Environmental Impact Assessment Report (EIAR)

Proposed Slievegrine Renewable Energy Development, Co. Waterford

Chapter 13 – Landscape and Visual

Glossary of Terms used in Landscape and Visual Chapter

Terminology	Definition
Guidelines (DoEHLG, 2006)	'Wind Energy Development Guidelines for Planning Authorities' published by Department of the Environment, Heritage, and Local Government (DoEHLG), 2006. Refers to the currently published guidance for use by planning authorities and developers which addresses aspects relating to siting and design of wind energy developments including landscape characterisation, visual aesthetics, and minimum general setback distances.
Draft Guidelines (DoHPLG, 2019)	'Draft Revised Wind Energy Development Guidelines' published by Department of Housing, Planning and Local Government (DoHPLG), 2019. Refers to the draft document of the updated Guidelines (DoEHLG, 2006), yet to be adopted and does not have statutory status. However, they are frequently considered by applicants and practitioners as emerging guidance and are referenced in this assessment for contextual purposes, particularly in relation setback distance for residential visual amenity based on tip-height of turbines.
Landscape Character Area (LCA)	Units of the landscape designated in local policy that are geographically specific and have their own character and sense of place, as defined in the local policy. Each LCA has its own distinctive physical character, based on factors such as recognisable patterns of geology, landform, land use, cultural, historical and ecological features.
LVIA Study Area	Study area selected for the assessment of landscape and residual visual effects on identified receptors; in this case a study area encompassing 25km radius from the Proposed Turbines.
Photomontage	Visualisation that graphically depicts an accurate model of a proposed development upon a photograph or series of photographs, captured from a specific location termed the 'viewpoint' and presented in the EIAR Volume 2A Photomontage Booklet, or the *Photomontage Booklet*.
Route Screening Analysis	An exercise conducted as part of the onsite visibility appraisal for the LVIA in which transport routes surrounding the Proposed Turbines to a radius of 3-5km are driven and data are recorded in real-time to quantify the degree of roadside visual screening looking in the direction of the Proposed Turbines.
Viewpoint	Specific location in the LVIA Study Area at which imagery has been captured and used in the production of a photowire or verified photomontage for the *Photomontage Booklet*.
Zone of Theoretical Visibility	GIS polygon produced using a digital elevation model, depicting areas of the landscape in which the Proposed Turbines are theoretically visible either to 'Full' or 'Partial' degree, and also indicates areas of the landscape in which the proposed development is not theoretically visible. The ZTV is calculated based on the half-blade tip height of the Proposed Turbines and covers the entire LVIA Study Area and assumes a bare-ground scenario, meaning that above-ground features including vegetation, built structure and topographical undulations less than 10m height which may limit or eliminate actual visibility,

	are not considered. The ZTV is primarily used as a tool to identify areas of no theoretical visibility. The ZTV does not depict actual visibility.

Glossary of Acronyms used in Landscape and Visual Chapter

Acronym	Definition
ACP	An Coimisiún Pleanála
CCDP	Cork County Development Plan
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
GLVIA3	Guidelines for Landscape and Visual Impact Assessment Third Edition
IEMA	Institute of Environmental Management and Assessment
LCA	Landscape Character Area
LCU	Landscape Character Unit
LI	Landscape Institute
LI TGN	Landscape Institute Technical Guidance Note
LVIA	Landscape and Visual Impact Assessment
Tailte Éireann	Ordnance Survey of Ireland
RSA	Route Screening Analysis
UNESCO	United Nations, Educational, Scientific and Cultural Organisation
VP	Viewpoint
WCCDP	Waterford City & 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 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 two volumes and four appendices:

- **EIAR Volume 2A, Photomontage Booklet:** A1-banner photomontage booklet presenting verified photomontage visualisations from 20 no. representative viewpoints showing views of the Proposed Turbines (hereafter, the *Photomontage Booklet*).
- **EIAR Volume 2B, 220kV Substation Visualisation**: A1-banner photomontage booklet presenting verified photomontage visualisation of the Proposed 220kV Loop-in Substation.
- **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).

13.1.1 Statement of Authority

MKO has developed extensive expertise and experience over the last 20 years in the preparation of LVIA of large-scale infrastructure developments for 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 Jack Workman with support from Rachel Smith and reviewed by Michael Watson.

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 of experience managing all aspects of LVIA for a broad range of commercial infrastructure developments. Jack holds a BSc. in Psychology, and an MSc. in Coastal and Marine Environments (Physical Processes, Policy & Practice). Jack is an active participant in the National Landscape Forum, presenting in 2023 and 2024 on the topic of LVIA, he also regularly delivers guest lectures for students on the topic of LVIA at top third level institutions in Ireland including University of Galway, Trinity College Dublin, University College Dublin and University College Cork.

Rachel Smith is a Project Environmental Scientist – LVIA Specialist who has been working with MKO since October 2023, with a University Certificate of Study (NFQ Level 9 Minor Award) in LVIA from the University of Limerick, a specialist postgraduate qualification developed specifically for professionals undertaking LVIA. Rachel is an Earth & Environmental Science consultant with more than 12 years of professional experience in producing and editing technical scientific reports, and collecting, analysing and reporting environmental data for regulatory compliance in both the US and Ireland, including the utilisation of QGIS mapping, organisation of field work, management of

environmental databases and training of environmental science staff. Rachel's primary role at MKO is producing and reviewing the LVIA chapter of EIA reports accompanying planning applications for multi-scale onshore renewable energy and non-energy developments, as well as conducting research and analysis in Irish landscape science and policy. Rachel is an affiliate of Landscape Alliance Ireland assisting with the Landscape Forum in 2025 and 2026 and has presented on topics related to LVIA at Irish universities since 2025. Rachel is a member of the Irish Geological Association as well as ProGeo, the International Association for the Conservation of Geological Heritage. Rachel holds an MSc. in Coastal and Marine Environments (Physical Processes, Policies & Practice) and a BSc. in Geology specialised in Hydrogeology.

Michael Watson is the Environment Division Director in MKO who has over 25 years of 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 2013. 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 2013. 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).

13.1.2 Proposed Project References

A full and detailed description of the Proposed Project can be found in the EIAR Chapter 4: '*Description of the Proposed Project*.' Section 4.1 of Chapter 4 describes the Proposed Project and its component parts, including the works subject of a proposed application for planning permission to ACP.

As detailed in Section 1.1.1 in Chapter 1: '*Introduction to the Proposed Project*', for the purposes of this EIAR, the following references are used in this LVIA: 'Proposed Project', 'Proposed Wind Farm' 'Proposed Grid Connection', 'Proposed Turbines', 'Proposed 110kV Substation', 'Proposed 220kV Loop-in Substation', 'Proposed 110kV Underground Cabling Route', 'Proposed Wind Farm site', 'Proposed Grid Connection site' and 'Site'.

13.1.3 '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) and has regard to the 'Notes and Clarifications on Aspects of GLVIA3: Landscape Institute Technical Guidance Note 2024-01' (hereafter, LI TGN 24-01) published by the LI (2024). The GLVIA3 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 (e.g. proposed meteorological mast, proposed telecommunications relay mast, proposed substations, associated compounds etc.) 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, these elements are given full consideration and assessment throughout this chapter.

13.1.4 Turbine Dimensions Assessed in this Chapter

As detailed in the Chapter 1 of this EIAR, the Proposed Turbines will have the following dimensions:

Table 13-1 Proposed Turbine Dimensions

Turbine ID	Tip Height (m)	Rotor Diameter (m)	Hub Height (m)
T1 - T6, T13 - T21	175	150	100
T7 - T12	185	162	104
T22 & T23	170	150	95

The range of different turbine dimensions shown above are accounted for in the GIS calculations including Zone of Theoretical Visibility (ZTV) mapping (see details in Section 13.3) and are modelled in the photomontages (see imagery in *Photomontage Booklet*). All turbine dimensions shown in Table 13-1 above are considered and assessed in this LVIA.

13.1.5 Mitigation by Best Practice Wind Farm Design

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

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

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

Siting in a Suitable Landscape for Wind Energy Development

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

- **Large-Scale Transitional Working Landscape of Marginal Upland**. The Proposed Wind Farm is strategically sited within an undulating, transitional, working landscape of marginal upland comprising commercial forestry stands and upland agricultural fields bounded by mature woodland and hedgerows, a landscape type deemed to be of relatively low value and of large scale, capable of accommodating wind turbines.
- **Low Sensitivity Landscape.** The Proposed Wind Farm site is a working landscape and does not hold any unique or special landscape qualities of county, regional or national renown and its entirety falls within the area designation of 'Low Sensitivity' landscape in the Waterford City and County Development Plan (WCCDP) 2022-2028.
- **Suitable Landscape Character Type for Wind Energy Development.** The Proposed Wind Farm site is located in the 'Foothills Landscape Type' (WCCDP 2022-2028); foothills are commonly considered one of the most suitable for the development of wind energy in Ireland given their large scale, sparse settlement pattern and typical land use characteristics, such as working landscapes which are less naturalistic and consequently of lower landscape value.
- **Appropriate Wind Energy Development Zoning in Local Planning**: All Proposed Turbines and all other infrastructure of the Proposed Project are sited within Co. Waterford land area zoned as 'Preferred' for wind energy development in the WCCDP 2022-2028 Appendix 7 Renewable Energy Strategy, Appendix 2 'Wind Energy Strategy' map.
- **Sparsely Populated and Well-Set Back**. The Proposed Wind Farm is sited within a large expanse of sparsely populated transitional marginal upland, set back from most landscape and visual receptors in the wider landscape, including main public roads and large population centres.
- **Limited Visual Exposure by Terrain**. The Proposed Turbines are strategically sited in undulating landscape with extensive boundaries of mature hedgerows, treelines and forestry blocks. The wider landscape is heavily vegetated with treelines and hedges, as demonstrated by Route Screening Analysis (see Section 13.3.5), further restricting long-range visibility. As demonstrated throughout this LVIA and by the photomontage visualisations in the *Photomontage Booklet*, visual exposure of the Proposed Turbines is generally limited to certain vantage points within the undulating enclosure of the terrain. This limits the potential for landscape and visual effects from vast areas within the LVIA Study Area (see Section 13.2.2 Scope of the LVIA and Study Areas below) and for many sensitive receptors.

Project Layout, Design and Embedded LVIA Mitigation

Details of the various turbine layout iterations included as part of this design process are included in Section 3.2.5 of the EIAR Chapter 3: *'Consideration of Reasonable Alternatives.'* 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 embedded LVIA mitigation measures arising from early-stage assessment:

- **Best Practice Setback from Residential Receptors**: The Proposed Project exceeds the recommended 500m setback from local residential receptors set out in the Guidelines (DoEHLG, 2006) and adheres to the prescribed 4-times-tip-height (680m-740m) setback distance from third-party properties for residential visual amenity as set out in the Draft Guidelines (DoHPLG, 2019).

- **Removal of Turbine to achieve better Visual Coherence**: The Proposed Project design included the omission of 1 no. turbine from the south of the Proposed Wind Farm site originally located in the townland of Toor South, which appeared visually detached and distinctly different when viewed from receptors to the east in the townland of Glenlicky, thereby improving the overall visual coherence of the design and also reducing the potential for surrounding effects.
- **Minimised Impact on Scenic Route Sensitivities designated in Local Policy**: The Proposed Turbines are strategically sited in locations that do not interfere, obstruct or significantly impact any of the scenic long-ranging landscape views from nearby designated scenic routes, e.g. from SR6 to the west and from SR5 and SR7 to the east (SR5, SR6, SR7 in the WCCDP 2022-2028), thereby helping to preserve the key scenic sensitivities of the area within 5km of the Proposed Turbines.
- **Appropriate Siting and Design for Landscape Character Type in the Guidelines (DoEHLG, 2006) and Draft Guidelines (DoHPLG, 2019)**. The Proposed Turbines are sited on a mix of ridges and hillslopes, arranged in multiple clusters with irregular spacing of turbines and an appropriately staggered, linear layout with a range of turbine heights that follows the highly undulating terrain, and are sufficiently distanced from cumulative developments and enclosed visually by the terrain such that the potential for in-combination visibility with cumulative developments is minimised, thereby aligning with best practice siting and design for wind energy developments in the Transitional Marginal landscape character type.
- **Strategic Siting of Proposed Turbines on Elevated Ridgelines:** In line with best practice siting and design guidance of wind farms in the Guidelines (DoEHLG, 2006) and Draft Guidelines (DoHPLG, 2019), the Proposed Turbines are strategically sited on ridges and peaks within the Transitional Marginal landscape character type to achieve clear visual separation between the moving turbine components and the visual complexity of lower ground.
- **Mitigation for Proposed 110kV Substation**. The Proposed 110kV Substation is strategically sited in a compound at lower elevation relative to the adjacent scenic route and residential receptors and which is set within a block of forestry to reduce to potential for visual effects.
- **Mitigation for Proposed 220kV Loop-in Substation**: The Proposed 220kV Loop-in Substation is located in an agricultural landscape that slopes downwards from the northeast and is naturally bounded by mature trees and hedgerows between fields, an area with very few receptors and thereby minimal potential to give rise to landscape and visual effects, especially when viewed from the northwest. LVIA mitigation includes replanting of hedgerows required to be removed as part of the construction works as well as placement of berms with planting along the northwest perimeter of the proposed compound and bolstering of the existing hedgerow with semi-mature vegetation which will further mature over time, to ensure sufficient screening, proposed as part of the design in conjunction with local community consultation.
- **Pro-active Biodiversity Enhancement Measures**: The Proposed Project includes specific pro-active biodiversity enhancement and management measures and interventions to improve the ecological value of the landscape at the Proposed Wind Farm site, including new hedgerow and native woodland establishment within the Proposed Wind Farm and construction of berms/embankments around the infrastructure to facilitate pollinator habitats which have the dual effect of providing localised visual screening, these measures are detailed in the Biodiversity Management and Enhancement Plan in Appendix 6-4 and effects of the Proposed Project on biodiversity and ecology are assessed in the EIAR Chapter 6: '*Biodiversity*.'
- **Proposed 110kV Underground Cabling Route:** The intended connection to the national electricity grid is underground, thereby eliminating potential landscape and visual effects during the operational phase on receptors of the route which includes users of the public roadway.

13.1.6 Pre-Planning Meeting Topics in LVIA

Pre-planning consultation meetings took place with ACP on the 16th of October 2025, 24th of February 2026 and 11th of March 2026. In addition, a consultation with Waterford City and County Council was undertaken on 26th February 2026. A detailed summary of the topics discussed at each of these pre-planning meetings is included in Section 2.6 of Chapter 2 of this EIAR.

A broad introduction to the Proposed Project was provided to ACP during the first meeting, including an overview on the landscape and visual assessment, landscape and policy designations and key protected routes and views which are being considered. The second meeting and the consultation with Waterford City and County Council also mentioned LVIA topics. Finally, a more in-depth discussion pertaining to the LVIA was had at the third ACP meeting on the 11th of March 2026, with the following LVIA topics being raised in relation to the Proposed Project, outlined below in Table 13-2. These topics have been addressed in the LVIA.

Table 13-2 LVIA Topics raised at ACP Pre-Planning Meeting March 2026

Topic Raised	Addressed in Section of LVIA
LVIA chapter must address all relevant landscape policy and designations within the relevant County Development Plan (WCCDP 2022-2028).	Section 13.4.1.
Whilst the Proposed Turbines are the key focus of the LVIA, the visual impacts, receptor sensitivity, potential mitigation measures associated with the substations should be considered and addressed.	Section 13.7.3.4 and Section 13.7.3.4.4.
Identify and address LVIA-related topics raised by residents during the community consultation process.	Section 13.7.3.4.5.
It was noted to ACP that consultation with Waterford City and County Council had been undertaken on 26 February 2026 and, as part of that consultation, scenic routes and views were discussed and are to be assessed within the LVIA chapter.	Section 13.7.3.4.

13.1.7 Consideration of Alternative Turbine Layouts in Early-Stage Pre-Planning

The potential for landscape and visual impacts was considered as part of the early-stage planning and design process. To this end, numerous turbine layouts were considered throughout the differing design phases of the Proposed Project; these are detailed in Section 3.2.5 of Chapter 3 '*Alternative Project Design Options*.' These early-stage assessments enabled the choice of suitably sited turbines for the Proposed Project with regard to mitigating any potential adverse environmental effects, including from a landscape and visual perspective. The current proposal includes fewer turbines (23 no.) than was previously proposed in earlier design iterations; for example, early designs using a 28 no. turbine layout and a 24 no. turbine layout were determined to be less suitable from an overall environmental perspective including the considerations of landscape and visual aspects. The current 23 no. turbine layout and the careful selection of the Proposed Wind Farm site minimises the theoretical potential for visibility and the site visits and assessment tools show that the actual visibility is far less than the theory. Where visibility does occur, the design is in accordance with best practice and a coherent project which neatly assimilates with the receiving landscape is achieved.

13.2 Brief Methodology and Assessment Criteria

This section broadly 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*. 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.
  - Route Screening Analysis.
- Landscape Baseline:
  - Landscape Policy Context: Policies, objectives and designations contained in the relevant county development plans pertaining to landscape and wind energy.
  - Designated Landscape Character Areas: LCAs in the LCA Study Area and preliminary analysis of LCAs scoped in for assessment.
  - Landscape Character of the Proposed Wind Farm site: Landscape character descriptions of the Proposed Wind Farm site based on site surveys undertaken in March 2024, May 2025, and February and March 2026.
  - Landscape Sensitivity of the Proposed Wind Farm site: Assigning an overall 'Sensitivity' rating to the Proposed Wind Farm site and its surrounding area according to its 'Value' and 'Susceptibility to Change' based on the appraisal of multiple indicators.
  - Guidance for Siting and Design: Landscape characterisation of the Proposed Wind Farm site as indicated in wind energy guidance of the Guidelines (DoEHLG, 2006) and Draft Guidelines (DoHPLG, 2019).
  - Wider Landscape Setting: Landscape character and key sensitivities of the wider landscape setting of the LVIA Study Area, including the Copper Coast UNESCO Global Geopark.
  - Landscape Receptors Preliminary Analysis: Indicates the selection and rationale for landscape receptors scoped in for assessment in the LVIA, and receptors scoped out.
- Visual Baseline:
  - Identify visual receptors scoped in for impact assessment.
  - Preliminary analysis of visibility from visual and residential receptors according to ZTV mapping and on-site visibility appraisals.
  - Identification of 21 no. viewpoints (VP01-VP20 and SS01) representing visual receptors throughout the LVIA Study Area, selected for photomontage visualisation in the *Photomontage Booklet*, Volume 2B 220kV Substation Visualisation booklet and the visual impact assessment in the LVIA.
- 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* and *Appendix 13-3*.
  - 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 Guidance

Regarding legislation and general guidance on overall Environmental Impact Assessment, please refer to Chapter 1: '*Introduction to the Proposed Project'* 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* (Section 1.3 'Guidelines').

13.2.2 Scope of the LVIA and Study Areas

The landscape and visual effects of the Proposed Project on the 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, the experience and professional judgement of the assessment team, two study areas are defined for this LVIA:

- 25km LVIA Study Area for the assessment of effects on landscape and visual receptors, hereafter referred to as the '**LVIA Study Area**,'
- 15km LCA Study Area for the assessment of effects on designated LCAs, hereafter referred to as the '**LCA Study Area**.'

Please refer to the detailed rationale of study area selection in *Appendix 13-1*; a brief overview is described here. Considering the LCA Study Area for the assessment of effects on designated LCAs, a 15km radius surrounding the Proposed Turbines was chosen as no significant effects on landscape character are likely to arise beyond a distance of 15km from the Proposed Turbines.

Considering the LVIA Study Area, a radius of 25km surrounding the Proposed Turbines was chosen for landscape and visual effects due to the presence of the nationally renowned Copper Coast UNESCO Global Geopark extending into the LVIA Study Area, with its closest point located approximately 16.2km northeast from the nearest Proposed Turbine, and which is considered a 'Very High' sensitivity landscape/visual receptor. As per the Guidelines (DoEHLG, 2006) (p.95) and the Draft Guidelines (DoHPLG, 2019) Guidelines (p.152), the distance at which the ZTV is set from a proposed wind farm development defines the parameters of the LVIA Study Area with relation to high sensitivity landscapes:

> *'In areas where landscapes of national or international renown are located within 25km of a proposed wind energy development, the Zone of Theoretical Visibility should be extended as far (and in the direction of) that landscape. This reflects the fact that highly sensitive landscapes deserve extra special treatment by developers and planners.'*

On the basis of desk studies and survey work undertaken, as well as the professional judgement of the assessment team, experience from other relevant projects and policy guidance or standards, the following topic areas have been scoped out of the assessment:

- Effects on landscape and visual receptors that have minimal or no theoretical visibility (as highlighted by the ZTV) and/or very distant visibility and are therefore unlikely to be subject to significant effects.
- Effects on designated landscapes beyond a 25km radius from the Proposed Turbines, from where it is judged that potential significant effects on key characteristics and/or special qualities, or views are judged unlikely to occur.
- Effects on designated LCAs beyond a 15km radius from the Proposed Turbines, where it is judged that potential significant effects on landscape character are unlikely to occur.
- Effects on visual receptors beyond a 25km radius from the Proposed Turbines, where it is judged that potential significant effects are unlikely to occur.
- Cumulative landscape and visual effects beyond a 25km radius from the Proposed Turbines, where it is judged that potential significant effects are unlikely to occur.
- Cumulative effects in combination with single turbines with a tip height less than 50m which are located at distances greater than 5km from the Proposed Turbines, where it is deemed no significant cumulative effects are likely to occur in combination with the Proposed Wind Farm.

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. Potential for cumulative effects are also considered and accounted for in these determinations and judgements. Mitigating factors are then taken into consideration to arrive at residual landscape and visual effects. Residual landscape and visual effects are graded upon an 'impact assessment classification of significance' scale, as defined by EPA, 2022. The assessments have been informed by many site visits and are supported by a range of best practice tools for LVIA including ZTV mapping and photomontages. 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 Ireland's renewable energy targets which have been set by the State for onshore renewable wind energy development, wind turbines will form a new component in the working landscape for the foreseeable future. The focus for visual impact assessment of wind energy developments is therefore distance, arrangement, location and potential disruption to key scenic sensitivities rather than a commonly misconceived focus on whether turbines are visible or not from a particular vantage point.

The outcome of the visual impact assessment, with regards to the definition of significance in EPA, 2022, is calibrated in the overall context of LVIA of wind energy developments in Ireland and what is acceptable in the context of emerging baseline trends and the acceptability of wind turbines within views as a result of national policy.

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

- The perceived scale of turbines as a result of setback distance,
- The number of turbines visible,
- The degree of visibility of turbines, e.g. are they fully or partially screened by features,
- The perceived horizontal extent of turbines, e.g. how wide of an extent within the field of view do the turbines occupy in terms of what is experienced by receptors, given their composition within both the 53.5-degree or 90-degree fields of view shown in the *Photomontage Booklet*,
- Overall visual coherency with regards to form and arrangement and how the turbines correspond to the landscape from a particular vantage point as per best practice siting and design guidance.

13.3 Visibility of the Proposed Turbines

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 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 during 2024, 2025 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 Zone of Theoretical Visibility (ZTV) Mapping

Zone of Theoretical Visibility (ZTV) mapping is an important step in the LVIA process, in that it illustrates which areas within the LVIA Study Area have theoretical visibility of the Proposed Turbines and shows definitively which areas have no theoretical visibility.

The ZTV mapping methodology outlined in *Appendix 13-1* was used to examine the theoretical visibility of the 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, which is calculated using the known hub height and rotor diameter of the Proposed Turbines. All dimensions as set out in Table 13-1 above were used to calculate the ZTV and thereby accurately represent the potential for visibility of all Proposed Turbines in a bare-ground scenario.

As noted in *Appendix 13-1*, because the ZTV is calculated assuming a bare-ground scenario not accounting for visual screening by above-ground features including trees, vegetation, or built infrastructure, the potential for actual visibility of the Proposed Turbines on the ground is significantly less than the theoretical visibility predicted by the ZTV mapping. The generation of the ZTV utilises large scale topographical data (interpolation across 10m Tailte Éireann contour data) and does not account for topographical variation of smaller scale (i.e. localised undulations less than 10m in height). Therefore, on the ground, modest and localised undulations in topography that may not be represented in the ZTV map are likely to further inhibit visibility of the Proposed Turbines. Overall, the ZTV is a useful tool to indicate definitive areas with no visibility of the Proposed Turbines, and thus, receptors located within such areas can be scoped out from further assessment.

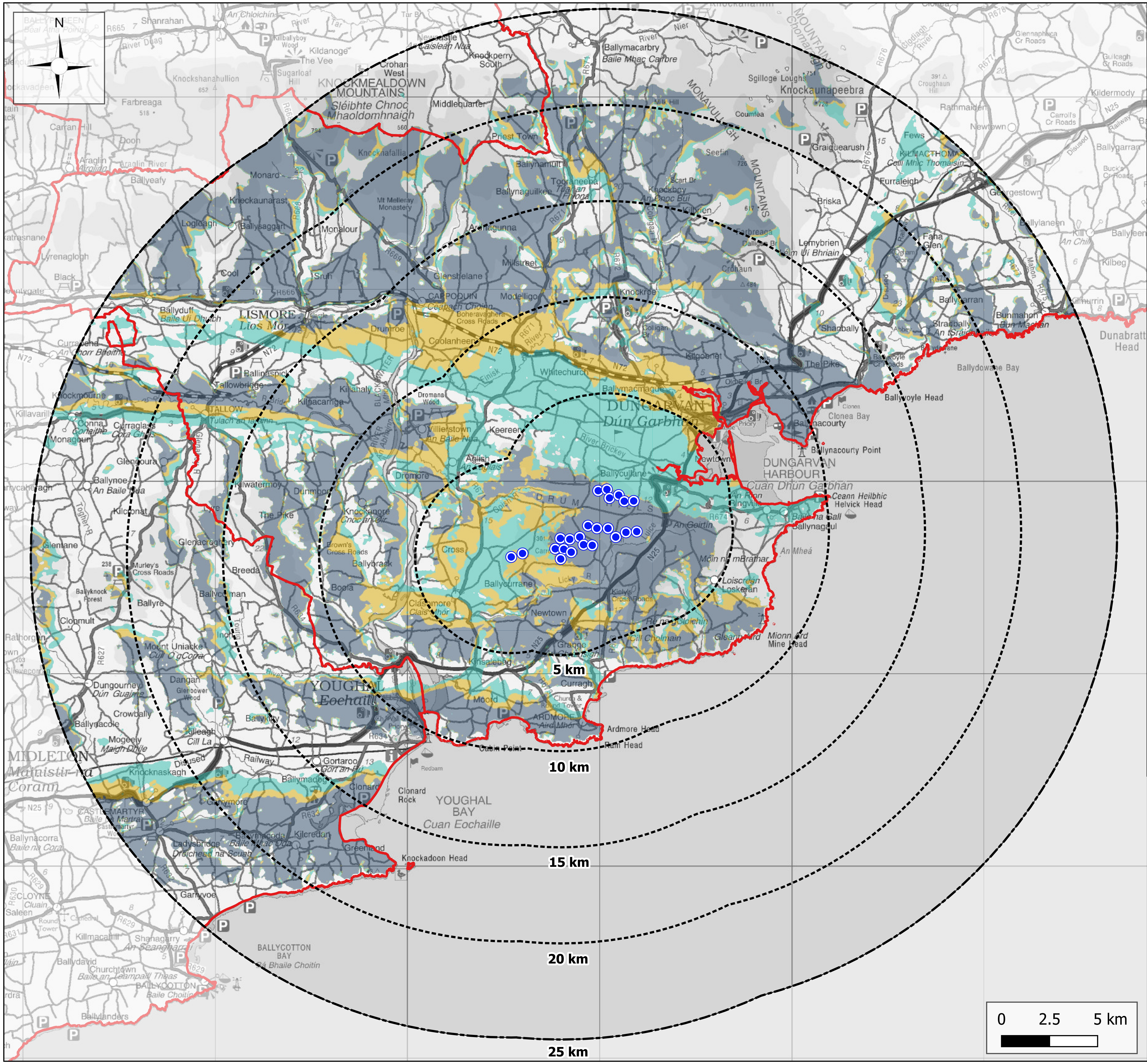
13.3.2 ZTV Map and Physical Landscape Features

Separate colour bands are used on the ZTV Map to indicate the number of Proposed Turbines which will potentially be visible, shown on Figure 13-1 below. The legend on the map shows the number of visible turbines for each corresponding colour, which are as follows:

- **Teal**: 1-8 turbines theoretically visible,
- **Yellow**: 9-16 turbines theoretically visible,
- **Grey**: 17-23 turbines theoretically visible.

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

The physical landscape features of the LVIA Study Area are characterised by a varied landscape that includes coastal, lowland, and upland terrain. The coastal plains of Dungarvan Harbour and Helvick Head are located in the east and the terrain slopes upwards from the coastline to the west. The coastline of Ardmore Head is to the south and the low-lying plains of Youghal Harbour and the east part of Co. Cork form the southwestern part of the LVIA Study Area. The Comeragh Mountains (706m highest elevation) and Knockmealdown Mountains (738m highest elevation) form a rugged terrain across the north of the LVIA Study Area and the Blackwater River Valley dissects the western part of the LVIA Study Area from north to south, with the mouth of the river located at Youghal Bay in the south. Transitional marginal terrain forms the central part of the LVIA Study Area and features localised foothills including Carronadavderg Hill (elevation 295m) and Slievegrine Hill (elevation 218m).



Map Legend

- LVIA Study Area
- Ireland County Boundaries
- Proposed Turbines

Zone of Theoretical Visibility

- 1-8 Turbines Theoretically Visible
- 9-16 Turbines Theoretically Visible
- 17-23 Turbines Theoretically Visible

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Drawing No.

Figure 13-1

Drawing Title

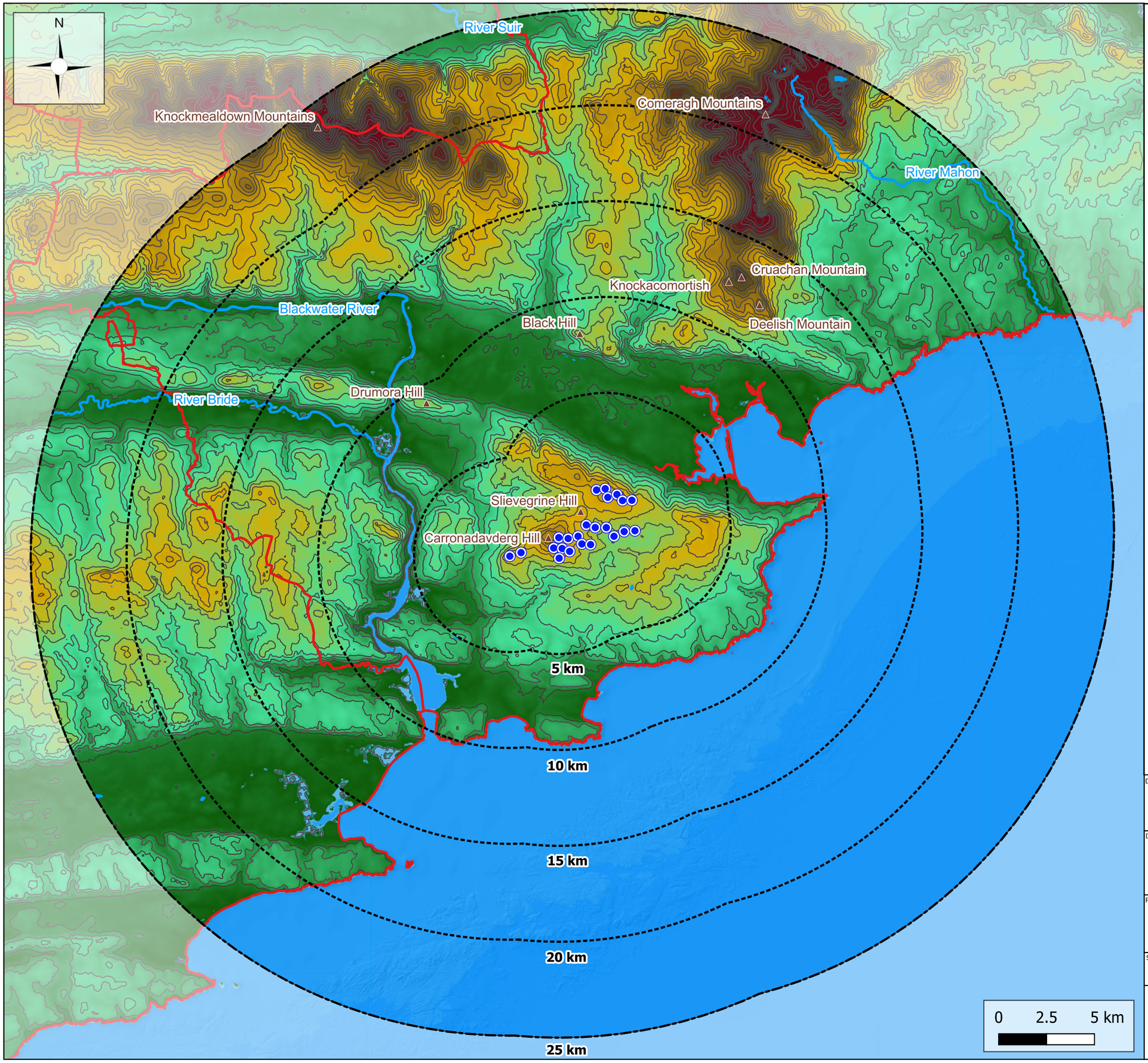
Zone of Theoretical Visibility Map

Project Title

Slievegrine Renewable Energy Development, Co. Waterford

Scale	Project No.	Date	Drawn By	Checked By
1:191,000	240740	2026.09.24	GL	RS

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Map Legend

- LVIA Study Area
- Ireland County Boundaries
- Proposed Turbines
- Topographic Features
- Primary Rivers

Elevation Above Ordnance Datum (m)

- 0
- 100
- 200
- 300
- 400
- 500

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Drawing No.

Figure 13-2

Drawing Title

Physical Landscape Features Map

Project Title

Slievegrine Renewable Energy Development, Co. Waterford

Scale	Project No.	Date	Drawn By	Checked By
1:191,000	240740	2026.09.24	GL	RS

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13.3.3 Theoretical Visibility of the Proposed Turbines

13.3.3.1 Theoretical Visibility in the LVIA Study Area

The geographical spread of theoretical visibility extends across a diverse landscape, encompassing both coastal and inland areas. The highest concentration of theoretical visibility is centred around the Proposed Wind Farm site. Theoretical visibility reduces moving outward from the Proposed Turbines, particularly towards the southeast and coastal areas, such as Youghal Bay and Dungarvan Harbour, where terrain variations and distance contribute to reduced turbine theoretical visibility. The mountainous northern regions of the LVIA Study Area exhibit moderate to high theoretical visibility interspersed with large pockets of 'Little/No' theoretical visibility. The Copper Coast UNESCO Global Geopark, located in the northeastern extent of the study area, falls within a mixed-visibility zone, suggesting that parts of this protected landscape may have intermittent views of the Proposed Turbines, albeit at significant distance. The actual potential for visibility of the Proposed Turbines varies significantly depending on local elevation and screening by vegetation or buildings along the road network within the LVIA Study Area.

13.3.4 Onsite Visibility Appraisal

This LVIA conducted onsite visibility appraisal to investigate areas of theoretical visibility and determine the actual potential for visibility in the direction of the Proposed Turbines versus what is indicated by the ZTV Map. In practice, vast areas of the LVIA Study Area which have an indication of 'Full' theoretical visibility (meaning 17-23 no. turbines theoretically visible) are anticipated to actually have **little to no visibility** of the Proposed Turbines, due to natural above-ground screening factors existent within the landscape.

Field surveys conducted in March 2024, January and March 2025 and July 2026 determined that screening from localised undulations in topography (less than 10m in height), as well as the presence of existing roadside vegetation and built structures, and considering distance, the likelihood of viewing the Proposed Turbines from large areas of the LVIA Study Area is significantly reduced. The onsite visibility appraisal, along with ZTV mapping and photomontage capture is an important tool informing the impact assessments and analysis of visibility in this chapter and included the Route Screening Analysis (RSA) exercise, detailed in the next Section 13.3.5.

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

13.3.5.1 Route Screening Categories

Route Screening Analysis (RSA) was conducted for the Proposed Project in June 2026 and was carried out on local, regional and national roads within a 3km radius of the Proposed Turbines, as well as on the full loop of designated scenic routes surrounding the Proposed Turbines (comprising large portions of SR5, SR6 and SR7) to a distance of 5km. In addition, major transport routes were assessed to 5km from the Proposed Turbines. For the avoidance of doubt in certain areas, selected additional local road networks were also assessed beyond 3km.

RSA was conducted to record the varying degrees of visual screening along the local road network and quantify the actual potential for visibility of the Proposed Turbines within 3-5km, as compared to what is indicated by ZTV mapping. The full methodology is outlined in *Appendix 13-1* (Section 1.5.3 'Onsite 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).



Plate 13-1 Example of 'Little/No' visual screening from within 3km of the Proposed Turbines



Plate 13-2 Example of 'Intermittent/Partial' visual screening from within 3km of the Proposed Turbines



Plate 13-3 Example of 'Dense/Full' visual screening from within 3km of the Proposed Turbines

13.3.5.2 RSA Results

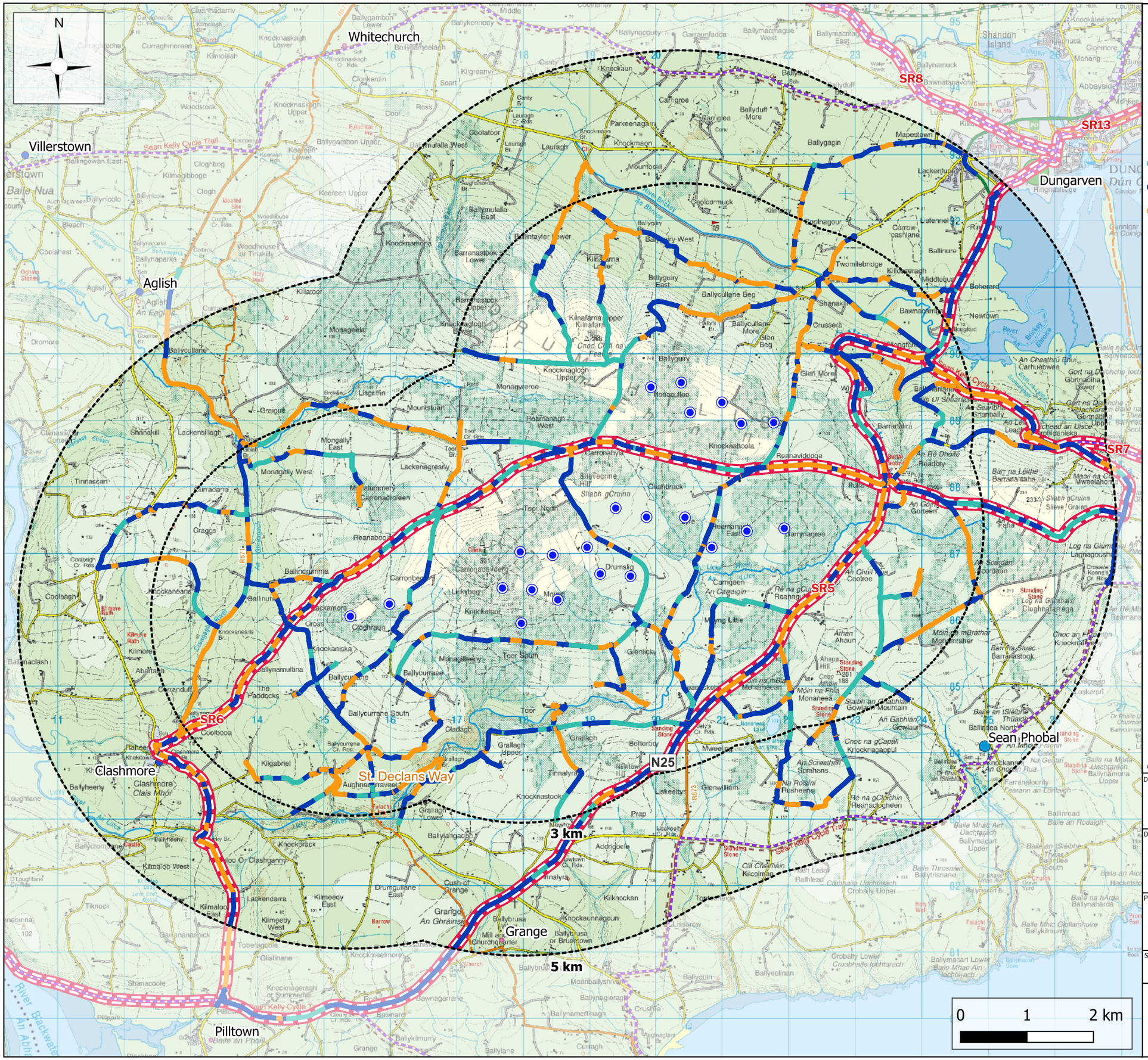
Table 13-3 Route Screening Analysis Results

Screening Class	Length of Road Mapped in Figure 13-3	Percentage Distribution of Screening Class on Surveyed Roads
'Little/None'	33.5km	18.9%
'Intermittent/Partial'	83.8km	47.4%
'Dense/Full'	59.7km	33.8%

For this LVIA, the RSA survey recorded the distribution of visual screening on a total of 177.0km of public roads. The results of the RSA survey are mapped in Figure 13-4; illustrating the distribution of screening classifications on all roads surveyed.

