is representative of an open towards the Proposed Turbines from this area. As discussed previously in Section 13.8.3.2.3, the Proposed Turbines extend across a relatively broad horizontal extent of the view, resulting in a 'Moderate' magnitude of change and an overall 'Moderate' residual visual effect. However, VP18 was captured from an elevated position on the bridge. Visibility for lower-lying ground-based receptors (i.e. residential receptors) will therefore be reduced by the visual screening provided by roadside vegetation.

VP06 was captured from a local road in the townland of Ticknevin, approximately. 3km north-west of VP18. Although VP06 is slightly closer to the nearest Proposed Turbine than VP18 (approximately. 1.29km from the nearest Proposed Turbine T30), it demonstrates a notable reduction in turbine visibility compared with VP18 due to the disproportionate screening effect that occur within this very flat landscape. Only a limited number of the 46 no. Proposed Turbines are clearly visible from this viewpoint, with the turbines viewed beyond distant treelines and agricultural buildings. Turbine bases are screened by intervening vegetation, while a number of turbines largely or fully screened from view. A 'Moderate' magnitude of change and an overall 'Moderate' residual visual effect was deemed to occur at VP06.

As seen in both VP18 and VP06, whilst the Proposed Turbines are seen, the intervening treelines and agricultural structures provide a sense of scale and spatial separation between the viewpoint and the Proposed Turbines. Although visibility may increase during the winter months, the viewpoint demonstrates that, even where relatively open views occur, intervening vegetation and other landscape features will continue to reduce the prominence of the Proposed Turbines. Overall, as the Proposed Turbines are sited with a flat landscape, perceived scale (i.e. height and breadth) of the Proposed Turbines diminishes quickly with increasing distance owing to the flat, planar nature of the Proposed Wind Farm and surrounding landscape, thereby reducing the scale of visual impact from residential receptors.

Photowire PWVP-F captured at Ticknevin Bridge, presents a similar orientation towards the Proposed Turbines but from a location further set back within the settlement of Ticknevin. The turbines are again seen beyond distant treelines, with intervening vegetation and the built environment providing

additional screening, providing a sense of spatial separation, further reducing visual prominence for residential receptors.

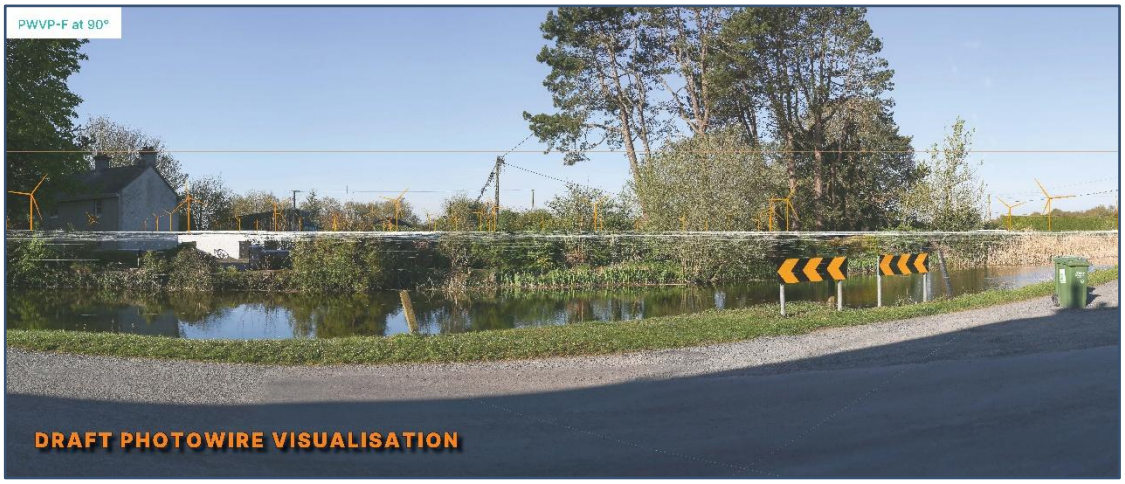


Plate 13-29 Photowire View from Ticknevin Bridge, approximately. 2km north from the nearest Proposed Turbine T46

Residential visual amenity effects for residential receptors to the north and north-east are further mitigated through the strategic siting of the Proposed Turbines, separation distances greater than four times tip height and the adoption of two graduated turbine tip heights. Turbines located around the outer perimeter of the Proposed Wind Farm, closest to surrounding residential receptors, have a tip height of 200m, while turbines towards the centre have a tip height of 220m. This reduces the potential for visual dominance and allows the outer turbines to take greater advantage of screening provided by intervening vegetation and other above-ground landscape features.

