Planning and Environmental Consultants

Chapter 14: Landscape and Visual

Seskin Renewables Wind Farm EIAR

DOCUMENT DETAILS

Client:	**Seskin Renewables Energy Ltd**
Project Title:	**Seskin Renewables Wind Farm EIAR**
Project Number:	**231103**
Document Title:	**Chapter 14: Landscape and Visual**
Document File Name:	**Chapter 14 LVIA – D1 - 2025.06.27 – 221103**
Prepared By:	**MKO** **Tuam Road** **Galway** **Ireland** **H91 VW84**

Planning and Environmental Consultants

Rev	Status	Date	Author(s)	Approved By
01	Final	2025.06.27	JC	JW

Table of Contents

14. LANDSCAPE AND VISUAL

14.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) includes the Landscape and Visual Impact Assessment (LVIA) of the Seskin Renewables Wind Farm, Co. Kilkenny and Laois. The LVIA assesses the likely significant effects of the Proposed Development on landscape and visual amenity. It covers the assessment methodology, a description of the Proposed Development and the existing landscape based on relevant guidance. The chapter also includes a description of the landscape policy of Co. Kilkenny and Laois, with specific reference to wind energy and the LVIA Study Area in which the Proposed Development is located, in which the Proposed Development infrastructure is sited.

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 potential impacts in terms of both landscape and visual are then assessed, including cumulative impacts.

A full description of the Proposed Development is provided in Chapter 4 Description of this EIAR. In this LVIA chapter, the following terminology is used in relation to Seskin Renewables Wind Farm:

- Where the '**Proposed Development**' is referred to this encompasses the entirety of the project for the purposes of this EIA in accordance with the EIA Directive.
- Where the '**Proposed Wind Farm**' is referred to, this refers to the wind turbines and associated foundations and hard-standing areas, meteorological mast, access roads, temporary construction compounds, underground cabling, borrow pit, spoil management, site drainage, biodiversity enhancement, turbine delivery accommodation areas and all ancillary works and apparatus.
- Where the '**Proposed Grid Connection**' is referred to, this refers to the 38kV onsite substation, associated temporary construction compound and 38kV underground cabling connecting to the existing Ballyragget 110kV substation, and all ancillary works and apparatus.
- Where the **'Site'** is referred to, this relates to the primary study area for the EIAR, as delineated by the EIAR Site Boundary in green as shown on Figure 1-1 of Chapter 1 of the EIAR and encompasses an area of approximately 302 hectares;
- **'Proposed turbines'** refers to the turbine components of the Proposed Development.

The remainder of this chapter is organised as follows; a description of the content of the assessment sections is provided in Section 14.2:

- Section 14.2: Brief Methodology and Assessment Criteria;
- Section 14.3: Visibility of the Proposed Project;
- Section 14.4: Landscape Baseline;
- Section 14.5: Visual Baseline;
- Section 14.6: Cumulative Context: Other Wind Farms;
- Section 14.7: Likely Significant Landscape and Visual Effects;
- Section 14.8: Conclusion.

This chapter is accompanied by one volume and five appendices as follows:

- *EIAR Volume 2: Photomontage Booklet*, presenting existing and cumulative imagery of the Proposed turbines in multiple fields of view from 15 no. selected viewpoints;
- *Appendix 14-1: LVIA Methodology*, outlining the detailed methodology of the assessment conducted in this chapter;

- *Appendix 14-2: LCA Assessment Tables*, assessing landscape, visual and cumulative effects of designated Landscape Character Areas (LCAs);
- *Appendix 14-3: Photomontage Visual Impact Assessment Tables*, assessing landscape, visual and cumulative effects of the selected viewpoints presented in the *Photomontage Booklet*;
- *Appendix 14-4: A0 LVIA Baseline Map*, showing all baseline landscape features, viewpoints, and visual receptors;
- *Appendix 14-5: Photowire Visualisation Booklet*, presenting supplemental early-stage draft wireline visualisations known as 'photowires' from an additional 8 no. selected locations representing views of the Proposed turbines.

14.1.1 Statement of Authority

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

This LVIA was written by Jack Workman and Rachel Smith and reviewed by Michael Watson. James Crean provided technical support for the production of the LVIA including fieldwork and GIS with oversight from Jack and Michael.

Jack Workman MSc., TMLI. is the Landscape & Visual Project Director at MKO and is chartered as a Technician Member of the British Landscape Institute. Jack is an environmental scientist and an LVIA specialist with an academic background in the field of Environmental Science and Geography. Jack's primary role at MKO is scoping and writing LVIA for EIARs with over 5 years' experience managing all aspects of LVIA for a broad range of commercial infrastructure developments. Jack holds a BSc. in Psychology, and an MSc. in Coastal and Marine Environments (Physical Processes, Policy & Practice). Jack is an active participant in the National Landscape Forum, presenting in 2023 and 2024 on the topic of LVIA, he also regularly delivers guest lectures for students on the topic of LVIA at top third level institutions in Ireland including University of Galway, Trinity College Dublin, University College Dublin and University College Cork. Jack holds a membership with the Chartered Institute of Water and Environmental Management and is also a member of the Landscape Research Group.