The RSA results report the extent and density of visual screening present along the local road network in the immediate vicinity of the Proposed Turbines. This allows the actual likely visibility of the Proposed Turbines to be considered and assessed in an objective and quantitative manner, thereby reducing the level of subjectivity involved in determining the actual potential for the Proposed Turbines to be viewed from within the local landscape immediately around the Proposed Wind Farm site.

Table 13-3 above shows the RSA results of the survey, indicating that more than 80% of the surveyed roads have some form of visual screening in the direction of the Proposed Turbines, either Intermittent/Partial or Dense/Full. The RSA results were also utilised to investigate the potential visual effects on local residential receptors within 3km of the Proposed Turbines; refer to Section 13.7.3.4.5 'Visual Effects on Local Residential Receptors.'



Map Legend

- 3km and 5km Buffers
- Proposed Turbines
- Designated Scenic Routes (WCCDP 2022-2028)

Route Screening Analysis (RSA)

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

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Drawing No.

Figure 13-3

Drawing Title

Route Screening Analysis Map

Project Title

Slievegrine Renewable Energy Development, Co. Waterford

Scale	Project No.	Date	Drawn By	Checked By
1:55,000	240740	2026.09.24	GL	RS

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13.4 Landscape Baseline

This section of the LVIA establishes the baseline landscape condition of the Proposed Wind Farm 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 Proposed Wind Farm 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 Proposed Wind Farm site. The Landscape Baseline is divided into seven parts as previously described in Section 13.2:

- Section 13.4.1 Landscape Policy Context,
- Section 13.4.2 Designated LCAs,
- Section 13.4.3 Landscape Character of the Proposed Wind Farm site,
- Section 13.4.4 Landscape Sensitivity of the Proposed Wind Farm site,
- Section 13.4.5 Guidance for siting and Design in the Guidelines (DoEHLG, 2006) and Draft Guidelines (DoHPLG, 2019),
- Section 13.4.6 Wider Landscape Setting, including landscape character and the Copper Coast UNESCO Global Geopark,
- Section 13.4.7 Landscape Receptors Preliminary Analysis.

13.4.1 Landscape Policy Context

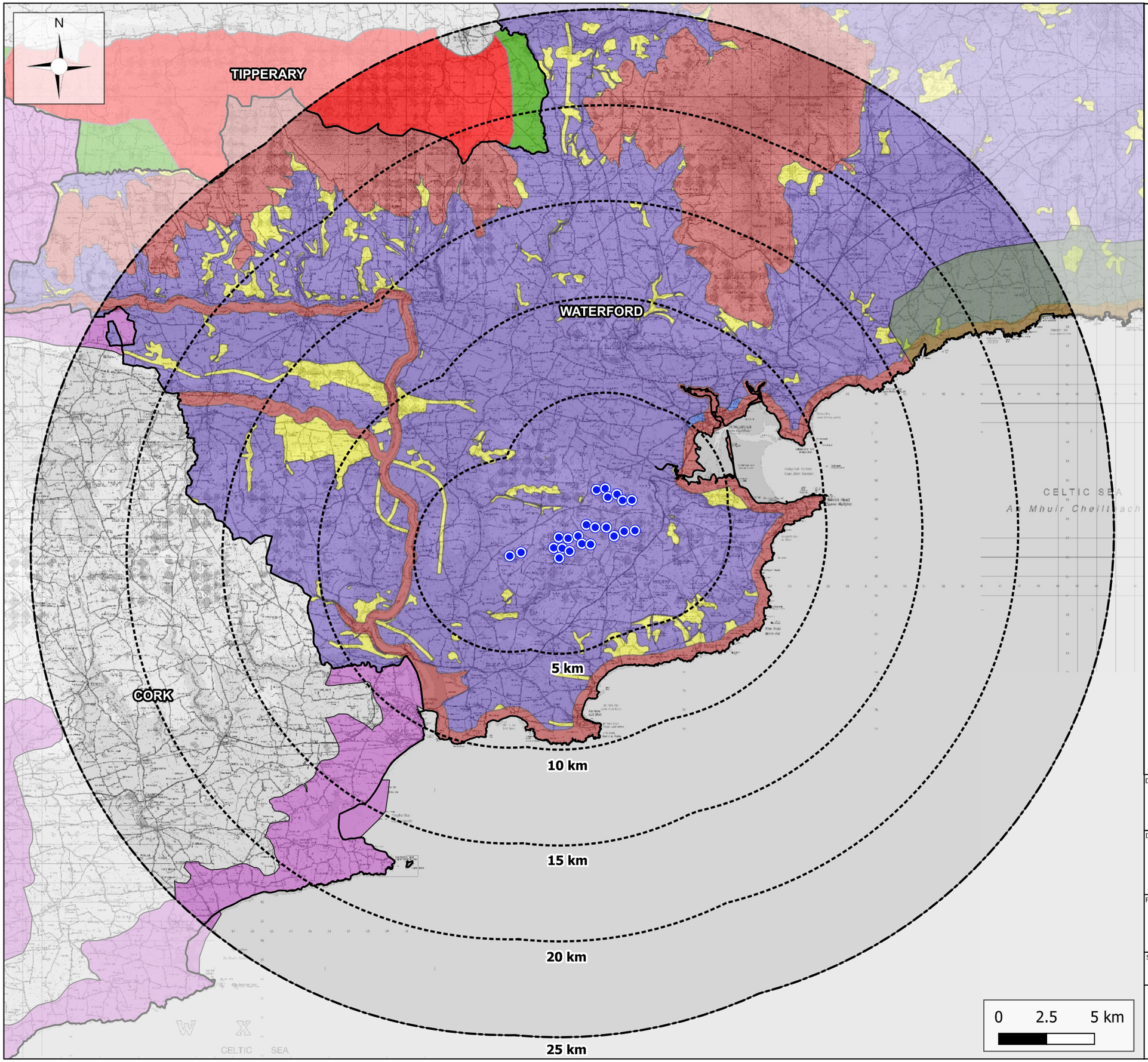
Figure 13-4 below maps all identified landscape policy designations for the LVIA Study Area and this section details the relevant reported local policies and planning objectives. Wind energy zoning is mapped separately in Section 13.4.1.5 below and LCAs are mapped separately in the next Section 13.4.2.

The following county development plans and their relevant appendices were consulted for this LVIA; see the detailed list of relevant maps, figures and appendices in *Appendix 13-1* Section 1.7.1 'Identifying Landscape Receptors':

- Waterford City & County Development Plan 2022-2028 (WCCDP).
- Cork County Development Plan 2022-2028 (CCDP).
- Tipperary County Development Plan 2022-2028 (TCDP).

The sections to follow, Section 13.4.1.1 through Section 13.4.1.8, are divided into the type of policy designations identified in the county development plans within the LVIA Study Area and provide the relevant planning objectives to consider from a landscape and visual perspective and with regard to wind energy development, for the Proposed Project:

- Landscape Policies of Chapter 10, WCCDP 2022-2028,
- Landscape Character Type and Unit,
- Landscape Capacity and Sensitivity Designations,
- Designated Scenic Routes & Protected Views,
- Wind Energy Zoning,
- High Value Landscapes (CCDP),
- Primary and Secondary Amenity Areas (TCDP).



Map Legend

- LVIA Study Area
- Ireland County Boundaries
- Proposed Turbines
- Copper Coast UNESCO Global Geopark

Landscape Designations (WCCDP 2022-2028)

- Most Sensitive
- High Sensitivity
- Low Sensitivity
- Least Sensitive

Landscape Designations (TCDP 2022-2028)

- Primary Amenity Area
- Secondary Amenity Area

Landscape Designations (CCDP 2022-2028)

- High Value Landscapes

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Drawing No.

Figure 13-4

Drawing Title

Landscape Policy Context Map

Project Title

Slievegrine Renewable Energy Development, Co. Waterford

Scale	Project No.	Date	Drawn By	Checked By
1:191,000	240740	2026.09.24	GL	RS

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13.4.1.1 Chapter 10 of the WCCDP 2022-2028

The Proposed Project is located in County Waterford, therefore the landscape and visual policies reported in Chapter 10 'Landscape and Seascape' of the WCCDP 2022-2028 are of primary reference in this LVIA. Chapter 10 Includes the following Landscape policies (Policy L04 relating to protected scenic routes and views is reported later in Section 13.4.1.6):

> ***L01 National Landscape Strategy****: We will support provisions of the 2014 National Landscape Strategy and provide for the sustainable management of all of County Waterford's landscapes including archaeological landscapes, waterway corridors, coastal, upland, rural and peri-urban landscapes.*
>
> ***L02 Protecting our Landscape and Seascape****: We will protect the landscape and natural assets of the County by ensuring that proposed developments do not detrimentally impact on the character, integrity, distinctiveness or scenic value of their area and ensuring that such proposals are not unduly visually obtrusive in the landscape, in particular, in or adjacent to the uplands, along river corridors, coastal or other distinctive landscape character units.*
>
> ***L03 Landscape and Seascape Character Assessment****: We will assess all proposals for development outside of our settlements in terms of the 2020 Landscape and Seascape Character Assessment (Appendix 8) and the associated sensitivity of the particular location. We will require a Landscape and Visual Impact Assessment (LVIA) for proposed developments with the potential to impact on significant landscape features within the City and County. Proposals for significant development (e.g. renewable energy projects, telecommunications and other infrastructure and the extractive industry) shall be accompanied by a LVIA which includes Zones of Theoretical Visibility (ZTV) which indicate the landscape impact zone within which the proposed development may be seen. There will be a presumption against developments which are located on elevated and exposed sites and where the landscape cannot accommodate such development with reasonable and appropriate mitigation.*

As per the policy cited above, this LVIA assesses the Proposed Project with regard to the 2020 Waterford Landscape Character Assessment which forms 'Appendix 8 Landscape and Seascape Character Assessment, Scenic Routes and Protected Views' of the WCCDP – hereafter 'Appendix 8'.

13.4.1.2 Landscape Character Type and Landscape Character Unit

The classification of landscape character type for Co. Waterford is given in Section 2 of Appendix 8, where all of Co. Waterford is first categorised into seven broad landscape character types, and Map A8.1 shows the Proposed Wind Farm site is located in the 'Foothills Landscape Type'.

As per Appendix 8, 'Table A8.1 Landscape Character Units' and 'Map A8.2 Landscape Character Units,' the Proposed Wind Farm site is located in the LCU-5E Drumhills unit, which is part of the 'Foothills Landscape Type.' Landscape types such as foothills are commonly considered one of the most suitable for the development of wind energy in Ireland given their large scale, sparse settlement pattern and typical land use characteristics. Like the Proposed Wind Farm site, foothills are typically working landscapes, less naturalistic and consequently of lower landscape value and sensitivity, particularly compared with other landscape types such as the Comeragh Mountains defined as 'Upland Landscape' to the north of the LVIA Study Area.

Landscape Types are then subdivided into Landscape Character Units (LCUs), which are distinct areas of the landscape of a particular landscape type the equivalent of a Landscape Character Area (LCA) in other landscape designations across Ireland. As per Appendix 8, 'Table A8.1 Landscape Character Units' and 'Map A8.2 Landscape Character Units,' the Proposed Wind Farm site is located in the LCU-

5E Drumhills unit. The specific characteristics and related policies of the LCU-5E Drumhills unit are reported below in Section 13.4.2 'Designated Landscape Character Areas (LCAs).'

13.4.1.3 Landscape Capacity to Absorb Development

Appendix 8, 'Section 3.1 Capacity to Absorb Development' classifies areas within Waterford according to their capacity to '*absorb development without changing the distinctiveness and character of that particular landscape type*.' The factors considered to determine a landscape type's capacity to absorb development are:

- '*(1) Topography - development in elevated areas will usually be visible over a wide area; development in enclosed areas will not.*
- *(2) Vegetation - areas which support (or which have the potential to support) trees, tall hedges and woody vegetation can screen new development from view. Areas which cannot easily sustain such vegetation will be unlikely to screen new development.*
- *(3) Development - New development is less likely to be conspicuous in the context of existing development in the landscape*.'

In addition, several '*site suitability*' and '*technical considerations*' are accounted for to determine a landscape type's capacity to absorb development; of them, three are relevant to landscape and visual impact:

- '*Landscape and screening,*
- *Suitability of site layout,*
- *Degree to which site development works will scar the landscape and/or result in a site with excessive gradient*.'

The WCDDP 2022-2028 Appendix 8 Section 3.1 expressly states:

> *'Areas where enclosing topography, screening vegetation and/or existing development are present, should have a* ***high potential*** *to absorb new development.'*

This LVIA demonstrates that the Proposed Project is located in an area and landscape type with high potential to absorb new development in that the topography is sufficiently enclosed and heavily vegetated (containing forestry and mature hedges/woody vegetation) and contains elements of existing electrical and energy infrastructure, including communications towers, pylons and an existing wind farm (see Section 13.6).

In addition, the landscape features a high degree of visual screening in the direction of the Proposed Turbines from 3-5km and is likely to result in a relatively low degree of 'scarring' to the landscape following landscape mitigation such as proposed planting, bolstering of existing/replaced hedgerows and reinstatement of natural vegetation following the construction phase; refer to discussions on these mitigation measures in Section 13.7 'Likely Significant Landscape and Visual Effects.'

The landscape impacts arising from wind energy development is unique compared to other development types on account of the scale and form of wind turbines. Not all landscape types can effectively accommodate commercial wind turbines and therefore the concept of landscape capacity, and factors contributing to it, must be considered in this context.

In this regard, elevated and exposed areas have characteristics which are considered appropriate and acceptable landscapes for the development of wind, as evidenced by the trend and distribution of existing and permitted wind farm developments across Ireland. Foothills comprising marginal upland landscape types such as the Wind Farm site are typically very robust and appropriate landscapes for accommodating commercial wind farm developments due to characteristics of the receiving landscape (i.e. large scale and separation from receptors; sparse settlement pattern; working landscape of low

sensitivity) identified and reported throughout this LVIA. This is supported by the wind energy zoning in the WCCDP, as the Proposed Wind Farm is sited in an area designated as 'Preferred' for wind energy development – see Section 13.4.1.5.

13.4.1.4 Landscape Sensitivity Designations

Chapter 10 of the WCCDP 2022-2028 includes only 1 no. Landscape Map - Figure 10.1, this shows the landscape sensitivity designations across County Waterford. The landscape sensitivity classifications are also reported again in the landscape character assessment of the WCCDP, Appendix 8, where Figure 10.1 is reproduced as 'Map A8.3 Landscape Sensitivity'.

The Proposed Project within an Area Designated as Low Landscape Sensitivity

All elements of the Proposed Project are located within the 'Low Sensitivity' landscape designation as per Map Figure 10.1 (Chapter 10 of the WCCDP) and Map A8.3 (Appendix 8 of the WCCDP). For reference, the Proposed Turbines and WCCDP sensitivity designations in the LVIA Study Area are mapped above in Figure 13-4, and then again at higher resolution below in Figure 13-5. Section 4.3 of Appendix 8 states the following description and guidance for landscape classified as 'Low Sensitivity':

> *'A large area of County Waterford is designated as a landscape of low sensitivity. These areas have potential to absorb a wide range of new developments subject to normal planning and development control procedures. In these areas the Planning Authority will have regard to general restrictions to development such as scenic routes, siting, road set backs, road widening plans, parking numbers, road and sewage disposal criteria.'*

Section 4.3 of Appendix 8 includes the following areas designated as 'Low' sensitivity:

- *'Pasture Land,*
- *Commercial Plantations.*

Table 8.3 of Appendix 8 describes features within the Low sensitivity designation as:

> *'A common character type with a potential to absorb a wide range of new developments. These areas have potential to absorb a wide range of new developments.*'

As shown in the remaining sections of the Landscape Baseline, the landscape of the Proposed Wind Farm site is primarily composed of commercial plantations and upland agricultural pasture bounded by mature woodland and hedgerows, which is a landscape aligned with the characteristics defined for Low landscape sensitivity in the WCCDP.

'Most Sensitive' and 'High Sensitivity' Areas in the LVIA Study Area

The landscape sensitivity designations as per Figure 10.1 and Map A8.3 in the WCCDP are mapped across the LVIA Study Area previously in Figure 13-4. Areas designated as 'Most Sensitive' are demarked in red and are listed in Section 4.1(a) of Appendix 8 as:

- *'The coastline, all headlands and promontories;*
- *The banks of rivers;*
- *The shoreline of all lakes*
- *The skylines of upland areas'*

In the LVIA Study Area these receptors include the coastal corridor, the Blackwater River Valley and also the Coomeragh and Knockmealdown Mountains which are considered landscape receptors of

High sensitivity in this LVIA. Although these receptors are well set back from the Proposed Project, where relevant and where there is potential for visibility and potential for indirect impacts on landscape character to occur, these higher sensitivity landscape receptors are assessed later in this chapter.

Areas designated as 'High Sensitivity' are demarked as yellow in the WCCDP. Figure 13-4 (previously) and also Figure 13-5 (below) shows some small areas of the landscape designated as 'High Sensitivity' within 5km of the Wind Farm site (delineated in green line, with Proposed Turbines as blue points), including a very small area within the EIAR Study Area on the route of the Proposed 110kV Underground Cabling Route (underground cabling).

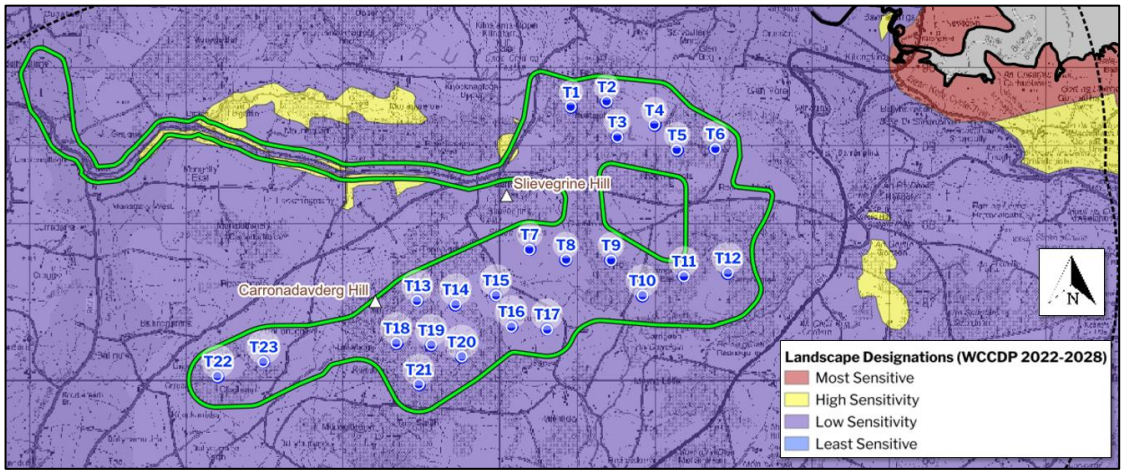


Figure 13-5 The Proposed Project and Landscape sensitivity designations in the WCCDP 2022-2028, including Location of Carronadavderg Hill and Slievegrine Hill

Section 4.2 of Appendix 8 lists areas designated as 'High' sensitivity as follows:

- *'Intertidal flats;*
- *Coastal lagoons;*
- *Agricultural lands with significant areas of natural vegetation;*
- *Sparsely vegetated areas;*
- *Beaches, dunes and sands;*
- *Inland and salt marshes;*
- *Bare rocks;*
- *Transitional woodland scrub;*
- *Broad leaved forest;*
- *Peat bogs; and*
- *Natural grassland.'*

Assessments in this LVIA have determined that the High sensitivity designated areas to the north and east of the Proposed Wind Farm are likely to be a combination of the following receptors from the list above: 'Agricultural lands with significant areas of natural vegetation; Transitional woodland scrub; Broad Leaved forest; Peat Bogs Natural Grassland'. The EIAR Site Boundary intersects with some of these areas along the Proposed 110kV Underground Cabling Route) where elements of the Proposed Project will be installed under or alongside the existing road and there will be no material impact on these landscape receptors.

Carronadavderg Hill & Slievegrine Hill: Inconsistent Sensitivity Ratings in Table 8.3 of Appendix 8 WCCDP 2022-2028

In addition to Figure 10.1 and Map A8.3, the WCCDP 2022-2028 Appendix 8 also lists landscape sensitivity ratings and descriptions of LCAs in table form in 'Table A8.3 Sensitivity Classifications and Areas' and the ratings of Table A8.3 are in some cases inconsistent with the designations shown in Figure 10.1 and Map A8.3. For example, an LCA classed overall as 'Least Sensitive' in Table A8.3 may

in reality comprise mixed area designations of 'Least', 'Low' and 'Most Sensitive' landscape sensitivity according to Map A8.3. In addition, isolated features such as 'Hills' are named as high sensitivity features in Table A8.3 and these features are located throughout LCAs classed with lower sensitivity ratings. 'Hills' are not mentioned or listed as high sensitivity areas under Section 4.2 of Appendix 8.

Carronadavderg Hill (295m elevation) and Slievegrine Hill (218m elevation) are both located along the western edge of the Proposed Wind Farm site. Carronadavderg Hill is located immediately adjacent to T13, T14, T18 and T19, with these turbines sited on its lower eastern aspect and Slievegrine Hill is located adjacent to T7-T12, with these turbines sited to the immediate east of the hill. Both hills are designated as 'Low Sensitivity' in Figure 10.1 and Map A8.3 (depicted previously in Figure 13-5) in the WCCDP. However, there is a duplication of these hills within Table A8.3 of Appendix 8 where they are each listed twice under the column 'locations' within the 'High Sensitivity - Hills' and 'Low Sensitivity – Conifer Plantations' tables.

The 'High Sensitivity' part of Table A8.3 lists Carronadavderg Hill and Slievegrine Hill as 'Hill' features of 'distinctive character' and defines 'High Sensitivity' features as having some capacity to absorb development. The same Table A8.3 then lists Carronadavderg Hill and Slievegrine Hill again later in the 'Low Sensitivity' part of the table as features of 'Conifer Plantation' and defines 'Low Sensitivity' features as having even greater capacity to absorb development.

Regarding Map A8.3, the 'Low Sensitivity' rating is due to the areas surrounding and including Carronadavderg Hill and Slievegrine Hill as having landcover of commercial forestry plantations and pasture land, which are the dominant land covers of the area of the Proposed Wind Farm site. 'Low Sensitivity' areas have good capacity to absorb development as defined above earlier in this section. As previously presented, Figure 13-5 above shows the location of both hills within the 'Low Sensitivity' landscape area of Figure 10.1 and Map A8.3 from the WCCDP, denoted in purple. It can be seen that 'High Sensitivity' areas marked in yellow and 'Most Sensitive' areas in red are separate from these two hills.

As reported later in Section 13.4.3 'Landscape Character of the Proposed Wind Farm site', field visits and assessments determined that both Carronadavderg Hill and Slievegrine Hill consist of modified working landscape of conifer plantation and pasture land, and as well are mapped as 'Low Sensitivity' in Map A8.3 and fall within the 'Preferred' area for wind energy zoning (see the next Section 13.4.1.5 'Wind Energy Zoning' below). The assessments in this LVIA did not identify any distinctive landscape qualities or cultural associations to these hills that would distinguish them differently from any other hills in the county or the country. As per best practice LVIA guidance and the methodology used for this assessment (see Section 1.7.2 of the *Appendix 13-1*), landscape sensitivity is derived by combining 'Landscape Value' with its 'Susceptibility to Change'. Susceptibility to change must consider the nature of the change which is governed by the type of development relative to the receiving landscape. In this regard, and as reported throughout this LVIA, landscape features such as hills are widely considered landscapes with a high capacity for wind energy development and a lower susceptibility to change than other landscape types and features. Given the inconsistent duplication on Table A8.3, the landscape sensitivity zoning shown with mapping figures in the WCCDP, the preferential wind energy zoning and the reality of sensitivity on the ground, Carronadavderg Hill and Slievegrine Hill are not considered high sensitivity landscape receptors in this LVIA.

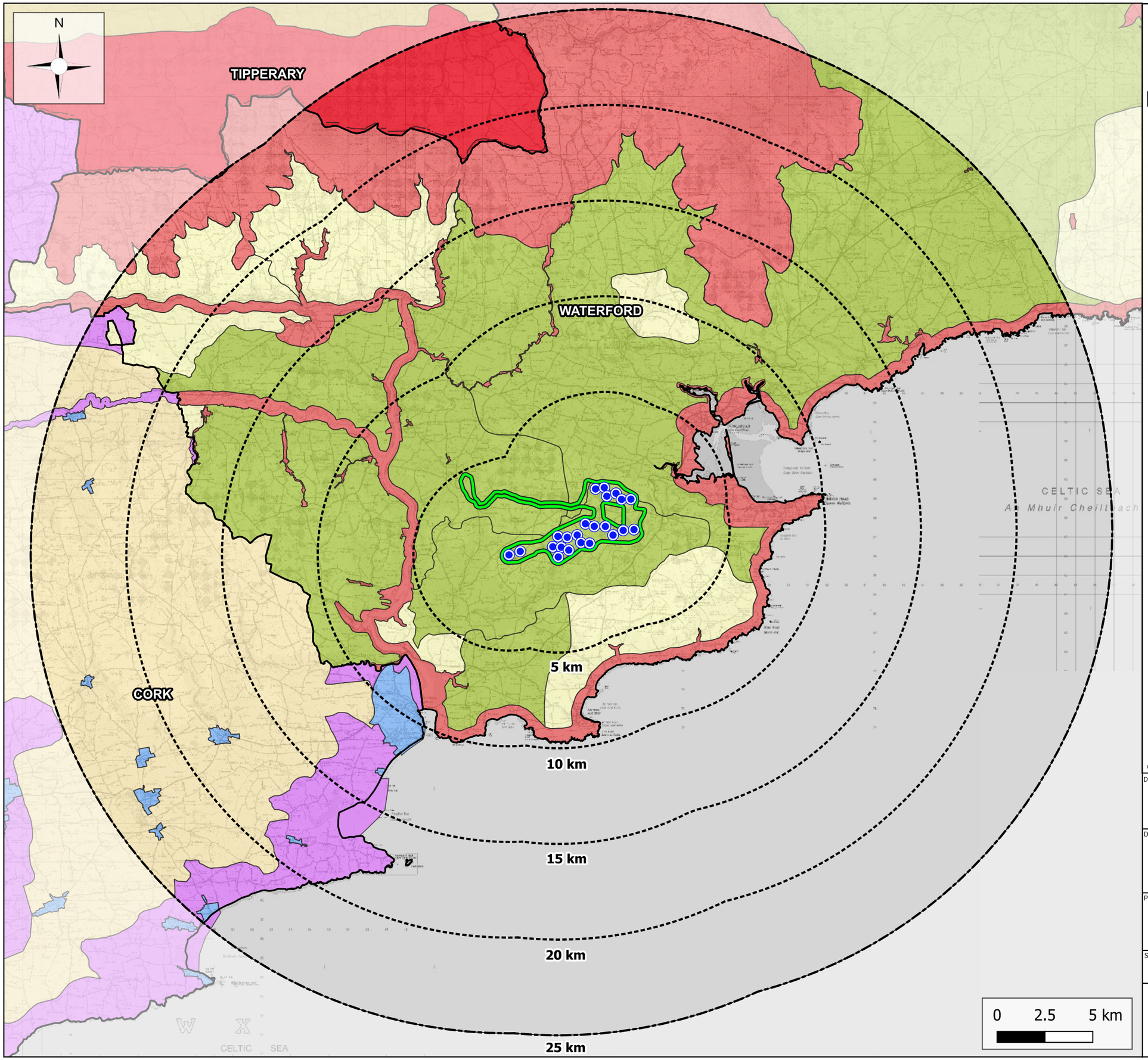
13.4.1.5 Wind Energy Zoning

All components of the Proposed Project are located within landscape area designated as '**Preferred'** for wind energy development in the WCCDP 2022-2028 'Appendix 7 Renewable Energy Strategy' (hereafter, Waterford RES) and the Waterford RES 'Appendix 2 Wind Energy Strategy Map' (reproduced below in Figure 13-6).

The Waterford RES states the following regarding onshore wind energy policy for Co. Waterford:

> *'A Wind Energy Policy forms part of Waterford County Development Plan 2011-2017 and forms the basis for a plan led approach to wind energy development in Waterford ... The impact of onshore wind energy developments will vary depending on the location of the individual site together with the number of turbines, layout, size, design and colour.'*
>
> *'The Wind Energy Policy of the Waterford County Development Plan 2011-2017 has amended wind energy strategy areas into three classifications as follows and as identified on the revised wind energy designations map:*
>
> - *Preferred Areas,*
> - *Areas Open to Consideration,*
> - *No Go Areas.*
>
> *These areas have been identified by way of overlaying the following series of maps and data: The Landscape and Seascape Character Assessment (Appendix 8 of the Development Plan); Natura 2000 network; Urbanised areas; Waterford Regional Airport Masterplan (Appendix 12 of the Development Plan); Wind energy mapping of adjacent local authorities; Major road infrastructure; and, Transmission grid.'*

Figure 13-6 below shows the wind energy zoning in the LVIA Study Area. As stated previously, this zoning was informed by the Landscape and Seascape Character Assessment in Appendix 8 of the WCCDP. This is evident by the 'Exclusion' areas demarked in red along the coastal corridor, prominent river corridors and also the Coomeragh and Knockmealdown Mountains which are considered landscape receptors of High or Very High sensitivity where wind energy is excluded.



Map Legend

- LVIA Study Area
- Ireland County Boundaries
- EIAR Site Boundary
- Proposed Turbines

Co. Waterford Wind Energy Strategy

- Exclusion
- Preferred
- Open for Consideration

Co. Tipperary Wind Energy Strategy

- Open to Consideration
- Unsuitable

Co. Cork Wind Energy Strategy

- Urban Area
- Open to Consideration
- Normally Discouraged

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Drawing No.

Figure 13-6

Drawing Title

Wind Energy Strategy Map

Project Title

Slievegrine Renewable Energy Development, Co. Waterford

Scale	Project No.	Date	Drawn By	Checked By
1:191,000	240740	2026.09.24	GL	RS

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13.4.1.6 Designated Scenic Routes & Protected Views

The WCCDP Chapter 10 sets out the following Landscape Policy Objective for designated scenic routes and protected views in Co. Waterford:

> ***L04 Scenic Routes and Protected Views****: We will protect the scenic routes and specified protected views identified in our Landscape Character Assessment (Appendix 8), including views to and from the sea, rivers, landscape features, mountains, landmark structures and urban settlements from inappropriate development that by virtue of design, scale, character or cumulative impact would block or detract from such views.*

WCCDP 2022-2028 Appendix 8 forms the landscape character assessment for Co. Waterford and lists designated Scenic Routes in Section 5.1 and Protected Views in Section 5.2; see the Visual Baseline Section 13.5 of this LVIA for the identification and scoping of scenic routes and protected views in the LVIA Study Area. WCCDP Appendix 8 states the following in relation to views from scenic routes:

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

This LVIA assesses the impact on several nearby scenic routes and demonstrates how the Proposed Project does not obstruct or degrade any visually vulnerable features or sensitive areas.

Co. Cork designated scenic routes within the LVIA Study Area are located beyond 9km and have limited theoretical visibility; where potential views exist from these routes the Proposed Turbines will be perceived as very small background features. No designated scenic routes or protected views of Co. Tipperary fall within the LVIA Study Area.

13.4.1.7 Co. Cork High Value Landscapes

A small portion of Co. Cork falls within the southwestern part of the LVIA Study Area and contains one area of 'High Value Landscape' (HVL) with theoretical visibility of the Proposed Turbines; this area of HVL is scoped in for assessment in the LVIA. At its closest point, the HVL is located 7.5km southwest of the Proposed Turbines and the HVL is mapped above in Figure 13-4 Landscape Policy Context Map. HVLs are defined in the Cork County Development Plan (CCDP) 2022-2028 as:

> *'Landscape Character Types which have a very high or high landscape value and high or very high landscape sensitivity and are of county or national importance are considered to be our most valuable landscapes and therefore are designated as High Value Landscapes (HVL).'*

The CCDP 'Vol.1 Main Policy Material, Chapter 14 Green Infrastructure and Recreation, Section 14.7 Landscape' and CCDP 'Vol.2 Heritage and Amenity, Chapter 5 Scenic Routes – Views and Prospects and Scenic Route Profiles' sets out policy and guidance for general landscape and HVLs as follows:

> ***'GI 14-9: Landscape****: a) Protect the visual and scenic amenities of County Cork's built and natural environment. b) Landscape issues will be an important factor in all land-use proposals, ensuring that a pro-active view of development is undertaken while protecting the environment and heritage generally in line with the principle of sustainability. c) Ensure that new development meets high standards of siting and design. d) Protect skylines and ridgelines from development. e) Discourage proposals necessitating the removal of extensive amounts of trees, hedgerows and historic walls or other distinctive boundary treatments.*

***GI 14-10 Draft Landscape Strategy**: Ensure that the management of development throughout the County will have regard for the value of the landscape, its character, distinctiveness and sensitivity as recognised in the Cork County Draft Landscape Strategy and its recommendations, in order to minimize the visual and environmental impact of development, particularly in areas designated as High Value Landscapes where higher development standards (layout, design, landscaping, materials used) will be required.*

***GI 14-11: Draft Landscape Strategy, Land Use Plans and Policy Guidance**: Have regard to the Draft Cork County Landscape Strategy (2007) in the preparation of plans and other policy guidance being prepared during the lifetime of the Plan. Review and update the Draft Cork County Landscape Strategy as soon as is practicable following the publication of a National Landscape Character Assessment as well as taking into account any associated guidelines. Whilst advocating the protection of such scenic resources the Plan also recognises the fact that all landscapes are living and changing, and therefore in principle it is not proposed that this should give rise to the prohibition of development along these routes, but development, where permitted, should not hinder or obstruct these views and prospects and should be designed and located to minimise their impact. This principle will encourage appropriate landscaping and screen planting of developments along scenic routes.'*

13.4.1.8 Co. Tipperary Primary and Secondary Amenity Areas

A small portion of Co. Tipperary falls within the northern part of the LVIA Study Area. The TCDP 2022-2028 Section 11.7.1 classifies landscape areas of 'Primary' and 'Secondary Amenity' which are valued for '*scenic and visual quality*' as well as their potential for '*significant opportunities for tourism development and rural recreational activities*.' The Primary and Secondary Amenity Areas occurring within the LVIA Study Area are mapped above in Figure 13-4 Landscape Policy Context Map. No Primary or Secondary Amenity Areas are located within 18km of the Proposed Turbines and onsite visibility appraisal determined that there is no potential for actual visibility of the Proposed Turbines from these areas and therefore these amenity areas are scoped out of the assessment.

13.4.2 Designated Landscape Character Areas (LCAs) and Policy on LCAs

Designated character areas of Co. Waterford and Co. Cork fall within the 15km LCA Study Area; the polices and details are described below. No designated LCAs of Co. Tipperary fall within the 15km LCA Study Area. LCAs are mapped below in Figure 13-7 and Figure 13-8.

13.4.2.1 LCAs containing the Proposed Project

W-LCU-5E Drumhills

Appendix 8 divides Waterford's landscapes into seven broad 'Landscape Types' (Coastal, Farmed Lowland, River Corridor, Estuaries, Foothills, Upland and Urbanising) with associated sensitivity levels and subdivides these landscape types into 28 specific Landscape Character Units (LCUs). The names of Co. Waterford LCAs are therefore prefixed by the abbreviation of 'LCU.' All 23 no. Proposed Turbines and most infrastructure of the Proposed Project are located within Co. Waterford LCU-5E Drumhills, which falls within the 'Foothills Landscape Type,' a suitable landscape type to accommodate wind energy development.

As indicated by Map A8.3, the vast majority of LCU-5E falls within 'Low Sensitivity' landscape classification, and the elements of the Proposed Wind Farm are located within the landscape areas of LCU-5E mapped as 'Low Sensitivity' (see the policy context map in Figure 13-4 previously). This is due to the landscape comprising primarily pastoral fields and coniferous commercial forestry plantation. A small portion of the Proposed 110kV Underground Cabling Route passes alongside a small area of land

designated as 'High' sensitivity, this comprises only a small section (approximately 4.3km total length) of the local road network.

The LVIA is cognisant that while LCU-5E aligns mainly as 'Low Sensitivity' landscape designation in Figure 10.1 and Map A8.3 in Appendix 8 of the WCCDP, it is listed as 'High Sensitivity' in Table A8.3 on account of it containing the landscape type 'Hills'. As reported previously, 'hills' are not listed as high sensitivity areas or receptors in Section 4 of the Appendix 8, therefore the classifications in that table relevant to LCU-5E are incongruent. As set out in this policy context section (see previous Section 13.4.1.1 through Section 13.4.1.4), and using the methodology for attributing sensitivity to LCAs in a regional and national context (see Section 1.7.3 in *Appendix 13-1*), the LVIA considers LCU-5E to be 'Low' sensitivity due to its vast mapping of 'Low Sensitivity' areas in Figure 10.1, Map A8.3 of WCCDP 2022-2028 and due to its primary landcover of pasture land and commercial plantation and with most of the LCA within a 'Preferred' area for wind energy development, zoning which was specifically informed by Appendix 8.

W-LCU-2D Clashmore & Newport Lowlands

A small portion of the Proposed 110kV Underground Cabling Route (approximately 1.8km in length) passes within Co. Waterford LCU-2D Clashmore & Newport Lowlands. Table A8.3 of the WCCDP 2022-2028 Appendix 8 lists LCU-2D as part of the 'Farmed Lowland' / 'Pasture land' landscape type and Map A8.3 classifies it as 'Low Sensitivity.' The length of Proposed 110kV Underground Cabling Route (underground cabling) passing through LCU-2D follows the L2021 Local Road and R671 Regional Road and makes up part of the Proposed Project within public roadways.

13.4.2.2 LCAs in the Wider LCA Study Area

Co. Waterford LCAs

5 no. designated LCAs in Co. Waterford that fall within the wider LCA Study Area (15km from the Proposed Turbines) are classified as 'Most Sensitive' in the WCCDP 2022-2028 Appendix 8, which is the highest sensitivity category in the policy; these LCAs will not contain any infrastructure of the Proposed Project. Table A8.3 of the WCCDP 2022-2028 Appendix 8 lists these LCAs as part of landscape types including the coastline, the banks of rivers and the skylines of upland areas with the following description:

> *'Very distinctive features with a very low capacity to absorb new development without significant alterations of existing character over an extended area.'*

The WCCDP 2022-2028 Appendix 8 states the following guidance on policy for LCAs classified as 'Most Sensitive':

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

In addition to LCU-2D reported above which contains a small portion of the Proposed Project infrastructure, two other designated LCAs in Co. Waterford that fall within the LCA Study Area are classified as 'Low' sensitivity in the WCCDP 2022-2028 Appendix 8 and will not contain any infrastructure of the Proposed Project. In some cases, a moderate portion of these LCAs fall within 5km of the Proposed Turbines.