Furthermore, visualisations of early turbine layouts identified 4 No. turbines in Lodge Bog visually disconnected from the Proposed Wind Farm and increased the horizontal extent of turbines when viewed from northern residential receptors, including those near Killina. These turbines were consequently removed to reduce the horizontal extent of turbines and thereby mitigate discordant visual effects arising for visual receptors to the north-west of the Proposed Turbines.

Assessment of Residential Receptors to the East of the Proposed Turbines

To the east of the Proposed Turbines, residential receptors are concentrated within the island of Lullymore, a locally distinctive area of agricultural land enclosed by extensive expanses of peatland (Plate 13-30). Residential properties are primarily arranged in a linear pattern along the R414 Regional Road and adjoining local roads. As identified in the Route Screening Analysis in Section 13.3.3, these roads are characterised by varying densities of roadside vegetation and are predominantly classified as having 'Partial/Intermittent Screening' or 'Dense/Full Screening' Visual Screening.



Plate 13-30 Drone view captured in December 2025 looking east over R-414 Regional Road and Lullymore Bog.

VP02 and VP03 were captured to represent the range of views experienced by residential receptors within Lullymore. As discussed previously in Section 13.8.3.2.3, only a limited number of the Proposed Turbines are clearly visible at VP02, where they are seen beyond intervening treelines and occupy a relatively limited horizontal extent of the view. At VP03, the nearest Proposed Turbine, T37, appears as a large and prominent feature. However, the remaining visible turbines appear as moderately scaled features, reducing in scale as they recede into the distance, beyond the distant treeline and are partially screened by intervening vegetation. Despite the relative proximity of Lullymore to the Proposed Wind Farm, only a limited number of the 46 Proposed Turbines are clearly visible from either viewpoint. This demonstrates how turbine visibility diminishes rapidly with distance across this very flat landscape. A 'Slight' magnitude of change and an overall 'Slight' residual visual effect were identified at VP02. At VP03, a 'Moderate' magnitude of change and an overall 'Moderate' residual visual effect were deemed to occur. On balance, this is not considered significant.

Lullymore (including both Lullymore East and Lullymore West) is physically and visually separated from the Proposed Turbines by multiple agricultural fields, large areas of peatland and substantial areas of woodland. Where visibility occurs, the Proposed Turbines will generally be seen beyond intervening treelines, which provide a sense of scale and spatial separation between residential receptors and the Proposed Wind Farm. Furthermore, many residential properties in this area have mature boundary vegetation surrounding their properties, which will reduce visibility of the Proposed Turbines and effects on residential visual amenity.

Embedded mitigation has substantially reduced the potential for adverse visual effects for residential receptors at Lullymore. Visualisations of earlier turbine layouts identified 4 No. turbines within Lodge Bog that appeared visually disconnected from the main turbine array and increased the potential for a discordant and surrounding visual effects on residential receptors in Lullymore. Two of these turbines were removed from the layout in 2020, with the remaining two removed in 2021. Their removal reduced the horizontal extent of the Proposed Wind Farm and mitigated the potential for surrounding visual effects for receptors at Lullymore.

The Proposed Onsite Substation is located within Lodge Bog instead of the 4 no. removed turbines. The Proposed Onsite Substation will not be visible from the local road network within the low-lying

streetscapes of Lullymore due to dense intervening vegetation within the flat landscape. Visibility of the Proposed Turbines in combination with the Proposed Onsite Substation may occur from residential receptors further east, such as those from within the townland Allenwood South. VP22 was captured from within Allenwood South and shows that the Proposed Turbines reduce in scale and size as they recede into the distance. Some minor visual stacking occurs with some of the turbines. A residual 'Moderate' visual effect was deemed to arise. Embedded mitigation design measures for the Proposed Onsite Substation include for graduate horizontal bands on the cladding of the substation, with a colour palette of darker, muted earth tones at the base transitioning to lighter tones above, finished in non-reflective matte materials to reduce glare. This treatment is intended to break up the perceived massing of the building and assimilate it with the flat, open character of the receiving landscape. Visual effects associated with the Proposed Grid Connection are discussed further in Section 13.8.2.5.

In addition, residential visual amenity effects are further mitigated by strategic siting, greater than 4x tip height separation and the adoption of a graduated two turbine tip heights, resulting in a reduced potential for potential for visual dominance of the Proposed Turbines.

Assessment of Residential Receptors to the South / South-East / South-West of the Proposed Turbines

The rural character of the landscape to the south is primarily defined by agricultural fields enclosed by dense shrub and tree vegetation. Where residential receptors are present, they are typically arranged in small clusters along the local road network as they disperse from the settlement of Rathangan. Similar to other roads within 5km, the roads to the south are primarily classified as both 'Dense/Full' Visual Screening and 'Partial/Intermittent' Visual Screening.