Rachel Smith, MSc., a Landscape and Visual Impact Assessment Professional who has been working with MKO since October 2023. Rachel is an Earth & Environmental Science consultant with more than 10 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-wind developments. Rachel holds an MSc. in Coastal and Marine Environments (Physical Processes, Policies & Practice) and a BSc. in Geology.

Michael Watson is the Environment Division Director at MKO, overseeing a team of highly skilled environmental professionals working on EIAR for a wide range and scale of projects, in particular large-scale infrastructure, housing, commercial and renewable energy development. Michael has over 25 years' experience in the environmental sector. Following the completion of his master's degree in environmental resource management, Geography, from National University of Ireland, Maynooth he worked for the Geological Survey of Ireland and then a prominent private environmental consultancy prior to joining MKO in 2014. Michael's professional experience includes managing Environmental Impact Assessments and Landscape & Visual Impact Assessments on behalf of clients in the wind farm, waste management, commercial and industrial sectors nationally. Michael worked on the capture and development of photomontages as well as compiling the Landscape & Visual Impact Assessments for

some of the first wind turbines being proposed in Ireland in the early 2000's and has been compiling and reviewing LVIA chapters for multiple wind farm projects each year since 2014. Michael is a key member of the MKO senior management team and as head of the Environment Division has responsibilities to mentor various grades of team members, foster a positive and promote continuous professional development for employees. Michael also has a Bachelor of Arts Degree in Geography and Economics from NUI Maynooth, is a Member of IEMA, a Chartered Environmentalist (CEnv).).

James Crean is an Environmental Scientist and LVIA Specialist with MKO. His primary role at MKO is producing the LVIA chapter of EIAR reports. James holds an MSc. in Applied Coastal and Marine Management from University College Cork. Since joining MKO, James has worked widely on renewable energy infrastructure, commercial, recreational, and residential projects. James is a qualified Unmanned Aerial Vehicle Operator and holds an A1/A3 and A2 drone licence.

14.1.2 'Do-Nothing' Scenario

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

If the Proposed Wind Farm were not to proceed, the opportunity to capture part of Co. Kilkenny's and Co. Laois's valuable renewable energy resource from a highly suitable landscape for wind energy would be lost, as would the opportunity to contribute to meeting Government and EU targets for the production and consumption of electricity from renewable resources and the reduction of greenhouse gas emissions.

14.1.3 Proposed Development Description

The Proposed Development will comprise the construction of 8 No. wind turbines with a ground-to-blade tip height of 175 metres and all associated works and a 38 kV substation and associated works, including underground 38kV cabling to connect to the national grid at Ballyragget 110kV substation. The full description of the Proposed Development is detailed in Chapter 4 of this EIAR.

The application is seeking a 35-year operational life from the date of commissioning of the entire wind farm.

14.1.4 Essential Aspects of the Proposed Development from an LVIA Perspective

The Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3) published by Landscape Institute (LI) & Institute of Environmental Management and Assessment (IEMA) (2013) states the following with regard to the essential aspects of LVIA:

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

For the Proposed Development assessed in this chapter, it is deemed that the tall, vertical nature of the Proposed turbines make them the most prominent element from a landscape and visual perspective, having the most potential to give rise to significant landscape and visual effects. In this regard, the Proposed turbines are deemed to be the 'essential aspect' of the development which will give rise to effects on the landscape and visual amenity and are therefore the primary focus of the LVIA.

Ancillary elements of the Proposed Development are deemed to be less visually prominent than the Proposed turbines; however, these components may also potentially give rise to localised landscape and visual effects. Although not the primary focus of the LVIA, these ancillary elements are also given due consideration and assessment in this chapter.

In addition to the Proposed turbines, the proposed 100m meteorological (met) mast is also a tall vertical structure; therefore, it is included in the photomontage booklet and is fully considered throughout this Chapter. However, given its shorter and more slender lattice form, the met mast will be substantially less visible than any of the Proposed turbines.

The proposed onsite 38kV substation comprise relatively larger and potentially more visually prominent elements of the ancillary infrastructure. The associated landscape and visual impacts are reported in Section 14.7.3.2.9 of this LVIA.

14.1.5 Mitigation by Design

The Proposed Development Site was strategically selected as a landscape highly suitable for accommodating wind energy development. Through the iterative project design process, informed by early-stage impact assessment work, landscape modelling, Zone of Theoretical Visibility (ZTV) mapping and photomontage visualisations, every effort has been made to bring forward the optimum design for the Proposed Development with respect to landscape and visual factors.

The final design of the Proposed Development aimed to comply with siting and design guidance stated in the 'Wind Energy Development Guidelines for Planning Authorities' published by Department of Environment, Heritage and Local Government in 2006 – hereafter the **DoEHLG 2006 Guidelines**. Siting and design guidance was also considered from the 'Draft Revised Wind Energy Development Guidelines for Planning Authorities' published by Department of Housing, Planning and Local Government in 2019, hereafter the **Draft 2019 Guidelines**.