1 no. designated LCA in Co. Waterford falls within the wider LCA Study Area and is classified as 'Least Sensitive' in the WCCDP 2022-2028 Appendix 8; this LCA will not contain any infrastructure of the Proposed Project. Table A8.3 of the WCCDP 2022-2028 Appendix 8 lists the LCA as part of the 'Continuous Urban Fabric' landscape type with the following description:

> *'Areas of existing development and infrastructure. New development reinforces existing desirable land use patterns.'*

The WCCDP 2022-2028 Appendix 8 states the following guidance on policy for LCAs classified as 'Least Sensitive':

> *'A small area of Waterford City and County is designated least sensitive to landscape change. These are areas of concentrated existing development and infrastructure. Appropriate new development in these areas can reinforce the existing desirable landuse patterns. Regard shall be had to site development standards namely density, building lines, height of structures and design standards. The overall aim is to ensure that the inherent character of city /town environs and town and village centres is maintained.*
>
> *In least sensitive areas: (a) New development shall sustain and reflect the character of the area; (b) Frontages on to the existing streets shall reflect the character of the street through careful design and use of materials; and(c) Development should reflect the character of the townscape generally but fresh approaches to design will be considered. (d) New development should be encouraged as a means of improving the existing character of such areas.'*

Co. Cork LCAs

The landscape character assessment for Co. Cork is provided in the CCDP Vol.1 Appendix F Landscape Character Assessment (p.513 of CCDP Vol.1). The assessment divides Cork's landscapes into sixteen broad character types and subdivides these into 76 specific LCAs, all given ratings for 'Sensitivity' and 'Value' each on a five-point scale: Very High, High, Medium, Medium/Low, Low; and 'Importance' on a three-point scale: National, County, Local.

A total of 3 no. designated LCAs in Co. Cork fall within the LCA Study Area. Of these, one (LCA-2 Broad Bay Coast) is classified in the CCDP 2022-2028 Appendix F as: 'Very High Sensitivity,' 'Very High Value,' and 'County-level Importance.' LCA-2 will not contain any infrastructure of the Proposed Project. This LCA also overlaps with a separate 'High Value Landscape' designation in local policy and features Co. Cork designated scenic route SR41 within 10km of the Proposed Turbines over elevated areas. The CCDP Vol.1 Section 14.7 provides the relevant definitions of these landscape areas:

> *'Very high sensitivity landscapes are extra vulnerable landscapes (e.g. seascape area with national importance) which are likely to be fragile and susceptible to change.*
>
> *Landscape Character Types which have a very high or high landscape value and high or very high landscape sensitivity and are of county or national importance are considered to be our most valuable landscapes and therefore are designated as High Value Landscapes (HVL).'*

Two other designated LCAs in Co. Cork falling within the LCA Study Area are classified in the CCDP 2022-2028 Appendix F as lesser sensitivity, value and importance levels. These LCAs will not contain any infrastructure of the Proposed Project.

13.4.2.3 LCAs Preliminary Analysis

Utilising the (15km) LCA Study Area, this section provides an initial analysis of designated LCAs from the county-level policy Landscape Character Assessments above. A map showing all LCAs within 15km

of the Proposed Turbines is shown below in Figure 13-7 and the distribution of theoretical visibility of the Proposed Turbines occurring in each LCA is shown below in Figure 13-8.

Each LCA is listed below in Table 13-4 as well as a rationale for scoping in the LCA, including a description of theoretical visibility within each LCA as indicated by Figure 13-8. Several LCAs identified in the LCA Study Area have very small areas of theoretical visibility as indicated by Figure 13-8. 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 in *Appendix 13-2* and the LVIA.

Table 13-4 below indicates designated LCAs which have the greatest potential to experience effects on landscape character arising as a result of the Proposed Project and are assessed in *Appendix 13-2* which reports the following:

- Relevant landscape key characteristics and classifications,
- The capacity of the LCA to accommodate wind energy development,
- The sensitivity of the LCA to wind energy development,
- The visibility of the Proposed Project from within the LCA and any viewpoints located within the LCA boundary if relevant,
- The context of cumulative developments identified within the LCA,
- The magnitude of change and significance of landscape effects,
- Any mitigating factors which influenced the residual landscape effect rating.

Following this, Table 13-5 gives the rationale for scoping the remaining LCAs out of assessment following the Landscape Baseline exercise.

Table 13-4 Designated LCAs Scoped in for Assessment in the LVIA

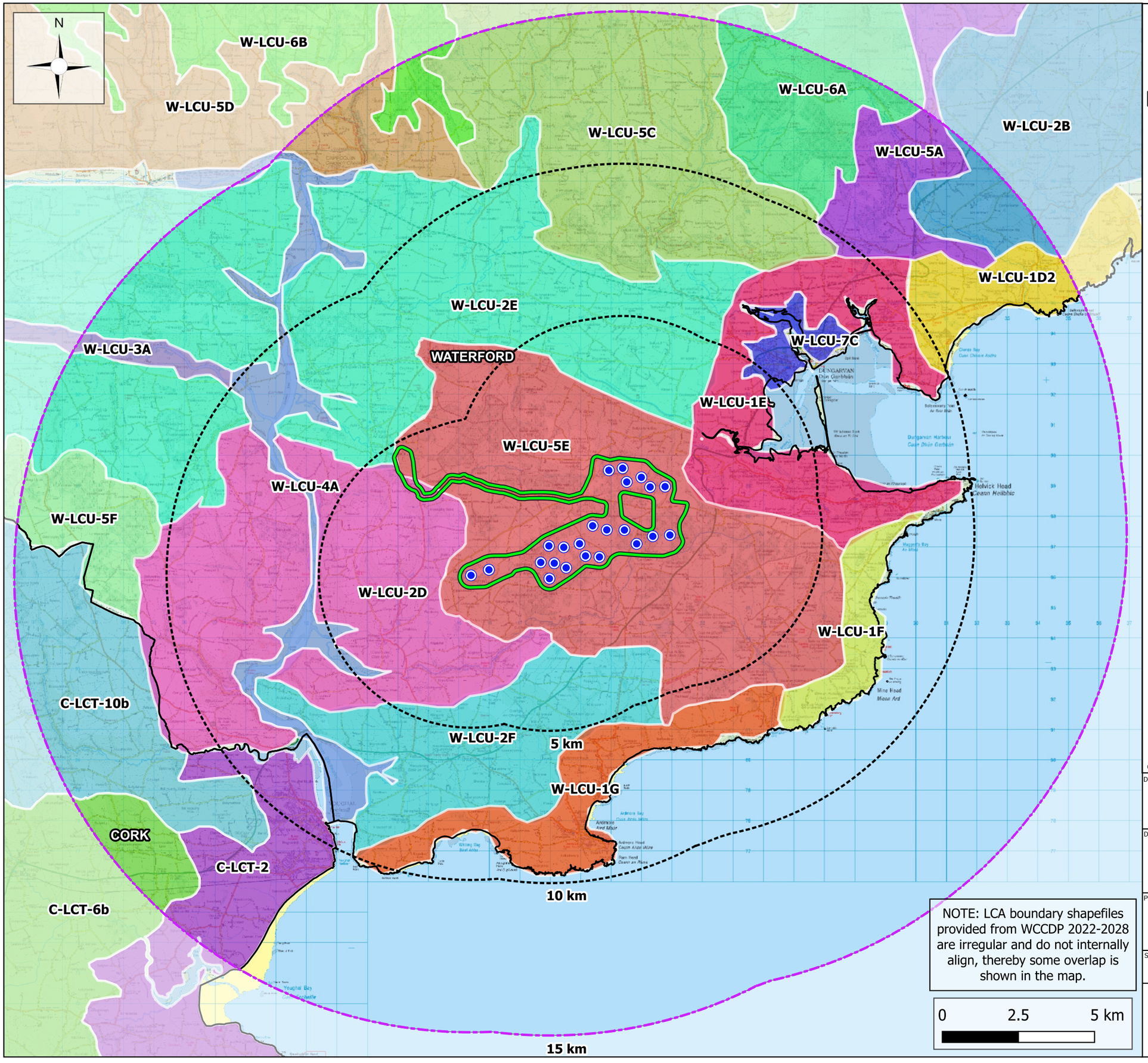
LCA Ref.	LCA Name	Rationale for Scoping In
Co. Waterford LCAs		
LCU-5E	Drumhills.	Contains all Proposed Turbines and almost all proposed infrastructure, including the Proposed 110kV Substation, the Proposed 220kV Loop-in Substation, and most of the Proposed 110kV Underground Cabling Route.
LCU-2D	Clashmore & Newport Lowlands.	Contains a short length (approximately 1.8km) of the Proposed 110kV Underground Cabling Route.
LCU-1E	Dungarvan Harbour.	A large portion of these LCAs fall within 5km of the Proposed Turbines and thus there is the potential to experience views of the proposed infrastructure from these landscapes.
LCU-2E	Blackwater & Bride Lowlands.	
LCU-5C	Tooraneena Foothills.	This landscape area contains high-elevation hills and features two designated scenic routes with pockets of full theoretical visibility in the direction of the Proposed Turbines, thus there is the potential to experience views of the proposed infrastructure from high points with open visibility.
LCU-5F	Glendine Foothills	This landscape area contains high-elevation hills with pockets of full theoretical visibility in the direction of the Proposed Turbines, thus there is the potential to

LCA Ref.	LCA Name	Rationale for Scoping In
		experience views of the proposed infrastructure from high points with open visibility.
Co. Cork LCAs		
LCA-2	Broad Bay Coast.	This landscape area has high classifications for sensitivity, value and importance within the local policy and overlaps with a separate 'High Value Landscape' designation in local policy and features Co. Cork designated scenic route SR41 within 10km of the Proposed Turbines over elevated areas, thus there is the potential to experience views of the proposed infrastructure from high points with open visibility in the direction of the Proposed Turbines.

Table 13-5 Rationale for Designated LCAs Scoped Out

LCA Ref.	LCA Name	Rationale for Scoping Out
Co. Waterford LCAs		
LCU-1F	Helvick Head.	Due to the low and flat nature of this LCA there will be visibility of the Proposed Turbines from locations within this LCA.
LCU-1G	Ardmore Head.	Visibility will be limited in the majority of this LCA due to distance and visual screening. There will be visibility of the Proposed Turbines from areas within this LCA.
LCU-2B	Kilmacthomas Lowlands.	Actual visibility of the Proposed Turbines will be very limited due to the distance and visual screening from vegetation within this LCA.
LCU-2F	Kinsalebeg.	Actual visibility will be very limited due to the distance and visual screening from vegetation within this LCA.
LCU-3A	Blackwater and Bride River Corridor.	Actual visibility will be very limited due to the distance and visual screening from vegetation within this LCA.
LCU-4A	Blackwater Estuary.	There will be visibility of the Proposed Turbines from areas within this LCA. Visibility will be limited in the majority of this LCA due to the low-lying nature of this LCA and visual screening.
LCU-5A	Knockaturnory Munsburrow.	Actual visibility will be very limited in this area due to the presence of coniferous forestry and vegetation limiting views towards the Proposed Turbines.
LCU-5D	Knockmealdown Foothills.	Actual visibility will mostly be in the south of this LCA.
LCU-6A	Comeragh Uplands.	Actual visibility will be very limited to areas of high elevation. Throughout this LCA there will be visual screening from vegetation.

LCA Ref.	LCA Name	Rationale for Scoping Out
LCU-6B	Knockmealdown Uplands.	Actual visibility will be very limited due to the distance and visual screening from vegetation within this LCA.
LCU-7C	Dungarvan Environs.	Actual visibility from the higher sensitivity areas of this LCA will be very limited to none.
Co. Cork LCAs		
LCA-6B	Broad Fertile Lowland Valleys.	Actual visibility will be very limited due to the distance and visual screening from vegetation within this LCA.
LCA-10B	Fissured Fertile Middleground.	Actual visibility will be very limited due to the distance and visual screening from vegetation within this LCA.



Map Legend

- LCA Study Area
- Ireland County Boundaries
- EIAR Site Boundary
- Proposed Turbines

Co. Waterford LCAs (WCCDP 2022-2028)

- W-LCU-1D2: Copper Coast West
- W-LCU-1E: Dungarvan Harbour
- W-LCU-1F: Helvick Head
- W-LCU-1G: Ardmore Head
- W-LCU-2B: Kilmacthomas Lowlands
- W-LCU-2D: Clashmore & Newport Lowlands
- W-LCU-2E: Blackwater & Bride Lowlands
- W-LCU-2F: Kinsalebeg
- W-LCU-3A: Blackwater and Bride River Corridor
- W-LCU-4A: Blackwater Estuary
- W-LCU-5A: Knockaturnory Munsburrow
- W-LCU-5C: Tooaneena Foothills
- W-LCU-5D: Knockmealdown Foothills
- W-LCU-5E: Drumhills Foothills
- W-LCU-5F: Glendine Foothills
- W-LCU-6A: Comeragh Uplands
- W-LCU-6B: Knockmealdown Uplands
- W-LCU-7C: Dungarvan Environs

Co. Cork LCAs (CCDP 2022-2028)

- C-LCT-10b: Fissured Fertile Middleground
- C-LCT-2: Broad Bay Coast
- C-LCT-6b: Broad Fertile Lowland Valleys

NOTE: LCA boundary shapefiles provided from WCCDP 2022-2028 are irregular and do not internally align, thereby some overlap is shown in the map.

0 2.5 5 km

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Drawing No.

Figure 13-7

Drawing Title

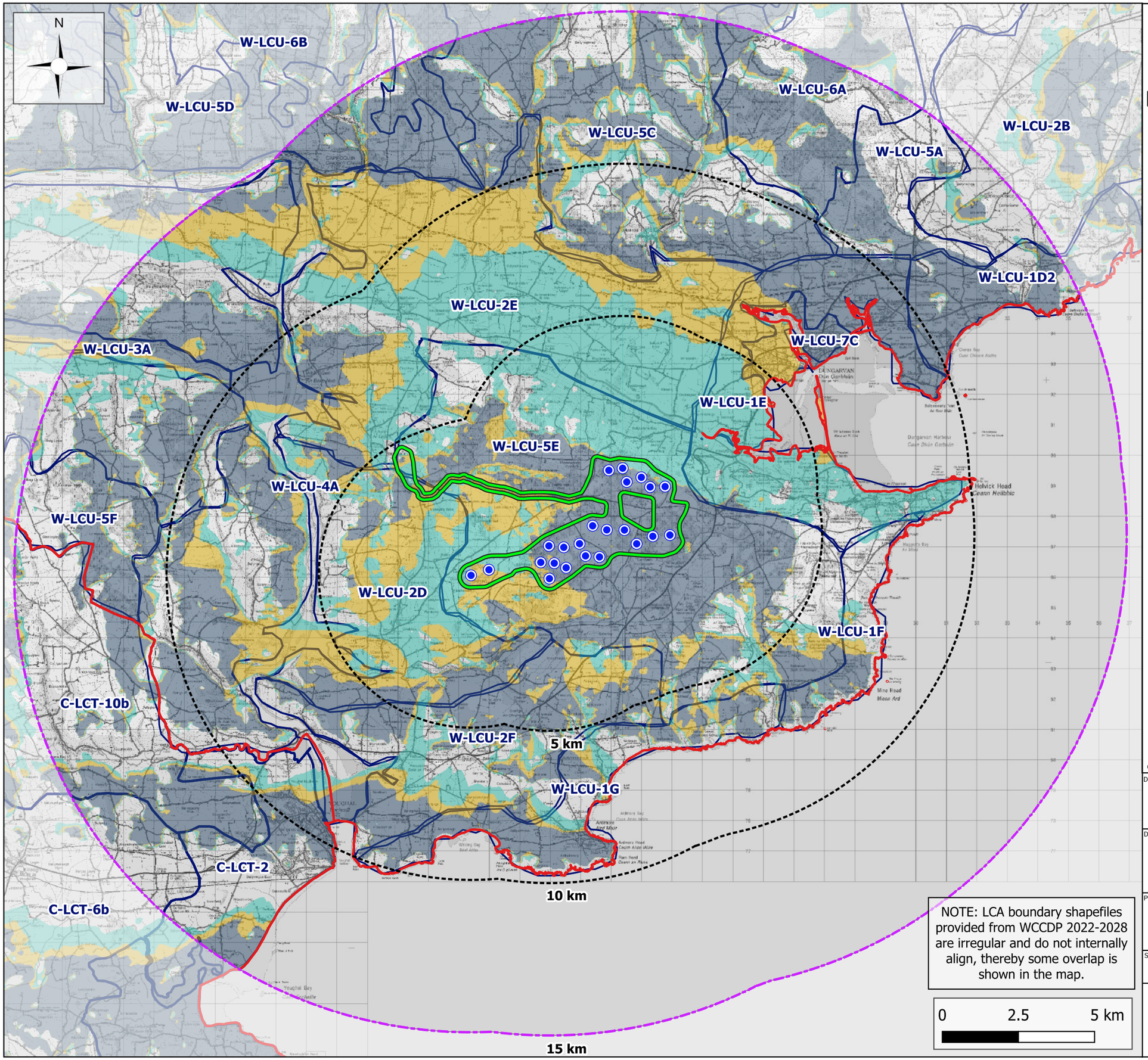
Landscape Character Areas (LCAs) Map

Project Title

Slievegrine Renewable Energy Development, Co. Waterford

Scale	Project No.	Date	Drawn By	Checked By
1:120,000	240740	2026.09.24	GL	RS

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NOTE: LCA boundary shapefiles provided from WCCDP 2022-2028 are irregular and do not internally align, thereby some overlap is shown in the map.

0 2.5 5 km

Map Legend

- LCA Study Area
- Ireland County Boundaries
- EIAR Site Boundary
- Proposed Turbines

Co. Waterford LCAs (WCCDP 2022-2028)

- W-LCU-1D2: Copper Coast West
- W-LCU-1E: Dungarvan Harbour
- W-LCU-1F: Helvick Head
- W-LCU-1G: Ardmore Head
- W-LCU-2B: Kilmacthomas Lowlands
- W-LCU-2D: Clashmore & Newport Lowlands
- W-LCU-2E: Blackwater & Bride Lowlands
- W-LCU-2F: Kinsalebeg
- W-LCU-3A: Blackwater and Bride River Corridor
- W-LCU-4A: Blackwater Estuary
- W-LCU-5A: Knockaturnory Munsburrow
- W-LCU-5C: Tooaneena Foothills
- W-LCU-5D: Knockmealdown Foothills
- W-LCU-5E: Drumhills Foothills
- W-LCU-5F: Glendine Foothills
- W-LCU-6A: Comeragh Uplands
- W-LCU-6B: Knockmealdown Uplands
- W-LCU-7C: Dungarvan Environs

Co. Cork LCAs (CCDP 2022-2028)

- C-LCT-10b: Fissured Fertile Middleground
- C-LCT-2: Broad Bay Coast
- C-LCT-6b: Broad Fertile Lowland Valleys

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Drawing No.

Figure 13-8

Drawing Title

LCAs of the LCA Study Area with ZTV

Project Title

Slievegrine Renewable Energy Development, Co. Waterford

Scale	Project No.	Date	Drawn By	Checked By
1:120,000	240740	2026.09.24	GL	RS

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13.4.3 Landscape Character of the Proposed Wind Farm 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.

Topography

The local topography (mapped below in Figure 13-9) is undulating across the Proposed Wind Farm site, comprising locally higher hills from north to south (approximately 220m elevation), to the highest point of Carronadavderg Hill in the centre-west of the Proposed Wind Farm site (330m elevation). The undulating nature of the topography creates relatively steep slopes from north to south and a sense of localised enclosure of the landforms and hilly terrain.

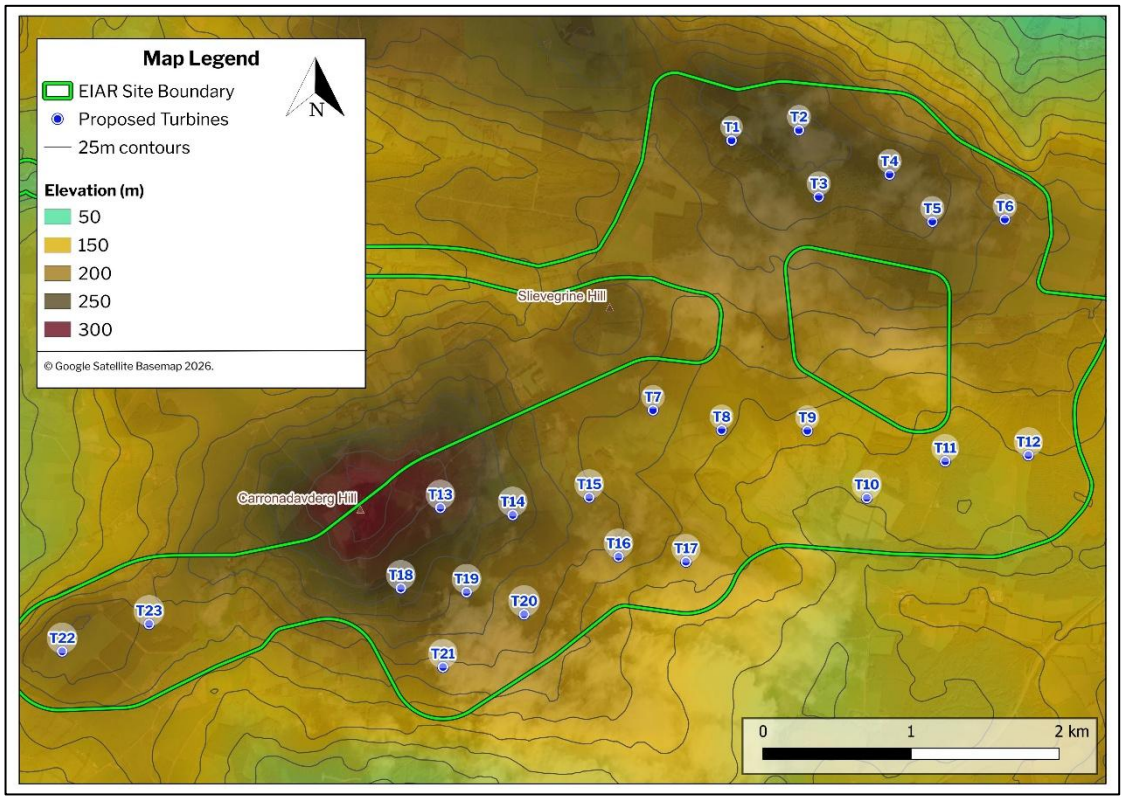


Figure 13-9 Topography map of the Proposed Wind Farm site

Landcover and Land Use

Figure 13-10 is an aerial map of the land use and land cover of the Proposed Wind Farm site and this is illustrated by Plate 13-4 and Plate 13-5 showing drone imagery looking down on the site. The Proposed Wind Farm site primarily comprises a mix of coniferous commercial forestry of mature stands and pasture land / agricultural fields with mature boundary vegetation and pockets of woodland. The majority of the Proposed Turbines are located within coniferous plantations. Any Proposed Turbines that are not located within coniferous plantations are located on pasture land which is a modified working landscape with no unique or special landscape qualities. Plate 13-6 through Plate 13-8 below show the nature of heavy vegetation and use of pasture land as viewed on the ground.

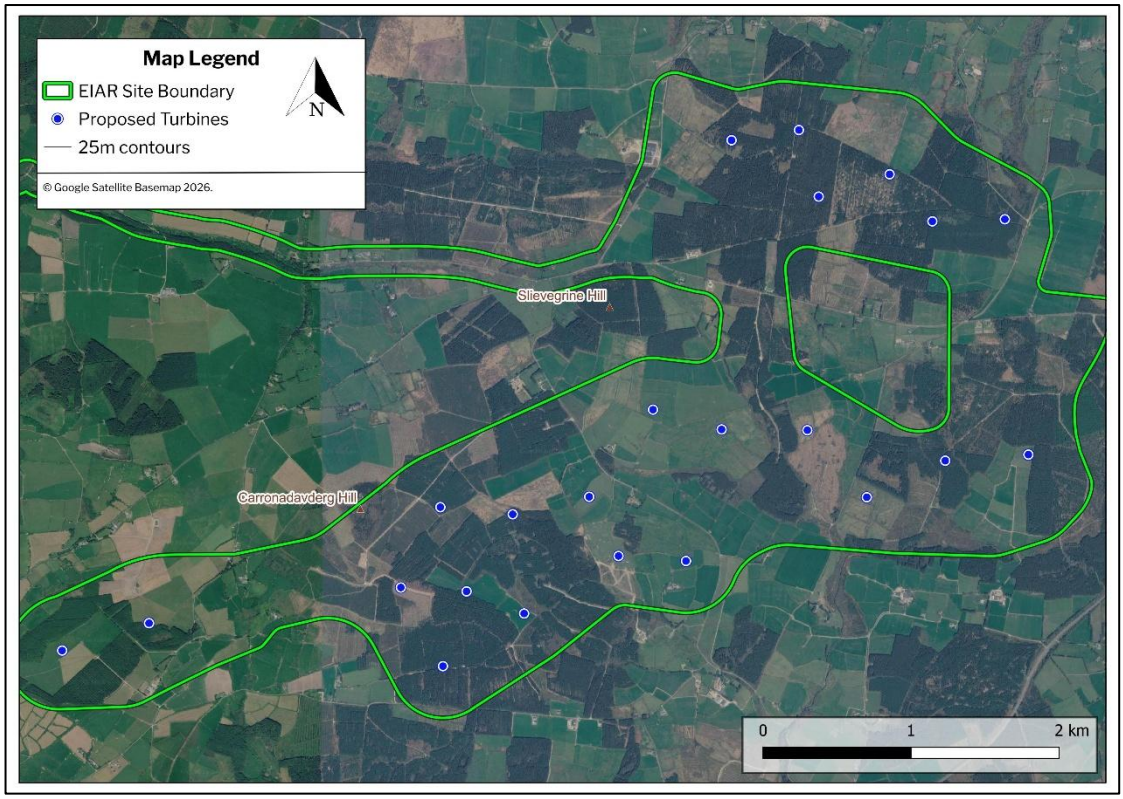


Figure 13-10 Aerial view showing landcover of the Proposed Wind Farm site



Plate 13-4 Drone imagery showing forestry stands in the north end of the Proposed Wind farm site



Plate 13-5 Drone imagery showing pasture land / agricultural fields, forestry and Carronadavderg Hill in the south of the Proposed Wind farm site



Plate 13-6 On-the-ground view of mature forestry within the Proposed Wind Farm site



Plate 13-7 On-the-ground view of pasture land / agricultural fields within the Proposed Wind Farm site



Plate 13-8 Heavily vegetated local roadway (L2024/SR6) passing through the Proposed Wind Farm site

Proposed 110kV Substation

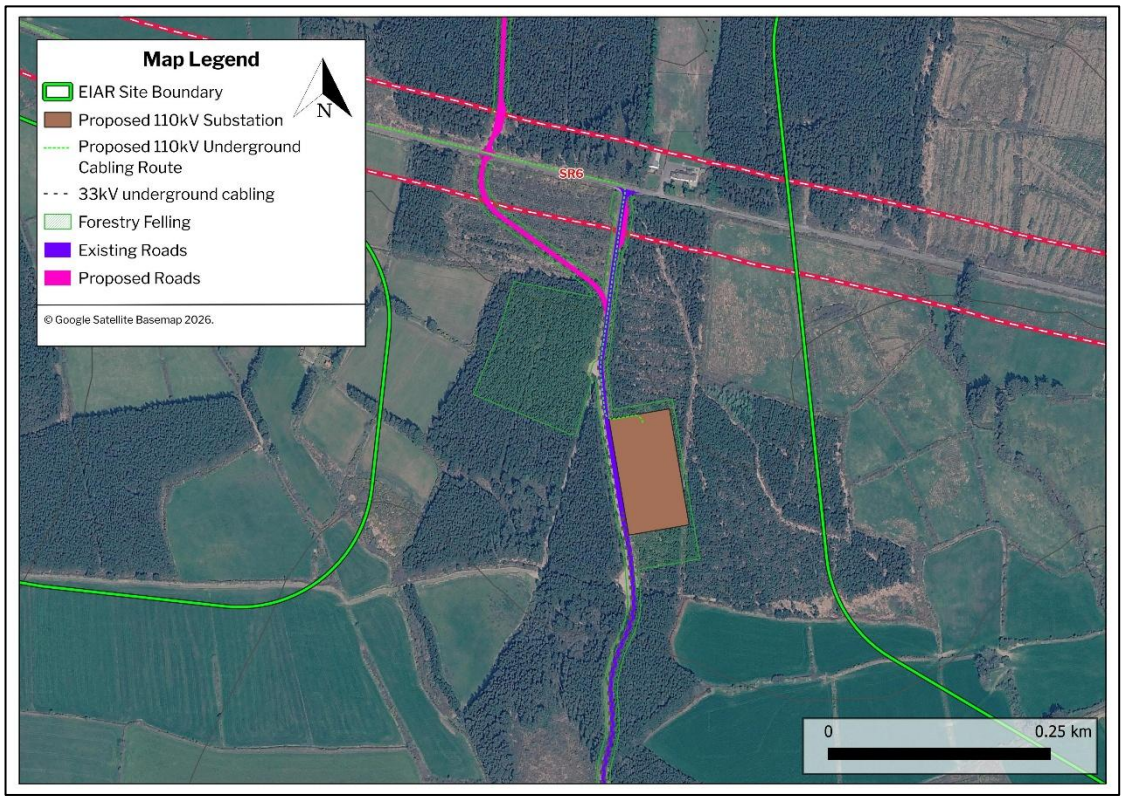


Figure 13-11 Aerial map of the location of the Proposed 110kV Substation, located south of the L2024/SR6 within the Proposed Wind Farm site

The Proposed 110kV Substation (mapped above in Figure 13-11) is set within a tract of commercial forestry and surrounded by mature trees, c.220m south of the L2024/SR6 at a lower elevation relative to the roadway to the north due to the sloping terrain. The landscape character of this part of the Proposed Wind farm site is heavily modified by forestry activities; see discussions on landscape and visual effects with regard to the Proposed 110kV Substation in Section 13.7.3.4 'Visual Effects on Designated Scenic Routes and Protected Views' which discusses the potential visual effects arising as a result of the Proposed 110kV Substation.

Proposed 220kV Loop-in Substation

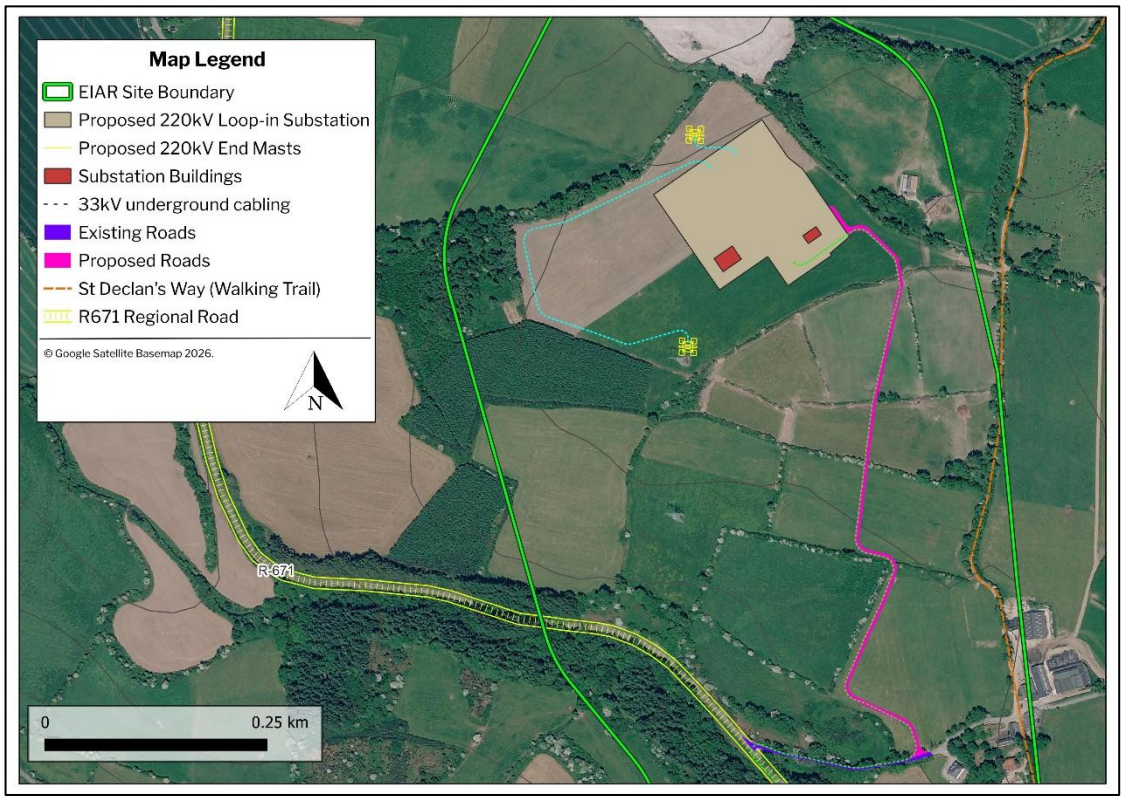


Figure 13-12 Aerial map of the location of the Proposed 220kV Loop-in Substation, in Ballycullane townland

The Proposed 220kV Loop-in Substation (mapped above in Figure 13-12) is located approximately 4.5km to the northwest of the nearest Proposed Turbine and is to be set within an agricultural field enclosed by mature boundary vegetation, approximately 500m from Regional Road R671 in the townland of Ballycullane. The landscape character of this part of the Site is characterised by agricultural use; see discussions on landscape and visual effects with regard to the Proposed 220kV Loop-in Substation in in Section 13.7.3.4.4 'Visual Effects on Major Transport Routes' which discusses the potential visual effects arising as a result of the Proposed 220kV Loop-in Substation.

13.4.4 Landscape Sensitivity of the Proposed Wind Farm site

The landscape sensitivity of the Proposed Wind Farm 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 13-6 below assesses indicators of landscape value for the Proposed Wind Farm site. The susceptibility to change and overall sensitivity rating of the site are then determined based on three factors: the assessment of value, the existing landscape character, and the nature of the Proposed Project.

Table 13-6 Indicators of Landscape Value and Susceptibility to Change for the Proposed Wind Farm site

Indicator	Evaluation
Landscape Designations	The Proposed Wind Farm site falls within 'Low Sensitivity' landscape designation and 'Preferred' landscape for wind energy development in the

Indicator	Evaluation
	WCCDP 2022-2028 (Map A8.3 and Waterford RES). One scenic route (SR6) passes through the north end of the site in E-W orientation.
Landscape Elements Quality / Condition	The condition of the landscape areas within the Proposed Wind Farm site is degraded in several locations due to commercial plantation and agriculture within pasture land.
Scenic / Aesthetic Qualities	The Proposed Wind Farm site has rural aesthetic qualities given the transitional upland setting and landform feature of Carronadavderg Hill. At the same time, the site has developed roadways, utility infrastructure and buildings as well as commercial plantations which offset the scenic quality.
Rarity or Conservation Interests	No sites of rarity or conservation interest are within the Proposed Wind Farm site. A comprehensive assessment of conservation interests of the Proposed Project is provided in the EIAR Chapter 6: '*Biodiversity*.'
Wildness / Naturalness	The Proposed Wind Farm site contains pockets of natural woodland, mostly along streams within the lower undulations of the terrain yet is primarily a mixture of landscape containing commercial plantation and pasture land which significantly lessens the degree of wildness.
Recreational Value	St Declan's Way walking trail passes through the western part of the Proposed Wind Farm site near the location of Proposed Turbines T22, T23, aligning with the local road network.
Cultural Meaning / Associations	No sites of popular cultural meaning or association are within the Proposed Wind Farm site. A full assessment of potential cultural heritage impacts is reported in Chapter 14: '*Cultural Heritage*.' According to Chapter 14, no 'Significant' effects on archaeological, architectural or cultural heritage resources are predicted within the site.

In consideration of the factors detailed in Table 13-6, the Proposed Wind Farm site is deemed to be of low landscape value, for the following reasons. It comprises a sparsely populated modified working landscape of commercial plantation and pasture land. The landscape has no unique or distinctive qualities of regional or national renown; however, one designated scenic route passes through the Proposed Wind Farm site adjacent to commercial forestry stands and agricultural fields. Working landscapes such as forestry and agricultural land within marginal uplands are commonly considered as generally unpopulated or sparsely populated landscape types of a large scale which can effectively accommodate wind energy development. Considering this, the Proposed Wind Farm site is deemed to have low susceptibility to change. On balance, the overall landscape sensitivity of the Proposed Wind Farm site is deemed 'Low.'

13.4.5 Guidance for Siting and Design in the Guidelines (DoEHLG, 2006) and Draft Guidelines (DoHPLG, 2019)

According to definitions of landscape character types in the Guidelines (DoEHLG, 2006) and Draft Guidelines (DoHPLG, 2019), the landscape type of 'Transitional Marginal Landscapes' is best suited to describe the Proposed Wind Farm site.

Key characteristics (Guidelines (DoEHLG, 2006), p.59; Draft Guidelines (DoHPLG, 2019), p.110):

- '***Transitional Marginal Landscapes****: Comprises something of both mountain moorland and farmland, thus involving a mix of small fields, tight hedgerows and shelterbelts.*
- *May include relatively rugged and rocky terrain, and thus a reasonable degree of spatial enclosure.*
- *Higher ground tends to be wet and boggy. Lower areas are usually cultivated and managed as fields.*
- *Houses and farmsteads are usually fairly common.*
- *This landscape type bridges the organised and intensively managed farmland and the more naturalistic moorland.*'

The key aspect for this landscape type to consider in siting and design of wind farms is given as:

> *'The essential key here is one of respect for scale and human activities. These landscapes are often relatively small-scale due to spatial enclosure provided by hills and wind energy developments should respond sensitively to this intimacy.'*

The siting and design guidance for wind energy developments within Transitional Marginal Landscapes are recommended as follows in '*Section 6.9 Landscape Character Types as a basis for guidelines*' of the Guidelines (DoEHLG, 2006) (p.52) and Draft Guidelines (DoHPLG, 2019) (p.104):

- '***Location:*** *As wind energy developments, for reasons of commercial viability, will typically be located on ridges and peaks, a clear visual separation will be achieved from the complexity of lower ground. However, wind energy developments might also be located at lower levels in extensive areas of this landscape type, where they will be perceived against a relatively complex backdrop. In these situations, it is important to minimise visual confusion such as the crossing by blade sets of skylines, buildings, utility lines and varied landcover.*

- ***Spatial Extent:*** *Wind energy developments in these landscapes should be relatively small in terms of spatial extent. It is important that they do not dominate but achieve a balance with their surrounds, especially considering that small fields and houses are prevalent.*

- ***Spacing:*** *All options are possible, depending on the actual landscape characteristics. However, irregular spacing is likely to be most appropriate, given the complexity of landform and land cover typical of these landscapes, and the absence of extensive swaths of fields of regular and rectilinear pattern.*

- ***Layout:*** *The likely location of wind energy developments on ridges suggests a linear or staggered linear layout whereas on broader hilltops they could be linear or clustered. Grid layouts are less likely to succeed aesthetically unless there is an open continuity of similar landcover.*

- ***Height:*** *In small-scaled enclosed areas, short turbines are preferred in order to avoid their spatial dominance and to ensure visual balance. However, where the upper ground is relatively open and visually extensive, taller turbines may be more appropriate.*

- ***Cumulative Effect:*** *This would have to be evaluated on a case-by-case basis, but great caution should be exercised. The spatial enclosure often found in transitional marginal landscapes is likely to preclude the possibility of seeing another wind energy development. However, should two or more wind energy developments be visible*

within a confined setting a critically adverse effect might result, depending on turbine height and wind energy development extent and proximity.'