As discussed previously in Section 13.8.3.2.3, visibility from the low-lying streetscapes within the centre area of Rathangan itself will be limited. This is primarily due to the visual screening occurring from the built environment and intervening vegetation within this low-lying settlement, as seen in Photowire PWVP-C previously. VP20 was captured on the outskirts, to the north of Rathangan, at St. Patrick's Graveyard. A 'Moderate' magnitude of change was deemed to arise, and an overall residual effect of 'Moderate' was deemed to occur. Despite the proximity of this viewpoint (approximately. 2km south of the nearest Proposed Turbine T14), as the Proposed Turbines are sited within a flat, low-lying landscape, visibility diminishes quickly with distance, with mature hedgerows and treelines restricting visibility. The overall perceived scale (i.e. height and breadth) of the Proposed Turbines when viewed from within the surrounding landscape (including that of the south diminishes quickly with increasing distance owing to the flat, planar nature of the Proposed Wind Farm and surrounding landscape, thereby reducing the scale of visual impact for residential receptors to the south. In actuality, many residential properties in this area have mature boundary vegetation surrounding their properties, which will reduce visibility of the Proposed Turbines and effects on residential visual amenity.

For residential receptors to the south-west of the Proposed Turbines (west of Rathangan) and to the south-east of the Proposed Turbines (east of Rathangan), views towards the Proposed Turbines will be similar as to those experienced at VP13. As discussed in *Appendix 13-3*, Proposed Turbine T13 is seen as prominent features within the view, while the remaining turbines appearing smaller in size and scale relative to the landscape as they recede into the distance beyond multiple treelines. A 'Moderate' magnitude of change and an overall 'Moderate' residual visual effect was deemed to arise at this viewpoint. On balance, this is not considered significant.

Residential visual amenity effects are further mitigated for residential receptors to the south by strategic siting, greater than 4x tip height separation and the adoption of a graduated two turbine tip heights, resulting in a reduced potential for potential for visual dominance of the Proposed Turbines.

Summary of Visual Effects on Residential Receptors

Within the LVIA Study Area, the visual impact on residential receptors ranges from 'Slight' to 'Significant' (for a small number of residences in very close proximity). Given the adherence to the 4x tip height set -back distance to protect visual amenity, on balance, effects on residential receptors are mitigated and are therefore not significant. Visual effects within and around residential receptors are mitigated by a number of embedded design measures (see *Appendix 13-5* for more information), and other mitigation measures. These are:

- All Proposed Turbines exceed the minimum 500m set-back distance from residential properties as set out in the WEDG 2006 and also adheres to the recommended best practice 4-times-tip-height set-back distance from residential receptors explicitly set out for residential visual amenity by the Draft WEDG 2019.
- The layout adopts two turbine tip heights. The Proposed Turbines at the outer perimeter of the Proposed Wind Farm, which are closest to surrounding visual receptors, have a tip height of 200m, while those turbines toward the centre rise to 220m. This graduated profile reduces the potential for visual dominance and allows these outer turbines to take greater advantage of existing visual screening within the landscape, such as intervening landform and vegetation.
- Photomontage visualisations of early turbine layouts identified 4 No. turbines in Lodge Bog visually disconnected from the Proposed Wind Farm, which were consequently removed to mitigate discordant and surrounding visual effects arising from turbines for visual receptors, particularly residential receptors and settlements in close proximity to the Proposed Turbines.
- The Proposed Turbines are sited within a flat, low-lying landscape. Due to this very flat landscape characteristic and disproportionate screening effect (See Section 13.3.2 previously), only a very small proportion of the overall Proposed Wind Farm is ever seen and experienced from any low-lying vantage point, including the residential receptors in close proximity.
- The perceived scale (i.e. height and breadth) of the Proposed Turbines generally diminishes with increasing distance owing to the flat, planar nature of the Proposed Wind Farm and surrounding landscape. This variation in perceived scale creates a perception of the more distant Proposed Turbines progressively smaller relative to the landscape as they recede into the distance.

13.8.3.2.5 *Visual Effects Relating to the Proposed Grid Connection*

Due to the nature and location of the Proposed Grid Connection, visual effects arising from this specific infrastructure will be very localised. Assessments determined that the greatest impact arising from the Proposed Grid Connection will occur for residential receptors in the townland of Allenwood South, Killybegs, as well as visual receptors at Lodge Bog Nature Reserve and along the designated KCDP Scenic Route 34. Focused discussion is provided below with respect to the specific features of the Grid Connection which have greatest visual exposure, including the Proposed Onsite Substation and the Proposed Offsite Substation, as well as the connection to the overhead line.