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

- **Appropriate Zoning and Sensitivity Ratings in Local Planning:** Six turbines are in Co. Kilkenny land area zoned as 'Open to Consideration' for wind energy development in the Kilkenny WES; two turbines are in Co. Laois land area with a 'Medium' landscape sensitivity rating and capacity to accommodate new uses without significant adverse effects.
- **Compliance with Wind Energy Development Guidelines Set-Back Distances:** Siting of Proposed turbines well exceeds the minimum 500m set-back distance from residences set out in the DoEHLG 2006 Guidelines and adheres to the 4-times-tip-height set-back distance prescribed for residential visual amenity by the Draft 2019 Guidelines.
- **Siting in a Working Landscape of Low Sensitivity:** All Proposed turbines and infrastructure of the Proposed Wind Farm are sited in a rural working landscape, a Site that has been highly modified from its natural state and does not comprise any unique or sensitive features of county, regional or national significance and primarily consisting of agricultural farmland, thereby considered to have relatively low sensitivity to wind farm development.
- **Appropriate Landscape Character Type:** The landscape character type with active agriculture patchwork fields delineated by hedgerows matches 'Hilly and Flat Farmland' from the Draft 2019 Guidelines, which is considered an appropriate landscape type for accommodating wind energy development.
- **Visual Containment by Topography:** The siting of turbines within the Nore Valley, on the upland plateau between Ballynalacken Hill (east) and Knockmannon Hill (west) provides extensive visual containment, with Zone of Theoretical Visibility (ZTV)

mapping showing no visibility across large areas of the LVIA Study Area, especially to the north-east, east, south-east, and south-west.

- **Visual Balance and Scenic Integration:** The Proposed turbines have been strategically sited to ensure visual balance within the landscape of the wider Nore River Valley landscape, as demonstrated by photomontages showing that turbines most often appear as a neatly arranged linear arrays upon an elevated ridgeline when viewed from prominent receptors in the valley.
- **Long Ranging Views:** The Proposed Development does not obstruct long-ranging views of general scenic value or does not obstruct views of a high scenic amenity within the high sensitivity Nore Valley LCA
- **Distance from Scenic Designations:** The Proposed Development is well set-back from designated Scenic Views and Prospects (closest = 4.5km) and therefore will not give rise to significant effects on designations with potential visibility.
- **Localised Visual Screening:** Mature vegetation and undulating terrain restrict wider landscape visibility within a 5km radius.
- **Coherent Turbine Layout:** The Proposed turbines are spaced appropriately in two staggered linear arrays in response to the underlying field pattern, such that they read coherently within the landscape and are of acceptable form and arrangement in alignment with the recommended siting and design of turbines for Hilly and Flat Farmland in the DoEHLG 2006 and Draft 2019 Guidelines.
- **Minimal New Ancillary Infrastructure:** The internal site road layout makes use of the existing tracks where possible (to be upgraded for construction and the delivery of wind turbine components), thereby minimising the requirement for new tracks within the Site.
- **Underground Grid Connection:** The Proposed Grid Connection Route to the national electricity grid is underground, thereby eliminating potential landscape and visual effects during the operational phase.
- **Avoidance of Landscape Receptors on Site:** The layout of the Proposed Wind Farm ensures minimal loss of valuable landscape receptors and biodiversity corridors such as mature hedgerows, the design ensures the integrity of existing field boundaries.

14.1.6 Scoping Replies & Pre-Planning Meetings

A scoping consultation exercise was carried out by MKO, as detailed in Chapter 2 Background of this EIAR. In addition, a pre-application consultation was held with Kilkenny County Council and Laois County Council in May 2024. These meetings were attended by representatives of the respective county councils, AIP and MKO.

All feedback and communications from the planning authorities (i.e. county councils) on landscape and visual queries have been taken on board when conducting this LVIA. A summary of topics relation to LVIA are noted below.

Kilkenny County Council Meeting: 22/05/2024

MKO provided an overview of the landscape and visual assessments included in this chapter. Kilkenny County Council highlighted that landscape photomontages are the most important component of this assessment and that the overall visual impact of the turbines should be the most important focus. Photomontages and overall visual impact of the Proposed turbines have been a key focus in this Chapter.

Laois County Council Meeting: 29/05/2024

MKO provided an overview of the landscape and visual assessments included in this chapter. Laois County Council raised questions on why two of the Proposed turbines (T1, T2) are sited in Co. Laois where the land area has been classified with unfavourable wind energy policy instead of being sited in Co. Kilkenny where it has more favourable policy. The matter of zoning two Proposed turbines in Co.

Laois with respect to landscape is comprehensively addressed later in this Chapter. It was also noted that the regional policy of the area is the midlands region. Laois County Council did not make any requests in relation to assessment of any specific landscape and visual receptors.

14.2 Brief Methodology and Assessment Criteria

This section briefly outlines the guidance and methodology used to undertake the LVIA of the Proposed Development; the full detailed description of the methodology is provided in *Appendix 14-1: LVIA Methodology*.

There are five main sections to this assessment:

- Visibility of the Proposed Development and Zone of Theoretical Visibility mapping,
- Landscape Baseline,
- Visual Baseline,
- Cumulative Context: Other Wind Farms,
- Likely Significant Landscape and Visual Effects – summarising all landscape and visual effects including cumulative assessment.