Overall, the Proposed Turbines are sited on a mix of ridges and hillslopes, arranged in multiple clusters with irregular spacing of turbines and an appropriately staggered, linear layout with a range of turbine heights that follows the highly undulating terrain, and are sufficiently distanced from cumulative developments and enclosed visually by the terrain such that the potential for in-combination visibility with cumulative developments is minimised.

In terms of location, most of the Proposed Turbines are located on ridges and hillslopes to avoid visual confusion where there is clear separation from the complexity of lower ground. In terms of spatial extent, the Proposed Turbines will comprise a relatively wide spatial extent over a large scale, especially as viewed from the south along SR5. The Proposed Turbines will have a random layout which is appropriate given the undulation of the landscape. In terms of spacing, the Proposed Turbines are appropriately irregular among the clusters, though T22 and T23 are somewhat visually separated (as a neat unit) if viewed from some vantage points. In terms of layout and height, the Proposed Turbines follow a staggered and linear layout following the ridges and hillslopes, avoiding visual confusion. In terms of cumulative effects, there are no other wind energy developments sited within the same confined setting as the Proposed Turbines and the distance between the Proposed Turbines and cumulative developments within the same undulating terrain (approximately 4km) is enough that cumulative visibility and landscape effects of the developments in combination are likely to be limited; see discussions of cumulative effects in Section 13.7.4.

13.4.6 Wider Landscape Setting

13.4.6.1 Landscape Character of the LVIA Study Area

In the wider LVIA Study Area, the landscape character is primarily defined by upland mountainous terrain of the Comeragh Mountains and Knockmealdown Mountains orientated E-W across the north of the LVIA Study Area, with steep peaks from approximately 300m elevation to greater than 700m. To the west is the low-lying Blackwater River Valley that follows the river in N-S orientation, and the lowland plains of eastern Co. Cork are to the southwest.

13.4.6.2 Copper Coast UNESCO Global Geopark

A portion of the Copper Coast UNESCO Global Geopark, a nationally renowned geological and heritage landscape of very high value, is located in the northeastern portion of the LVIA Study Area. The Copper Coast landscape is designated as a UNESCO Global Geopark since 2001 however is not subject to UNESCO Heritage Site planning policy. The Copper Coast landscape area is divided into LCU-1C Copper Coast East and LCU-1D Copper Coast West which are designated within the WCCDP 2022-2028 Appendix 8 as 'Most Sensitive,' the highest landscape sensitivity rating in the development plan, defined with the characteristics of:

'Very distinctive features with a very low capacity to absorb new development without significant alterations of existing character over an extended area.'

While the Copper Coast landscape is not subject to UNESCO Heritage Site planning policy, the LVIA uses an extended 25km study area in order to include the Copper Coast landscape in the assessment and considers it a 'Very High' sensitivity landscape/visual receptor. One viewpoint (VP02) was captured from an area of the Copper Coast landscape which has 'Full' theoretical visibility and expansive, open views in the direction of the Proposed Turbines. Landscape and visual effects, including cumulative effects, on the Copper Coast landscape are reported in this LVIA in the following sections:

- Section 10345021.0.10344961.0.659448672 'Landscape and Visual Effects on Copper Coast UNESCO Global Geopark,'

› Section 13.7.4.1.3 'Cumulative Effects on Copper Coast UNESCO Global Geopark.'

13.4.7 Landscape Receptors Preliminary Analysis

13.4.7.1 Landscape Receptors Scoped In

The following landscape receptors identified in the LVIA Study Area were scoped in for assessment in the LVIA and are mapped below along with visual receptors in Figure 13-13 Visual Baseline Map; see the full detailed methodology in *Appendix 13-1* for the analysis of scoping landscape receptors in and out of assessment.

Table 13-7: Landscape Receptors Scoped in for Assessment in the LVIA

Receptor	Description	Theoretical Visibility	Onsite Visibility Appraisal	Scoped In
Copper Coast UNESCO Global Geopark	Co. Waterford designated landscape area of national renown for geological and heritage value.	Full to None.	Potential visibility from areas near the coast with open views to the southwest.	Yes.
Areas of 'Most Sensitive' Landscape Sensitivity	Co. Waterford areas of designated Landscape Sensitivity classified as 'Most Sensitive' or 'High Sensitivity' (in Map A8.3 of the WCCDP Appendix 8) falling within the LVIA Study Area (primarily comprising the Blackwater River Valley, Comeragh Mountains, Knockmealdown Mountains and the general coastline).	Full to None.	Potential visibility from some areas along the southern coastline, areas of the southern part of Comeragh Mountains, and areas of the southeastern part of Knockmealdown Mountains and one small area of the Blackwater River Valley.	Yes.
Carronadavderg Hill & Slievegrine Hill	Hills within the Proposed Wind Farm site falling under 'Low Sensitivity' designation in the WCCDP 2022-2028 based on landcover type of forestry/pastoral land.	Full.	Proposed Turbines are sited within close proximity to both hills.	Yes.
High Value Landscape	Co. Cork designated landscape area aligning with C-LCA-2 Broad Bay Coast, in the CCDP 2022-2028.	Full to None.	Potential visibility from the southern part of the landscape near Youghal.	Yes.

13.4.7.2 Landscape Receptors Scoped Out

In some cases, specific landscape 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.

Table 13-8: Landscape Receptors Scoped Out of the Assessment

Receptor	Description	Rationale for Scoping Out
High Value Landscapes	Co. Cork designated landscape area aligning with C-LCA-5 Fertile Plain with Moorland Ridge, in the CCDP 2022-2028, located at the western border of the LVIA Study Area.	The landscape area is located greater than 20km from the Proposed Turbines and has mostly no theoretical visibility.
Primary and Secondary Amenity Areas	Co. Tipperary designated Primary and Secondary Amenity Areas, in the TCDP 2022-2028, located at the northern border of the LVIA Study Area.	Both landscape areas are located mostly greater than 20km from the Proposed Turbines and have Little/No theoretical visibility or very small patches of Full theoretical visibility.

13.5 Visual Baseline

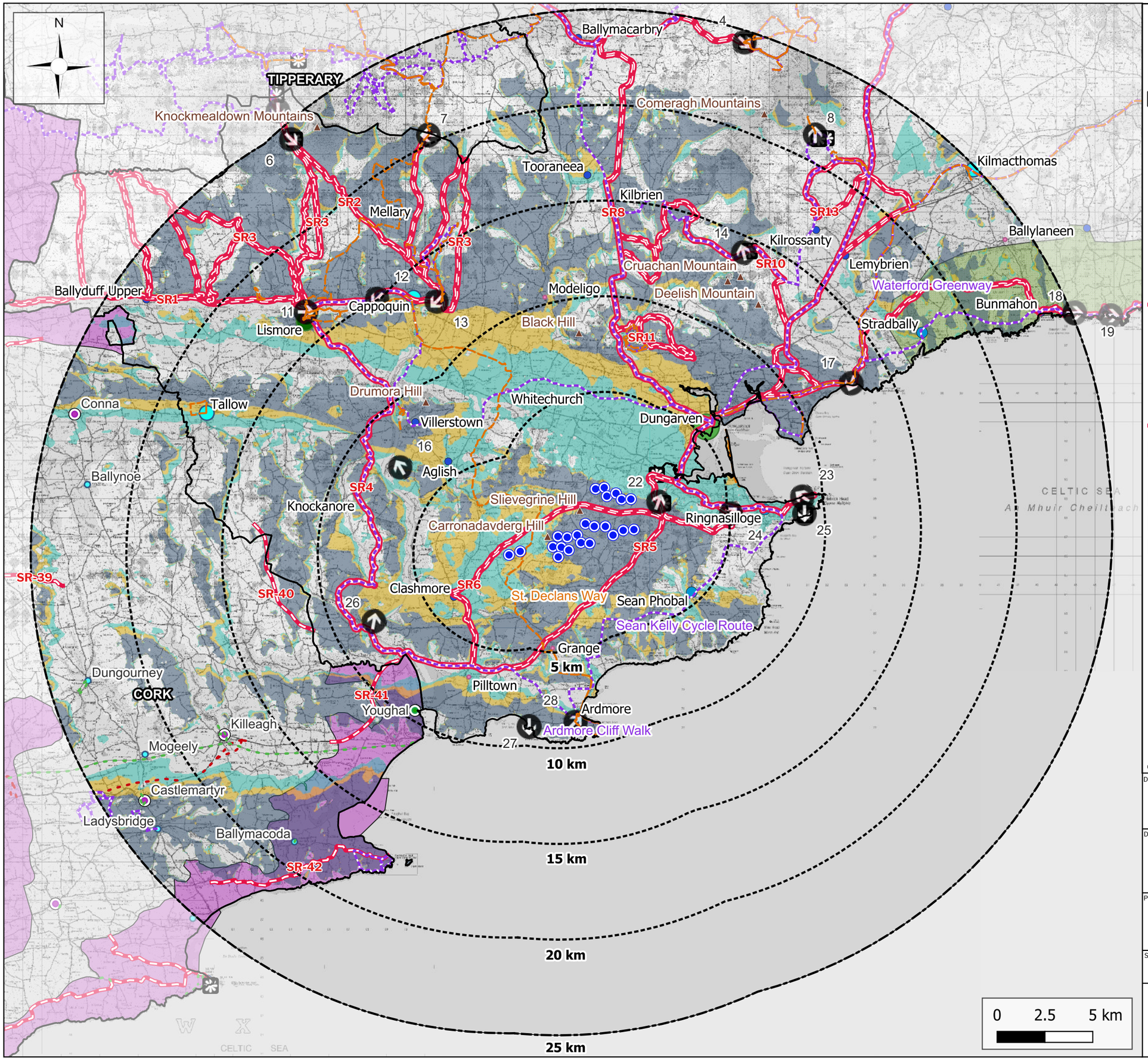
Figure 13-13 Visual Baseline Map below maps all identified visual receptors for the LVIA Study Area (except local residential receptors) and overlays the ZTV Map to indicate theoretical visibility at the receptor locations. Figure 13-14 maps 20 no. photomontage viewpoint locations (VP01-VP20) showing views of the Proposed Turbines, and one photomontage viewpoint showing views of the Proposed 220kV Loop-in Substation, selected for assessment.

The identified visual receptors include those at designated scenic routes and protected views as well as visitors to the Copper Coast UNESCO Global Geopark and other sensitive receptors as identified previously in Section 13.4 'Landscape Baseline.' Section 13.5.1 through Section 13.5.8 below report the relevant types of visual receptors, and Section 13.5.9 below provides the preliminary analysis and scoping of visual receptors, with rationale. The visual receptors are divided into:

- Designated Scenic Routes,
- Designated Protected Views,
- Recreational Routes,
- Popular Recreational, Cultural Heritage and Tourist Destinations,
- Tailte Éireann Viewing Areas,
- Key Settlements,
- Primary Transport Routes,
- Local Residential Receptors (mapped separately).

Finally, Section 13.5.10 presents the detailed descriptions and location information on the viewpoint selection for the LVIA, informed by the preliminary analyses of landscape receptors (from Section 13.4.7 above), the preliminary analysis of visual receptors (reported below in Section 13.5.9), and the analysis of cumulative context identifying other wind farms in the LVIA Study Area (presented in Section 13.6). The viewpoint selection for the LVIA includes:

- Photomontage viewpoints VP01-VP20 selected for assessment of visual impact of the Proposed Turbines in *Appendix 13-3*.
- Alternative photowire image locations with views towards the Proposed Turbines, used to support discussions on visual impact in Section 13.7.
- Additional views showing the Proposed 220kV Loop-in Substation.



Map Legend

- LVIA Study Area
- Ireland County Boundaries
- EIAR Site Boundary
- Proposed Turbines

National Level Visual Receptors

- Copper Coast UNESCO Global Geopark
- Greenways & Cycling Trails
- Tailte Éireann Viewing Points

Co. Waterford Visual Receptors

- Protected Views (WCCDP 2022-2028)
- Scenic Routes (WCCDP 2022-2028)
- Recreational Routes

Co. Cork Visual Receptors

- Roadways
- Walkways
- Scenic Routes (CCDP 2022-2028)
- High Value Landscapes (CCDP 2022-2028)

Zone of Theoretical Visibility (ZTV)

- 1-8 Turbines Theoretically Visible
- 9-16 Turbines Theoretically Visible
- 17-23 Turbines Theoretically Visible

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Drawing No.

Figure 13-13

Drawing Title

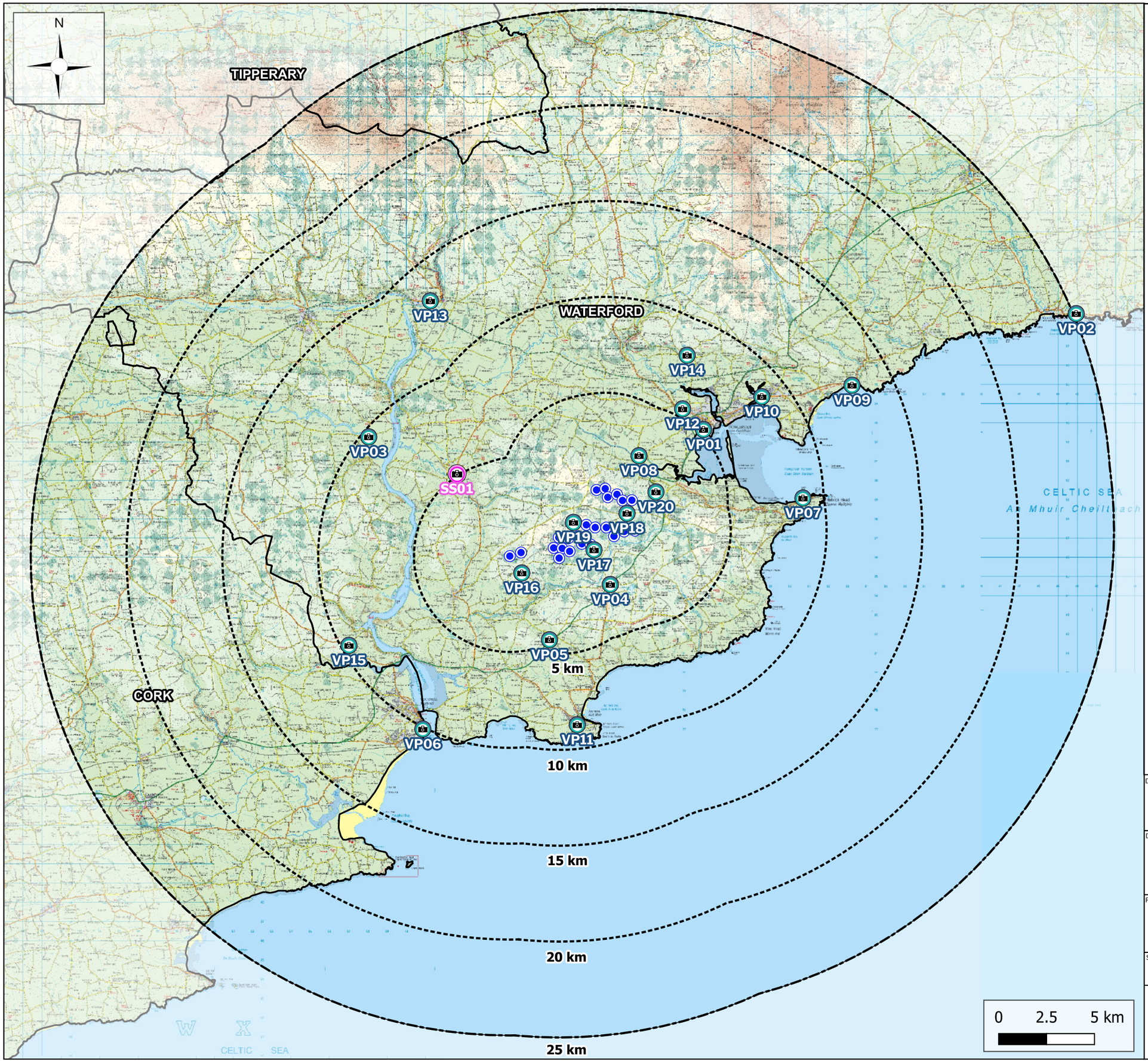
Visual Baseline Map with ZTV

Project Title

Slievegrine Renewable Energy Development, Co. Waterford

Scale	Project No.	Date	Drawn By	Checked By
1:191,000	240740	2026.09.24	GL	RS

MKO Planning and Environmental Consultants



Map Legend

- LVIA Study Area
- Ireland County Boundaries
- Proposed Turbines
- Photomontage Viewpoint Locations
- Viewpoint of Proposed 220kV Loop-in Substation

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Drawing No.

Figure 13-14

Drawing Title

Photomontage Viewpoint Location Map

Project Title

Slievegrine Renewable Energy Development, Co. Waterford

Scale	Project No.	Date	Drawn By	Checked By
1:191,000	240740	2026.09.24	GL	RS

MKO Planning and Environmental Consultants

13.5.1 Designated Scenic Routes

9 no. designated scenic routes in Co. Waterford (WCCDP 2022-2028) with potential visibility of the Proposed Turbines are located within the LVIA Study Area; of these, two scenic routes pass directly through or are adjacent to the Proposed Wind Farm site: SR5 to the east and SR6 to the west, with the two scenic routes creating a loop around/through the Proposed Wind Farm site, and these scenic routes are of primary focus in the LVIA. Other scenic routes which were found to have potential visibility of the Proposed Turbines are also scoped in. No designated scenic routes or views in Co. Cork (CCDP 2022-2028) were found to have potential visibility of the Proposed Turbines. No designated scenic routes or views in Co. Tipperary (TCDP 2022-2028) are located within the LVIA Study Area.

13.5.2 Designated Protected Views

5 no. designated protected views in Co. Waterford (WCCDP 2022-2028) with potential visibility of the Proposed Turbines are located within the LVIA Study Area; of these, one protected view is located within 5km and is directed away from the Proposed Turbines, while other protected views are located beyond 5km or 10km and in some cases align with designated scenic routes.

13.5.3 Recreational Routes

4 no. recreational routes (national or regional walking / cycling trails) were identified with potential visibility of the Proposed Turbines and other infrastructure of the Proposed Project; of these, one walking trail which follows local roads passes directly through the Proposed Wind Farm site and one regional scale cycling route that circles the LVIA Study Area along road networks comes within 5km of the Proposed Turbines at two different locations along the route. Two additional routes are each located beyond 5km.

13.5.4 Popular Recreational, Cultural Heritage and Tourist Destinations

No popular recreational, cultural heritage and tourist destinations with potential visibility of the Proposed Turbines were identified in the LVIA Study Area.

13.5.5 Tailte Éireann Viewing Areas

No Tailte Éireann Viewing Areas identified in the LVIA Study Area were scoped in (9 no. total identified), owing to the areas being located a substantial distance from the Proposed Turbines, or having a localised nature of views, or views being directed away from the Proposed Turbines.

13.5.6 Settlements

According to the settlement hierarchies reported in local policy, only one rural node, Grange, within 5km has potential visibility of the Proposed Turbines. One Key Town, Dungarvan (which features Dungarvan Castle) and one Main Town, Youghal, are located beyond 5km of the Proposed Turbines and have potential visibility. One Rural Village, Aglish, is located beyond 5km and was scoped in to assess the potential for cumulative visual effects.

13.5.7 Primary Transport Routes

Onsite visibility appraisal determined that most visibility of the Proposed Turbines will occur within 3-5km of the Proposed Turbines from the local, regional and national road network surrounding the

Proposed Wind Farm site. Within 3-5km, one national road and one local road align with designated scenic routes (N25 / SR5 and L2024 / SR6) and one regional road is to the west of the Proposed Wind Farm site. Beyond 5km, elevated vantage points along the regional road R634 above the Blackwater River Valley were found to have potential visibility within long-distance landscape views, and were scoped in.

13.5.8 Local Residential Receptors

While the Proposed Wind Farm is sited within a sparsely populated landscape, the LVIA has identified local residential receptors within 3km of the Proposed Turbines to focus on the assessment of localised visual effects. Two areas of local receptors are considered central to the Proposed Wind Farm site, and four areas of local receptors surround the Proposed Wind Farm site. The specific townlands are identified in the scoping tables below. Local residential receptors are mapped within the specific section of this LVIA which assesses the visual impacts on them; refer to Section 13.7.3.4.5 'Visual Effects on Local Residential Receptors' and Figure 13-27 'Visibility Appraisal of Local Residential Receptors.'

13.5.9 Visual Receptors Preliminary Analysis

After identifying all visual receptors in the LVIA Study Area, the preliminary analysis was carried out to determine the likely visibility of the Proposed Turbines informed by ZTV mapping and on-site visibility appraisals. Following this, the final list of visual receptors was selected for further assessment as part of this LVIA using viewpoint selection and photomontage visualisation, supplemented by photowire, or early-stage 'draft' photomontage, analysis. Viewpoints, photomontages and photowires are explained below in Section 13.5.10.

13.5.9.1 Visual Receptors Scoped In

The following visual receptors identified in the LVIA Study Area were scoped in for assessment in the LVIA and are mapped above in Figure 13-13 'Visual Baseline Map' (except local residential receptors); see the full detailed methodology in *Appendix 13-1* for the analysis of scoping receptors in and out of assessment. Within Table 13-9, the content in italics indicates quoted descriptions taken from the WCCDP 2022-2028 Appendix 8.

Table 13-9 Visual Receptors Scoped in for Assessment in the LVIA

Receptor	Description	Theoretical Visibility	On-site Visibility Appraisal	Scoped In
Within 5km				
Designated Scenic Routes central/ adjacent to the site	W-SR6: '*North from Kinsalebeg to Clashmore on the R671, east at Clashmore along third class route to N25 at Gorteen*,' passing through the Proposed Wind Farm site.	Full and mixed.	Potential visibility along the route.	Yes.
	W-SR5: '*From Youghal Bridge east along the N25 to Dungarvan*;' passes within 1-2km of the Proposed Turbines, directly east of the Proposed Wind Farm site.	Full and mixed.	Potential visibility along the route.	Yes.

Receptor	Description	Theoretical Visibility	On-site Visibility Appraisal	Scoped In
Protected Views within 5km	W-V22: '*Panoramic View over Dungarvan Harbour from N25 layby at Barranalira. The focus of this view is the town of Dungarvan.*' The marine waters and south end of the Comeraghs are an important feature of this view.	Partial.	Potential visibility of the Proposed Turbines in the opposite direction of the protected view.	Yes.
Recreational Routes within 5km	St. Declan's Way walking trail designated in the WCCDP 2022-2028, passes N-S orientation through the Proposed Wind Farm site, passing within approx. 300m of T23.	Full within 5km.	Potential visibility of Proposed Turbines along the route, to the east and west.	Yes.
	Sean Kelly Cycling Trails – Heritage Route: 73km cycling trail on roadways which circles through the LVIA Study Area and passes within 5km of the Proposed Turbines at two locations: near the intersection of SR6 and SR7, east of the Proposed Wind Farm site and at the Liskeelty crossroads on R673.	Primarily Partial.	Potential visibility along the route from the southeast.	Yes.
Settlements within 5km	Grange: Rural Node.	Full and mixed.	Potential visibility from the outskirts of the settlement.	Yes.
Transport Routes within 5km	National, regional and local road networks within 3-5km, focusing on: › N25 / SR5 to the east, › L2024 / SR6 to the west and passing through the site, › R671 to the west.	Full and mixed on all routes.	Potential visibility along all routes.	Yes.
Areas of Local Residential Receptors central to the Proposed Wind Farm site	Area of Monacullee, Clashbrack, Knocknahoola, Reanaviddoge.	Full.	Potential visibility from both areas.	Yes.
	Area of Knockatoor, Carronbeg.	Partial.		Yes.
Areas of Local	North & Northwest – Ballyguiry West/East, Ballycullane Beg,	Partial.	Potential visibility from	Yes.

Receptor	Description	Theoretical Visibility	On-site Visibility Appraisal	Scoped In
Residential Receptors surrounding the Proposed Wind Farm site	Ballycullane More, Glen Beg, Glen More, Windgap, Toor North, Reamanagh West, Mountstuart, Lackenagreany.		most areas surrounding the Proposed Turbines.	
	West & Southwest – Reanaboola, Lackamore, Ballindrumma, Ballinure, Knockanearis, Ballynamutina, Knockaniska, Ballycurrane North/ South, Ballycurrane, Cladagh.	Partial.		Yes.
	South & Southeast – Glenlicky, Toor, ToorSouth, Grallagh, Boherboy, Reanaskeha, Monameean, Moyng Little, Carrigeen, Reanagullee, Ahaun, Coolroe.	Full.		Yes.
	East – Pulla, Gorteen, Readoty, Barranalira, Ballyharrahan.	Partial to Full.		Yes.
Beyond 5km				
Designated Scenic Routes	W-SR1: '*The R666 heading west from the County border to Cappoquin.*'	Full and mixed.	Potential visibility along the route.	Yes.
	W-SR4: '*Third class route from the mouth of the Glendine River, crossing the River Bride and following the Blackwater north, turning west to Lismore.*'	Full and mixed.	Potential visibility along the route.	Yes.
	W-SR7: '*East from Gorteen along third class route via Monamraher to the R674. East to Helvick Head, west to N25.*'	Mixed.	Potential visibility along the route.	Yes.
	W-SR8: '*North-west from Dungarvan to Tooraneena on the R672. Third class North to Ballymacarbry. Join R671 to Clonmel taking the R678 and turning south for third class route through the Comeraghs.*'	Mixed.	Potential visibility along the route.	Yes.
	W-SR11: '*Third class circular route off R672 to Kilgobnet.*'	Full along most of the route.	Potential visibility along the route.	Yes.
	W-SR13: '*R676 South from Clonmel to Lemybrien. N25 south to The Pike. Circular route along third class road south to R675, crossing N25 via*	Full within 10km.	Potential visibility along the route.	Yes.

Receptor	Description	Theoretical Visibility	On-site Visibility Appraisal	Scoped In
	Garrynageragh, east along R675 and north via Garranbaun and third-class road returning to The Pike.'			
	W-SR14: '*From Ballyvoyle Head east on the R675 to the junction with the R677. Continuing south along the R675 to Bunmahon, east via Kilmurrin and Annestown and Northeast to Fennor. East onto Tramore and north to Waterford City.*'	Full and mixed.	Potential visibility from a few areas along the route.	Yes.
Designated Protected Views	W-V17: '*Knockyoolahan East on Waterford Greenway looking to Ballynacourty Headland and An Rinn. The focus of this view is on Ballynacourty Headland and the hilly headland of An Rinn.*'	Full.	Potential visibility at great distance.	Yes.
	W-V13: '*View from 1916 Memorial East of Cappoquin. The focus of this view is the surrounding countryside. The hills in the background are an important feature of this view.*'	Full.	Potential visibility at great distance in successional view compared to the direction of the Proposed Turbines.	Yes.
	W-V23: '*Layby Helvick Head Harbour. This view is from the viewing platform leading off the layby at Helvick harbour. The focus of this view is the north shore of Dungarvan Bay. The south end of the Comeraghs are an important feature of this view.*'	Partial.		Yes.
	W-V28: '*Ardmore Round Tower looking over Ardmore Bay. This view is from the road as it approaches the monastery from the south and from within the monastery grounds. The focus of this view is the Round Tower and the panoramic view north over Ardmore and coast.*'	Full.		Yes.
Recreational Routes	Waterford Greenway: 46-kilometre off-road cycling and walking trail following an old railway line from Waterford City to Dungarvan.	Alternating areas of Full and None.	Potential visibility at great distance.	Yes.
	Ardmore Cliff Walk. 4-km coastal loop trail in County Waterford that loops around Ardmore Head and Ram Head overlooking Ardmore Bay and features	Full to None.	Potential visibility.	Yes.

Receptor	Description	Theoretical Visibility	On-site Visibility Appraisal	Scoped In
	panoramic ocean views alongside local historic landmarks.			
Settlements	› Dungarvan (Key Town) & Dungarvan Castle which sits within the town centre. › Youghal: Main Town. › Aglish: Rural Village.	Partial to Full.	Potential visibility from the settlements.	Yes.
Transport Routes	Long-distance landscape views from west of the Blackwater River Valley along R634 Regional Road.	Full.	Potential visibility at long distance.	Yes.

13.5.9.2 Visual Receptors Scoped Out

In some cases, visual receptors were 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. These visual receptors and the rationale for scoping them out of the assessment are provided in Table 13-10 below. Within Table 13-10, the content in italics indicates quoted descriptions taken from the WCCDP 2022-2028 Appendix 8.

Table 13-10 Rationale for Visual Receptors Scoped Out

Receptor	Description	Rationale for Scoping Out
Up to 10km		
Tailte Éireann Viewing Areas	No.25 – *Panoramic view (330 degrees) over Dungarvan from Old Parish Road*;' same as WCCDP 2022-2028 protected view V24.	Protected view is in the opposite direction of the Proposed Turbines.
	No.151 – '*Panoramic view (180 degrees) over Dungarvan Harbour from N25 at Barranalira*;' same as WCCDP 2022-2028 protected view V22.	Same as above.
	No.189 – '*View overlooking Dungarvan Harbour*.'	Same as above.
Settlements	› Sean Phobal: Small Rural Town. › Clashmore: Rural Village. › Ringnasilloge: Small Rural Town. › Aglish: Rural Village. › Villerstown: Rural Village. › Whitechurch: Rural Node.	Visibility is unlikely due to low elevation of the settlement and nature of visual screening in the surrounding area (topography and/or vegetation, etc.)
Beyond 10km		
	Co. Waterford SR2, SR3, SR9, SR10.	

Receptor	Description	Rationale for Scoping Out
Designated Scenic Routes	Co Cork SR39, SR40, SR41, SR42.	Visibility from these scenic routes is very unlikely due to distance from the site and intervening visual screening (vegetation, topography, etc.).
Designated Protected Views	W-V25: '*Layby South Face of An Rinn Headland. The focus of this view is the open ocean and shore cliffs to the south, and Dungarvan and the Comeraghs to the north.*'	No theoretical visibility.
	W-V26: '*Ardsallagh. This view is from the local road L6040 to Ardsallagh Quay viewing north over the River Blackwater.*'	
	W-V11: '*Lismore Bridge East and West. The focus of this view is Lismore Castle. The woods surrounding the feature and the River Blackwater are important features of this view.*'	No visibility due to the distance of this viewing area from the Proposed Turbines and the localised nature of the view focus in a different direction from the Proposed Turbines.
	W-V12: '*Picnic Area between Cappoquin and Lismore along River Blackwater. The focus of this view is the River Blackwater and its opposite bank.*'	
	W-V14: '*Mama Road. The focus of this view is the view looking down the mountain valley at the countryside. The enclosing mountain walls and covering grass and forestry are important features of this view.*'	
	W-V4: '*Nire Valley. The focus of this view is the surrounding countryside and Comeragh Mountains.*'	
	W-V16: '*Blackwater Valley from layby West of Aglish. The focus of this view is the River Blackwater and the hills on it's sides. The Knockmealdown mountains in the background are an important feature of this view.*'	
	W-V8: '*Mahon Falls. The focus of this view is the Mahon Falls to the north and the view down the valley over the countryside to the south. The enclosing mountain walls and covering grass are important features of this view.*'	

Receptor	Description	Rationale for Scoping Out
	W-V6: '*Sugarloaf Horseshoe Walk Parking area - Waterford / Tipperary Border. The focus of this view is the Waterford countryside. The forestry is an important feature of this view.*'	Very limited potential visibility due to the substantial distance of this viewing area from the Proposed Turbines.
Tailte Éireann Viewing Areas	No.102 – Same as WCCDP 2022-2028 protected view V25 (see above).	No theoretical visibility.
	No.193 – Same as WCCDP 2022-2028 protected view V14 (see above).	No visibility due to the distance of this viewing area from the Proposed Turbines and the localised nature of the view focus in a different direction from the Proposed Turbines.
	No.57 and No.96 – Two views very close together; both points are the same as WCCDP 2022-2028, V8 (see above).	
	No.160 – Same as WWCCDP 2022-2028 protected view V4 (see above).	
	No.45 – Same as WCCDP 2022-2028 V6 (see above).	Very limited potential visibility due to the distance of this viewing area from the Proposed Turbines.

13.5.10 Photomontage Viewpoint (VP) Selection

Following the Landscape Baseline and Visual Baseline exercises, 20 no. photomontage viewpoint locations were selected to represent views towards the Proposed Turbines and imagery was captured at these locations for full assessment in the LVIA including the consideration of potential for cumulative effects. Photomontages VP01-VP20 provide a good geographical spread of locations throughout the LVIA Study Area. All VPs are mapped above in Figure 13-14 'Viewpoint Location Map,' and an enlargement of VP locations is mapped below in Figure 13-15 for better clarity of the locations closer in surrounding the Proposed Wind Farm site.

Table 13-11 Summary of Photomontage Viewpoints VP01-VP20

Viewpoint No.	Description	Grid Ref. (ITM)
VP01	**Dungarvan:** View from Co. Waterford Scenic Route 5 and R911 Regional Road within the townscape of Dungarvan on Youghal Road, located on the Sean Kelly Cycling Route. Approximately 5.3km northeast of the nearest Proposed Turbine.	E: 625454. N: 592709.
VP02	**Copper Coast Geopark:** View from the Copper Coast UNESCO Global Geopark on Co. Waterford Scenic Route 14 and the R675 in Knockmahon. Approximately 25.1km northwest of the nearest Proposed Turbine.	E: 644902. N: 598754.
VP03	**SR4 at Camphire Bridge:** View from Co. Waterford Scenic Route 4 at Camphire Bridge crossing of L6020. Approximately 9.6km northwest of the nearest Proposed Turbine.	E: 607985. N: 592326.

Viewpoint No.	Description	Grid Ref. (ITM)
VP04	**SR5 / N25 at Mweeling:** View from Co. Waterford Scenic Route 5 and the N25 National Road in the townland of Mweeling. Approximately 2.3km south of the nearest Proposed Turbine.	E: 620590. N: 584628.
VP05	**SR5 / N25 at Ballybrusa West:** View from Co. Waterford Scenic Route 5 and N25 National Road in the townland of Ballybrusa West. Approximately 4.3km south of the nearest Proposed Turbine.	E: 617415. N: 581746.
VP06	**Youghal:** View from R634 Regional Road in the town of Youghal, Co. Cork. Approximately 10.1km southwest of the nearest Proposed Turbine.	E: 610807. N: 577089.
VP07	**SR7 at Helvick Head Harbour:** View from Co. Waterford Scenic Route 7 and Protected View 23 Helvick Head Harbour. Approximately 8.9km east of the nearest Proposed Turbine.	E: 630644. N: 589134.
VP08	**L2039 at Coolnagour:** View from L2039 Local Road northeast of the Proposed Wind Farm site near the townland of Coolnagour. Approximately 2.3km northeast of the nearest Proposed Turbine.	E: 622087. N: 591345.
VP09	**Protected View 17 Knockyoolahan East:** View southwest from the location of Protected View 17 Knockyoolahan East at the junction of Co. Waterford SR13 and SR14, looking southwest towards Ballyacourty Headland and An Rinn, located on the Waterford Greenway. Approximately 13.0km northeast of the nearest Proposed Turbine.	E: 633203. N: 595020.
VP10	**SR13 at Barnawee Bridge:** View from Co. Waterford Scenic Route 13 and the R675 Regional Road, northeast of Dungarvan and Barnawee Bridge. Approximately 8.7km northeast of the nearest Proposed Turbine.	E: 628497. N: 594423.
VP11	**Ardmore Round Tower:** View north from the location of Protected View 28 Ardmore Round Tower on New Line Road at Ardocheasty townland, located on the Ardmore Cliff Walk. Approximately 8.7km south of the nearest Proposed Turbine.	E: 618867. N: 577312.
VP12	**SR8 at Luskanargid:** View from Co. Waterford Scenic Route 8 and the R672 Regional Road northwest of Dungarvan at Luskanargid townland, located on the Sean Kelly Cycling Route. Approximately 5.4km northeast of the nearest Proposed Turbine.	E: 624363. N: 593786.
VP13	**SR1 at Cappoquin:** View from Co. Waterford Scenic Route 1 in the town of Cappoquin, in close proximity to Protected View 13. Approximately 13.1km northwest of the nearest Proposed Turbine.	E: 611197. N: 599420.
VP14	**SR11 at Kilgobnet:** View from Co. Waterford Scenic Route 11 in the townland of Kilgobnet. Approximately 8.1km northeast of the nearest Proposed Turbine.	E: 624598. N: 596581.
VP15	**Killea above the Blackwater River Valley:** View from the townland of Killea near the R634 Regional Road, representing long-distance open	E: 606952. N: 581452.

Viewpoint No.	Description	Grid Ref. (ITM)
	landscape views from west of Blackwater River Valley. Approximately 9.6km southwest of the nearest Proposed Turbine.	
VP16	**Ballycurrane:** View from the townland of Ballycurrane on an unnamed local road, south of Proposed Turbines T22 and T23. Approximately 1.1km south of the nearest Proposed Turbine.	E: 615971. N: 585229.
VP17	**Drumslig:** View from the townland of Drumslig on the L2023 Local Road where it passes through the Proposed Wind Farm site, southeast of Carronadavderg Hill. Selected to show the landscape context within the centre of the Proposed Wind Farm site. Approximately 330m south of the nearest Proposed Turbine.	E: 619740. N: 586432.
VP18	**SR6 in Reanaviddoge:** View from Co. Waterford Scenic Route 6 in the townland of Reanaviddoge, within the Proposed Wind Farm site. Approximately 700m south of the nearest Proposed Turbine.	E: 621463. N: 588339.
VP19	**Toor North:** View from the L2023 Local Road in the townland of Toor North within the Proposed Wind Farm site. Approximately 685m west of the nearest Proposed Turbine.	E: 618668. N: 587869.
VP20	**SR5 / N25 at Windgap:** View from Co. Waterford Scenic Route 5 and N25 National Road at the Windgap/L2038 crossroad. Approximately 1.3km northeast of the nearest Proposed Turbine.	E: 622973. N: 589455.

Alternative Photowire Image Locations with Views towards the Proposed Turbines

11 no. additional photowire image locations (PW-A to PW-K) classified as Type 3 Visualisations in the LI TGN 06/18 are presented in this LVIA to aid discussions of visual effects in the subsequent sections; these images constitute early-stage draft photomontage imagery which were not brought forward for the production of photomontages but have been used to inform the assessment of visual receptors in the LVIA. The images are therefore draft and do not include modelling of cumulative permitted and proposed developments in the LVIA Study Area. All photowire images are presented in 90-degree views (except PW-H, presented in 180-degree view) and the photowires are not assessed in *Appendix 13-3*, which assesses photomontage viewpoints only. All photowire image locations are mapped below in Figure 13-15.

- PW-A: Dungarvan town, SR13/R911, Sean Kelly Cycling Route, setting of Dungarvan Castle, distance from the Proposed Turbines: 6.4km.
- PW-B: SR5/Protected View V22 on the N25, distance: 1.5km.
- PW-C: SR5/N25 at L2024, distance: 1.8km.
- PW-D: SR6 at Monacullee, distance: 980m.
- PW-E: Church in Clashmore near SR6, distance: 3.1km.
- PW-F: L2032 in Ballyguiry Upper, distance: 1.1km.
- PW-G: Seak Kelly Cycling Route in Liskeelty, distance: 4.1km.
- PW-H: St Declan's Way in Carronbeg, distance: 350m.
- PW-I: SR6 and St Declan's Way in Carronadavderg townland, distance: 600m.
- PW-J: SR6 in Ballynamultina, distance: 1.3km.
- PW-K: Aglish, distance: 5.8km.

Additional Views showing the Proposed 220kV Loop-in Substation

Due to the location of the Proposed 220kV Loop-in Substation on the brow of a hill in agricultural fields, one additional photomontage, SS01, was captured and specifically modelled to represent views towards the Proposed 220kV Loop-in Substation from nearby local receptors. SS01 is a Type 4 Visualisation and does not show the Proposed Turbines. SS01 is presented in a separate volume, EIAR Volume 2B: 220kV Substation Visualisation, and is assessed for visual impact in *Appendix 13-3*. In addition, two photowires (Type-3 Visualisations) representing alternative views towards the Proposed 220kV Loop-in Substation from other locations in the nearby vicinity are included within the chapter text to support discussions on visual effects in Section 13.7.3.4.4. As with SS01, photowires PW-L and PW-M show only the Proposed 220kV Loop-in Substation and do not show the Proposed Turbines. The locations of photomontage SS01 and photowires PW-L and PW-M are mapped below in Figure 13-15.