Proposed Onsite Substation and Proposed Offsite Substation

The Proposed Onsite Substation and the Proposed Offsite Substation and their compounds are one of the larger and more visually prominent elements of the non-turbine infrastructure of the Proposed Project. As discussed in Section 13.4.2.1.2 previously, the Proposed Onsite Substation is sited within Lodge Bog, to the south-east of the Proposed Wind Farm, whilst the Proposed Offsite Substation is sited within agricultural fields currently used as for grazing pasture, located immediately south of the settlement of Prosperous, set-back from the Proposed Wind Farm.

Proposed Onsite Substation

Photomontage Viewpoint VP21 is representative of visual receptors at 'Lodge Bog Nature Reserve' in a recreational capacity. As detailed in *Appendix 13-3*, the Proposed Onsite Substation and towers are visible in the centre background of the view, beyond the tract of shrub vegetation within the peatland, set-back from the viewpoint, and occupy a relatively small portion of the overall open and expansive view. The Proposed Substation is situated within cutover peatlands at a lower elevation than receptors using the boardwalk at this viewpoint. Consequently, the intervening landform and vegetation provides visual screening of the lower components of the Proposed Onsite Substation compound. Overall, the Proposed Onsite Substation is seen occupying a relatively small portion of an open expansive view. VP21 has a residual visual effect of 'Slight'.

Photomontage Viewpoint VP22 captured at Allenwood South is representative of residential receptors in close proximity to the Proposed Onsite Substation. As detailed in *Appendix 13-3*, the Proposed Onsite Substation and ancillary infrastructure is clearly seen in combination with the Proposed Turbines. VP22 has a residual visual effect of 'Moderate'. As detailed in *Appendix 13-3*, the location of this viewpoint was selected to represent open views available of the Proposed Onsite Substation, where in reality there will be no residential receptors in proximity with such open visibility of the Proposed Onsite Substation due to mature boundary vegetation. Many residential properties in this area have mature boundary vegetation surrounding their properties, further reducing visibility of the Proposed Onsite Substation (and the Proposed Turbines). Users of the nearby designated Scenic Route 34 (230m north of VP21 and 250m north of VP22) will have momentary views through roadside screening.

Furthermore, as detailed in Section 13.1.4, the design of the Proposed Onsite Substation incorporates cladding and colour treatment for the Proposed Onsite Substation, comprising a graduated palette of horizontal bands with darker, muted earth tones at the base transitioning to lighter tones above, finished in non-reflective matte materials to reduce glare. This treatment is intended to break up the perceived massing of the GIS substation buildings and assimilate it with the receiving landscape. Overall, the view is of a vast planar extent of peatland, where the open and expansive, flat nature of the peatland has the capability to effectively absorb and accommodate the scale of the Proposed Project. Any visual effects are likely to be highly localised, 'Long-term', 'Negative', ranging from 'Slight' to 'Moderate'. On balance, these effects are not considered significant.

Proposed Offsite Substation

Photomontage Viewpoint VP23 and VP24 are representative of residential receptors in close proximity to the Proposed Offsite Substation. VP23 and VP24 show that the Proposed Offsite Substation is sited in a location enclosed by vegetation, reducing visibility from receptors in the surrounding landscape. The nearest residential receptor is located approximately. 300m from the Proposed Offsite Substation location. Many residential properties in this area have mature boundary vegetation surrounding their properties, further reducing visibility of the Proposed Offsite Substation. The Proposed Offsite Substation is located in an agricultural landscape. LVIA mitigation includes horizontal banding to the exterior cladding to break up the perceived massing of the building. The Offsite substation uses a colour palette graduating from dark green at the base to light grey tones above to align and assimilate with its agricultural landscape context. Users of the L6002 Local Road will have momentary views through roadside screening; these receptors are deemed to be Low sensitivity. Any visual effects are likely to be highly localised, 'Long-term', 'Negative' and will be 'Slight'. On balance, these effects are not considered significant.

Connection to the Existing Overhead Line

The overhead line is to be connected to 2 no. steel masts, which will be constructed at the Proposed Offsite Substation, and will connect to existing Maynooth-Dunstown 220kV OHL in the townland of Killybegs, Co. Kildare, as discussed in Section 13.4.2.1.2 previously. VP24 was captured to show how this proposed infrastructure is accommodated within the landscape, and to inform the assessment of visual effects of these electricity towers in combination with the Proposed Offsite Substation. This viewpoint is fully assessed in *Appendix 13-3*. Due to the flat, heavily vegetated landscape that makes up much of the LVIA Study Area, visibility of these towers will be very localised, with greatest visual

effects experienced by nearby residential receptors in the townland of Killybegs and a small section of the local road network. VP24 has a residual visual effect of 'Slight'. Any visual effects are likely to be highly localised, 'Long-term', 'Negative' and will be 'Slight'. On balance, these effects are not considered significant.