14.2.1 Guidelines

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

The LVIA reported in this chapter was guided and informed by guidance documentation specifically pertaining to LVIA. Details of the guidance used to conduct this LVIA are outlined in *Appendix 14-1: LVIA Methodology* (Section 1.3 Guidelines). Meanwhile, a full list of documents referenced in this chapter and its appendices is provided in the bibliography of the EIAR.

14.2.2 Scope and Definition of LVIA Study Area

In this chapter, 'the Site' refers to the immediate environment in which the Proposed turbines of the Proposed Development are located, with the Proposed turbines being the primary essential aspect of the LVIA (recall previous Section 14.1.4) and the primary focus of the LVIA, with ancillary elements also considered. The Site is delineated by a green line labelled 'EIAR Site Boundary' in all relevant maps of this chapter and its appendices.

For this LVIA, two study areas with different radii were defined with respect to the location of the Proposed turbines, explained as follows:

- **LVIA Study Area:** 20km study area boundary around the Proposed turbines for assessment of effects on landscape and visual receptors including cumulative wind farms;
- **LCA Study Area:** 15km study area boundary around the Proposed turbines was only used for assessment of effects on designated Landscape Character Areas (LCAs).

Six broad topics were scoped out of this assessment, on the basis of desk studies, survey work and professional judgement of the assessment team:

- Receptors with minimal or no visibility, or no theoretical visibility as indicated by ZTV mapping;
- General landscape receptors beyond 20km;
- Visual receptors beyond 20km;
- Designated LCAs beyond 15km;
- Cumulative effects beyond 20km.

- Cumulative effects in combination with single turbines with a tip height lower than 50 metres beyond 3km from the Proposed Wind Farm.

The full justification and rationale for use of the LVIA Study Area for assessment of effects on landscape and visual receptors, LCA Study Area for assessment of effects on LCAs, and topics scoped out of the assessment are presented in detail in *Appendix 14-1: LVIA Methodology*.

14.2.3 Baseline Landscape and Visual Information

An initial desk study of baseline information was undertaken to inform the LVIA, divided into 'Landscape' and 'Visual' baseline components:

Landscape Baseline

- Policies, objectives and designations contained in the relevant county development plans pertaining to landscape and wind energy:
  - Kilkenny County Development Plan (KKCDP) 2021–2027,
  - Laois County Development Plan (LCDP) 2021-2027.
- Landscape character and description of the Proposed Development Site and its immediate surroundings, determined by site surveys conducted in:
  - November 2023,
  - September, November and December 2024.
- Landscape value and sensitivity of the Site and its immediate surroundings, also determined in the site surveys;
- Landscape character of the Site as designated in the DoEHLG 2006 Guidelines and Draft 2019 Guidelines under Section 6.9 and Section 6.10 'Landscape Character Types as a basis for Guidelines',
- Landscape character of the Site and its wider setting as designated by LCAs in county-level policies for Landscape Character Assessment.

Visual Baseline

- Identification and scoping of seven categories of visual and residential receptors in the LVIA Study Area:
  - Designated Scenic Routes and Views;
  - Ordinance Survey of Ireland (OSi) Viewing Points;
  - Settlements;
  - Recreational routes (multiple types);
  - Recreational, cultural heritage and tourist destinations;
  - Transport routes;
  - Residential receptors;
- Preliminary analysis of visibility from these receptors according to ZTV mapping and on-site visibility appraisals;
- Visibility in close proximity (within 3km) according to Route Screening Analysis (RSA).

14.2.4 Assessment of Potential Impacts

The LVIA process used in this chapter is presented in *Appendix 14-1: LVIA Methodology* and includes clearly documented methods based on guidelines of the GLVIA3 (LI & IEMA, 2013), as follows.

First, this LVIA considers landscape and visual 'Sensitivity' balanced with the 'Magnitude of Change' to determine the likely significance of effects. Second, mitigating factors are then considered to arrive at 'Residual' landscape and visual effects. Third, residual landscape and visual effects are graded upon an

'impact assessment classification of significance' scale, as defined by the Environmental Protection Agency of Ireland (EPA, 2022) ranging as follows: 'Imperceptible', 'Not Significant', 'Slight', 'Moderate', 'Significant', 'Very Significant' or 'Profound' and considering effects as 'Short-term/ Long-term/ Temporary' and 'Positive/ Negative/ Neutral'.

Photomontages are used as illustrative tools to assess potential impacts, whereby the potential effects arising as a result of the Proposed Development are assessed from viewpoint locations representative of prominent landscape and visual receptors located within the LVIA Study Area. Throughout this chapter, 'theoretical visibility' is referred to, based on ZTV mapping (see below Section 14.3 Visibility of the Proposed turbines), and is assessed to compare 'theoretical' versus 'actual' visibility. The detailed methods used to produce ZTVs, and photomontages are included in *Appendix 14-1*.