- Photomontage SS01 – Proposed 220kV Loop-in Substation: View of the Proposed 220kV Loop-in Substation from the R671 Regional Road near a local road junction in the townland of Ballycullane, facing southeast towards the proposed infrastructure. Selected to show only the Proposed 220kV Loop-in Substation and not the Proposed Turbines, which are not visible from this location. Approximately 584m from the Proposed 220kV Loop-in Substation. E: 612596, N: 590402.
- PW-L: L2011 in Shanakill facing north towards the Proposed 220kV Loop-in Substation, distance from the proposed infrastructure: 933m.
- PW-M: Unnamed local road in Graigue facing northwest towards the Proposed 220kV Loop-in Substation, distance from the proposed infrastructure: 550m.

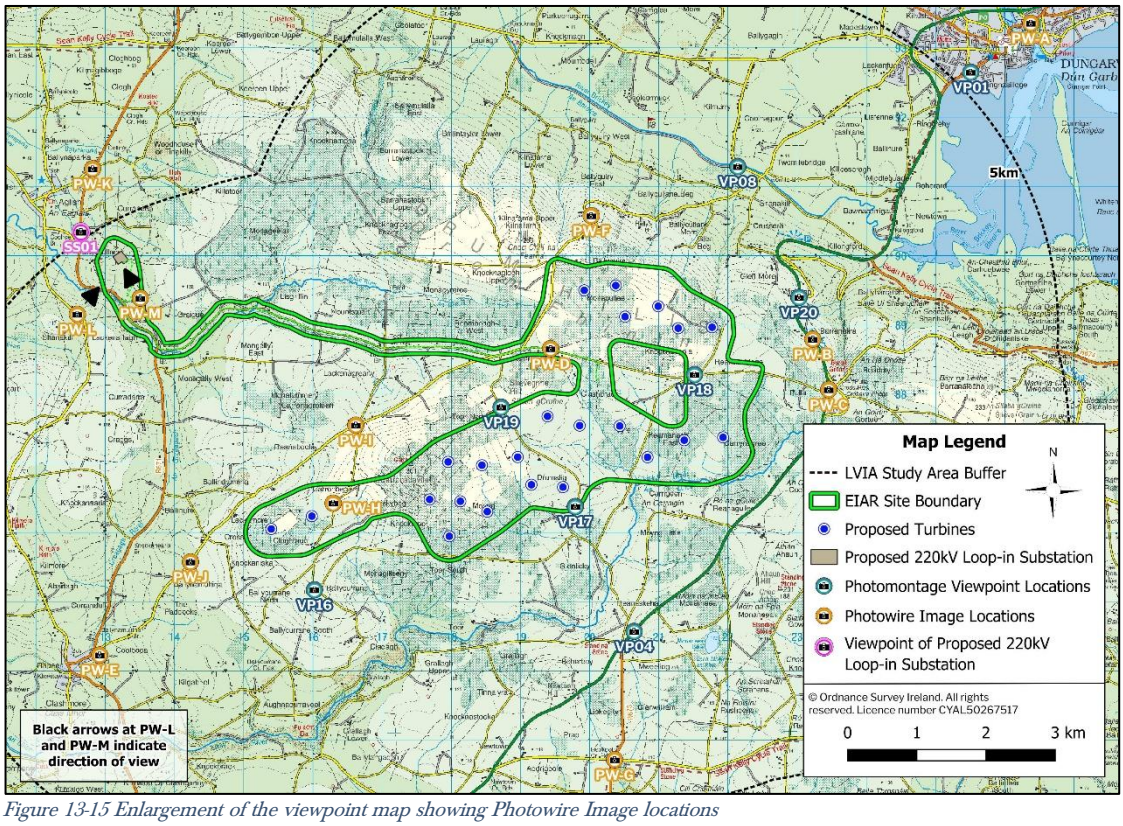


Figure 13-15 Enlargement of the viewpoint map showing Photowire Image locations

13.6 Cumulative Context

13.6.1 Wind Farms in the LVIA Study Area

Table 13-12 below lists wind farm developments identified within the LVIA Study Area which are included in the photomontage graphics and cumulative impact assessment for this LVIA; these are mapped below in Figure 13-16 'Cumulative Context Map.'

Table 13-12 Cumulative Wind Farms identified in the LVIA Study Area

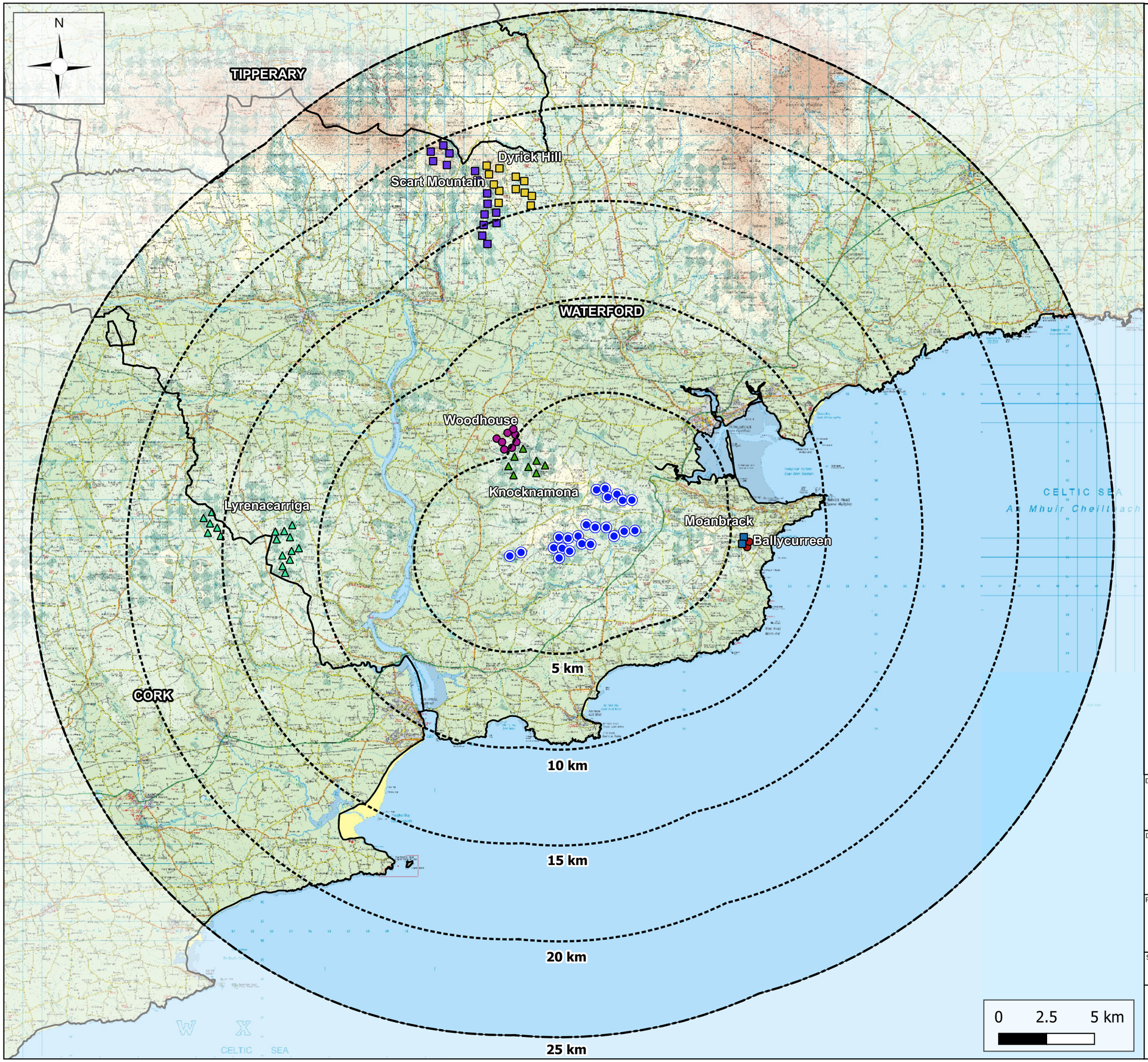
Cumulative Wind Farm Name	Status	No. of Turbines	Distance to Proposed Turbines	Hub Height	Tip Height
Knocknamona Wind Farm	Permitted	8 no.	3.3km	90-92.5m	159m
Woodhouse Wind Farm	Existing	8 no.	4.9km	75-80m	125-126m
Moanbrack Wind Farm	Proposed	2 no.	5.6km	79m	120m
Ballycureen Wind Farm	Existing	2 no.	5.9km	79m	120m
Lyrenacarriga Wind Farm	Permitted	17 no.	11.0km	83.5m	150m
Scart Mountain Wind Farm	Proposed	15 no.	14.0km	102.5-110.5m	179.5-185m
Dyrick Hill Wind Farm	Proposed	12 no.	15.2km	104m	185m

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

The methodology and rationale for the search process of identifying cumulative wind farms for this LVIA are reported in *Appendix 13-1*. The appendix includes the process for assessment of cumulative landscape and visual effects including how cumulative wind farms are visually presented within the *Photomontage Booklet*.

13.6.2 Potential for Cumulative Landscape and Visual Effects

In terms of potential cumulative landscape effects, the existing Woodhouse Wind Farm and permitted Knocknamona Wind Farm are set within the same landscape character area and same undulating transitional upland terrain as the Proposed Turbines. However, the distance between the developments (approximately 4km) is enough that cumulative landscape effects in terms of material alteration are not likely. Considering the potential for cumulative visual effects, Figure 13-17 maps the theoretical visibility of cumulative wind energy developments in the LVIA Study Area with the Proposed Turbines. The greatest potential for cumulative visibility is to the northwest within 5km, with the existing Woodhouse and permitted Knocknamona wind farms. See discussions of cumulative landscape and visual effects in Section 13.7.4.



Map Legend

- LVIA Study Area
- Ireland County Boundaries
- Proposed Turbines

Cumulative Wind Farms

- Woodhouse — Existing
- Ballycurreen — Existing
- Knocknamona — Permitted
- Lyrenacarriga — Permitted
- Moanbrack — Proposed
- Scart Mountain — Proposed
- Dyrick Hill — Proposed

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Drawing No.

Figure 13-16

Drawing Title

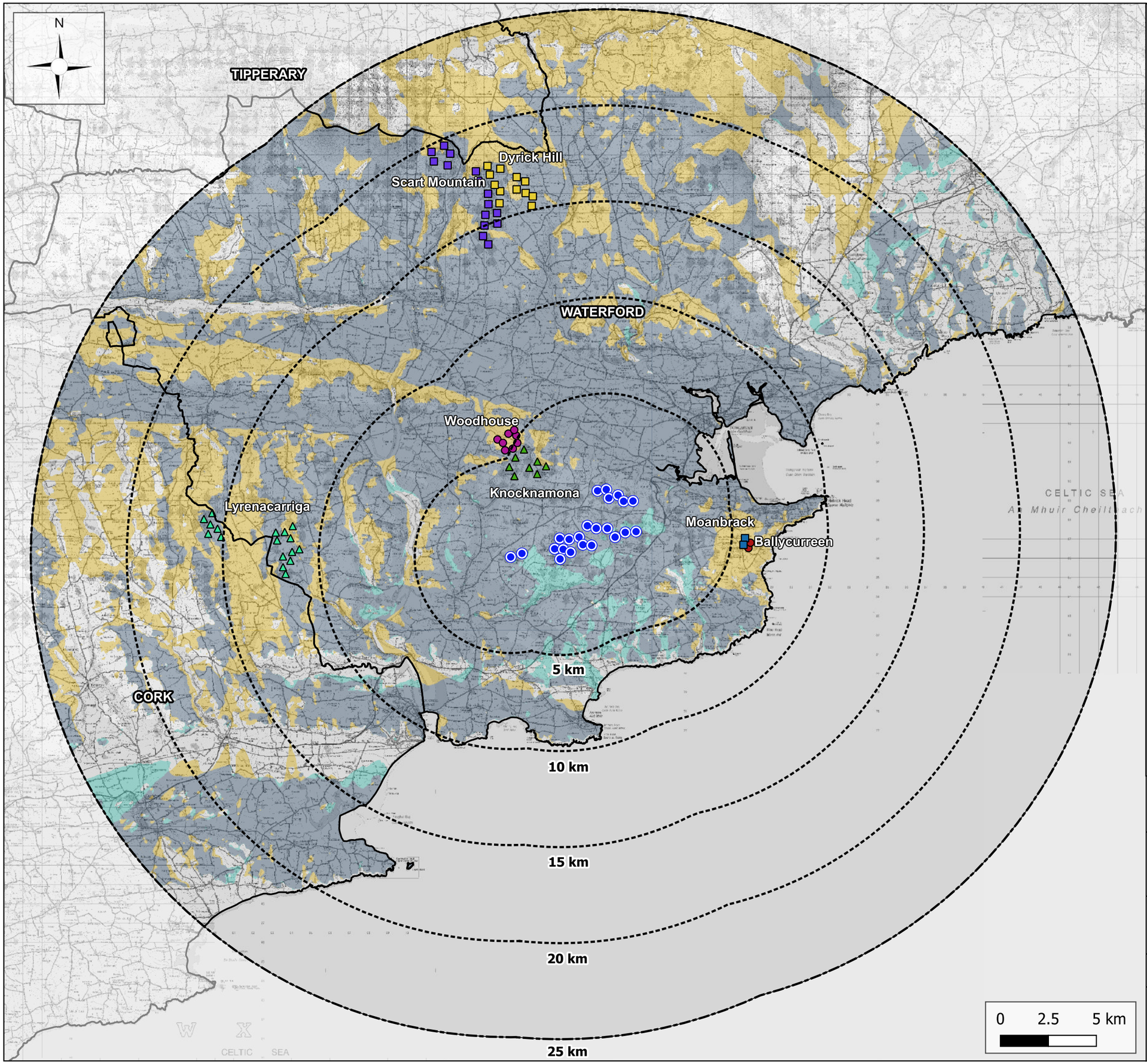
Cumulative Context Map

Project Title

Slievegrine Renewable Energy Development, Co. Waterford

Scale	Project No.	Date	Drawn By	Checked By
1:191,000	240740	2026.09.24	GL	RS

MKO Planning and Environmental Consultants



Map Legend

- LVIA Study Area
- Ireland County Boundaries
- Proposed Turbines

Cumulative Comparative Zone of Theoretical Visibility (ZTV)

- Theoretical Visibility of Proposed Turbines Only
- Theoretical Visibility of Cumulative Wind Farms Only
- Theoretical Visibility of Proposed Turbines and Cumulative Wind Farms

Cumulative Wind Farms

- Woodhouse — Existing
- Ballycurreen — Existing
- Knocknamona — Permitted
- Lyrenacarriga — Permitted
- Moanbrack — Proposed
- Scart Mountain — Proposed
- Dyrick Hill — Proposed

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Drawing No.

Figure 13-17

Drawing Title

Theoretical Visibility of Cumulative Wind Farms

Project Title

Slievegrine Renewable Energy Development, Co. Waterford

Scale	Project No.	Date	Drawn By	Checked By
1:191,000	240740	2026.09.24	GL	RS

MKO Planning and Environmental Consultants

13.7 Likely Significant Landscape and Visual Effects

13.7.1 'Do-Nothing' Scenario

As reported in Chapter 3 of this EIAR, the 'Do-Nothing' scenario land-use option to developing a renewable energy project at the Proposed Wind Farm site would be to leave the site as it is, with no changes made to the current land use of commercial forestry and agricultural pasture within the Proposed Wind Farm and public road corridor and agricultural pasture along the Proposed 110kV Underground Cabling Route (approximately 9km). The established trends in respect of land use/landcover and the baseline landscape and visual context are likely to remain largely consistent with the scenario described in the preceding baseline sections of this chapter. Should the 'Do-Nothing' scenario occur, the residual landscape and visual effects would be 'None' and the impact would be 'Neutral.'

13.7.2 Construction Phase Effects

It is estimated that the construction phase of the Proposed Project will last between 18 to 24 months. Construction of the development will involve the installation of the 23 no. turbines with a maximum blade-tip height ranging from 170m-185m and all associated works, including construction of the Proposed 110kV Substation, the Proposed 220kV Loop-in Substation, the 80m height met mast, 30m height telecoms relay mast and all associated works including borrow pits and underground cabling. Construction phase effects will also include the associated effects resulting from the movement of construction and turbine transport vehicles into and out of the Site, to allow for construction of all Proposed Project elements, and may include potential visibility of borrow pits from various vantage points during construction. This section is divided into the reporting of construction phase landscape and visual effects separately, as per best practice guidance.

13.7.2.1 Landscape Effects during the Construction Phase

Proposed Wind Farm

Associated earthworks such as cut and fill and the provision of borrow pits required to facilitate construction of the Proposed Wind Farm, as well as the Proposed 110kV Substation and Proposed 220kV Loop-in Substation, have the greatest potential for landscape effects, where the physical fabric of the landscape is materially altered. The Proposed Wind Farm makes use of as much of existing roadways as much as possible within the Proposed Wind Farm site, thereby reducing the requirement for new internal site roads and reducing the extent of direct residual landscape effects on the site. Where excavation is required, the existing landcover, vegetation and spoil will be removed. In most instances, groundworks and excavation trenches will be re-instated upon completion of construction. Where spoil arising from construction activities is managed within the Proposed Wind Farm site, the vegetative top-soil layer will be removed and re-instated following spoil management taking place. The construction activities may potentially cause temporary impacts on the landscape such as the creation of temporary structures, dust, minor soil erosion and minor alterations to drainage. The construction works will be temporary/short-term in nature and completed as soon as practically possible. It is considered that this is a 'Direct,' 'Short-term,' 'Negative' effect with a significance rating of 'Slight' in terms of landscape effects, which is not considered significant.

Proposed 110kV Underground Cabling Route

All land area of the Proposed 110kV Underground Cabling Route is designated as 'Low Sensitivity' in the WCCDP 2022-2028 Map A8.3 (except for a few small areas along the linear public roadway). 'Low Sensitivity' landscape in the WCCDP 2022-2028 is defined as '*A common character type with a*

potential to absorb a wide range of new developments.' Current land-use along the Proposed 110kV Underground Cabling Route comprises public road corridor, pastures, low density residential, industry, commercial forestry and land principally used for agriculture with significant areas of natural vegetation; therefore, in terms of landscape character it is considered a modified working landscape. As the Proposed 110kV Underground Cabling Route passing through these land-use areas is naturally to be located underground primarily within the road corridor, the greatest effects attributed to this element of the Proposed Project will occur during the construction phase. The majority of underground electrical cabling works are to be carried out along existing public road corridors. The construction works of the proposed underground cabling will be temporary, localised, and transient in nature, as the works move along the Proposed 110kV Underground Cabling Route. The works will include trench excavation, and other associated construction activities. These activities will cause temporary change to the physical landscape along the Proposed 110kV Underground Cabling Route; however, these changes will be localised to the immediate environment surrounding the route and will not affect the character of the landscape setting or visual amenity of the wider area. The Proposed 110kV Underground Cabling Route works are likely to cause 'Direct,' 'Short-term,' 'Negative' landscape effects with a significance rating of 'Slight,' which is not considered significant.

Proposed 220kV Loop-in Substation

Current land-use of the site of the Proposed 220kV Loop-in Substation comprises agricultural pasture connected by public road corridor surrounded by low density residential; therefore, in terms of landscape character it is considered a modified working landscape. The construction works require installation of the proposed compound and control buildings, underground electrical cabling, the proposed end masts and all ancillary works. The works will include soil stripping, excavation, the laying of drainage and base layers and other associated construction activities. These activities will cause temporary change to the physical landscape in the agricultural fields; however, these changes will be localised to the immediate environment and will not affect the character of the landscape setting or visual amenity of the wider area. The Proposed 220kV Loop-in Substation construction works are likely to cause 'Direct,' 'Short-term,' 'Negative' landscape effects with a significance rating of 'Slight,' which is not considered significant.

Mitigating Factors for Landscape Effects during Construction

The above predicted landscape effects during construction assume the implementation of the following mitigation measures for the Proposed Wind Farm, Proposed 110kV Underground Cabling Route and the Proposed 220kV Loop-in Substation. All construction activities will follow best practice methods to reduce impacts upon the environment and landscape of the Site. Further details are presented in Chapter 4 and the Construction and Environmental Management Plan (CEMP) contained in Appendix 4-3 of this EIAR. The following measures should be implemented to mitigate landscape effects during the construction phase of the Proposed Project:

- In all circumstances, excavation depths and volumes will be minimised, and excavated material will be re-used where possible.
- For the Proposed 110kV Underground Cabling Route, where the cable trench is to be located in the road verge, subsoil will be temporary-stored on-site and re-used for re-instatement after cabling works. Should any medium planting be removed, it should be replaced with the same or similar species whenever it is not possible to salvage and reinstate.
- Any areas of bare soil remaining after the landscaping phase will be seeded as soon as possible with a grass-seed mix to minimise sediment run-off.

13.7.2.2 Visual Effects during Construction Phase

Proposed Wind Farm

Proposed Turbines. The most substantial visual effects will arise from requisite construction activities on the Proposed Wind Farm site itself, such as assembling tower sections and erecting the Proposed Turbines. There shall be temporary scenarios during the construction phase in which the Proposed Turbines will be partially constructed and may be seen as either stand-alone tower sections, or incomplete turbines where only one or two blades are visible. The equipment and vehicles required to transport and erect the Proposed Wind Farm components include large cranes and large haulage vehicles. For local receptors surrounding the Proposed Wind Farm site, the construction activities will cause 'Direct,' 'Short-term' and 'Negative' visual effects with a significance rating of 'Slight,' which is not considered significant.

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

Site Access Tracks and Hardstand Areas. The proposed access roads and hardstand areas (including construction compounds) are flat features and will be most visible within their immediate surroundings, within the Proposed Wind Farm site where there are very few sensitive visual receptors. Every use will be made of the existing access tracks within the Site. Some tracks will be upgraded appropriately whilst several stretches of new internal roads will need to be constructed. The visual impact of the construction of these flat and hard surfaces will be very localised to the Proposed Wind Farm site itself. For local receptors surrounding the Proposed Wind Farm site, visual effects arising from the construction of access tracks and hardstand areas are likely to be 'Direct,' 'Short-Term' and 'Negative' with a significance rating of 'Slight,' which is not considered significant.

Borrow Pits. It is proposed to construct five temporary borrow pits within the Proposed Wind Farm site: (1) Located approx. 47m west of T1 along the western side of the ridge within a forestry block; (2) located approx. 33m northwest of the Proposed 110kV Substation within a forestry block; (3) located approx. 168m west of T13, along the eastern aspect of Carronadavderg Hill within a forestry block; (4) located approx. 319m west of T18, also along the eastern aspect of Carronadavderg Hill within a forestry block; and (5) located approx. 281m northeast of T22 within pasture land. The extraction of material from the borrow pits is a construction phase activity only, done through means of rock breaking and blasting (as appropriate). The proposed borrow pits located within areas of commercial forestry will be largely screened from nearby visual receptors by dense vegetation within the Proposed Wind Farm site itself. Should the commercial forestry be felled, the borrow pits may become temporarily visible; however, any visibility would be limited. The proposed borrow pit located within pasture land is surrounded by forestry blocks on all sides and is therefore not likely to be visible. These borrow pits will be most visible in the immediate vicinity, primarily by residential receptors on the southern side of the ridge. All proposed borrow pits are located within a landscape of 'Low' sensitivity, as detailed previously in Section 13.4.4. The visual effects arising from excavation at the borrow pits will be localised, 'Slight', 'Short-term', 'Negative' visual effects. Several rehabilitation measures will be implemented post-construction phase. For example, the borrow pits will be backfilled with spoil and then reseeded or left to vegetate naturally. Following rehabilitation, the visual effects will be 'Not Significant' during the operational phase. On balance, for local receptors surrounding the Proposed Wind Farm site, visual effects arising from the construction of borrow pits are likely to be 'Direct,' 'Short-Term' and 'Negative' with a significance rating of 'Slight,' which is not considered significant.

Proposed 110kV Substation. During the construction phase, visual effects will occur as the Proposed 110kV Substation and its associated construction compound are built due to the earthworks and requisite construction activities; these will cause a substantial but localised and temporary change to

views in the immediate area. As established in the baseline investigations, the Proposed 110kV Substation is to be located approximately 220m south of the L2024/SR6 and at a lower elevation than the roadway due to the sloping terrain, within a tract of commercial forestry. Therefore, during construction works, visibility of the works associated with the Proposed 110kV Substation and adjacent construction compound will be limited from along the road. In the event that the commercial forestry is felled, localised screening by vegetation will remain along the road (see imagery examples later in Section 13.7.3.4 'Visual Effects on Designated Scenic Routes and Protected Views'), and screening by forestry would return in time following re-planting. For local receptors in the north of the Proposed Wind Farm site, visual effects of the Proposed 110kV Substation during the construction phase are likely to be highly localised, 'Direct,' 'Short-Term' and 'Negative,' with a significance rating of 'Slight,' which is not considered significant.

Proposed 110kV Underground Cabling Route

As reported above, the greatest effects attributed to the underground Proposed 110kV Underground Cabling Route will occur during the construction phase and are largely related to temporary landscape changes. The works will include roadside vegetation removal, soil/road surface stripping, excavation and other associated construction activities. These activities will cause temporary change to the physical landscape along the underground Proposed 110kV Underground Cabling Route. Changes will be localised to the immediate environment surrounding the underground cabling and will not permanently affect the character of the landscape setting at the ground-level or the visual amenity of the wider area. For local receptors surrounding the route, the Proposed 110kV Underground Cabling Route during the construction phase is likely to cause 'Direct,' 'Short-Term' and 'Negative' visual effects with a significance rating of 'Slight,' which is not considered significant.

Proposed 220kV Loop-in Substation

During the construction phase, visual effects will occur as the Proposed 220kV Loop-in Substation, the 220kV end masts and the associated construction compound are built due to the earthworks and requisite construction activities; these will cause a substantial but localised and temporary change to views in the immediate area. As established in the baseline investigations, the Proposed 220kV Loop-in Substation will be set approximately 500m from Regional Road R671 in the townland of Ballycullane, within an agricultural field bound by mature vegetation. The works will occur on the north-western aspect of a local hill and include relatively substantial cut and fill to absorb the substation compound within the slope of the hill. Due to the enclosure by landform to the east, south and west by the landform of the hill and existing vegetation, only a small number of visual receptors are likely to have visibility of these temporary works, potentially including one residential receptor to the northwest and southbound receptors having momentary views on the R671. Other residential receptors in the wider area will experience temporary effects when taller components such as the end masts are constructed, for example residential receptors to the southeast in the townland of Graigue. Overall, during construction, visibility of the works associated with the Proposed 220kV Loop-in Substation will be very limited from along the local road network and receptors in the wider area. Visual effects of the Proposed 220kV Loop-in Substation during the construction phase are likely to be highly localised, 'Direct,' 'Short-Term' and 'Negative,' with a significance rating of 'Slight,' which is not considered significant.

Turbine Delivery Route

As detailed in Section 4.5.2 in Chapter 4 which details the turbine delivery route to be used for transporting turbine components to Proposed Wind Farm site, there are no significant accommodation works required to facilitate the delivery of components to the Site. Any minor works required, such as temporary alterations to the existing streetscape and roundabout islands, temporary local road widening, overruns of roundabout island and temporary relocation of signs and street furniture, will be temporary and not significant. Full details of the assessment are included as part of the traffic impact

assessment set out in Chapter 15: '*Material Assets*,' Section 15.1 of this EIAR. Therefore, from a landscape and visual perspective, there will be no significant impacts.

Mitigating Factors for Visual Effects during Construction

- General housekeeping measures, necessary for Health & Safety requirements, will ensure that the active construction areas will be kept tidy, mitigating localised visual impacts during the Construction Phase.
- The location of construction works primarily within forestry blocks in undulating terrain ensures that most construction works will be screened from view either by forestry, topography, or a combination of both. In the event that forestry is felled prior to construction, visibility will be limited by dense or intermittent roadside screening along most roads within the Proposed Wind Farm site.

13.7.3 Operational Phase Effects

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

- **Landscape Effects during Operational Phase**: Reporting landscape effects for the Proposed Wind Farm and Proposed Grid Connection, and effects on landscape receptors.
- **Assessment Outcomes of Designated LCAs (Appendix 13-2):** 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*.
- **Assessment Outcomes of Photomontage Viewpoints (Appendix 13-3):** A summary of the visual impact assessment outcomes in the (25km) LVIA Study Area for each photomontage as is comprehensively reported in *Appendix 13-3: Photomontage Visual Impact Assessment Tables*.
- **Visual Effects during Operational Phase:** Discussion of visual effects on the specific visual receptors selected for assessment within the visual baseline exercise (recall Section 13.5.9 'Preliminary Analysis: Visual Receptors') with reference to photomontages and photowires, including a discussion of visual effects on local residential receptors within close proximity to the Proposed Wind Farm site.
- **Cumulative Effects**: Discussion of landscape and visual effects expected to occur in combination with the Proposed Wind Farm and all identified existing, permitted and proposed wind farms identified in the LVIA Study Area.

13.7.3.1 Landscape Effects during the Operational Phase

13.7.3.1.1 *Landscape of the Proposed Wind Farm*

Proposed Wind Farm site

All area of the Proposed Wind Farm site is designated as 'Low Sensitivity' in the WCCDP 2022-2028 Map A8.3 and 'Preferred' for wind energy development in the Waterford RES. The land cover of the Proposed Wind Farm site is mainly coniferous plantation and pasture land, which are the two types of landscape designated as 'Low Sensitivity' in the WCCDP 2022-2028, defined as '*A common character type with a potential to absorb a wide range of new developments*.'

As set out previously in the Landscape Baseline (Section 13.4), Proposed Wind Farm site is located in the 'Foothills Landscape Type,' a common landscape type considered one of the most suitable for the development of wind energy in Ireland given their large scale, sparse settlement pattern, typical land use characteristics and separation from large population centres. The Proposed Wind Farm site

comprises a working landscape which is less naturalistic and consequently of lower landscape value, particularly compared with other landscape types such as the Comeragh Mountains to the north of the LVIA Study Area. Considering the landscape's capacity to absorb new development according to classifications set out in the WCCDP 2022-2028 Appendix 8, the Proposed Wind Farm site is located in an area with high potential to absorb new development in that the topography is sufficiently enclosed and heavily vegetated (containing forestry and mature hedges/woody vegetation) and contains elements of existing electrical and energy infrastructure. Additional factors from a visual perspective also make the landscape suitable; see discussions on localised visual effects in Section 13.7.3.4.5 'Visual Effects on Local Residential Receptors.'

The landscape of the Proposed Wind Farm site will undergo substantial changes by the introduction of the Proposed Turbines as vertical, man-made structures within the material area of the site, as well as the hardstands, roads and other ancillary infrastructure. The turbines themselves are visually prominent, and their material footprint on the landscape itself will occur over a moderate extent of the total land area of the Proposed Wind Farm site yet will retain large areas of existing landscape between the turbine hardstands. On balance, there will be a 'Substantial' magnitude of change to the landscape in localised areas within the Proposed Wind Farm site where the landscape is materially altered (i.e. the Proposed Project footprint). The landscape value and sensitivity of the Proposed Wind Farm site as determined in the Landscape Baseline of this LVIA are 'Low.'

Landscape of the Proposed 110kV Substation

Regarding the Proposed 110kV Substation, it is within the Proposed Wind Farm site therefore its land area is designated as 'Low Sensitivity' in the WCCDP 2022-2028 Map A8.3 and 'Preferred' for wind energy development in the Waterford RES. The land cover is coniferous plantation, one of two types of landscape designated as 'Low Sensitivity' in the WCCDP 2022-2028. The Proposed 110kV Substation will feature a compound with two control buildings, parking area, wastewater storage tank and other electrical substation ancillary components as required. The Proposed 110kV Substation and Proposed 110kV Underground Cabling Route will remain in place after the operational phase of the Proposed Wind Farm, thereby forming a permanent structure within the landscape and amounting to 'Permanent' landscape effects. The landscape character of the immediate area where the proposed compound is to be located is considered degraded by forestry activities and considered low value and low sensitivity.

Overall, the 'Low' sensitivity balanced with 'Substantial' magnitude of change amounts to long-term landscape effects of 'Moderate' significance upon the physical fabric of the landscape of the Proposed Wind Farm site. Landscape effects to the footprint of the Proposed 110kV Substation will be 'Permanent.' The landscape effects shall be highly localised to the footprint of the Proposed Project within the Proposed Wind Farm site. Residual landscape effects on the perceptual and aesthetic character of the Proposed Wind Farm site are deemed to be 'Direct,' 'Long-Term' to 'Permanent' and 'Negative' with a significance rating of 'Moderate,' which is not considered significant.

Landscape of Carronadavderg Hill and Slievegrine Hill

Carronadavderg Hill and Slievegrine Hill are key landforms of the Proposed Wind Farm site and are named landscape receptors under the column 'locations' in Table A8.3 in Appendix 8 of the WCCDP 2022-2028. The landscape areas of Carronadavderg Hill and Slievegrine Hill are both designated as 'Low Sensitivity' in the WCCDP 2022-2028 Map A8.3, and Figure 10.1 of Chapter 10 of the WCCDP and 'Preferred' for wind energy development in the Waterford RES. The land cover of both hills is mainly coniferous plantation with some pasture land, which are the two types of landscape designated as 'Low Sensitivity' in the WCCDP 2022-2028, defined as '*A common character type with a potential to absorb a wide range of new developments.*' Whilst there is some discrepancy in Table A8.3 of the WCCDP 2022-2028 regarding the landscape sensitivity designation of these hills (refer to the previous explanation discussed in the Landscape Baseline Section 13.4.1.4), the LVIA considers both hills to be Low sensitivity landscape features based on extensive onsite fieldwork which determined that the hills comprise modified working landscape of coniferous forestry and pasture land. The two hills do not

have any cultural associations or recreational value, nor do they have unique characteristics distinguishing them from other hills in the county or region.

The closest Proposed Turbine to Slievegrine Hill is T7 located approximately 630m southeast of the summit and the closest to Carronadavderg Hill is T13, located approximately 600m east of the summit. T7 is located within an agricultural field of pasture land bordered by hedgerows and mature vegetation, and T13 is located in a forestry block. It can be seen in the image compilation below, Figure 13-18, that both hills comprise forestry blocks and pasture land. In addition, Carronadavderg Hill features other man-made infrastructure such as several tall communication towers, at its peak, thereby contributing to the character of the working nature of the receiving landscape. The Proposed Turbines are located on the lower slopes of the hills and will amount to 'Substantial' magnitude of change on landscape character, as well as materially within the Proposed Project footprint, where changes will take place on the physical fabric of the landscape of these foothills. The landscape of both hills is relatively low value and low sensitivity, with low susceptibility to change. Overall, residual landscape effects on Carronadavderg Hill and Slievegrine Hill are deemed to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Moderate,' which is not considered significant.

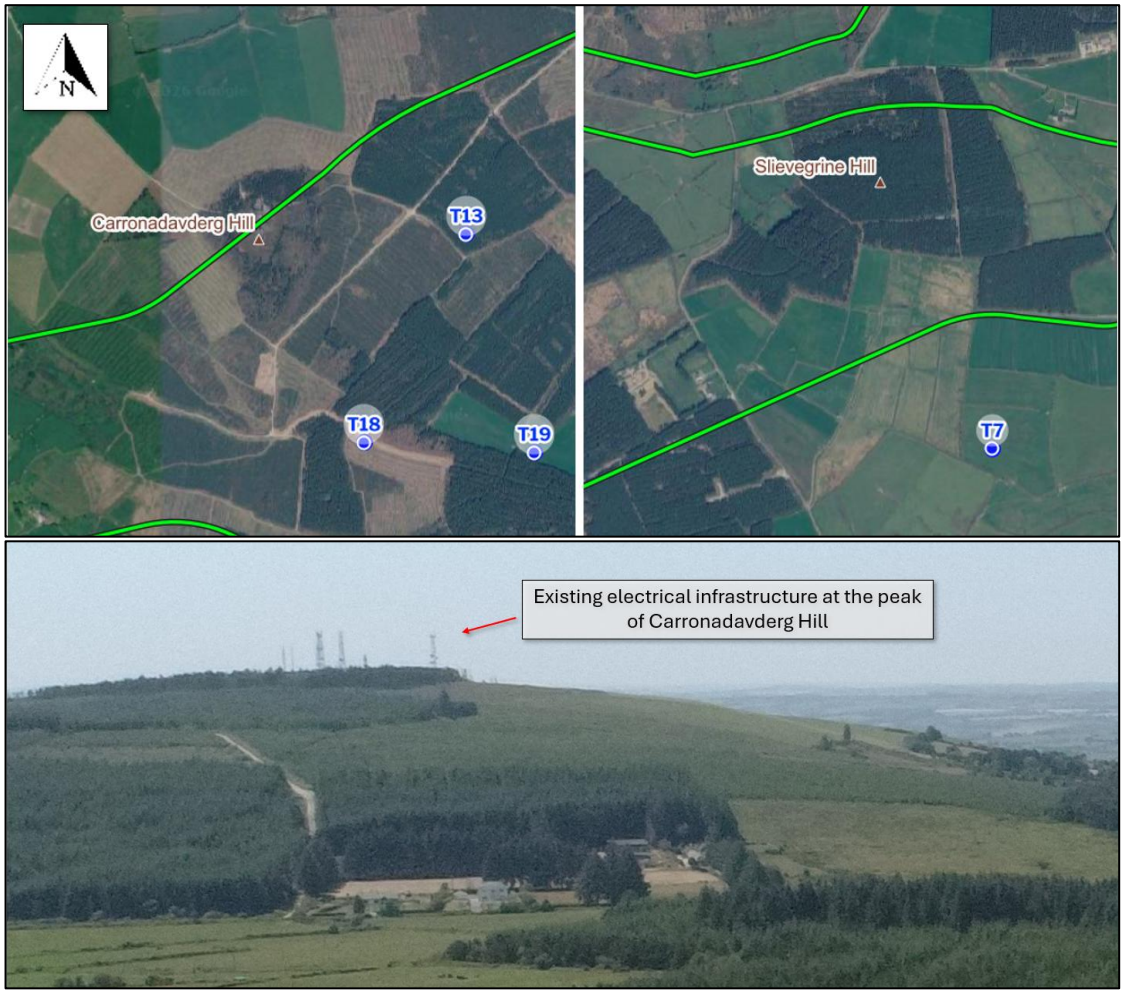


Figure 13-18 Low sensitivity landcover of Carronadavderg Hill and Slievegrine Hill

Mitigating Factors for Landscape Effects of the Proposed Wind Farm during the Operational Phase

Relevant factors that mitigate the overall impact of the Proposed Wind Farm on the immediate landscape of the Proposed Wind Farm site, are summarised here (previously detailed in Section 13.1.5 of the 'Introduction').

- Siting in a Suitable Landscape for Wind Energy Development:
  - A large-scale transitional working landscape of marginal upland comprising commercial forestry stands and upland agricultural fields bounded by mature woodland and hedgerows, capable of accommodating wind turbines.
  - A low sensitivity landscape with no unique or special landscape qualities of county, regional or national renown and designated as 'Low Sensitivity' landscape in the Waterford City and County Development Plan (WCCDP) 2022-2028.
  - Sited within Co. Waterford land area zoned as 'Preferred' for wind energy development in the WCCDP 2022-2028 Appendix 7 Renewable Energy Strategy, Appendix 2 'Wind Energy Strategy' map.
  - Sited within a large expanse of sparsely populated transitional marginal upland, set back from most landscape and visual receptors in the wider landscape.
- Project Layout, Design and Embedded LVIA Mitigation:
  - Appropriate siting and design for the Transitional Marginal landscape character type in the Guidelines (DoEHLG, 2006) and Draft Guidelines (DoHPLG, 2019)
  - Strategic siting of the Proposed 110kV Substation at lower elevation relative to the adjacent scenic route and residential receptors and set within a block of forestry to reduce to potential for visual effects.