13.8.3.2.6 Discussion of Cumulative Visual Effects

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

> *"At every stage in the process the focus should be on the key cumulative effects which are likely to influence decision making, rather than an assessment of every potential cumulative effect."*
>
> *"The level of information generated can distract attention from the most significant cumulative effects which are likely to influence the consenting decision. Assessments should therefore focus on the most significant cumulative effects and conclude with a clear assessment of those which are likely to influence decision making."*

Following this guidance, a primary focus is given to the cumulative effects likely to occur and likely to be experienced by visual receptors as a result of other wind turbines identified in the LVIA Study Area. Cumulative visual effects were assessed as part of all Photomontage Assessment Tables found in *Appendix 13-3*. Whether a visual effect is deemed to be positive, negative, or neutral, this involves a degree of subjectivity.

There are several other existing, permitted, and proposed wind farms within 20km from the Proposed Turbines as identified previously in Section 13.7 Cumulative Context. These are located:

- Within Ballydermot Bog itself (existing Cushaling Wind Farm)
- To the east in Co. Offaly (proposed Drehid Wind Farm)
- To the north-east (existing Mountlucas Wind Farm, proposed Ballinla Wind Farm, proposed Derrynadarragh Wind Farm, existing Moanvane Wind Farm, existing Cloncreen Wind Farm, and existing Yellow River Wind Farm

A Cumulative ZTV in Section 13.7 that within the LVIA Study Area, there is primarily widespread theoretical visibility of both the Proposed Turbines and cumulative turbines. However, as established throughout this chapter, views beyond 5km of the Proposed Turbines are limited throughout the LVIA Study Area due to the flat landscape and intervening vegetative screening. In this landscape type, photomontages are a superior tool for assessing potential cumulative impacts compared with cumulative comparative ZTV mapping. The discussion of cumulative visual effects in this section uses the following terminology:

- **'In combination'** where the Proposed Turbines will be seen with other turbines from a particular vantage point representing visual receptors.
- **In combination 'simultaneous'** visual effects occur where the Proposed Turbines are seen with other cumulative turbines within the same or similar field of view.
- **In combination 'successional'** visual effects occur where the Proposed Turbines are seen with other turbines from the same viewpoint but in an alternative field of view where the receptor will need to turn to face a different direction to experience cumulative effects.
- **'Sequential'** visual effects occur when the observer has to move to another viewpoint to see different developments (i.e. in a journey scenario)

As shown in the photomontages in Volume 2: Photomontage Booklet, most cumulative effects occur from elevated vantage points within the LVIA Study Area. These cumulative interactions are illustrated in the photomontages, and discussed in *Appendix 13-3*, with a summary provided below:

- **Six Hills (Chair of Kildare) to the south-east of the Proposed Wind Farm** – Visual receptors, including residential receptors and receptors at a recreational capacity at the Six Hills to the south-east of the Proposed Wind Farm, as seen in VP01 (Crosspatrick Hill), and VP12 (Boston Hill), would experience would experience simultaneous in combination cumulative visual effects, as the Proposed Turbines would be visible in combination with the existing Mountlucas, Cloncreen, Cushaling, Yellow River, Moanvane Wind Farms, as well as the Permitted Clonarrow Wind Farm and the proposed Ballinla, Cushina, and Derrynadarragh Wind Farms in a potential future receiving environment. From these viewpoints, the Proposed Turbines do add to the extent of turbines potentially visible from this viewpoint. The large-scale and expansive nature of the view effectively accommodates the addition of these cumulative developments.
- **Croghan Hill to the west of the Proposed Wind Farm –** As seen in VP10, visual receptors at Croghan Hill would experience simultaneous in combination cumulative visual effects, as the Proposed Turbines would be visible in combination with the existing Cushaling and Cloncreen Wind Farms, as well as the proposed Ballina, Derrynadarragh and Drehid Wind Farms in an uncertain future receiving environment. The existing Yellow River and Mountlucas Wind Farms would be seen in the same field of view, although there would be a large visual separation between these turbines and the Proposed Turbines. The Proposed Turbines add to the extent of turbines visible from this viewpoint. The large-scale and expansive nature of the view effectively accommodates the addition of the Proposed Turbines with other existing and permitted and proposed wind energy developments. From this viewpoint, the landscape is capable to effectively absorbing the Proposed Turbines and all other cumulative turbines.
- **Elevated vantage points at the Curragh (including Dún Ailinne) –** As seen in VP08 and VP27, visual receptors at the Curragh and Dún Ailinne would experience simultaneous in combination cumulative visual effects, as the Proposed Turbines would be visible in combination with the existing Cushaling and Cloncreen Wind Farms. The existing Moanvane Wind Farm would be seen in the same field of view, though there is a visual separation between these turbines and the Proposed Turbines. In an uncertain future receiving environment, the Proposed Turbines may be seen in combination with the proposed Drehid, Derrynadarragh and Cushina Wind Farms, though there is a degree of separation between these turbines and the Proposed Turbines. At this distance (approximately. 17km from the Proposed Turbines at VP08 and 19.8km from the Proposed Turbines at VP27), the Proposed Turbines in combination with the cumulative turbines are effectively absorbed within the expansive, large-scale landscape setting.
- **Localised elevated vantage points in close proximity to the Proposed Wind Farm –** As seen in VP15, visual receptors from localised elevated vantage points will experience simultaneous in combination cumulative visual effects, as the Proposed Turbines would be visible in combination with the existing Cloncreen Wind Farm, where both developments are seen as one collective wind farm. In an uncertain future receiving environment, the Derrynadarragh Wind Farm will be seen within the same field of view as the Proposed Turbines. The Proposed Turbines add to the extent of turbines visible from this viewpoint. From this viewpoint, the large-scale, expansive landscape is capable to effectively absorbing the Proposed Turbines and all other cumulative turbines.