14.2.5 LVIA: Wind Energy Context

Given Irelands renewable energy targets which have been set by the State for on-shore renewable wind energy development, wind turbines will form a new component in the working landscape for the next 30 years at least. The focus for visual impact assessment of wind energy developments is therefore distance, arrangement, location and potential disruption to key scenic sensitivities rather than a commonly misconceived focus on whether turbines are visible or not from a particular vantage point. The outcome of the visual impact assessment, with regards to the EPA (2022) definition of significance, is calibrated in the overall context of LVIA of wind energy developments in Ireland and what is acceptable in the context of emerging baseline trends and the acceptability of wind turbines within views as a result of national policy.

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

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

- The scale of the turbines as a result of setback distance;
- The number of turbines visible;
- Full or partial visibility of turbines e.g. are they partially screened by features
- Horizontal extent how do the turbines comprise the field of view experienced by receptors, with regard given to their composition within both 53.5 or 90 degree field 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

14.3 Visibility of Proposed Development

14.3.1 Zone of Theoretical Visibility (ZTV) Mapping

ZTV mapping is an important step in the LVIA process, as it clearly shows which areas have theoretical visibility of the Proposed turbines and which areas have no theoretical visibility.

The ZTV mapping methodology outlined in Section 1.5 of *Appendix 14-1: LVIA Methodology* was used to examine the theoretical visibility of the 8 no. Proposed turbines from all landscape and visual receptors within the LVIA/LCA Study Areas, using the half-blade height of the wind turbines as points of reference, called the half-blade ZTV or ZTV, within associated ZTV maps.

As noted in *Appendix 14-1*, actual visibility on the ground is *substantially less* than predicted by the ZTV mapping due to intervening factors including visual screening from natural and man-made features on the ground (e.g. mature vegetation, hedgerows, buildings, etc.), localised topography including hills and similar features.

Generation of the ZTV utilises large scale topographical data (interpolation across 10m OSi contour data) and does not account for topographical variation of smaller scale (e.g. < 10m). Therefore, small and localised undulations in topography are likely to further inhibit visibility of the Proposed turbines that may not be represented in the ZTV maps. Other features of the landscape such as vegetation and man-made elements may also obscure the Proposed turbines from view from many areas where the ZTV indicates there is full theoretical visibility. In this regard, ZTV mapping is a useful tool to confirm where there is **no** visibility of the Proposed turbines, and thus any receptors located in these areas can be scoped out of the LVIA.

Figure 14-1 below shows the ZTV map for the Proposed turbines. The ZTV is used within several mapping figures included in this chapter to enable assessment of theoretical visibility from landscape and visual receptors. Separate colour bands are used in the ZTV to indicate the number of turbines of which half of the blade will theoretically be visible. The legend in all ZTV maps show the number of visible turbines for each corresponding colour as follows:

- Teal: 1–2 turbines theoretically visible;
- Yellow: 3–5 turbines theoretically visible;
- Grey: 6–8 turbines theoretically visible.

14.3.2 Landforms of the LVIA Study Area

Figure 14-2 below maps the topography and physical features of the LVIA Study Area including mountains, major hills and water bodies, followed by discussion of theoretical visibility of the Proposed turbines in the wider landscape. In relation to landscape-related terminology and definitions of the topographical features of the LVIA Study Area, this chapter uses the following:

- **'Nore River'** and **'Nore River Valley'** refers to the primary river and valley feature traversing the full length of the LVIA Study Area from northwest to southeast.
- **'Slieveardagh Hills'** is the medium-scale regional uplands surrounding the Proposed Development and containing hills and mountains named herein. It also forms the western side of the Nore Valley
- **'Seskin'** is the informal name of the small-scale lower-elevation hill where the Proposed turbines are sited.
- **'Capponellan'** is the small-scale ridgeline immediately northwest of the Site adjacent to Seskin hill and the Proposed turbines.
- **'Ballynalacken Hill'** is the landform feature comprising the eastern side of the Nore Valley.

- **'Knockmannon Hill'** is the enclosing landform feature of the Site to the southwest.
- **'Cullahill Mountain, Ballylehaun Hill, and Clomantagh Hill'** are the higher-elevation landforms beyond Knockmannon Hill farther to the southwest.
- **'Castelcomer Plateau'** is a broad-scale regional plateau partially inside the eastern edge of the LVIA Study Area.
- **'Cullenagh Mountain, Fossy Mountain and peaks of Brennanshill area'** are the higher-elevation landforms of the wider study area at the northeast edge of the LVIA Study Area.

The Proposed Development is sited in hilly and flat agricultural land occupying the border of northern Co. Kilkenny and southern Co. Laois, within the wider landscape of the Nore River Valley of Kilkenny. The Proposed turbines are set-back upon the western slope of the Nore River Valley yet not within the river corridor. The Nore River is a key feature of this landscape, traversing the full length of the LVIA Study Area from the northwest to the southeast.

The Proposed turbines are sited on the small-scale lower-elevation (200m) hill called Seskin, sloping down towards the Nore River. Low-lying areas of the surrounding valley are approximately 50m elevation.