The Proposed Wind Farm has been designed to, where possible, avoid direct impact on valuable landscape receptors (individual landscape features and the landscape character of the site as a whole) on the Proposed Wind Farm site such as hedgerows or any areas of broadleaf woodland. In addition, a Biodiversity Management and Enhancement Plan (BMEP) has been prepared as part of this EIAR (see *Appendix 6-4*), which includes the following measures:

- Planting and establishment of 5.5km of new hedgerow and 3.6ha of native woodland.
- Construction of berms/embankments around the infrastructure to facilitate pollinator habitats which have the dual effect of providing localised visual screening.

The BMEP will provide ecological enhancement and improved connectivity to several areas of the Proposed Wind Farm site and will consequently improve the landscape value and quality in these areas. The greatest concentration of planting is proposed in the southeastern part of the Proposed Wind Farm site where a positive impact on landscape character will occur.

13.7.3.1.2 *Proposed Grid Connection*

Landscape of the Proposed 110kV Underground Cabling Route

As the Proposed 110kV Underground Cabling Route is located underground, landscape effects of this element of the Proposed Project during the operational phase will be 'Imperceptible' once vegetation has re-established in the landscape following earthworks during the construction phase. In terms of duration and quality of landscape effects, the Proposed 110kV Underground Cabling Route is a permanent structure within the material landscape of the Site. Overall, residual landscape effects on the perceptual and aesthetic character of the Proposed 110kV Underground Cabling Route are deemed to be 'Direct,' 'Permanent' and 'Negative' with a significance rating of 'Imperceptible,' which is not considered significant.

Landscape of the Proposed 220kV Loop-in Substation

The landscape where the Proposed 220kV Loop-in Substation is to be located, adjacent to the R671 Regional Road approximately 4.5km northwest of the nearest Proposed Turbine, is designated as 'Low

Sensitivity' in the WCCDP 2022-2028 Map A8.3 and 'Preferred' for wind energy development in the Waterford RES. The land cover is pasture land, one of two types of landscape designated as 'Low Sensitivity' in the WCCDP 2022-2028 and defined as '*A common character type with a potential to absorb a wide range of new developments*.' The landscape is agricultural, sloping downwards from the northeast and is bounded by mature trees and hedgerows between fields. Drone imagery of the agricultural field and surrounding landscape in which the Proposed 220kV Loop-in Substation is located relative to R671 regional road is pictured below in Plate 13-9.

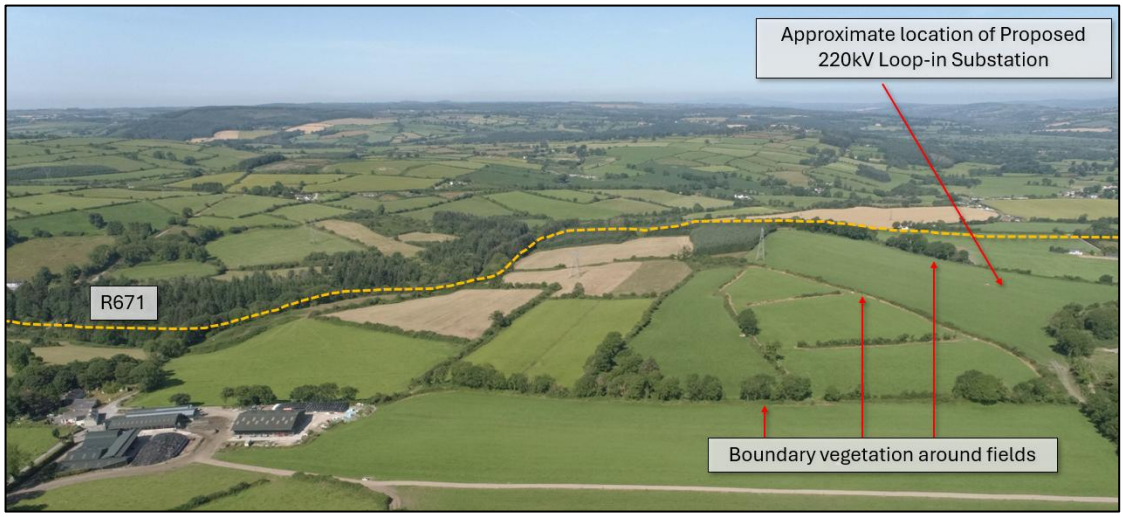


Plate 13-9 Drone imagery facing southwest, of agricultural field and surrounding landscape of the Proposed 220kV Loop-in Substation

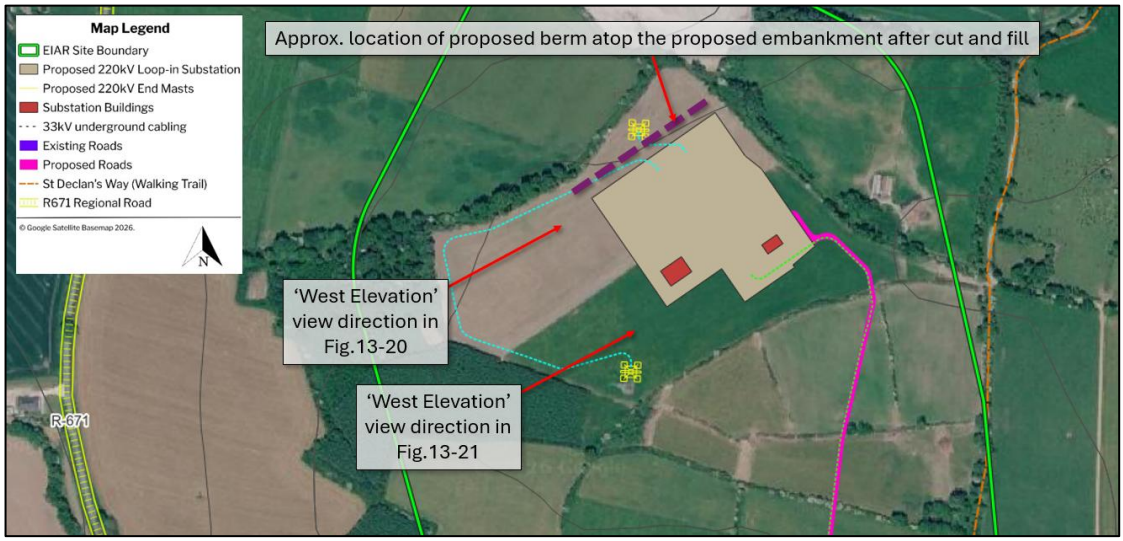


Figure 13-19 Map indicating the view direction of 'West Elevation' drawings looking onto the Proposed 220kV Substation in cross-section view Figure 13-20 and Figure 13-21 below

As shown above in Figure 13-19, the Proposed 220kV Loop-in Substation will feature a compound with two proposed control buildings, two proposed end masts, the proposed bay and busbar configuration, and other proposed underground cabling, steel palisade fencing, parking area, underground wastewater storage tank and other electrical substation ancillary components as required. The Proposed 220kV Loop-in Substation will remain in place after the operational phase of the Proposed Wind Farm, thereby forming a permanent structure within the landscape. The landscape character of the immediate area where the proposed compound is to be located is considered low value and 'Low' sensitivity. Substantial cut and fill is required to build the substation compound on the northwestern slope, this includes the construction of a proposed embankment using fill material along the northwestern edge of the proposed compound as seen in the 'West Elevation' views; see Figure 13-20 and Figure 13-21 below.

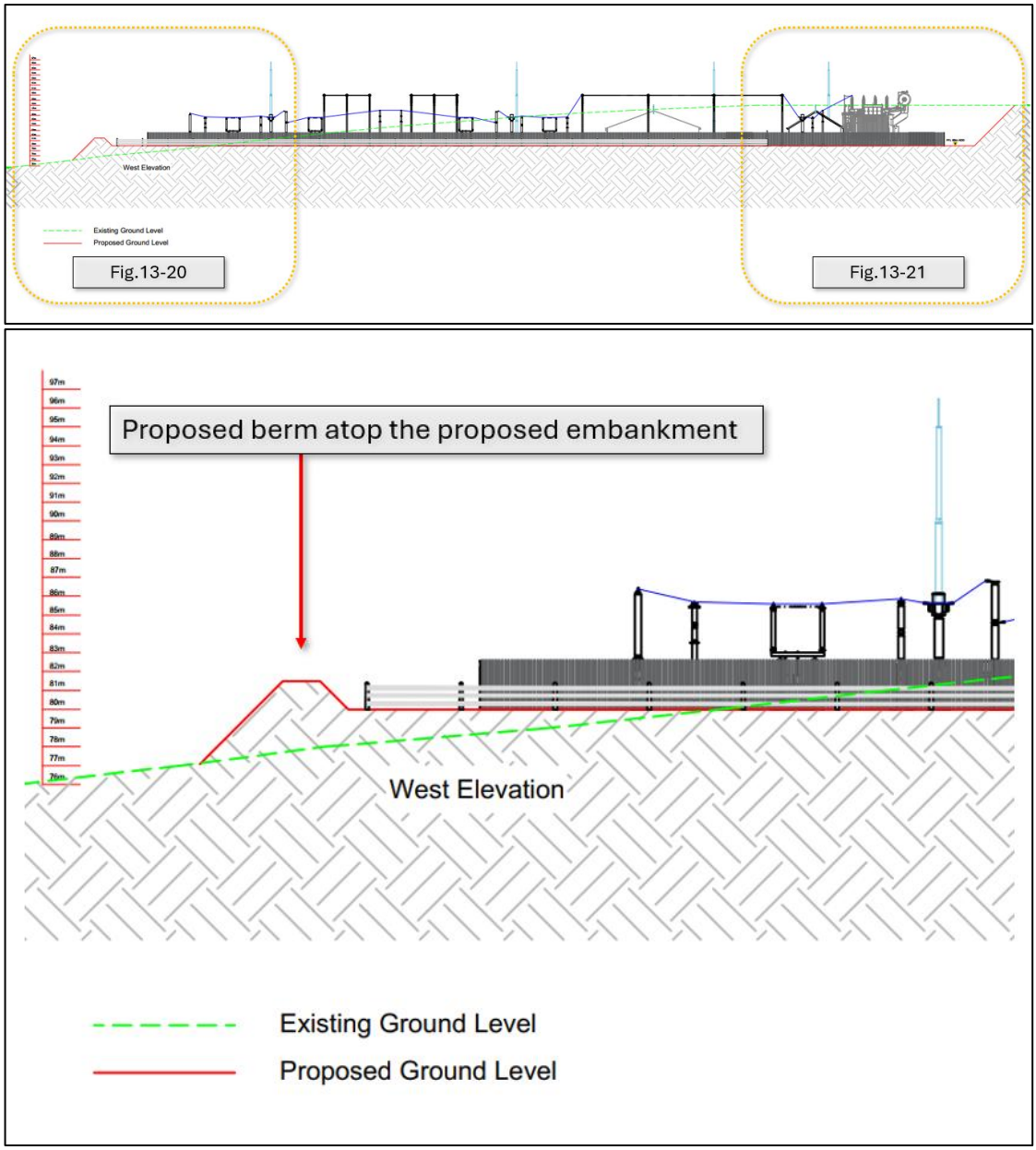


Figure 13-20 Two-panel figure showing (top) full-width 'West Elevation' drawing of cut and fill and (bottom) West Elevation drawing of the proposed berm atop the proposed embankment for the Proposed 220kV Loop-in Substation

As shown in Figure 13-20, LVIA mitigation includes a 1 metre-tall proposed berm atop this embankment that will feature mitigation planting along the fence line. Below, Figure 13-21 illustrates the nature of localised changes to the volume of the landscape due to extensive cut and fill. In addition, there will be planting along the top of the proposed berm, replanting of hedgerows required to be removed as part of the construction works, and bolstering of the existing mature hedgerow and treeline to the northwest with semi-mature vegetation that will further mature over time, proposed as part of the design in conjunction with local community consultation. Mitigation planting is depicted in photomontage SS01 and discussed with respect to visual effects in Section 13.7.3.4.4.

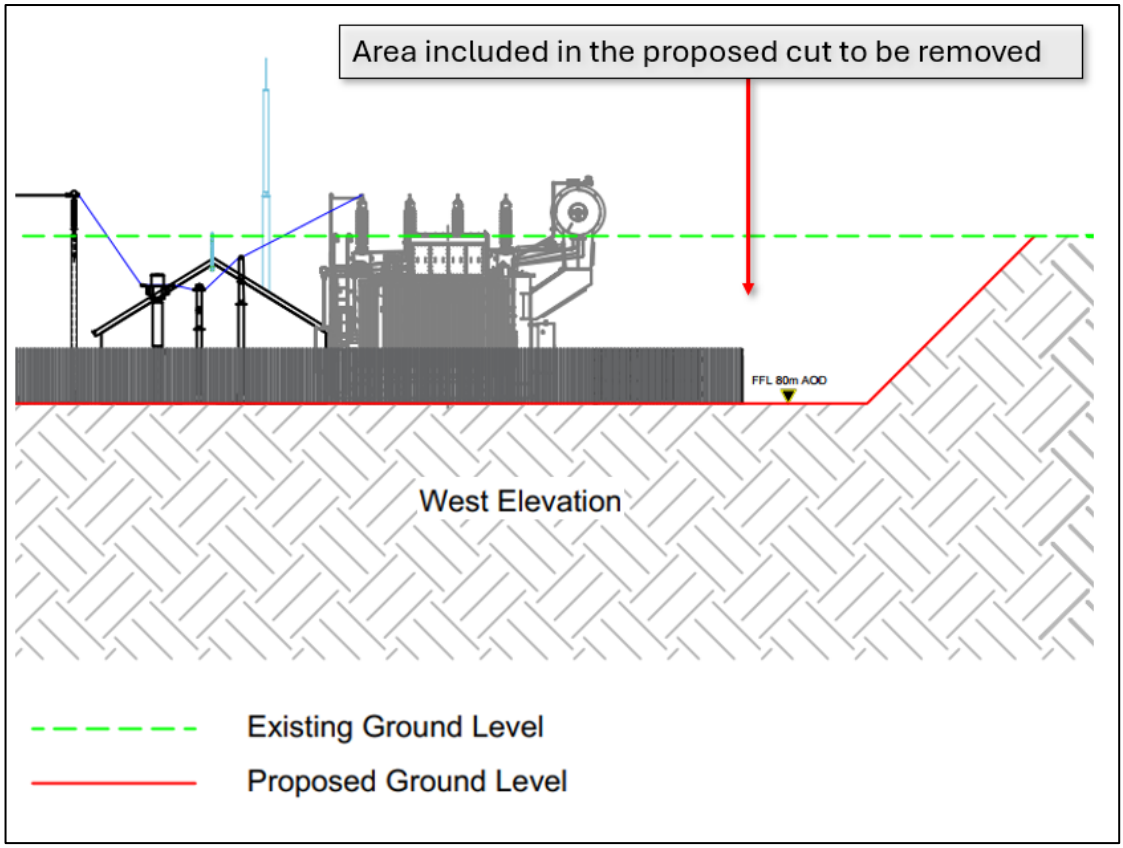


Figure 13-21 West elevation drawing showing southeastern area of proposed cut for the Proposed 220kVLoop-in Substation

With respect to landscape effects, the proposed planting mitigation measures will have a dual effect of providing visual screening of the Proposed 220kV Loop-in Substation and restoring and improving the landscape character after construction, as the landscape is re-seeded and allowed to naturally revegetate. Considering the modifications to the physical fabric of the landscape of the Proposed 220kV Loop-in Substation, there will be 'Substantial' localised changes to the 'Low' sensitivity pastoral field where the proposed infrastructure is located. Overall, residual landscape effects on the physical fabric and aesthetic character of the landscape where the Proposed 220kV Loop-in Substation is to be located are deemed to be 'Direct,' 'Permanent' and 'Negative' with a significance rating of 'Moderate,' which is not considered significant.

13.7.3.1.3 *Landscape Effects on Identified Landscape Receptors*

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

'Most Sensitive' Areas of Landscape Sensitivity (WCDDP 2022-2028)

The areas classified as 'Most Sensitive' with respect to Landscape Sensitivity in Appendix 8 of the WCCDP 2022-2028 which fall within the LVIA Study Area include the Comeragh Mountains to the northeast, the Knockmealdown Mountains to the northwest, the Blackwater River Valley in the west, and the coastline of Co. Waterford from the border of Co. Cork in the southwest to the Copper Coast UNESCO Global Geopark in the northeast. No elements of the Proposed Project are located within

these 'High' sensitivity landscape areas, therefore landscape effects are not material. ZTV mapping found that the majority of these landscape areas have little to no theoretical visibility of the Proposed Turbines. Onsite visibility appraisal found little to no actual visibility in the direction of the Proposed Turbines from most of these areas.

The upland areas of Comeragh Mountains in the northeast and Knockmealdown Mountains in the northwest primarily have no theoretical visibility. Baseline studies found that scenic routes and protected views within the Comeragh Mountains and Knockmealdown Mountains are largely concentrated in areas with no theoretical visibility and/or have protected views in the opposite direction of the Proposed Turbines, usually focused on enclosed landscape views to the north.

The Blackwater River Valley is located greater than 5km west of the Proposed Turbines and the 'Most Sensitive' designation of the Blackwater River Valley is confined to the narrow river corridor itself. There is mostly no potential visibility of the Proposed Turbines from lower parts of the valley within the river channel itself and along its banks. From occasional vantage points in the valley and elevated areas of the landscape above the Blackwater River Valley to the east and west, which mainly comprise landscape designated as 'Low' sensitivity in the WCCDP 2022-2028, the Proposed Turbines will be seen at substantial distance. An example of this is demonstrated in VP15, where there will be no significant impact on the overall character and setting of the Blackwater River Valley

Similarly, the area of Co. Waterford coastline designated as 'Most Sensitive' is confined to a relatively narrow strip of landscape running continuously along the coast from southwest to northeast. Only one small portion of this designated landscape is within 5km of the Proposed Turbines—this area occupies the west side of Dungarvan Bay and little to no theoretical visibility of the Proposed Turbines. Several VPs are located within the 'Most Sensitive' coastline areas of Co. Waterford, namely VP01, VP07, VP09, VP10 and VP11, as well as VP02 located 25.1km from the Proposed Turbines within the Copper Coast landscape in the northwest. These VPs were found to have 'Not Significant' or 'Slight' residual visual effects owing to the distance from the Proposed Turbines, the location of the Proposed Turbines in the periphery of views and the low impact to primary scenic views, mainly directed out towards the sea. Overall, from these 'Most Sensitive' landscape areas, the Proposed Turbines may be visible or partially visible from elevated vantage points and will be viewed inland, upon foothills in the background of views. Due to the set-back and visual separation, the Proposed Turbines will not impact the key sensitivities attributed to the setting of the coastal landscape.

The residual landscape effects on the perceptual and aesthetic character of the identified areas of 'Most Sensitive' landscape sensitivity designation in the WCCDP 2022-2028 are deemed to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

Landscape Effects on Co. Cork High Value Landscape

One area of HVL in Co. Cork is located 7.5km southwest of the Proposed Turbines, at its closest point, and has theoretical visibility according to ZTV mapping. All landscape policies in the CCDP 2022-2028 relating to HVLs are relevant only to developments proposed within the HVL (recall Section 0). No elements of the Proposed Project are located within the HVL Views in the direction of the Proposed Turbines are represented by VP06 in the *Photomontage Booklet*, which was determined to have a 'Not Significant' residual visual effect (see *Appendix 13-3*). From areas of the HVL with open visibility in the direction of the Proposed Turbines, the turbines are likely to be seen at significant distance and located away from scenic views of the sea to the south and partially screened by terrain features. Overall, residual landscape effects on the perceptual and aesthetic character of the HVL in Co. Cork are deemed to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

Landscape and Visual Effects on Copper Coast UNESCO Global Geopark

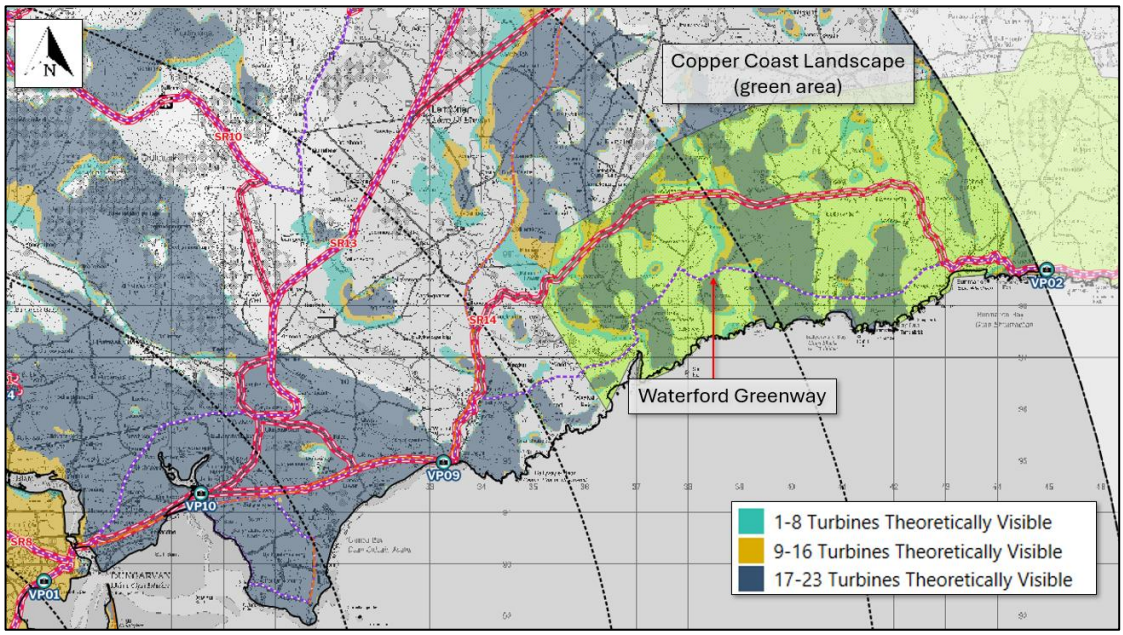


Figure 13-22 Areas of patchy theoretical visibility within the Copper Coast UNESCO Global Geopark

At its closest point, the Copper Coast UNESCO Global Geopark is located 16.2km northeast of the Proposed Turbines; therefore, any potential landscape effects only relate to impacts on character or setting. Figure 13-22 above indicates the patchy nature of theoretical visibility within the designated landscape area that falls within the LVIA Study Area boundary.

Views in the direction of the Proposed Turbines from the Copper Coast landscape are represented by VP02 in the *Photomontage Booklet*, which was determined to have a 'Not Significant' residual visual effect (see *Appendix 13-3*). Whilst some areas of theoretical visibility are located closer to the Proposed Turbines than the location of VP02, onsite appraisals determined that the greatest potential for visibility within this landscape occurs near the coast where views are open and unobstructed; therefore, VP02 is the best representation of views from this landscape with the potential for impact. As cumulative turbines are also visible within the view, the detailed discussion on visual impact from VP02 is given below in Section 13.7.4.1.3 'Cumulative Effects on Copper Coast UNESCO Global Geopark.' Overall, residual landscape effects on the perceptual and aesthetic character of the Copper Coast landscape are deemed to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

13.7.3.2 Assessment Outcomes of Designated LCAs (Appendix 13-2)

The detailed assessment of LCAs is provided in *Appendix 13-2* and the outcomes are summarised in Table 13-13 below, followed by summary discussion. The 'Significance of Effect' ratings are taken from EPA, 2022 and the full methodology for conducting the assessment of landscape effects on designated LCAs is provided *Appendix 13-1*.

Table 13-13 Summary of Residual Landscape Effects on Designated LCAs (Appendix 13-2)

LCA Ref.	Name	LCA Sensitivity	Magnitude of Change in LCA	Significance of Effect
LCAs containing the Proposed Project				
LCU-5E	Drumhills.	Low.	Moderate.	**Slight.**

LCA Ref.	Name	LCA Sensitivity	Magnitude of Change in LCA	Significance of Effect
LCU-2D	Clashmore & Newport Lowlands.	Low.	Negligible.	**Imperceptible.**
LCAs in the wider 15km LCA Study Area				
LCU-1E	Dungarvan Harbour.	Medium.	Slight.	**Not Significant.**
LCU-2E	Blackwater & Bride Lowlands.	Low.	Slight.	**Not Significant.**
LCU-5C	Tooraneena Foothills.	Medium.	Slight.	**Not Significant.**
LCU-5F	Glendine Foothills.	Low.	Negligible.	**Imperceptible.**
LCA-2	Broad Bay Coast.	High.	Negligible.	**Not Significant.**

LCU-5E and LCU-2D. Most of the Proposed Project is located within LCU-5E Drumhills, except for a very small portion (approximately 1.5km length) of the Proposed 110kV Underground Cabling Route which is located within LCU-2D Clashmore & Newport Lowlands. Both LCU-5E andLCU-5D were determined to be 'Low Sensitivity' owing to a combination of classification and definitions of low sensitivity landscape features within WCCDP 2022-2028 Appendix 8 and onsite appraisal. LCU-5E is predicted to experience 'Moderate' magnitude of change primarily due to the material installation of the Proposed Project into the landscape and laying of the majority of the length of proposed underground cabling along the Proposed 110kV Underground Cabling Route. LCU-2D is predicted to experience 'Negligible' magnitude of change as the short length of proposed underground cabling is confined to the footprint of the local road network along the Proposed 110kV Underground Cabling Route and therefore the potential impacts on visual amenity related to the Proposed Project elements nearby this portion of the LCA (i.e. the Proposed 220kV Loop-in Substation) are predicted to be minor. Overall, residual landscape effects on the physical fabric and perceptual and aesthetic character of designated LCAs containing the Proposed Project are deemed to be 'Direct,' 'Long-Term' to 'Permanent' and 'Negative' with a significance rating ranging from 'Imperceptible' to 'Slight,' which is not considered significant.

LCAs in the wider LCA Study Area. No infrastructure of the Proposed Project is located within any LCAs of the wider LCA Study Area; therefore, the nature of landscape effects is not material and is related instead to the visual aspect of the Proposed Turbines being seen at great distance from within the LCAs. The potential for actual visibility of the Proposed Turbines from these LCAs is very limited due to a variety of factors including distance from the Proposed Turbines and high degree of visual screening by vegetation or terrain. Overall, residual landscape effects on the physical fabric and perceptual and aesthetic character of designated LCAs in the wider LCA Study Area are deemed to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating ranging from 'Imperceptible' to 'Slight,' which is not considered significant.

13.7.3.3 Assessment Outcomes of Photomontage Viewpoints (Appendix 13-3)

The impact assessment outcomes of VP01-VP20 are summarised in Table 13-14 below. This table and *Appendix 13-3* should be read in conjunction with the *Photomontage Booklet*. Regarding the column in the table titled 'Quality of Effect,' the LVIA is cognisant that whether a visual effect of the Proposed Turbines is deemed to be positive, negative or neutral, involves a degree of subjectivity. The approach used in this LVIA is based on the GLVIA3 (p.113, para.6.29) which outlines the general subjectivity of describing visual effects in an LVIA context. The GLVIA3 highlights that what appears to be a positive effect to one viewer could be deemed to be a negative effect by another viewer. In this LVIA, all predicted visual effects of the Proposed Turbines are considered 'Long-Term' with 'Direct' impact, and all impacts were determined to be of 'Negative' quality.

Table 13-14: Summary of Viewpoint Impact Assessment Outcomes (Appendix 13-3)

VP No.	Name	Distance to the Proposed Turbines	Grid Ref.	Duration and Type of Effect	Quality of Effect	Visual Sensitivity of Receptors	Magnitude of Visual Change	Significance of Residual Visual Effect
VP01	**Dungarvan.**	5.3km.	E: 625454. N: 592709.	Direct, Long-Term.	Negative.	High.	Slight.	**Not Significant.**
VP02	**Copper Coast Geopark.**	25.1km.	E: 644902. N: 598754.	Direct, Long-Term.	Negative.	Very High.	Negligible.	**Not Significant.**
VP03	**SR4 at Camphire Bridge.**	9.6km.	E: 607985. N: 592326.	Direct, Long-Term.	Negative.	High.	Slight.	**Slight.**
VP04	**SR5/N25 at Mweeling.**	2.3km.	E: 620590. N: 584628.	Direct, Long-Term.	Negative.	High.	Moderate.	**Moderate.**
VP05	**SR5/N25 at Ballybrusa West.**	4.3km.	E: 617415. N: 581746.	Direct, Long-Term.	Negative.	High.	Slight.	**Slight.**
VP06	**Youghal.**	10.1km.	E: 610807. N: 577089.	Direct, Long-Term.	Negative.	High.	Slight.	**Not Significant.**
VP07	**SR7 at Helvick Head Harbour.**	8.9km.	E: 630644. N: 589134.	Direct, Long-Term.	Negative.	High.	Slight.	**Not Significant.**
VP08	**L2039 at Coolnagour**	2.3km.	E: 622087. N: 591345.	Direct, Long-Term.	Negative.	High.	Moderate.	**Slight.**
VP09	**Protected View V17 Knockyoolahan East**	13.0km.	E: 633203. N: 595020.	Direct, Long-Term.	Negative.	High.	Slight.	**Not Significant.**

VP No.	Name	Distance to the Proposed Turbines	Grid Ref.	Duration and Type of Effect	Quality of Effect	Visual Sensitivity of Receptors	Magnitude of Visual Change	Significance of Residual Visual Effect
VP10	**SR13 at Barnawee Bridge**	8.6km.	E: 628497. N: 594423.	Direct, Long-Term.	Negative.	High.	Slight.	**Slight.**
VP11	**Ardmore Round Tower**	8.7km.	E: 618867. N: 577312.	Direct, Long-Term.	Negative.	High.	Slight.	**Not Significant.**
VP12	**SR8 at Luskanargid**	5.4km.	E: 624363. N: 593786.	Direct, Long-Term.	Negative.	High.	Slight.	**Slight.**
VP13	**SR1 at Cappoquin**	13.0km.	E: 611197. N: 599420.	Direct, Long-Term.	Negative.	High.	Slight.	**Not Significant.**
VP14	**SR11 at Kilgobnet**	8.1km.	E: 624598. N: 596581.	Direct, Long-Term.	Negative.	High.	Slight.	**Not Significant.**
VP15	**Killea above the Blackwater River Valley**	9.6km.	E: 606952. N: 581452.	Direct, Long-Term.	Negative.	Medium.	Slight.	**Not Significant.**
VP16	**Ballycurrane**	1.0km.	E: 615971. N: 585229.	Direct, Long-Term.	Negative.	High.	Moderate.	**Moderate.**
VP17	**Drumslig**	330m.	E: 619740. N: 586432.	Direct, Long-Term.	Negative.	Medium.	Substantial.	**Significant.**
VP18	**SR6 in Reanaviddoge**	700m.	E: 621463. N: 588339.	Direct, Long-Term.	Negative.	High.	Moderate.	**Moderate.**

VP No.	Name	Distance to the Proposed Turbines	Grid Ref.	Duration and Type of Effect	Quality of Effect	Visual Sensitivity of Receptors	Magnitude of Visual Change	Significance of Residual Visual Effect
VP19	**Toor North**	685m.	E: 618668. N: 587869.	Direct, Long-Term.	Negative.	High.	Moderate.	**Significant.**
VP20	**SR5 / N25 at Windgap**	1.3km.	E: 622973. N: 589455.	Direct, Long-Term.	Negative.	High.	Slight.	**Slight.**

13.7.3.4 Visual Effects during the Operational Phase

13.7.3.4.1 *Visual Effects on Designated Scenic Routes and Protected Views*

The majority of wind farms in Ireland have open access during the operational period and are extensively used for amenity purposes, in particular walking and cycling and including the passage of designated scenic routes through or adjacent to wind farm sites. Users of the scenic routes are by definition moving through the landscape, either driving, cycling, or walking. There is sufficient evidence that the amenity of recreational routes is not materially affected by the presence of wind turbines for the small portion of what is, overall, an extensive network of scenic routes and walking trails which pass briefly through wind farms throughout the country. Considering the landscape's capacity to absorb new development from a visual perspective, according to guidelines and policies set out in the WCCDP 2022-2028 Appendix 8, the Proposed Turbines are sited within an area with high potential to absorb new development in that the topography is sufficiently enclosed and heavily vegetated (containing forestry and mature hedges/woody vegetation) and contains elements of existing electrical and energy infrastructure. In addition, the landscape type features a high degree of screening in the direction of the Proposed Turbines from 3-5km and is likely to result in a relatively low degree of 'scarring' to the landscape following landscape mitigations such as proposed planting, bolstering of existing/replaced hedgerows and reinstatement of natural vegetation following the construction phase; refer to discussions on these mitigations in Section 13.7 'Likely Significant Landscape and Visual Effects.'

Co. Waterford designated scenic routes SR5 and SR6 traverse the LVIA Study Area within close proximity of the Proposed Turbines; see Figure 13-23 below. Views best representing the visual effects of the Proposed Turbines on SR5 and SR6 are shown in four photomontage viewpoints VP04, VP05, VP18 and VP20 (imagery presented in the *Photomontage Booklet*) and four photowire images PW-C, PW-D, PW-I and PW-J (photowire imagery is presented in the relevant text subsections below). Regarding SR6, this section of the report also considers the potential visual impacts of the Proposed 110kV Substation which is located 220m south of SR6 within the Proposed Wind Farm site.

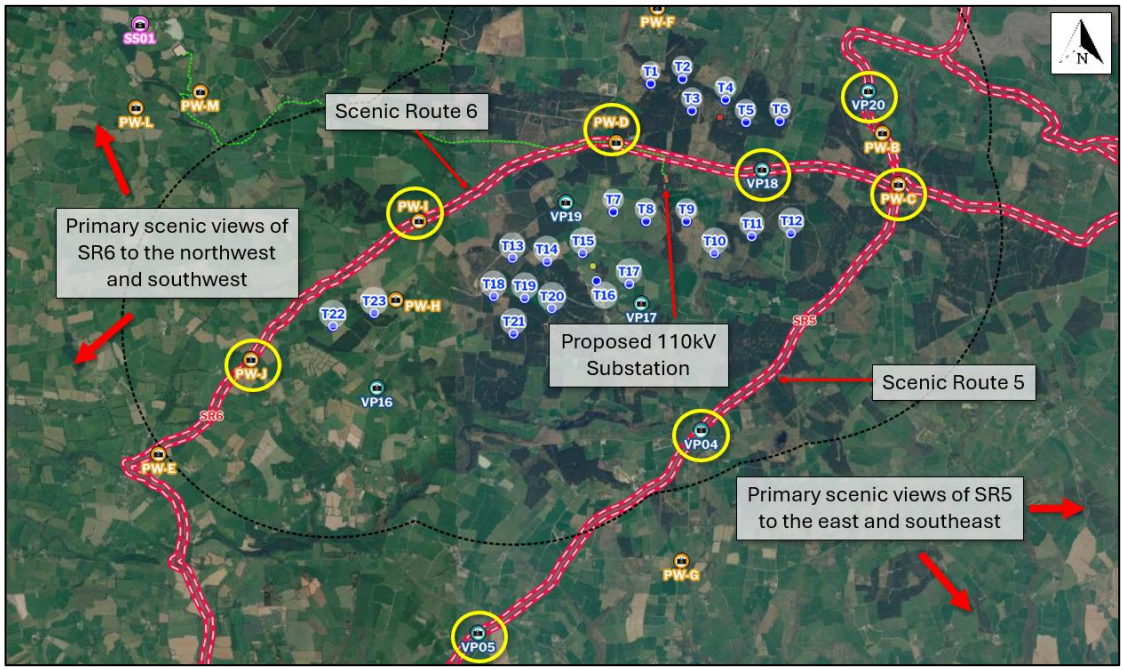


Figure 13-23 Co. Waterford SR5 and SR6 within 5km of the Proposed Turbines, with location of the Proposed 110kV Substation and representative viewpoint locations

Figure 13-23 above indicates the location of relevant viewpoints and photowire imagery along SR5 and SR6 (indicated by yellow circles), along with the location of the Proposed 110kV Substation, relative to the Proposed Turbines.

Co. Waterford Scenic Route 5

SR5 traverses the eastern part of the LVIA Study Area and passes within 5km of the Proposed Turbines. Onsite visibility appraisal found that the primary scenic views from SR5 are looking east and southeast towards the sea, in the opposite direction to the Proposed Turbines, thus the Proposed Turbines are not within the scenic views. This is demonstrated by the view shown below in photowire PW-C (see Plate 13-10 below); it can be seen in the plate imagery that in the views looking inland away from the sea, the Proposed Turbines are mostly screened behind thick forestry.



Plate 13-10 Photowire PW-C captured on SR5 east of the Proposed Turbines

The RSA survey was conducted on SR5 for the full length of the route within and beyond 5km of the Proposed Turbines and the results show that the majority of the route has some form of visual screening in the direction of the Proposed Turbines (recall the previous Figure 13-3 RSA Map). From locations on SR5 to the northeast and east of the Proposed Turbines, only a few turbine blades are visible above the topography which is thickly forested, as evidenced by VP20 which was found to have 'Slight' residual visual effects.

From the southeast, there are more open views towards the Proposed Turbines and all turbines are likely to be visible from the route though visual screening along the route is heavy from vegetation, as evidenced by VP04 found to have 'Moderate' residual visual effects. Importantly, the landscape within in which the Proposed Turbines are viewed from the scenic route is designated as 'Preferred' for wind energy development in the Waterford RES and comprises forestry blocks and pasture land which are landscape types designated as 'Low Sensitivity' in the WCCDP 2022-2028. From beyond 5km of the Proposed Turbines, the turbines are seen to be well set back in the landscape, partially or almost entirely screened by the terrain and will diminish in perceived size and scale with distance from the viewer, as evidenced by VP05 (found to have 'Slight' residual visual effects). The total length of SR5 is approximately 24km, while the areas of the route likely to experience the residual visual effect discussed are concentrated in the southern part of the route in the vicinity of the locations of VP04 and VP05 (an area totalling approximately 4-5km in length); therefore, the anticipated impacts will be to a relatively small portion of the full route.

On balance, the residual visual effects on Co. Waterford SR5 are predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating ranging from 'Not Significant' to 'Moderate,' which is not considered significant.

Co. Waterford Scenic Route 6

SR6 (total length approximately 12km) first traverses the central part of the LVIA Study Area in E-W orientation, passing westward through the Proposed Wind Farm site between T1-T6 and T7-T12, then turns south and traverses the western edge of the Proposed Wind Farm site in NE-SW orientation. The

Proposed 110kV Substation is located c.220m south of SR6 within the Proposed Wind Farm site. The length of SR6 passing through this part of the Proposed Wind Farm site which will be impacted by the effects discussed below is approximately 4.5km in length.

As marked in the previous Figure 13-23 above, the primary scenic amenity of SR6 comprises views directed to the northwest towards the distant Knockmealdown Mountains and west-southwest over the Blackwater River Valley; all primary high quality scenic amenity from SR6 comprise long-distance views and are directed away from the Proposed Turbines. Photomontage VP18 was captured at one of the only locations on SR6 with open visibility to the Proposed Turbines and was found to have 'Moderate' residual visual effects. VP18 was captured on the E-W portion of SR-6 within the Proposed Wind Farm site and is the closest viewpoint location to the Proposed Turbines. The photomontage shows that while the Proposed Turbines are visible from the scenic route, the landscape in which the turbines are viewed has no unique scenic qualities and comprises forestry blocks and pasture land, the two landscape types designated as 'Low Sensitivity' in the WCCDP 2022-2028. Ultimately, the landscape in which the Proposed Turbines are viewed from SR6 is designated as 'Preferred' for wind energy development in the Waterford RES and therefore is envisioned by the local policy to be appropriate for wind energy development.

The degree of dense roadside visual screening by forestry along SR6 and the nature of screening provided by the undulating topography itself from vantage points along SR6 are demonstrated in the imagery of one alternate 'View C' captured from the location of VP18 (presented below in Plate 13-11), showing that T1-T6 in the north of the Proposed Wind Farms site are almost entirely visually screened from view when looking to the northwest.