Apart from cumulative visual effects that will occur from elevated vantage points, cumulative visual effects may also occur in a journey scenario through the wider Midlands landscape of Kildare and Offaly, where a visual receptor driving around will experience sequential cumulative visual effects of

both the Proposed Turbines and other cumulative wind farms. Sequential cumulative visual effects may also occur with other developments within the wider landscape.

Instances may also arise in other locations within the LVIA Study Area where the Proposed Turbines will be perceived in an opposing field of view to existing wind energy developments, resulting in combination successional cumulative visual effects. As discussed in *Appendix 13-3* for VP05, visual receptors, including nearby residences and local road users, may experience the Proposed Turbines in combination with the existing Cushaling Wind Farm when looking east, with the existing Cloncreen Wind Farm visible in the opposing direction to the west. In each direction, views of the wind farms in either direction will inherently be intermittent due to the dense roadside vegetation that is characteristic of this very flat landscape. As illustrated by VP05, only a limited number of the 46 Proposed Turbines are clearly visible at any one location. This demonstrates how turbine visibility diminishes with distance and highlights the disproportionate screening effect of above-ground landscape features within this very flat landscape (see Section 13.3.1.2 previously). Overall, while a small number of receptors may experience turbines in opposing directions, giving rise to in combination successional visual effects, it does not cause any unacceptable surrounding effects.

Further detail on the cumulative visual effects from each photomontage viewpoint is detailed in *Appendix 13-3*. In a general sense, the landscape in which the Proposed Turbines are located in, and the entire LVIA Study Area 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, eliminating cumulative visual effects from many receptors.

13.8.4 Decommissioning Phase Effects

The landscape and visual effects during the Decommissioning Phase are anticipated to be of a similar nature as those occurring during the construction phase. The important element of decommissioning from 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 Proposed Wind Farm, the wind turbines will be disassembled in reverse order to how they were erected. The Proposed Turbines will be disassembled with a similar model of crane that was used for their erection. The turbine components will likely be removed from the Proposed Wind Farm using either the same transport methodology adopted for delivery to the Project Site initially or in smaller sections and transported by standard methodologies.

Turbine foundations will remain in place underground and will be covered with earth and reseeded as appropriate. This naturalisation process will revert the landscape of the Proposed Project to a condition similar to the current landscape baseline. Removal of the turbines and ancillary infrastructure from the Proposed Project will result in a 'Short-term', 'Slight', 'Negative' visual effect. On balance, these effects are not considered significant.

Internal site roads could be in use for purposes other than the operation of the Proposed Project by the time the decommissioning of the Proposed Wind Farm is to be considered, and therefore it may be more appropriate to leave the site access roads in situ for future use. It is envisaged that the roads will be widely utilised for amenity purposes by the local community and as part of the MTN.

The Proposed Grid Connection, Proposed Onsite Substation and Proposed Offsite Substation will remain in place as it will be under the ownership and control of the ESB Networks and/or EirGrid and will form a permanent part of the national electricity grid.