As shown in Figure 14-2, the Proposed Development is locally surrounded by higher-elevation topography—immediately northwest is the ridgeline of Capponellan (250m elevation) orientated NE-SW. Ballynalacken Hill (300m) is to the east and Knockmannon Hill (320m) to the southwest, with further peaks and hills in the southwest ranging up to 350m in elevation, mainly Cullahill Mountain (265m), Ballylehaun Hill (265m) and Clomantagh Hill (350m).

At the far northeastern edge of the LVIA Study Area, the topography includes several higher elevation peaks including Cullenagh Mountain (315m), Fossy Mountain (330m) and the peaks of Brennanshill area (up to 325m).

Map Legend

- County Border
- LVIA Study Area

Half Blade Zone of Theoretical Visibility

- 1-2 Turbines Visible
- 3-5 Turbines Visible
- 6-8 Turbines Visible
- Proposed Turbine Layout

5 km
10 km
15 km
20 km

0 2.5 5 km

Drawing No.

Figure 14-1

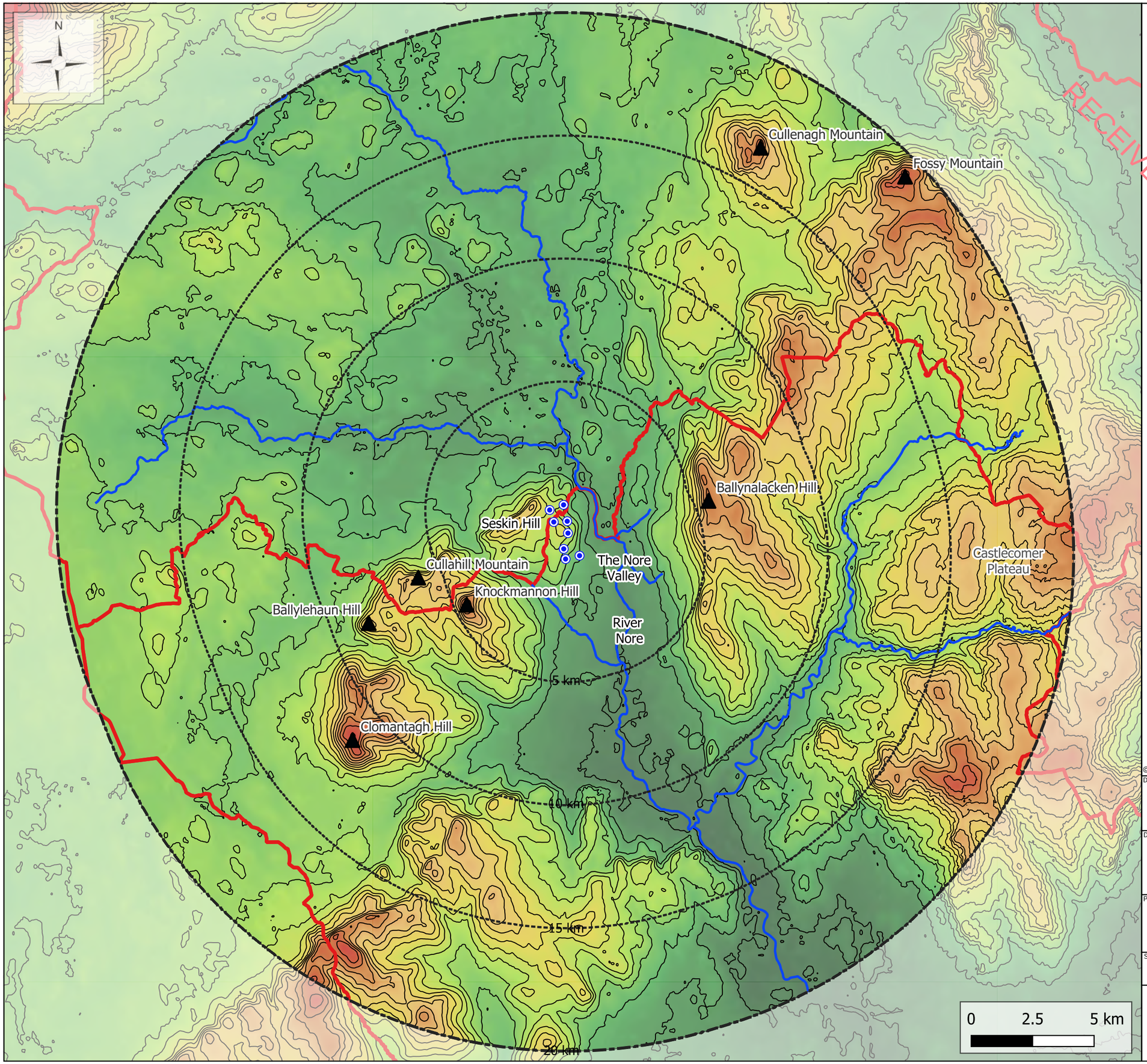
Drawing Title

Half-Blade ZTV Map

Project Title

Seskin Renewables Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	231103	01.04.2025	JC	JW



Map Legend

- County Border
- Proposed Turbine Layout
- LVIA Study Area

Elevation (Ordance Above Datum)

- 50m
- 100m
- 150m
- 200m
- 250m
- 300m
- 350m
- 20m Contours
- Hills
- Rivers

Drawing No.