Plate 13-11 Alternate 'View C' of Photomontage VP18 with rendered wireline showing the view looking northwest



Plate 13-12 Portion of SR6 within the Proposed Wind Farm site, orientated E-W, with dense roadside screening in the direction of the Proposed Turbines

Along the E-W portion of the route within the Proposed Wind Farm site, SR6 is mostly lined with mature forestry and thick roadside vegetation (see Plate 13-12 above). As with SR5, the RSA survey was conducted on SR6 for the full length of the route within and beyond 5km of the Proposed Turbines and, similarly to SR5, the results show that the majority of the route has some form of visual screening in the direction of the Proposed Turbines.

SR6 View of Proposed 110kV Substation

The Proposed 110kV Substation is to be located along this E-W orientated part of SR6, within a block of forestry c.220m south of the scenic route within the Proposed Wind Farm site. Plate 13-13 below shows drone imagery of the forestry block and surrounding landscape in which the Proposed 110kV Substation is located relative to SR6.

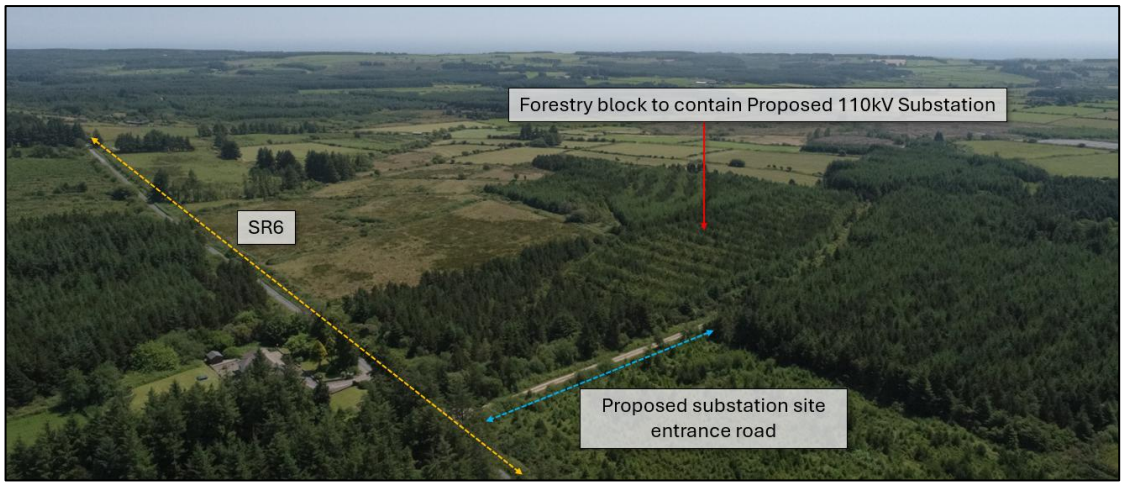


Plate 13-13 Drone imagery of forestry block and surrounding landscape of the Proposed 110kV Substation

A view from SR6 at the location of the site road entrance above the area of the proposed compound is shown in Plate 13-14 below, followed by images of the thick roadside screening in this area adjacent to residential receptors along SR6 (Plate 13-15 and Plate 13-16).



Plate 13-14 Site image of entrance road leading to the Proposed 110kV Substation



Plate 13-15 Site image looking west of roadside screening near the location of the Proposed 110kV Substation



Plate 13-16 Site image looking southeast of roadside screening near the location of the Proposed 110kV Substation

The Proposed 110kV Substation will be set back from residential receptors and SR6. The location is an area of lower elevation relative to visual receptors on the road, with sloping terrain and dense visual screening owing to commercial forestry as well as natural mature woodland and roadside vegetation. Photowire PW-D (presented in Plate 13-17 below) was captured from SR6 looking eastward toward the location of the Proposed 110kV Substation and the location of the control buildings is indicated as a wireline, showing that the buildings will be screened by forestry and are set at significantly lower elevation than the road, which further contributes to the nature of visual screening.

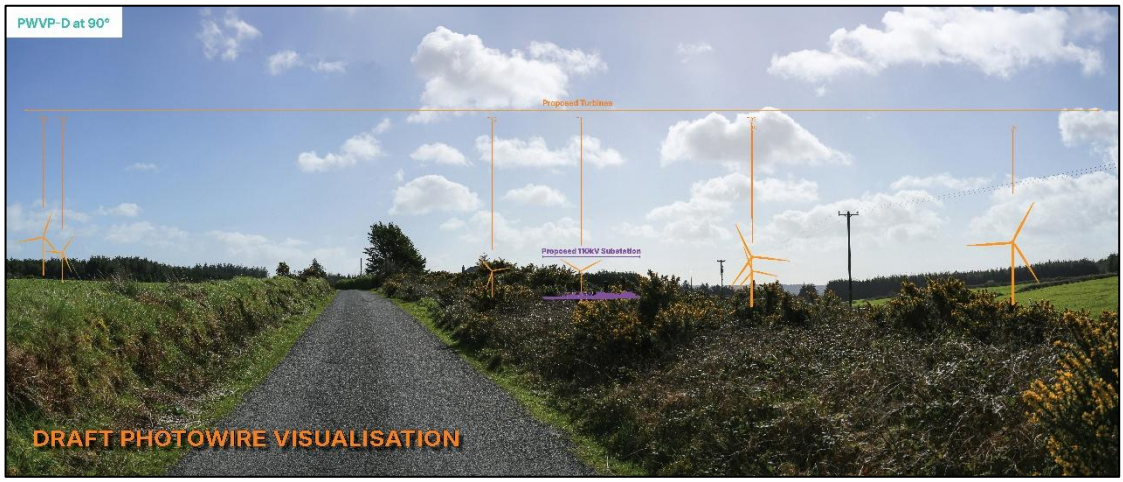


Plate 13-17 Photowire PW-D showing wireline render of the Proposed 110kV Substation and indicating no visibility of the substation

In addition, the LVIA considers that the Proposed 110kV Substation is set within a landscape of commercial forestry subject to rotational-block felling of trees during harvest which means that some degree of visual screening by forestry will likely always be present in the surrounding views, thereby lessening the potential for actual visibility of the proposed infrastructure in the case where forestry nearby the proposed infrastructure is removed.

Along the NE-SW portion of the route with the Proposed Wind Farm site, SR6 mostly runs along the base of undulating and thickly forested terrain, i.e. the bases of Slievegrine Hill and Carronadavderg Hill situated between SR6 and the Proposed Turbines, see Plate 13-18 below. From this portion of SR6 the primary scenic views are looking out westward over the long expanse of marginal foothills and the Blackwater River Valley, and the Proposed Turbines are not within these views, as shown by Plate 13-19 below.



Plate 13-18 Portion of SR6 west of the Proposed Turbines orientated NE-SW



Plate 13-19 Primary scenic views of SR6 to the southwest

Photowire PW-I (presented below in Plate 13-20) was captured at the base of Carraonadavderg Hill and shows that the Proposed Turbines will be visually screened primarily by the hill itself. Following this, the imagery of PW-J (presented below in Plate 13-21) captured from further south on SR6 indicates that visibility of the Proposed Turbines looking up towards Carronadavderg Hill from the south is limited by the terrain—only one Proposed Turbine (T22) will be prominently visible from this area. Associated ancillary proposed infrastructure of small-scale vertical nature, namely the proposed 38kV end masts (16.2m height) located in the vicinity of T22 and T23, will not be visible from SR6.



Plate 13-20 Photowire PW-I showing visual screening of the Proposed Turbines from SR6 looking towards Carronadavderg Hill



Plate 13-21 Photowire PW-J showing limited visibility of the Proposed Turbines and nature of dense/intermittent roadside screening along the southern portion of SR6

PW-J (above) was captured from one of the only locations on this part of SR6 with open visibility towards the Proposed Turbines—the majority of the route has dense/intermittent roadside screening in the direction of the Proposed Turbines as shown at the left edge of the PW-J imagery and below in Plate 13-22. Overall, the southern portion of SR6 is heavily screened by mature trees, indicating that views in the direction of the Proposed Turbines form the southern portion is limited.



Plate 13-22 Screening along SR6 near the south portion of the route

The assessments have determined that while the Proposed Turbines will be intermittently visible from occasional vantage points along small sections of SR6, overall, they are not seen within a sensitive part of the landscape and will not impact the key scenic sensitivities experienced by visual receptors on SR6. On balance, residual visual effects on Co. Waterford SR6 are therefore predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Slight' which is not considered significant.

Protected View W-V22 Panoramic View over Dungarvan Harbour

The focus of this Co. Waterford protected view is a panoramic view to the west towards Dungarvan Harbour, which is looking in the opposite direction of the Proposed Turbines. Meaning, the Proposed Turbines are located inland, behind the vantage point of the viewer, if standing at the protected view location. The view inland from the protected view location is best represented by photowire PW-B which was captured at the protected view itself located in the SR5/N25 layby at Barranalira (shown below in Plate 13-22). The photowire demonstrates first, that only a few turbine blades are visible above the terrain and thick forestry block and second, more importantly that the Proposed Turbines are in the opposite direction of the view towards Dungarvan Harbour. While the visual effect is measurable it does not impact the key sensitivities of the protected view. On this basis, the residual visual effects on Co. Waterford V22 are therefore predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Imperceptible,' which is not considered significant.



Plate 13-23 Photowire PW-B captured from Co. Waterford Protected View V22 on the SR5 / N25

Scenic Routes and Protected Views beyond 5km

Co. Waterford SR1 and Protected View V13. The scenic route is represented by photomontage VP13 which was captured on the scenic route SR1 very near to the location of protected view V13 1916 Memorial East of Cappoquin. The focus of the protected view is not directed towards the Proposed Turbines; however, the protected view encompasses a wide expanse of the surrounding countryside, with the hills in the background being the important feature. From the vantage point of VP13, which is directed southeast, the protected view would encompass views of the open countryside looking to the southwest and the Proposed Turbines are situated at the periphery of the view. From the scenic route, the Proposed Turbines are viewed in the background as very small features relative to the landscape with a 'Slight' magnitude of change considering the context of cumulative turbines also visible from the location of VP13. Overall, the key sensitivities of the scenic route as defined in the local policy are not significantly impacted. Overall, the residual visual effects on Co. Waterford SR1 and Protected View V13 are therefore predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

Co. Waterford SR4. The scenic route is represented by photomontage VP03 which was captured on the route at a point of higher elevation and with Full theoretical visibility in the direction of the Proposed Turbines and found to have a 'Slight' residual visual effect. From the scenic route, the Proposed

Turbines will be set back beyond the horizon and mostly visually screened by the terrain. The Proposed Turbines will be perceived at smaller size and scale than the existing Woodhouse turbines seen in the landscape, and smaller size in scale than permitted Knocknamona turbines in the same area which will be visible in a future uncertain scenario. Overall, the key sensitivities of the scenic route as defined in the local policy are not significantly impacted. On balance, the residual visual effects on Co. Waterford SR4 are therefore predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Slight,' which is not considered significant.

Co. Waterford SR7 and Protected View V23. The scenic route SR7 and Protected View V23 at Helvick Head Harbour are represented by photomontage VP07 which was captured on the route at the same location of V23 and found to have a 'Not Significant' residual visual effect. The focus of the protected view is not directed towards the Proposed Turbines; however, the protected view encompasses a wide expanse of the surrounding view from the viewing platform leading off the layby at Helvick Harbour, with the north shore of Dungarvan Bay and Comeragh Mountains in the background being the important features. From the vantage point of VP07, which is directed west, the protected view would encompass open views of the bay and distant mountains looking to the north and the Proposed Turbines are situated at the periphery of the view. Moving inland to the west in a direction closer to the Proposed Turbines, the primary scenic views from SR7 remain to the north, looking over the bay and to the distant mountains and are therefore in the opposite direction of the Proposed Turbines. Overall, the key sensitivities of the scenic route and protected view as defined in the local policy are not significantly impacted. The residual visual effects on Co. Waterford SR7 and Protected View V23 are therefore predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

Co. Waterford SR8. The scenic route is represented by photomontage VP12 which was captured on the route at a point of higher elevation on the outskirts of Dungarvan town and found to have 'Slight' residual visual effects. Whilst VP12 was captured on SR8 within an area of 'Full' theoretical visibility, the photomontage demonstrates that actual visibility from SR8 will be limited due to the Proposed Turbines being screened by the topography. In addition, the Proposed Turbines will be well set back and seen within an expansive landscape setting and will not be prominent in the views. Other areas of SR8 have less theoretical visibility than that shown in VP12. On balance, the residual visual effects on Co. Waterford SR8 are therefore predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Slight,' which is not considered significant.

Co. Waterford SR11. The scenic route is represented by photomontage VP14 which was captured on the route at a point of higher elevation and with Full theoretical visibility in the direction of the Proposed Turbines and found to have 'Not Significant' residual visual effects. SR11 is located approximately 8km northeast of the Proposed Turbines, in the higher elevation foothills of the Comeragh Mountains. From the scenic route, the Proposed Turbines are mostly screened from view by the terrain and are seen in the background of views and perceived at small scale relative to the landscape. Most of the scenic route has none to low theoretical visibility. Overall, the residual visual effects on Co. Waterford SR11 are predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

Co. Waterford SR13, SR14 and Protected View V17 Knockyoolahan East. The junction of scenic routes SR13 and SR14 is located at the site of protected view V17 Knockyoolahan East, which is focused southwest towards Ballynacourty Headland and the hilly headland of An Rinn. The protected view is represented by photomontage VP09 which was captured at the protected view location and junction of SR13 and SR14. Additional views from SR13 are represented by photomontage VP10 captured northeast of Dungarvan. VP09 located 13km from the Proposed Turbines and VP10 located at 8km were found to have 'Not Significant' and 'Slight' residual visual effects, respectively, as the Proposed Turbines and all cumulative turbines are viewed at significant distance and are effectively absorbed into the sweeping panoramic setting, thereby not significantly impacting the character of the view. The majority of SR13 and SR14 are located beyond 10km of the Proposed Turbines and shown many areas of none or mixed theoretical visibility. On balance, the residual visual effects on Co.

Waterford SR13/SR14 and Protected View V17 are predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

Co. Waterford Protected View V28 Ardmore Round Tower looking over Ardmore Bay. The focus of this Co. Waterford protected view is not directed towards the Proposed Turbines; however, the protected view encompasses a wide panoramic view to the northeast over Ardmore Bay, with the Round Tower and the bay being the important features. The protected view is represented by photomontage VP11 which was captured at the protected view location and found to have 'Not Significant' residual visual effects. From the vantage point of VP11, which is directed north, the Proposed Turbines are situated at substantial distance in the background to the north at the periphery of the view. It was determined that the key sensitivities of the view are not significantly impacted. The residual visual effects on Co. Waterford Protected View V28 are predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

13.7.3.4.2 *Visual Effects on Recreational Routes*

St. Declan's Way

The full length of St. Declan's Way is more than 100km and stretches from Cashel in Co. Tipperary to the south of Co. Waterford at Ardmore, with the majority of the trail winding through The Knockmealdown Mountains in the north of the LVIA Study Area, greater than 10km from the Proposed Turbines in an area with little or no theoretical visibility of the Proposed Turbines. At one of the most elevated parts of the trail, St. Declan's Way passes through the Proposed Wind Farm site in close proximity to T22 and T23, see Figure 13-24 below.

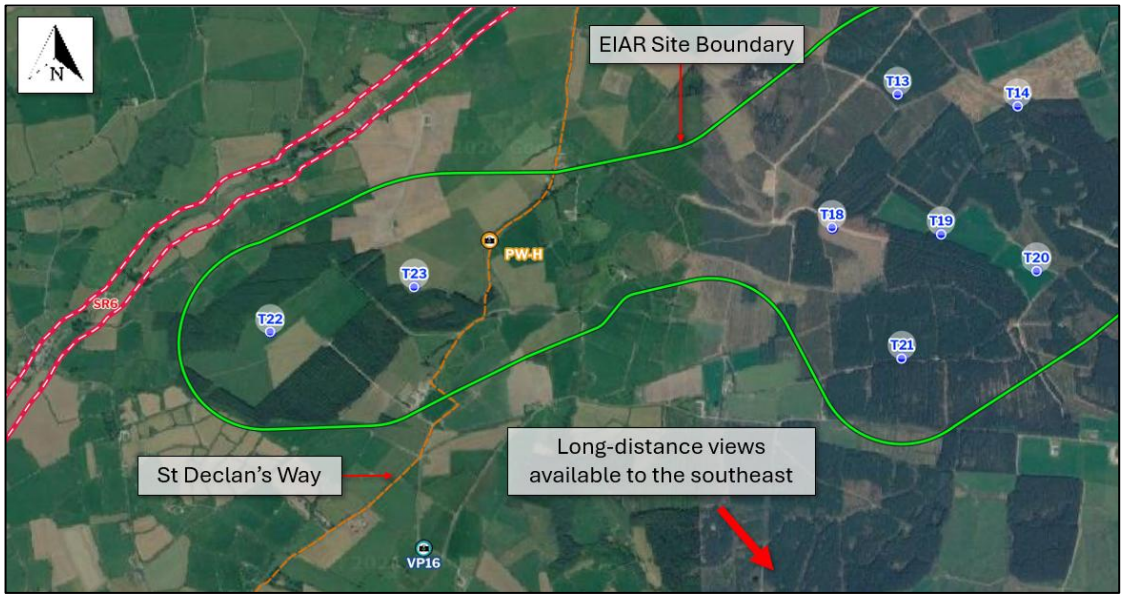


Figure 13-24 St. Declan's Way within the Proposed Wind Farm site



Plate 13-24 Photowire PW-H showing unobstructed long-ranging views from the hilltop near T22 and T23

Photowire PW-H (presented above in Plate 13-24) was captured on St. Declan's Way within 300m of T23 and demonstrates that long-distance, scenic views experienced from that vantage point are not obscured by the Proposed Turbines since they do not sit within the primary direction of open views. Additional views captured in close proximity to St. Declan's Way are shown in photomontages VP16 and VP05 located to the south of the Proposed Turbines and represent views looking to the north at successively greater distances from the Proposed Turbines, 1km and 4.3km, respectively. The farthest away, VP05, was found to have 'Slight' residual visual effects, while VP16 within 1km was found to have 'Moderate' residual visual effects and shows that for a short section of St. Declan's Way, the Proposed Turbines will be viewed at moderate to large perceived size/scale relative to the landscape. Considering the context of wind farm development becoming increasingly acceptable within sparsely populated upland landscapes, it is becoming common for walking trails to pass through wind farms, as is the case with St. Declan's Way and the Proposed Project. It can be stated that, whilst trail users of St. Declan's Way will be passing along the trail adjacent to the Proposed Turbine towers, the nature of the magnitude of change in views is temporal, meaning that the views of wind energy infrastructure are short-lived and not stationary as trail users pass through the area, and long-ranging views are available between tower structures. Considering the wider LVIA Study Area, the majority of St. Declan's Way has no visibility of the Proposed Turbines and overall will not be significantly impacted. Overall, the residual visual effects on St. Declan's Way waymarked walking trail are predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating ranging from 'Imperceptible' beyond 10km of the Proposed Turbines to 'Slight' within 5km, which is not considered significant.

Sean Kelly Cycling Trails – Heritage Route

Photowire PW-G (presented below in Plate 13-25) was captured at the Liskeelty crossroad at R673 on the cycle route in an area with open visibility within 5km of the Proposed Turbines and indicates that visibility of the Proposed Turbines will be almost entirely screened by forestry from this area.



Plate 13-25 Photowire PW-G captured on Sean Kelly Cycling Route within 5km of the Proposed Turbines

Additional views in the direction of the Proposed Turbines from the Sean Kelly Cycle Route are represented by VP01 and VP12 (in the northeast), VP03 (in the northwest), and VP11 (in the southeast); all captured greater than 5km from the Proposed Turbines and found to have residual visual effects ranging from 'Not Significant' to 'Slight.' The full length of the cycling route is 75km and the route circles the LVIA Study Area, with only two locations where the route comes within 5km of the Proposed Turbines—in the northeast along SR5/SR7 and in the southeast along local road networks. In the northeast along SR5/SR7 the roadways have intermittent to dense visual screening in the direction of the Proposed Turbines, as shown by RSA survey. In the southeast, views may be more open, as shown previously in PW-G, though the Proposed Turbines will be seen as small features relative to the landscape are mostly visually screened. On balance, the residual visual effects on Sean Keely Cycling Route are predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

Recreational Routes beyond 5km

Waterford Greenway. The full length of the Waterford Greenway is approximately 46km and most of the greenway is located beyond 10km of the Proposed Turbines in the northeast of the LVIA Study Area and has little to no theoretical visibility of the Proposed Turbines. The closest point of Waterford Greenway to the Proposed Turbines that is within the LVIA Study Area, is within Dungarvan town, greater than 5km from the Proposed Turbines, and views are best represented by photomontage VP10, captured from a higher elevation vantage point with open views from the greenway beyond 8km from the Proposed Turbines, and found to have 'Moderate' residual visual effects. From this perspective, the Proposed Turbines are seen a significant distance and are effectively absorbed into the panoramic setting. Photomontages VP09 and VP02 also represent views from areas with Full theoretical visibility at successively greater distances, approximately 15km and 25km, respectively and were found to have 'Not Significant' residual visual effects for the same reason. On balance, the residual visual effects on Waterford Greenway are therefore predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

Ardmore Cliff Walk. The trail is located near Ardmore Round Tower and protected view V28, greater than 8km from the Proposed Turbines, and views are represented by photomontage VP11 which was found to have 'Not Significant' residual visual impact. Most of this trail is circling Ardmore Head to the south of VP11 and the primary scenic views are of the sea and coastline to the south. Therefore, the residual visual effects on Ardmore Cliff Walk are predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

13.7.3.4.3 *Visual Effects on Settlements*

Grange (Rural Node)

Onsite visibility appraisal determined that there is potential for visibility of the Proposed Turbines from the northern outskirts of Grange, located 4.8km south of the Proposed Turbines. VP05 captured to the north of Grange best represents views from this settlement. VP05 was found to have 'Not Significant' residual visual effects as, from this perspective, the Proposed Turbines are visible in the background of views and do not significantly alter the character of landscape views comprising medium to long ranging views of open countryside, pasture land and forestry. Overall, the residual visual effects on Grange are therefore predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

Settlements beyond 5km

Dungarvan (Key Town) & Dungarvan Castle. Onsite visibility appraisal determined that there is potential for visibility of the Proposed Turbines from the southwestern outskirts of Dungarvan, located approximately 5km from the Proposed Turbines. Photowire PW-A (presented below in Plate 13-26) was captured within Dungarvan and shows the view and setting of Dungarvan Castle which sits within the town centre, representing views from within the town at higher elevation vantage points with relatively open visibility in the direction of the Proposed Turbines.



Plate 13-26 Photowire PW-A showing the setting of Dungarvan Castle from within Dungarvan

The image demonstrates that the Proposed Turbines are well set back and are not significantly prominent within the views and are not likely to significantly alter the existing character of the view which is of modern townscape with the castle as a historical feature. In addition, photomontage VP01 was captured on the southwestern outskirts of the town and demonstrates the view from SR5 as it leaves the town heading south and was found to have 'Not Significant' residual visual effects. Overall, the residual visual effects on Dungarvan are therefore predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

Aglish (Rural Village). Photowire PW-K (presented below in Plate 13-27) was captured from a higher elevation vantage point on the outskirts of Aglish and best represents open views of the Proposed Turbines from the village. As shown in the photowire below, the visible components of the Proposed Turbines are screened primarily behind the topography as well as above-ground features such as vegetation and are therefore not visible from Aglish. There will be no visual effects in Aglish arising as a result of the Proposed Project.



Plate 13-27 Photowire PW-K showing no visibility of the Proposed Turbines from Aglish

Youghal (Main Town). Onsite visibility appraisal determined that there is potential for visibility of the Proposed Turbines at substantial distance from higher elevation vantage points within Youghal. Photomontage VP06 was captured on the R634 where it gains in elevation along the coastal cliff of Youghal and best represents open views towards the Proposed Turbines at the distance of approximately 10km and was found to have 'Not Significant' visual effects. As shown in the photomontage, the Proposed Turbines are viewed at significant distance and are partially visually screened and achieve a certain aesthetic balance within the landscape. In addition, from the higher elevation areas of Youghal to the south, the primary scenic views are directed away from the Proposed Turbines, focusing on views of the sea and coastline. Most areas of Youghal will not have actual

visibility in the direction of the Proposed Turbines due to screening by buildings and other structures within the settlement. Overall, the residual visual effects on Youghal are therefore predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

13.7.3.4.4 *Visual Effects on Major Transport Routes*

R634 above the Blackwater River Valley

The R634 Regional Road comes within 10km of the Proposed Turbines in the southwest corner of the LVIA Study Area and has long-ranging scenic views over the landscape from above the Blackwater River Valley which is a high-sensitivity landscape area in local policy. While the R634 itself is within a low-sensitivity landscape area in local policy, views from the higher-elevation terrain look across the Blackwater river Valley and are considered scenic. The ZTV map (recall Figure 13-1) shows small areas of full theoretical visibility in the direction of the Proposed Turbines and views are represented by VP15, found to have 'Not Significant' residual visual impact. From this perspective, the Proposed Turbines are viewed at significant distance and do not significantly alter the character of landscape views. Overall, the residual visual effects on motorists and cyclists of R634 within 10km of the Proposed Turbines are predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

R671 to the West

The ZTV map (recall Figure 13-1) shows that the entire length of R671 in the LVIA Study Area has limited theoretical visibility of the Proposed Turbines and the RSA survey (recall Figure 13-3) indicates that R671 within 5km has intermittent to dense roadside screening in the direction of the Proposed Turbines along its full length. Photowire PW-E (presented below in Plate 13-28), was captured from the church/cemetery in Clashmore adjacent to the R671, 5km from the Proposed Turbines.



Plate 13-28 Photowire PW-E captured at church/cemetery adjacent to R671

PW-E demonstrates that there is very little potential for visibility of the Proposed Turbines from this area of R671 due to screening by the terrain, and intermittent screening by vegetation within the landscape. Overall, the residual visual effects on motorists and cyclists of R671 Regional Road, arising as a result of the Proposed Turbines, are predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Not Significant,' which is not considered significant.

R671 View of Proposed 220kV Loop-in Substation

The Proposed 220kV Loop-in Substation is located near the R671 in Ballycullane, distinctly separate from the Proposed Wind Farm, located approximately 4.5km from the Proposed Turbines, sited within an agricultural field with mature boundary vegetation on all sides. Photomontage SS01 (presented in EIAR Volume 2B Proposed 220kV Loop-in Substation Visualisation) shows a view from the R671 approximately 584m from the nearest element of the Proposed 220kV Loop-in Substation and indicates the visibility of the Proposed 220kV Loop-in Substation from the R671 to the northwest. This viewpoint represents southbound receptors on the R671 who will have momentarily have open views in the direction of the direction of the Proposed 220kV Loop-in Substation. As the photomontage also represents one residential receptor seen in the foreground of the photomontage imagery, the viewpoint of SS01 is given 'High' sensitivity on account of this residential receptor in close proximity which has potential to experience views of the Proposed 220kV Loop-in Substation.

The Proposed 220kV Loop-in Substation is seen within a wider landscape of existing electrical and wind energy infrastructure; Plate 13-29 below is a site image showing the wider landscape view, as seen from further to the south along R671, and shows that existing pylons and wind turbines (Woodhouse Wind Farm) are visible within the landscape and in addition, screening by vegetation can be seen around the residential receptor in the image.

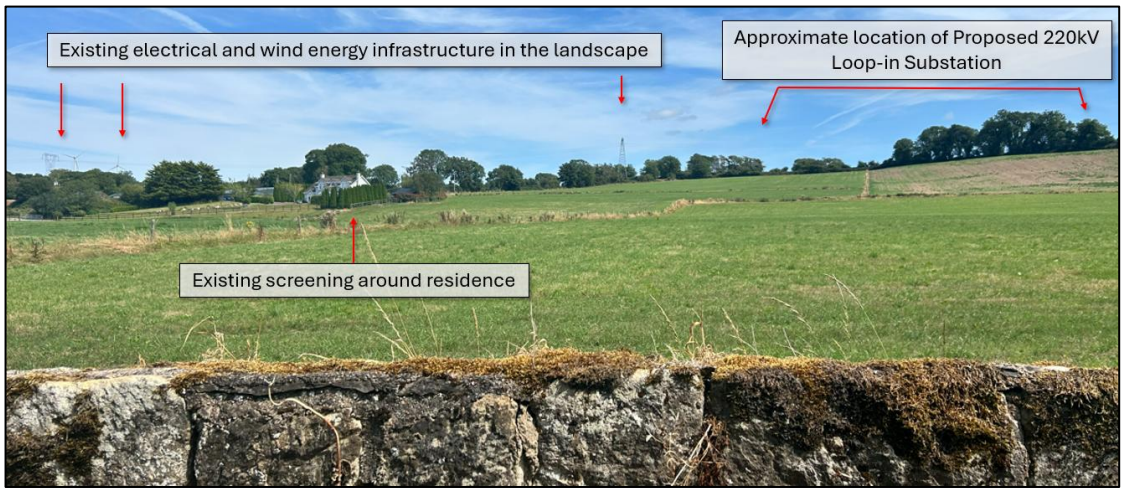


Plate 13-29 On-the-ground view from R671 towards Proposed 220kV Loop-in Substation

Two proposed views are shown in SS01—first is the pre-mitigation view of the Proposed 220kV Loop-in Substation following construction, and second is the view following 5 years of growth on proposed planting as part of mitigation measures to reduce visual impact over time. This mitigation planting is proposed following a consultation with local residential receptors. The visual impact assessment of SS01 is presented in *Appendix 13-3* and indicates a 'Slight' magnitude of change in the view post-mitigation. In general, even before mitigation planting, all elements of the Proposed 220kV Loop-in Substation are well set back and many elements are entirely or almost entirely visually screened by dense woodland or by the topography itself.

Below, Figure 13-25 indicates a map of additional photowire locations showing alternate views towards the Proposed 220kV Loop-in Substation, PW-L from a high-elevation vantage point to the southwest (in Shanakill townland) on L2011 road within 1km and PW-M from the base of the hill (in Graigue) to the southeast of the proposed infrastructure within 585m. Both photowire images accurately show the scale and relative position of the Proposed 220kV Loop-in Substation in the landscape from these vantage points, but do not show the reality of visual screening, which is therefor discussed in text and supported by annotations on the photowires. The photowires indicate that visibility of all lower lying infrastructure of the Proposed 220kV Loop-in Substation will be very limited from all visual receptors in the wider area, except to the northwest where Photomontage SS01 is located.



Figure 13-25 Photowire locations of additional wireline views towards the Proposed 220kV Loop-in Substation

PW-L (presented below in Plate 13-30) shows visual screening by the intervening forestry and topography of the landscape as viewed from this vantage point with only a small portion of the proposed end mast partially visible above the treeline.

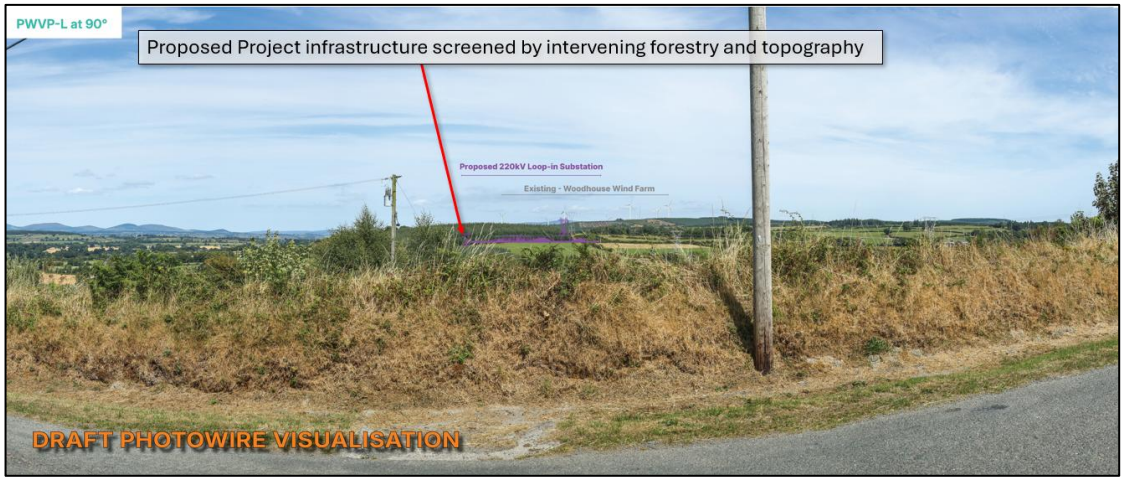


Plate 13-30 Photowire PW-L (annotated) showing wireline image of proposed 220kV control buildings from high-elevation vantage point to the southwest on L2011 in Shanakill

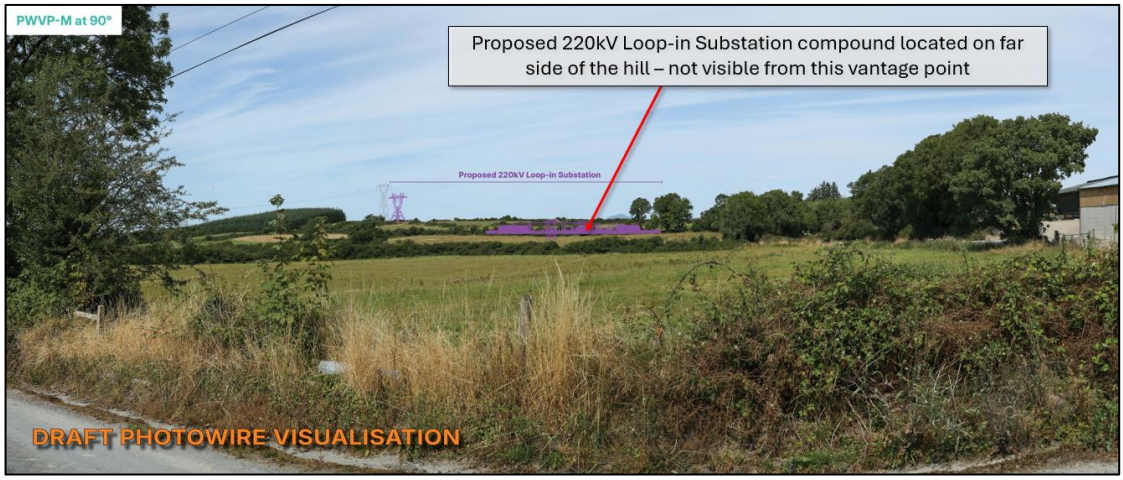


Plate 13-31 Photowire PW-M (annotated) showing wireline image of proposed 220kV control buildings from the local road at the base of the hill to the southwest in Graigue

PW-M (presented above in Plate 13-31) shows that the entire substation compound will not be visible, it will be screened from view by the intervening hillside, as the Proposed 220kV Loop-in Substation is located on the far side of the hill from this vantage point and nearby residential receptors. The most southern proposed end mast will be visible on the ridgeline from the south-east, the number of receptors with potential visibility is low as the area is sparsely populated; moreover, the end-masts will be viewed within a modified working landscape designated as 'Low' sensitivity.

As discussed previously in 13.7.3.1.2, LVIA mitigation includes proposed planting along the top of the berm. Figure 13-26 below is a two-panel extract of photomontage SS01 imagery showing the nature of proposed bolstering to the hedgerow northwest of the proposed endmast, and planting on the proposed berm before and after vegetation.

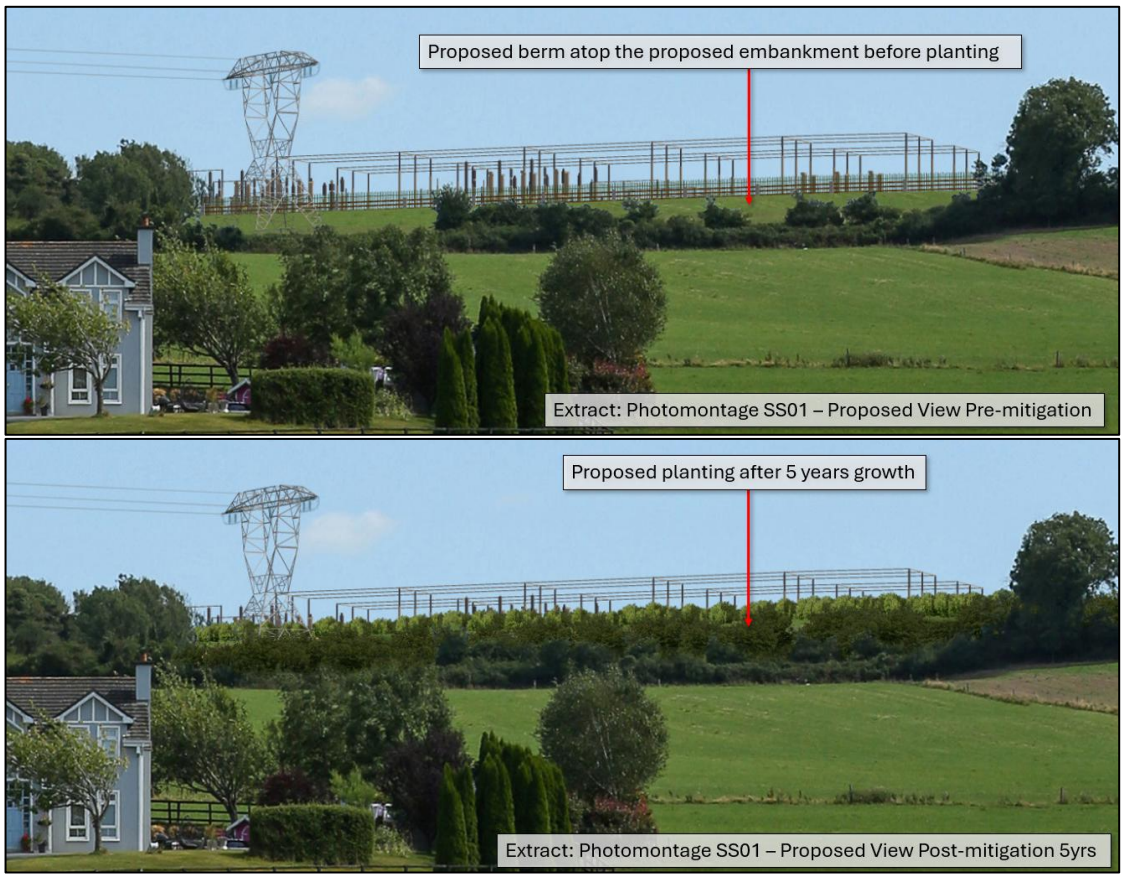


Figure 13-26 Two-panel image: (top) Pre-mitigation and (bottom) post-mitigation 5-years growth of proposed planting atop the proposed berm/embankment and bolstering of existing hedgerow at the location of the Proposed 220kV Loop-in Substation

Overall, the residual visual effects arising for a very small number of nearby residential receptors as a result of the Proposed 220kV Loop-in Substation are predicted to be 'Direct,' 'Permanent' and 'Negative' with a significance rating ranging from 'Not Significant' to 'Slight,' which is not considered significant.