13.9 Summary

This Chapter assesses the likely significant landscape and visual impacts arising as a result of the Proposed Project. Although all elements of the Proposed Project are assessed, the Chapter focusses

upon the Proposed Turbines, as they are deemed to be the primary essential aspects of the proposal under assessment from a landscape and visual perspective. The Chapter also assesses the Proposed Onsite Substation and the Proposed Offsite Substation which form part of the Proposed Grid Connection. The Chapter describes the baseline landscape and assesses the direct effects on the landscape of the Proposed Wind Farm, as well as effects on landscape character and the impact on sensitive landscape receptors (Areas of High Amenity) and Landscape Character Areas (LCAs). Visibility of the Proposed Turbines was assessed from receptors within a study area extending 20km from the Proposed Turbines; and visual effects were determined from information gathered during multiple site visits as well as other tools such as ZTV mapping, photomontages and photowires.

The Proposed Wind Farm is predominantly located within a large-scale, flat landscape of former industrial peatlands which has undergone a substantial degree of human modification due to historic peat extraction, drainage and forestry. There is little to no recreational value to the Proposed Wind Farm itself, and the landscape comprises predominantly degraded cutover peatland which has an industrial character and limited scenic or aesthetic quality. The Proposed Wind Farm is located within KCDP LCA 04 - Bog of Allen and the Offaly LCA, in an area designated as 'Open for Consideration' to wind energy development in both the KCDP and the OCDP. The Proposed Wind Farm is not located within any of the highly sensitive landscape designations identified in the wider landscape, although a small portion of an 'Other Eskers' esker designated as an Area of High Amenity in the OCDP extends into the north-western extent of the Project Site. Assessment of effects on sensitive landscape receptors in the surrounding landscape, including the Grand Canal, the Curragh and Environs, Croghan Hill, the Chair of Kildare, Lodge Bog Nature Reserve, the Lullymore East Ecclesiastic Site, the Peatland & Nature Corridor and Dún Ailinne was a key focus of this LVIA.

A key consideration in the design of the Proposed Project was the avoidance and reduction of potential landscape and visual effects through embedded LVIA design mitigation. The Proposed Project has undergone an extensive iterative design process, informed by LVIA surveys, ZTV mapping and photomontage visualisations undertaken since 2020. Key embedded LVIA design measures include the omission of turbines from previous layout iterations to reduce landscape and visual effects; the removal of turbines from Lodge Bog which were identified as visually disconnected from the rest of the Proposed Turbines; the adoption of two turbine tip heights, with lower 200m turbines located around the outer perimeter, and 220m turbines located towards the centre; the siting and spacing of the Proposed Turbines to create a visually coherent arrangement in accordance with the guidance for Flat Peatland landscapes in both the 2006 WEDGs and the draft WEDG 2019; adherence to the recommended four-times-tip-height setback from residential receptors; and the appropriate setback of the Proposed Turbines from the Grand Canal. These measures have been embedded within the final design of the Proposed Project to mitigate potential landscape and visual effects on sensitive receptors within the surrounding landscape.

On-site visibility appraisals, ZTV mapping, a Route Screening Analysis and photomontage viewpoint locations determined that visibility of the Proposed Turbines will be very limited from locations beyond 5 km from the Proposed Wind Farm. Siting of the Proposed Turbines at low base elevation in an extensively flat landscape with highly vegetated agricultural fields surrounding the Proposed Wind Farm largely restricts visual exposure in the wider landscape. Visibility of the Proposed Turbines beyond the immediate landscape setting of the Proposed Wind Farm 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. In terms of location, spatial extent, spacing and layout, the siting and design of the Proposed Project adheres to the guidance for the siting of wind farms in Flat Peatland Landscapes as set out in the WEDG 2006 and Draft WEDG 2019.

The overall landscape value of the Proposed Wind Farm and Proposed Onsite Substation is deemed to be 'Low/Medium', with an overall 'Low' sensitivity to wind energy development. In relation to the Proposed Offsite Substation, the landscape value is deemed 'Low', with an overall 'Low' landscape sensitivity. As discussed in Section 13.8.3.1.1, residual effects upon the landscape of the Project Site itself are deemed to be 'Long-term', 'Negative' and 'Moderate'. On balance, these effects are not

considered significant. These direct landscape effects will be localised to the footprint of the Proposed Project.

The Proposed Wind Farm itself is located within KCDP LCA 04 – Bog of Allen and the Offaly LCA. The greatest residual landscape effects occur within these LCAs, where the Proposed Project will have a 'Long-term', 'Negative', 'Moderate' residual effect on these landscape receptors. On balance, these effects are not considered significant. The Proposed Wind Farm will not materially alter any of the other LCAs in the LCA Study Area and therefore the Proposed Wind Farm will give rise to 'Long-term', 'Negative', 'Not Significant' or 'Slight' residual landscape effects on the landscape character of these other LCAs. The Proposed Offsite Substation and part of the Proposed Grid Connection are located within KCDP LCA 03 – River Liffey Valley and Plains, where residual landscape effects are deemed to be 'Long-term', 'Negative' and 'Slight'. On balance, these effects are not considered significant.