Figure 14-2

Drawing Title

Physical Landscape Features Map

Project Title

Seskin Renewables Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:150,000	231103	01.04.2025	JC	JW

MKO

14.3.3 Description of Theoretical Visibility

The ZTV map indicates that most areas within 5km of the Proposed turbines have full theoretical visibility owing to the open nature of the Nore River Valley and the turbines being sited on the western slope of the valley on the small-scale hill of Seskin. The small Capponellan ridgeline immediately northwest of the Proposed turbines visually screens the area immediately behind the ridge to the north.

Beyond 5km to the east, west and south, theoretical visibility of the Proposed turbines reduces substantially, this is primarily due to the influence of topography as discussed above. The Site is effectively enclosed to the east by Ballynalacken Hill and to the west by Knockmannon Hill and Cullahill Mountain, while the rising landform in the broader southeastern area causes visual screening, significantly reducing visibility in these directions. These features provide overall visual containment of the Proposed turbines, reducing visual exposure beyond the Nore Valley. The higher ridges and steep slopes obstruct lines of sight to most of the Proposed turbines, limiting theoretical visibility to only isolated pockets where 1–2 turbines might be visible.

The ZTV shows a greater spread of theoretical visibility to the north, south and north-west of the Proposed turbines, and there will be very limited theoretical visibility from Kilkenny City at the southeastern edge of the LVIA Study Area.

The Physical Landscape Features map shows the Proposed turbines located on the slope of Seskin hill which forms the western side of the Nore Valley. The Site and Seskin hill are located at the very north-eastern extent of an undulating upland area which stretches to the south-west and includes Knockmannon Hill and Cullahill Mountain, which obscure visibility of the Proposed turbines. The Nore river valley runs through the centre of the LVIA Study Area, with the river flowing from flat lowland plains in the north and northwest to the southeast. Due to the enclosure caused by topographical features of the Nore valley, the ZTV is mainly concentrated within 5km and to the north and south of the Proposed turbines. There are very limited views of the Proposed turbines to the east and southwest of the Proposed turbines. A large proportion of the LVIA Study Area comprises areas of 'No Theoretical Visibility'.

The visual containment and limited spread of theoretical visibility results in visual effects to a lesser number of receptors and can be considered as a positive factor supporting the general suitability of this site to accommodate wind energy development.

As seen from the ZTV, there will be little to no theoretical visibility from County Carlow and County Tipperary, small portions of which are in the LVIA Study Area but are therefore not scoped in for further assessment.

14.3.4 On-Site Visibility Appraisal

Field surveys and on-site visibility appraisal were conducted in November 2023 and September, November and December 2024 to determine the actual likely visibility of the Proposed turbines from locations where the ZTV has indicated full theoretical visibility. The surveys determined that visual screening from localised undulations in topography, vegetation and man-made elements substantially reduce the potential for visibility of the Proposed turbines, especially beyond 5km to the east and south-west.

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

To comprehensively demonstrate the characteristics of visual screening along roads in close proximity (<3km) to the Proposed Development where the potential for landscape and visual effects is greatest,

Route Screening Analysis (RSA) was employed, an MKO methodology for recording the actual potential for visibility in comparison to the theoretical visibility.

RSA determines the extent and density of visual screening present along the local road network in the immediate vicinity of the Proposed Wind Farm, thereby allowing the actual potential for visibility of the Proposed turbines to be considered and assessed objectively and quantitatively and reducing the level of subjectivity involved in determining landscape and visual effects in the immediate area of the Site.

RSA was undertaken for all roads within a 3km radius of the Site, recording the nature of visual screening for views in the direction of the Proposed turbines in three categories:

- **'Little/No'** visual screening, indicates areas that are mainly open with very light vegetation and/or built structures or very little intervening topography (see example in Plate 14-1 below);
- **'Intermittent/Partial'** visual screening, indicates areas of light deciduous roadside vegetation and short-gapped vegetation and/or built structures or a degree of topographical screening allowing intermittent or partial views (see Plate 14-2);
- **'Dense/Full'** visual screening, indicates areas with dense vegetation and/or built structures and/or topography dense enough to effectively enclose the viewer and block the views (see Plate 14-3).

Visual screening along the N77 National Road and R639 Regional Road was recorded to a distance of 5km as these roads are prominent transport routes within the LVIA Study Area. The full methodology is outlined in *Appendix 14-1: LVIA Methodology*.

Below, Table 14-1 lists the distribution of the screening classes on 59.4km of public road recorded during the survey and Figure 14-3 maps the quantified results of the RSA, illustrating the extent of visual screening.

'Little/No Screening' was the least common class recorded. Some form of screening (either 'Partial/ Intermittent' or 'Full roadside Screening') was recorded for approximately 80% of roads surveyed, confirming that actual visibility of the Proposed turbines will be substantially less than is indicated by the ZTV. Images from multiple photomontages and photowire viewpoint locations were captured from areas with theoretical visibility indicated by the ZTV and 'Little/No Screening' recorded during the RSA.