13.7.3.4.5 Visual Effects on Local Residential Receptors

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

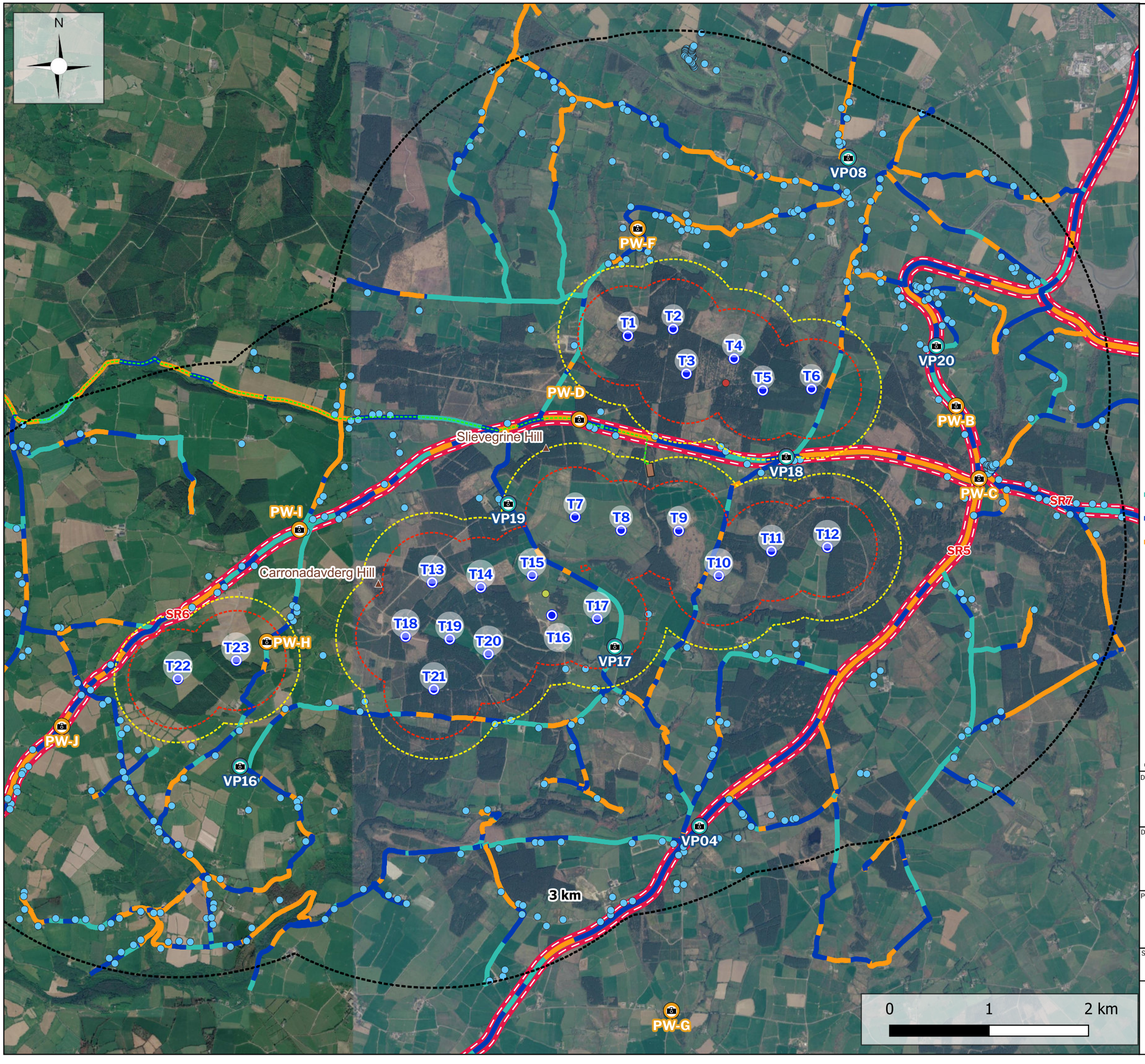
Considering the landscape's capacity to absorb new development from a visual perspective, according to classifications set out in the WCCDP 2022-2028 Appendix 8, the Proposed Wind Farm is located within a landscape featuring a high degree of visual screening in the direction of the Proposed Turbines from receptors within 3-5km owing to enclosure by the topography and high degree of forestry and vegetation which screen the views. The assessment of visual effects on local residential receptors focuses on receptors within 3km of the Proposed Turbines where greatest potential for significant impacts are likely to occur. The assessment uses analysis of aerial maps and photomontages with the intention of identifying the theoretical precautionary scenario for potential visual effects on residential receptors. As detailed in Chapter 5: '*Population and Human Health*,' the landscape surrounding the Proposed Wind Farm site has a population density significantly lower than the average national and county population densities (see Table 5.4 in Chapter 5); therefore, the predicted visual effects discussed below would be experienced by a very low number of residential receptors.

Table 13-9 Visual Receptor Preliminary Analysis previously presented in the Visual Baseline reports the areas of local residential receptors to be assessed, relative to the position of the Proposed Turbines, which includes the areas central to the Proposed Wind Farm site and areas to the east/north/northwest and southwest/south/ southeast. Photomontages VP04, VP08, VP16, VP17, VP18, VP19, VP20 and five photowire images representing views nearby these receptors are used to support the following assessment of visual effects on local residential receptors.

The design of the Proposed Project 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 reccomended 500m set-back distance from residential receptors set out in the Guidelines (DoEHLG, 2006),
- All Proposed Turbines adhere to the recommended 4-times-tip-height (680m-740m) set-back distance from third-party properties for residential visual amenity as set out in the Draft Guidelines (DoHPLG, 2019).

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



Map Legend

- 3km Buffer
- Photomontage Viewpoint Locations
- Photowire Image Locations
- Designated Scenic Routes (WCCDP 2022-2028)

Set-Back Buffers from Local Residential Receptors, Best Practice Guidance

- Dwellings within 3km
- 4xTip-Height (680m-740m, Draft Guidelines DoHPLG 2019)
- 500m Buffer (Guidelines DoEHLG 2006)

Proposed Infrastructure

- Proposed Turbines
- Proposed Telecoms Relay Mast (30m Height)
- Proposed Met Mast (80m Height)
- Proposed 220kV Loop-in Substation
- Proposed 110kV Underground Cabling Route

Route Screening Analysis (RSA)

- Class 1 - Little/No Screening
- Class 2 - Intermittent/Partial Screening
- Class 3 - Desne/Full Screening

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Drawing No.

Figure 13-27

Drawing Title

Visibility Appraisal of Local Residential Receptors

Project Title

Slievegrine Renewable Energy Development, Co. Waterford

Scale	Project No.	Date	Drawn By	Checked By
1:36,650	240740	2026.10.07	GL	RS

MKO Planning and Environmental Consultants

Local Receptors central to the Proposed Wind Farm site

Figure 13-27 above maps all residential dwellings within 3km of the Proposed Turbines and indicates the minimum setback distances recommended in the Guidelines (DoEHLG, 2006) and Draft Guidelines (DoHPLG, 2019) and overlays the RSA results previously presented in Section 13.3.5, to show the visual screening classes recorded on site. The Proposed Project exceeds the recommended 500m setback from local residential receptors set out in the Guidelines (DoEHLG, 2006) and adheres to the prescribed 4-times-tip-height (680m-740m) setback distance for all third-party properties for residential visual amenity in the Draft Guidelines (DoHPLG, 2019). Local residential receptors central to the Proposed Wind Farm site include those along the SR6/L2024 between T1-T6 and T7-T12, those southwest of Slievegrine Hill, and those southwest of Carravonadavderg Hill.

SR6 between T1-T6 and T7-T12. According to Figure 13-27 above, the number of local residential receptors located along SR6 between T1-T6 and T7-T12 is low and the RSA results indicate primarily dense or intermittent visual screening in the direction of the Proposed Turbines and these ratings consider that turbines are located on both sides of the receptors. Views of residential receptors located along SR6/L2024 within the Proposed Wind Farm site are represented by photomontage VP18 and photowire PW-D; these receptors are within 1km of the nearest Proposed Turbine. VP18 is presented in Appendix 13-3 and PW-D, along with several site images captured along SR6, was presented previously in Section 13.7.3.4. The assessment of VP18 in *Appendix 13-3* found a residual visual effect of 'Moderate' for the small section of SR6 which runs E-W within the Proposed Wind Farm site. As discussed in *Appendix 13-3*, a number of mitigating factors can be considered to lessen the overall residual visual effects that are likely to be experienced by residential receptors along this portion of SR6, as follows. VP18 is captured at one of the only locations on SR6 where the Proposed Turbines are clearly visible. Considering the limited scenic views from this small portion of the scenic route, the spacing of visible turbines is such that long-distance scenic views to the south are still available and are partially unobstructed. Currently, there is no visibility of T01-T06 to the north from residential receptors on this road nearby VP18 and Photowire PW-D due to dense visual screening by commercial forestry to the north and also the underlying landform characteristics. The very small number of residential receptors in this area have the potential to experience some form of surrounding effects in a future receiving environment when the block of forestry immediately to the north is felled and the Proposed Turbines will potentially be visible in two opposing field of view. However, the various plots of commercial forestry to the north of these receptors is subject to rotational-block felling, meaning that some degree of visual screening by forestry will likely always be present in the views, thereby lessening the overall visual impact. In addition, the sloped nature of the topography in this area and the strategic siting of turbines in a staggered formation ensures that visible turbines will be seen set back within the landscape and partially visually screened by the undulating terrain, with turbines at lower elevations having less overall visual impact. Because of the high degree of roadside screening (natural vegetation, forestry, etc.) along the road network in this area, most residential receptors located adjacent to this road will have far less visibility of the Proposed Turbines than that shown in the photomontage (VP18). On balance, the residual visual effects on local residential receptors along this route are predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Moderate,' which is not considered significant.

Southwest of Slievegrine Hill. Views of residential receptors immediately southwest of Slievegrine Hill are represented by VP19, located within 1km of the Proposed Turbines and found to have a 'Significant' residual visual effect. According to Figure 13-27, the number of receptors at this location is low and that the RSA screening results indicate primarily intermittent visual screening in the direction of the Proposed Turbines from this area, and this rating takes into account that turbines are visible in multiple directions. From this vantage point, T1 to T6 are visible as a horizontal staggered arrangement, while the turbines further south are visible in a clustered arrangement, with the Proposed Turbines diminishing quickly in perceived size and scale moving away from the viewpoint. As the view features several of Proposed Turbines seen at different perceived size/scale, as well as in different arrangements (horizontal and clustered), the overall aesthetics are non-uniform. Therefore, on balance, the residual

visual effects on local residential receptors immediately to the west are predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Significant.' The number of receptors to experience these effects is very low as the landscape is sparsely populated.

Southwest of Carravondavderg Hill. Views of residential receptors located to the southwest of Carronadavderg Hill are represented by photowire PW-H (previously presented in Plate 13-24 in Section 13.7.3.4.2); these receptors are within 1km of the nearest Proposed Turbine. The view as previous shown in Plate 13-24 demonstrates that while turbines will be visible, long-distance views to the south which are not obstructed by the Proposed Turbines are still available from the local road at the highest part of Carronadavderg Hill. As with the receptors previously discussed above, residential receptors at this location will also inevitably experience 'surrounding' effects having turbines on two sides. In the case of this area within the Proposed Wind Farm site, the RSA results show the road network where the local residential receptors are concentrated has intermittent visual screening, and this rating considers that the Proposed Turbines are located in two directions from the road. The number of local residential receptors located here is low. Considering the close proximity of some local residential receptors to Proposed Turbines T22 and T23, it is likely that these two turbines will be perceived at very large size and scale; however, the Proposed Turbines in the other direction (to the east) are mostly visually screened by the terrain and diminish quickly in perceived size and scale as they are positioned in a linear stagged layout and extend down the sloping terrain. On balance, the residual visual effects on local residential receptors at this location are therefore predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Moderate,' which is not considered significant.

Local Receptors to the East, North & Northwest

According to the RSA presented in Figure 13-27 above, most of the road network where local residential receptors are located to the east, north and northwest of the northern cluster have intermittent to dense roadside screening in the direction of the Proposed Turbines, indicating that potential visibility will be limited. This is demonstrated by photomontages VP08 and VP20 (see *Photomontage Booklet*), both found to have 'Slight' visual effects, owing to the Proposed Turbines being mostly visually screened from these directions by terrain and forestry. Proposed Turbines T1 to T6 are visible from the north and are generally aesthetically balanced in terms of uniform perceived size/scale, even spacing and appropriate height profile which follows naturally with the undulating terrain. No sensitive scenic views from the north are impacted by the Proposed Turbines from these vantage points. Photowire PW-F (presented below in Plate 13-32) demonstrates views from local roads north of T1-T6 and indicates that visibility of the Proposed Turbines is limited by the high degree of screening by the terrain and intervening forestry.



Plate 13-32 Photowire PW-F showing views towards the Proposed Turbines from north of T1-T6

Photowires PW-C and PW-B (previously presented in Plate 13-10 and Plate 13-23, respectively) demonstrate the degree of visual screening of the Proposed Turbines behind the terrain and forestry

from the east along SR5/N25 and PW-I (previously presented in Plate 13-20) demonstrates the screening of Proposed Turbines behind Carronadavderg Hill in views looking east from the scenic route. These photowire image locations are within 2km of the nearest Proposed Turbine and therefore represent views from vantage points closer to the Proposed Turbines than most local receptors. On balance, the residual visual effects on local residential receptors to the east, north and northwest are predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating ranging from 'Not Significant' to 'Slight,' which is not considered significant.

Local Receptors to the Southwest, South & Southeast

According to Figure 13-27 above, most of the road network where local residential receptors are located to the southwest of T22-T23 have intermittent or dense roadside screening in the direction of the Proposed Turbines, indicating that potential visibility will be limited. This is demonstrated by photowire PW-J (previously presented in Plate 13-21 in Section 13.7.3.4) captured on SR6 from a location to the southwest of T22—PW-J shows that T22 will be the only fully visible Proposed Turbine and T23 will be visible as blade-tips only above the forestry block, while the remaining Proposed Turbines are not visible behind the terrain.

Views of residential receptors located south of the Proposed Turbines are represented by photomontage VP16, found 'Moderate' residual visual effects. From this vantage point some of the Proposed Turbines are visible across a wide horizontal extent yet also vary in perceived size and scale owing to the difference in setback distance and T22 and T23 appear visually separated from the remaining turbines. According to Figure 13-27, much of the road network to the south where local residential receptors are concentrated has intermittent or dense roadside screening in the direction of the Proposed Turbines, indicating that the potential for actual visibility is limited. There are pockets of open visibility, and VP16 was captured from one of these locations. The location of VP16 therefore represents a vantage point with the worst-case scenario view—meaning unobstructed open views in the direction of the Proposed Turbines. Most parts of the local road network will have less visibility than that shown in VP16 due to screening by the terrain and by roadside forestry, vegetation or woodland. The onsite appraisal found many local roads further south to be on steep terrain with dense roadside screening and little potential for actual visibility.

Views of residential receptors located southeast of the Proposed Turbines are represented by photomontages VP04 and VP17, found to have 'Moderate' and 'Significant' residual visual effects, respectively. According to Figure 13-27, much of the road network to the southeast has intermittent or dense roadside screening in the direction of the Proposed Turbines, and the onsite appraisal found many local roads to be on steep terrain with dense roadside screening and little potential for actual visibility. VP04 demonstrates that while the Proposed Turbines are seen across a wide horizontal extent, the layout of the Proposed Turbines is aesthetically balanced in terms of uniform perceived size/scale, even spacing and appropriate height profile which follows naturally with the undulating terrain and long-distance views of distant terrain such as the Comeragh Mountains to the northeast are still available. VP17 was given a 'Significant' residual visual effect as it was captured from the brow of a hill showing the full horizontal extent of turbines; however, VP17 is within 500m of T17 and is located much closer to the Proposed Turbines than most local receptors—**no third-party receptors are within** the 500m or 4-times-tip-height buffers as set out in the Guidelines (DoEHLG, 2006) and Draft Guidelines (DoHPLG, 2019). Residential receptors approximately 500m south of VP17 at lower elevation, further set back from the Proposed Turbines, will experience less visual impact than what is shown in the photomontage due to enclosure and visual screening from localised landform and mature treelines, with substantially less horizontal extent of turbines seen.

Overall, the residual visual effects on local residential receptors to the southwest, south and southeast are predicted to be 'Direct,' 'Long-Term' and 'Negative' with a significance rating of 'Moderate,' which is not considered significant.

Summary of Visual Effects on Residential Receptors

Within the LVIA Study Area, the visual impact on residential receptors ranges from 'Imperceptible' to 'Significant' (for a small number of residences in very close proximity). Given the adherence to the best practice 4-times-tip-height set-back distance to protect residential visual amenity, on balance, effects on residential receptors are mitigated and are therefore deemed 'Not Significant'.

13.7.4 Cumulative Landscape and Visual Effects

The assessment of cumulative landscape and visual effects must be proportional, meaning that the focus of the assessment is on the extent to which the Proposed Project contributes toward cumulative effects on the particular receptors under assessment; these contributions are clearly explained in the narrative on cumulative impact assessment. The assessment in this section focuses on cumulative impacts with other wind energy developments within the LVIA Study Area as identified previously in Section 13.6 Cumulative Context.

13.7.4.1.1 *Cumulative Landscape Effects during Operational Phase*

The landscape of the Proposed Wind Farm site is a modified working landscape of marginal upland terrain comprising coniferous forestry and pasture land that is designated as 'Low Sensitivity' and 'Preferred' for wind energy development in the WCCDP 2022-2028. The existing Woodhouse Wind Farm and Permitted Knocknamona Wind Farm are set within the same LCA and same undulating transitional upland terrain as the Proposed Turbines, approximately 4km from the nearest Proposed Turbine. The Proposed Project will cumulatively impact this LCA in comination with the existing Woodhouse and permitted Knocknamona Wind Farm. The LCA in which the cumulative developments are located, LCU-5E Drumhills, is large scale and robust, and mostly comprising 'foothill' landscape type, capable of effectively accommodating multiple wind energy developments.

The Proposed Turbines will be visible at distance in combination with other existing wind energy developments (See the Photmotage Booklet) from other high sensitivity receptors in the LVIA Study Area including the coast, The Coomeragh and Knockmealdown Mountains, and the Blackwater River Valley. Whilst the Proposed Turbines and other cumulative turbines are visible, and indirectly influence the character of this these higher sensitivity landscapes, they are well set back and do not impact the key sensitivities and key landscape qualities associated with these receptors.

13.7.4.1.2 *Cumulative Visual Effects during Operational Phase*

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

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

Following this guidance, a primary focus is given to the cumulative effects likely to occur as a result of other wind turbines identified in the LVIA Study Area as these are likely to cause the greatest potential

for significant cumulative effects. Cumulative visual effects were assessed as part of the viewpoint assessments in *Appendix 13-3*.

To the west and south of the Proposed Turbines within 5km and out to 10km, cumulative wind farms are not likely to be visible due to the enclosure of the undulating terrain which limits visibility to short-range and medium-range views, or which screens cumulative turbines fully in the distant views; this is evidenced by photomontages VP04, VP05, VP06, VP08, VP11, VP15, VP16, VP17, and VP18.

Existing Woodhouse and Permitted Knocknamona Wind Farms

The greatest potential for cumulative visibility is to the northwest within 5km, with the existing Woodhouse Wind Farm (8 no. turbines) which is set within the same landscape area as the Proposed Turbines and located 4.9km from the nearest Proposed Turbine, T1. From the northeast beyond 5km of the Proposed Turbines, Woodhouse is visible in the background of views, perceived at a slightly smaller size and scale than the Proposed Turbines and may be on the periphery of views in a journey scenario along elevated routes, in succession with the Proposed Turbines; this is evidenced by photomontages VP12 and VP14. From the northeast beyond 5km at lower elevations, Woodhouse is screened from view by the undulating terrain, this is evidenced by VP01 and VP10. From the northeast beyond 5km at higher elevations, Woodhouse is not likely to be discernible in the background of views, as evidenced by VP09.

From the west/northwest approximately 10km and beyond of the Proposed Turbines, Woodhouse turbines are seen together in the landscape with the Proposed Turbines in the background of views, perceived as very small objects, and the Proposed Turbines contribute to widening the horizontal extent of visible turbines in the landscape in both directions, this is evidenced by VP03 and VP13.

In a future receiving environment, the permitted Knocknamona Wind Farm (8 no. turbines) located adjacent to Woodhouse approximately 3.3km from the nearest Proposed Turbine T1, would also be visible in the background of views from the west/northwest, seen in the same landscape as Woodhouse and the Proposed Turbines. Both Woodhouse and Knocknamona have limited visibility from distances greater than 5km from the Proposed Turbines. The cumulative turbines would be seen in combination with the Proposed Turbines within a robust landscape designated as 'Low Sensitivity' and 'Preferred' for wind energy development in the WCCDP 2022-2028.

Other Cumulative Wind Farms

No other wind farms are within 5km of the Proposed Turbines. The existing Ballycurreen Wind Farm (2 no. turbines) located 5.9km east of the Proposed Turbines is visible in the periphery of views from the northeast, as evidenced by photomontage VP07. In an uncertain future receiving environment, the proposed Moanbrack Wind Farm (2 no. turbines) would be visible in the same area, essentially viewed as an extension of Ballycurreen. In a future receiving environment, the permitted Lyrenacarriga Wind Farm located 11.0km to the west is not likely to be discernible in the background of views from the east of the Proposed Turbines as evidenced by photomontage VP14.

In an uncertain future receiving environment, the proposed Scart Mountain Wind Farm (15 no. turbines) located 14.0km northwest of the Proposed Turbines is not likely to be visible in the background of views of the Proposed Turbines from the southeast due to the substantial distance between the developments, the setting of the Scart Mountain turbines within steep terrain and above-ground screening features such as forestry in the intervening landscape, as evidenced by photomontage VP04. The proposed Dyrick Hill Wind Farm (12 no. turbines) located 15.2km from the Proposed Turbines is not visible in any photomontage of the Proposed Turbines. From vantage points northwest of the Proposed Turbines between 5-15km, there is potential to view the Proposed Turbines along with the existing Woodhouse Wind Farm and potentially the permitted Knocknamona Wind Farm, at substantial distance when looking towards the southeast, with the proposed Scart Mount and Dyrick

Hill being situated behind the viewer at higher elevations in the Knockmealdown Mountains; this is discussed in the assessment of VP13 in *Appendix 13-3*.

13.7.4.1.3 Cumulative Effects on Copper Coast UNESCO Global Geopark

It is deemed that there will be no significant cumulative impacts on the Copper Coast UNESCO Global Geopark arising as a result of the Proposed Project. The visual analysis of VP02 (see *Photomontage Booklet*) shows that, cumulative turbines are visible in the wireline at the same perceived size and scale as the Proposed Turbines and are not likely to be discernible at this distance; the residual visual effects of VP02 are reported as 'Not Significant'. In VP02, it can be seen that the existing Ballycurreen and Woodhouse Wind Farms are visible in the wireline but in the landscape image are hardly discernible at this distance, as are the Proposed Turbines shown by the photomontage visualisation. VP02 also shows that in a future receiving environment, the permitted Knocknamona and proposed Moanbrack Wind Farm are perceived as very small-scale features in the background of views. Any visible turbines will be hardly discernible at this scale and distance and are therefore effectively absorbed into the wide expansive views from along the coast. VP02 was selected for the LVIA to represent the Copper Coast landscape because it is the closest point on the scenic route (SR14) and Waterford Greenway within the Copper Coast landscape with expansive, open views from the edge of the coast in the direction of the Proposed Turbines, thereby representing the 'worst-case' scenario of views. The ZTV shows that theoretical visibility is patchy from the inland areas within the Copper Coast landscape and it is not likely that any turbines would be discernible to any greater degree than that shown in VP02, at this scale and distance from any other areas within the Copper Coast landscape that show theoretical visibility.

13.7.5 Decommissioning Phase Effects

The landscape and visual effects during the Decommissioning Phase are anticipated to be of a similar nature as those occurring during the construction phase. The important element of decommissioning from an LVIA perspective is the dismantling and removal of the Proposed Turbines. This will occur for a limited period of time and will predominately involve the placement of cranes adjacent to the Proposed Turbines during the dismantling process. Upon decommissioning of the Proposed Wind Farm, the Proposed Turbines will be disassembled in reverse order to how they were erected. The Proposed Turbines will be disassembled with a similar model of crane that was used for their erection. The Proposed Turbines will likely be removed from the Proposed Wind Farm site using the same transport methodology adopted initially for delivery.

Turbine foundations/handstand would remain in place underground and would be covered with earth and reseeded as appropriate. This naturalisation process shall revert the landscape of the Proposed Wind Farm site back to a condition similar to the current landscape baseline. The Proposed 110kV Substation, the 110kV underground electrical cabling and Proposed 220kV Loop-in Substation will remain in place after the operational phase of the Proposed Wind Farm, thereby forming permanent structures within the landscape.

Removal of the Proposed Turbines and ancillary above ground infrastructure from the Proposed Wind Farm site during decommissioning will result in 'Direct,' 'Short-Term,' and 'Negative' visual effects with a significance rating of 'Slight,' which is not considered significant. The residual landscape and visual effects associated with the Proposed 110kV Underground Cabling Route are reported above as 'Imperceptible' owing to the connection route being underground. Regarding the Proposed 110kV Substation and the Proposed 220kV Loop-in Substation, the infrastructure will comprise permanent fixtures within the landscape and will therefore not be decommissioned. A 'Decommissioning Plan' has been prepared (Appendix 4-6 of this EIAR), the details of which will be agreed upon with the Local Authority prior to any decommissioning. The Decommissioning Plan will be updated prior to the end of the operational period in line with decommissioning methodologies that may exist at the time and will be agreed upon with the competent authority at that time.

13.8 Conclusion

The Proposed Project is an appropriately designed development, sited in a modified working landscape of low population density within marginal upland terrain of coniferous plantation and pasture land, designated as 'Low Sensitivity' and 'Preferred' for wind energy development in the WCCDP 2022-2028. This LVIA determined the landscape of the Proposed Wind farm site to be of low value and low susceptibility to change from a landscape and visual perspective and gives a 'Low' landscape sensitivity rating.

The Proposed Project is sited in a landscape of low population density and the design exceeds the recommended 500m setback from local residential receptors set out in the Guidelines (DoEHLG, 2006) and adheres to the prescribed 4-times-tip-height (680m-740m) setback distance from third-party properties recommended for residential visual amenity in the Draft Guidelines (DoHPLG, 2019). In addition, the Proposed Project follows best practice guidance for good wind farm design with respect to the location, spatial extent, spacing, layout, height and cumulative effect of the Proposed Turbines in Transitional Marginal landscape type prescribed by the Guidelines (DoEHLG, 2006) and Draft Guidelines (DoHPLG, 2019) as follows: the Proposed Turbines are sited on a mix of ridges and hillslopes, arranged in multiple clusters with irregular spacing of turbines and an appropriately staggered, linear layout with a range of turbine heights that follows the highly undulating terrain, and are sufficiently distanced from cumulative developments and enclosed visually by the terrain such that the potential for in-combination visibility with cumulative developments is minimised.

The LVIA demonstrates that, according to the classifications set out in the WCCDP 2022-2028 Appendix 8, the Proposed Project is located in an area with high potential to absorb new development in that the topography is sufficiently enclosed and heavily vegetated (containing forestry and mature hedges/woody vegetation) and contains elements of existing electrical and energy infrastructure. In addition, the landscape type features a high degree of screening in the direction of the Proposed Turbines from 3-5km and other infrastructure of the Proposed Wind Farm.

Additional key factors embedded within the design of the Proposed Wind Farm design that contribute to mitigating landscape and visual effects arising as a result of the Proposed Project include: the removal of previously proposed turbines to achieve better visual coherence of visible turbines in the landscape; strategic siting of the Proposed Turbines in undulating terrain and within forestry blocks to minimise visual impact from sensitive designated scenic routes in local policy as well as local residential receptors; the strategic siting of the Proposed 110kV Substation and Proposed 220kV Loop-in Substation and associated infrastructure within landscapes that have natural visual screening and/or the capacity to accommodate berms and planting for additional screening; the adoption of proactive biodiversity enhancement measures including the establishment of hedgerow and native woodland within the Site; and the implementation of underground grid connection cabling within the public road network that will therefore be imperceptible in the landscape from a visual perspective in the long-term.

This LVIA assessed the likely significant effects of the Proposed Project on key sensitive landscape and visual receptors, as well as visual effects on local residential receptors in close proximity to the Proposed Turbines, including cumulative effects with other wind energy developments within 25km of the proposed turbines. The LVIA was informed by desk study, field surveys, on-site visibility appraisals, GIS analysis including ZTV and RSA (i.e. on-the-ground visibility appraisal within 3-5km), as well as the production of 21 no. verified photomontages—twenty viewpoints representing views towards the Proposed Turbines, which are the essential aspect of the Proposed Project design from a landscape and visual perspective, and one viewpoint representing views towards the Proposed 220kV Loop-in Substation located greater than 5km from the Proposed Wind Farm site.

The Proposed Turbines are sited strategically within a landscape capable of accommodating a wind energy development of this scale. Local residential receptors located centrally to the Proposed Wind Farm site and in close proximity to the Proposed Turbines (within 3km) were assessed using photomontage viewpoint impact assessment. Considering the local residential receptors, most of the

residual visual effects were deemed 'Not Significant,' 'Slight' 'or 'Moderate' owing to the limited visibility of Proposed Turbines within the undulating terrain. Small areas within 1km of the Proposed Turbines were deemed to have 'Significant' residual visual effects owing to the prominence of a small number of Proposed Turbines within views as shown in 2 no. photomontages (VP17 and VP19); however, the number of receptors that will experience these effects is low and the effects are offset by the adherence of best-practice set back buffers from local residential receptors and the screening provided by surrounding forestry, woodland, and undulating terrain of the intervening landscape, which lessen the overall visual impacts.

This LVIA assessed the likely significant effects of the Proposed Project on designated LCAs within the LCA Study Area (15km from the Proposed Turbines). Two LCAs containing all elements of the Proposed Project (W-LCU-5E Drumhills and W-LCU-2D Clashmore & Newport Lowlands) were determined to be Low sensitivity and are classified as 'Preferred' for wind energy development in the WCCDP 2022-2028. LCU-5E containing all Proposed Turbines and the Proposed 220kV Loop-in Substation will experience a Moderate magnitude of change owing to the direct material alteration of the landscape and the visual impacts associated with limited views of the Proposed Turbines within close proximity and the permanent nature of the Proposed 220kV Loop-in Substation. LCU-2D containing a short length of the Proposed 110kV Underground Cabling Route will experience 'Negligible' magnitude of the change owing to the proposed cabling being underground. Overall, the residual landscape effects on the perceptual and aesthetic character of designated LCAs containing the Proposed are deemed to be 'Direct,' 'Long-Term' to 'Permanent' and 'Negative' with a significance rating ranging from 'Imperceptible' to 'Slight,'. No other LCAs will contain any infrastructure of the Proposed Project and are predicted to have landscape character effects with a significance rating ranging from 'Imperceptible' to 'Not Significant,'.

This LVIA assessed the likely significant effects of the Proposed Project on key sensitive landscape and visual receptors throughout the LVIA Study Area. Effects on the landscape of the Proposed Wind Farm site will be 'Slight' to 'Moderate' owing to the direct material alteration within the site itself that includes the installation of wind turbines and associated ancillary infrastructure (reversible and not permanent) and the installation of two proposed substations with ancillary infrastructure (permanent). Landscape and residual visual effects on the identified landscape receptors in the LVIA Study Area, including Carronadavderg Hill and Slievegrine Hill within the Proposed Wind Farm site, one small area of Co. Cork High Value Landscape (7.5km to the southwest) and the Copper Coast UNESCO Global Geopark (16.2km to the northwest), will be 'Not Significant.' Overall, the landscape effects are not considered significant.

20 no. viewpoints covering a good geographical spread of the LVIA Study Area were selected for photomontage assessment of views towards the Proposed Turbines; of these, 18 no. show that residual visual effects arising as a result of the Proposed Turbines (and considering cumulative impacts with other wind farms) are 'Not Significant' with a few being 'Slight' or 'Moderate'. Two viewpoints (VP17 and VP19) forming part of the visual assessment of local residential receptors outlined above found 'Significant' visual effects that will be experienced by a very low number of receptors. In the case of VP17, residential receptors approximately 500m south of the viewpoint at lower elevation, further set back from the Proposed Turbines, will have less visual impact than what is shown in the photomontage due to enclosure and visual screening from localised landform and mature treelines, with substantially less horizontal extent of turbines seen. In the case of VP19, the visual effects are offset by the setback distance, the view of turbines within a low sensitivity landscape type and the nature of diminishing perceived size/scale of turbines owing to the linear layout as viewed from that vantage point. One additional viewpoint (SS01) was selected for photomontage assessment of views towards the Proposed 220kV Loop-in Substation from the R671 Regional Road in Ballycullane and was found to have 'Slight' residual visual effects following mitigation planting that was proposed in conjunction with community consultation.

Visual effects on designated scenic route SR5 and SR6 which surround the Proposed Wind Farm site (and SR6 passes through the Site) will be 'Slight' and 'Moderate' respectively. Visual effects on St.

Declan's Way waymarked walking trail which passes through the Proposed Wind Farm site will be 'Imperceptible' beyond 10km of the Proposed Turbines to 'Slight' within 5km.

The Proposed Project will have a cumulative effect on LCU-5E Drumhills in combination with the existing Woodhouse Wind Farm and the permitted Knocknamona Wind Farm. This is a large-scale, robust foothill landscape that can accommodate multiple wind energy developments. The Proposed Turbines will be visible at distance with other wind energy developments from higher-sensitivity receptors, including the coast, the Comeragh and Knockmealdown Mountains and the Blackwater River Valley. They are well set back, so they will not affect the key sensitivities or qualities of these landscapes or significantly impact the scenic amenity of visual receptors.

Overall, no 'Significant' landscape effects are predicted. Localised 'Significant' visual effects are predicted for a limited number of visual receptors in close proximity to the Proposed Turbines. The number of receptors likely to experience 'Significant' visual effects is very low. The presence of wind turbines in the rural landscape of Ireland is consistent with evolving national climate policy and the changing character of Ireland's working landscapes. The focus for the LVIA of the Proposed Project was on a combination of distance, arrangement, and location of turbines as well as potential disruption to key scenic sensitivities, rather than simply on whether turbines are visible or not from a particular vantage point. The outcome of the LVIA, with regards to the EPA, 2022 definition of significance, is calibrated in the overall context of LVIA of wind energy developments in Ireland as well as what is acceptable in the context of emerging baseline trends and the acceptability of wind turbines within views as a result of national policy. The Proposed Project is therefore considered acceptable in this context and is in alignment with emerging baseline trends.

13.9 EIA Classification Summary

Topic	Landscape and/or Visual Receptor	Determination of Effects	Reference to Section	Residual Significance of Effect	Significance in the context of EIA
Construction Phase					
Landscape of Proposed Wind Farm	Landscape of Proposed Wind Farm.	Direct, Short-Term, Negative, Slight.	Section 13.7.2.1	'Slight' landscape effects.	Not significant.
Landscape of Proposed 110kV Underground Cabling Route	Landscape of Proposed 110kV Underground Cabling Route.	Direct, Short-Term, Negative, Slight.		'Slight' landscape effects.	Not significant.
Landscape of Proposed 220kV Loop-in Substation	Landscape of Proposed 220kV Loop-in Substation.	Direct, Short-Term, Negative, Moderate.		'Moderate' landscape effects.	Not significant.
Visual Effects of Proposed Wind Farm elements	Local receptors surrounding the Proposed Wind Farm.	Direct, Short-Term, Negative, Slight.	Section 13.7.2.2	'Slight' visual effects.	Not significant.
Visual Effects of Proposed Grid Connection elements	Local receptors surrounding the route.	Direct, Short-Term, Negative, Slight.		'Slight' visual effects.	Not significant.
Visual Effects of Turbine Delivery Route works	Local receptors surrounding the route.	Direct, Short-Term, Negative, Slight.		'Slight' visual effects.	Not significant.
Operational Phase					
Landscape of Proposed Wind Farm	Landscape of Proposed Wind Farm.	Direct, Long-Term, Negative, Moderate.	Section 13.7.3.1.1	'Moderate' landscape effects.	Not significant.
Landscape of Proposed Grid Connection	Landscape of Proposed Grid Connection.	Direct, Permanent, Negative. Range: Imperceptible to Moderate.	Section 13.7.3.1.2	'Imperceptible' to 'Moderate' landscape effects.	Not significant.

Topic	Landscape and/or Visual Receptor	Determination of Effects	Reference to Section	Residual Significance of Effect	Significance in the context of EIA
'Most Sensitive' Landscape Sensitivity Areas in WCCDP 2022-2028	Areas of Comeragh Mountains, Knockmealdown Mountains, Blackwater River Valley and the coastline of Co. Waterford.	Direct, Long-Term, Negative, Not Significant.	Section 13.7.3.1.3	'Not Significant' landscape effects.	Not significant.
Co. Cork High Value Landscape	Portion of the designated landscape which falls within the LVIA Study Area.	Direct, Long-Term, Negative, Not Significant.		'Not Significant' landscape effects.	Not significant.
Copper Coast UNESCO Global Geopark	Portion of the designated landscape which falls within the LVIA Study Area.	Direct, Long-Term, Negative, Not Significant.		'Not Significant' landscape and visual effects.	Not significant.
Designated LCAs Scoped in for Assessment	General landscape of designated LCAs containing the Proposed Project.	Direct, Negative. Range: Long-Term to Permanent. Range: Imperceptible, Slight.	Section 13.7.3.2	'Imperceptible' to 'Slight' landscape effects.	Not significant.
	General landscape of designated LCAs in the wider study area.	Direct, Long-Term, Negative. Range: Imperceptible to Slight.			
Viewpoints VP01-VP20 and SS01	Viewpoints are representative of key landscape and visual receptors throughout the	Direct, Long-Term, Negative. Range: Not Significant, Slight,	Section 13.7.3.3	'Not Significant' to 'Significant' visual effects.	Not significant to significant.

Topic	Landscape and/or Visual Receptor	Determination of Effects	Reference to Section	Residual Significance of Effect	Significance in the context of EIA
	LVIA Study Area.	Moderate, Significant.			
Designated Scenic Routes and Protected Views within 5km	Motorists, walkers, cyclists of Co. Waterford SR5, SR6, Protected View V22.	Direct, Long-Term, Negative. Range: Imperceptible, Not Significant, Slight, Moderate.	Section 13.7.3.4.1	'Imperceptible' to 'Moderate' visual effects.	Not significant.
Designated Scenic Routes beyond 5km	Motorists, walkers, cyclists of Co. Waterford SR1, SR4, SR7, SR8, SR11, SR13, SR14 and Protected Views V13, V23, V17, V28.	Direct, Negative. Range: Long-Term, Permanent. Range: Not Significant, Slight, Moderate.		'Not Significant' to 'Moderate' visual effects.	Not significant.
Recreational Routes within 5km	Motorists, walkers, cyclists of Sean Kelly Cycling Trails and St. Declan's Way.	Direct, Long-Term, Negative. Range: Imperceptible, Not Significant, Slight.	Section 13.7.3.4.2	'Imperceptible' to 'Slight' visual effects.	Not significant.
Recreational Routes beyond 5km	Motorists, walkers, cyclists of Waterford Greenway and Ardmore Cliff Walk.	Direct, Long-Term, Negative, Not Significant.		'Not Significant' visual effects.	Not significant.
Settlements	Co. Waterford Grange, Dungarvan, Aglish, Co. Cork Youghal.	Direct, Long-Term, Negative. Range: No Effects, Not Significant	Section 13.7.3.4.3	'No Effects' to 'Not Significant' visual effects.	None to not significant.

Topic	Landscape and/or Visual Receptor	Determination of Effects	Reference to Section	Residual Significance of Effect	Significance in the context of EIA
Transport Routes	Motorists, cyclists of R671 and R673.	Direct, Long-Term, Negative, Not Significant.	Section 13.7.3.4.4	'Not Significant' visual effects.	Not significant.
Visual Effects on Local Residential Receptors	Local receptors to central to and surrounding the Proposed Turbines.	Direct, Long-Term, Negative. Range: Not Significant, Slight, Moderate, Significant.	Section 13.7.3.4.5	'Not Significant' to 'Significant' visual effects.	Not significant to significant.
Decommissioning Phase					
Landscape of Proposed Wind Farm site	Landscape of Proposed Wind Farm site.	Same as construction phase (see above).	Section 13.7.5	'Slight' landscape effects.	Not significant.
Landscape of Proposed 110kV Underground Cabling Route	Landscape of Proposed 110kV Underground Cabling Route.			'Slight' landscape effects.	Not significant.
Visual Effects of Proposed Wind Farm elements	Local receptors surrounding the site.			'Slight' visual effects.	Not significant.