No significant landscape effects were deemed to arise on the sensitive landscape receptors assessed within the LVIA Study Area. The Proposed Project will not materially alter the physical fabric of the Grand Canal, Royal Canal Corridor, the Curragh and Environs, Croghan Hill, the Chair of Kildare/Six Hills, Lodge Bog Nature Reserve, the Lullymore East Ecclesiastic Site, the Peatland & Nature Corridor or Dún Ailinne. Residual landscape effects on the character of these receptors range from 'Not Significant' to 'Moderate'. On balance, these effects are not considered significant.

The likely future receiving environment has also been considered as part of this LVIA. Industrial peat extraction ceased across the part of the Project Site located within the Allen Bog Group in 2020 and natural revegetation, ongoing site management, decommissioning and environmental monitoring will continue irrespective of whether the Proposed Project proceeds. The likely future receiving environment at commencement of the construction phase will therefore remain materially comparable to the existing baseline environment with respect to landscape and visual receptors. The implementation of the Draft Rehabilitation Plans will progressive towards a wetter, more vegetated peatland landscape. These future environmental trends have been considered in the assessment of landscape effects arising from the Proposed Project.

The assessment of visual effects was primarily informed by Photomontage Visualisations, a Route Screening Analysis, and observations recorded during site visits. Photomontages were used to assess the visual effects arising as a result of the Proposed Project from 27 no. viewpoint locations within the LVIA Study Area. The assessment concluded that no 'Profound' or 'Very Significant' effects occurred at any of the photomontage viewpoints. Residual effects of 'Significant' occurred at 4 no. viewpoint locations: VP01 (Crosspatrick Hill) and VP12 (Boston Hill), representing elevated hilltop views at the Chair of Kildare / Six Hills, and VP05 (Ballydermot) and VP15 (Edenderry), representing nearby residential receptors and an elevated vantage point within Edenderry. All other viewpoints were assessed as 'Moderate' (8), 'Slight' (12) and 'Not Significant' (3). These residual significant effects therefore occur for a small number of receptors within small geographic areas and are not representative of effects experienced across the wider LVIA Study Area, where visibility and the resulting magnitude of change generally diminish with distance or are reduced by intervening landform, vegetation, forestry and built form.

Residential receptors were identified as some of the most sensitive receptors with the greatest potential to be impacted by the Proposed Turbines and were a key consideration throughout the iterative design process. All Proposed Turbines exceed the minimum 500m setback distance from residential properties as set out in the WEDG 2006 and adhere to the recommended four-times-tip-height setback distance from third-party receptors for residential visual amenity prescribed by the Draft WEDG 2019. Within the LVIA Study Area, the visual impact on residential receptors ranges from 'Slight' to 'Significant' for a small number of residences in close proximity (VP05 and VP15). The flat, low-lying nature of the receiving landscape and the prevalence of mature boundary vegetation around residential properties substantially restrict visibility from many residential receptors. Visual effects are further mitigated

through the strategic siting of the Proposed Turbines, the adoption of two turbine tip heights with lower turbines around the outer perimeter of the Proposed Wind Farm and the removal of turbines from Lodge Bog during the iterative design process.

The Proposed Onsite Substation and Proposed Offsite Substation, which form part of the Proposed Grid Connection, will give rise to highly localised visual effects ranging from 'Slight' to 'Moderate'. On balance, these effects are not considered significant.

Cumulative landscape and visual effects have greatest potential to arise with other existing, permitted and proposed wind energy developments. The Proposed Turbines will increase the extent and scale of wind energy development within the peatland landscape, with the greatest cumulative landscape effects occurring within KCDP LCA 04 - Bog of Allen. Cumulative visual effects are mostly limited to elevated vantage points, where the large-scale, flat and expansive receiving landscape has the capacity to accommodate the Proposed Wind Farm as well as other wind energy developments. Cumulative landscape effects with the proposed Eastern and Midlands Region Water Supply Project will be localised to where it transects the Project Site, and cumulative visual effects are not likely to occur.

In conclusion, this LVIA determined that the Proposed Wind Farm is located within a landscape that can effectively accommodate a wind energy development of this scale, given the large-scale and expansive nature of the receiving environment and the mitigation measures embedded within the design of the Proposed Project. Four 'Significant' residual visual effects occur at specific viewpoint locations where the Proposed Turbines result in a greater magnitude of visual change as a result of proximity, elevation and/or open visibility. These effects are localised and are not representative of effects throughout the wider LVIA Study Area. The assessments have determined that the landscape of the Proposed Wind Farm site is capable of effectively accommodating the Proposed Project.