Plate 14-1 Example of 'Little/No' roadside screening along N77 National Road

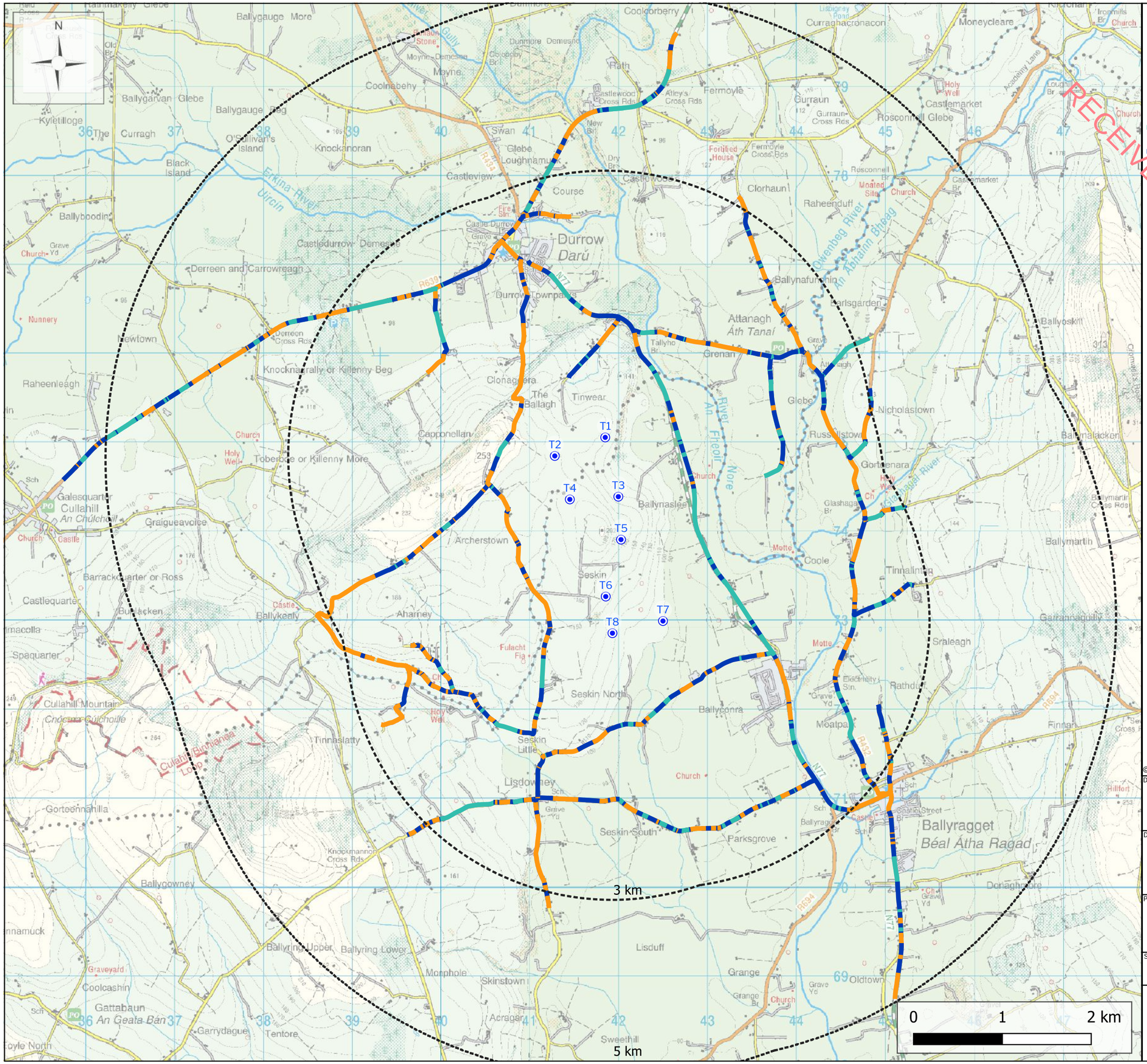
Plate 14-2 Example of 'Intermittent/Partial' roadside screening along L5753 Local Road

Plate 14-3 Example of 'Dense/Full' roadside screening along L5753 Local Road.

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

Screening Class	Length of Road Mapped in RSA Map	Percentage Distribution of Screening on the Surveyed Roads
'Little/No' Screening	12.8km	21.6%
'Partial/Intermittent' Screening	22.2km	37.3%
'Dense/Full' Screening	24.4km	41.1%

RSA is a useful exercise to inform the overall assessment of landscape and visual effects in relation to specific receptors located in close proximity to the Proposed Development, particularly residential visual amenity and the local road network. The RSA and the map below are discussed in further detail in the assessment of landscape and visual effects in section 14.7 of this Chapter.



Map Legend

- Proposed Turbine Layout
- LVIA Study Area

Route Screening Analysis

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

Drawing No.

Figure 14-3

Drawing Title

Route Screening Analysis Map

Project Title

Seskin Renewables Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:41,500	231103	01.04.2025	JC	JW

CH.14 LANDSCAPE AND VISUAL

END OF PART 1