13. LANDSCAPE AND VISUAL

13.1 Introduction

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

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

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

13.1.1 Statement of Authority

MKO has developed extensive expertise and experience over the last 15 years in the Landscape and Visual Impact Assessment of a range of projects, including large scale wind energy developments. The Landscape and Visual Impact Assessments were conducted and reported in this Chapter by Saoirse Fitzsimons.

Saoirse Fitzsimons is a Project Environmental Scientist and LVIA Specialist with MKO. Saoirse is an Affiliate Member of the British Landscape Institute. Her primary role at MKO is producing the LVIA chapter of EIA reports for large infrastructure developments. Saoirse holds an MSc. in Coastal and Marine Environments from the National University of Ireland, Galway where she was awarded The Prof Micheál O'Cinnéide Award for Academic Excellence. Since joining MKO, Saoirse has worked widely on renewable energy infrastructure, commercial, recreational, and residential projects. Saoirse holds an A1/A3 and A2 drone licence and is one of the lead drone pilots in MKO.

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

13.1.2 'Do-Nothing' Scenario

The Proposed Development site currently comprises 28 existing operational turbines of the Existing Kilgarvan Wind Farm.

In a Do-Nothing Scenario 13 of the 28 existing wind turbines (namely, turbines T16 - T28 inclusive) of the Existing Kilgarvan Wind Farm will be removed when their planning permission expires in 2029. As per the 'Guidelines on the information to be contained in Environmental Impact Assessment Reports' (EPA, 2022), the LVIA in this Chapter considers all *'likely future receiving environments*'. The potential landscape and visual impacts in a 'Do-Nothing Scenario' (which can be considered a potential future receiving environment) are therefore also reported in impact assessments in this chapter.

13.1.3 Proposed Development Description

The Proposed Development will comprise the removal of 28 no. existing wind turbines, the construction of 11 No. wind turbines with a minimum blade tip height of 199.5m and a maximum blade tip height of 200 metres and all associated works. The Proposed Development will be utilising the existing onsite Coomagearlahy 110kV electrical substation, along with the existing 110kV overhead line to Clonkeen Substation.

A full description of the Proposed Development is included in Chapter 4.

13.1.3.1 Essential Aspects of the Proposed Development from an LVIA Perspective

The term 'proposed turbines' or 'Proposed Development turbines' refers to the 11 No. turbines proposed as part of the Proposed Development. Guidance for LVIA (GLVIA3, 2013) states that:

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

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

Other components of the Proposed Development are not deemed to be as visually prominent as the proposed turbines, however, they have the potential to give rise to localised landscape and visual effects. Although not the primary focus of the LVIA, these elements are given due consideration throughout this chapter and are assessed in detail in Section 13.7 – *Ancillary Components of the Proposed Development – Landscape and Visual Effects.*

13.1.3.2 Proposed Turbine Range

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

- Turbine Tip Height: 199.5 metres – 200 metres (a difference of 50 centimetres)
- Hub Height: 118 metres –125 metres (a difference of 7 metres)
- Blade Rotor Diameter: 149 metres - 163 metres (a difference of 14 metres)

The Nordex N163 model, with a rotor diameter of 163m and a hub height of 118m, is considered throughout the EIAR assessment and is a representative illustration of the Proposed Development. This combination of rotor diameter and hub height (Minimum Hub Height and Maximum Rotor Diameter, 199.5m Tip Height, Model 2) is the turbine presented for every photomontage viewpoint in the photomontage booklet. The other turbine models considered throughout this assessment and outlined in Table 4-2 of Chapter 4 are:

- Model 1:
  - Hub Height - 125m
  - Rotor Diameter - 149m
  - tip height - 199.5m

- Model 3:
  - Hub Height - 122.5m
  - Rotor Diameter - 155m
  - Tip height - 200m

The dimension combinations of these two-alternative turbine models are considered in the assessments in this LVIA and both dimension combinations are presented for three selected viewpoints included in the photomontage booklet accompanying this document.

The landscape and visual impacts of all scenarios within the proposed turbine range are considered and assessed in this Chapter in Section 13.7.4.

13.1.4 Scope of this LVIA in the Context of the Proposed Development as a Wind Repowering Project

The Proposed Development is a repowering project, where the proposed turbines are sited within an existing wind farm. The 28 no. turbines of the Existing Kilgarvan Wind Farm are operational and are currently visible in the existing baseline landscape. The Proposed Development includes the removal of all 28 of the existing Kilgarvan turbines (removal from the landscape and views), and replacement with the 11 no. proposed turbines. A key consideration of the assessments reported in this Chapter is to address the difference between the continued landscape and visual effects arising as a result of the Existing Kilgarvan Wind Farm (Existing Baseline Scenario) compared with the likely significant landscape and visual effects of the Proposed Development.

In a Do-Nothing Scenario turbines T16-T28 of the Existing Kilgarvan Wind Farm will be removed when their planning permission expires in 2029. Whilst the LVIA reported in this Chapter uses comparisons between the Existing Baseline Scenario and the Proposed Development, the likely significant landscape and visual effects arising as a result of the Proposed Development are also considered against a Do-Nothing Scenario where 13 No. of the existing turbines would not be visible in the landscape.

Whilst this LVIA compares and considers the Proposed Development against both the 'Existing' and 'Do-Nothing' Scenarios, the ultimate determination of significant landscape and visual effects uses professional judgement to determine the impact of the Proposed Development on its own merit upon the landscape and upon visual amenity. However, it is material to the determination of residual landscape and visual effects that wind energy is well established and has been acceptably accommodated in the landscape of the site and turbines will exist in both an 'Existing' and 'Do-Nothing' Scenario.

13.1.5 Mitigation by Design

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

The final design of the Proposed Development and strategic siting of turbines in the landscape was informed by extensive early-stage impact assessment work conducted throughout 2022, including assessment of various turbine layouts and turbine models. The evolution of the turbine layout included omission of turbines from the project and careful micro-siting of turbines aimed at preventing the potential for significant landscape and visual effects. The final design is also considered in the context of

siting and design guidance stated in the *'Wind Energy Development Guidelines for Planning Authorities'* Published by the Department of Environment, Heritage and Local Government in 2006 and the draft revised Wind Energy Development Guidelines - Hereafter referred to as the WEDGs (DoEHLG, 2006) and Draft WEDG's (DoHPLG, 2019). The project layout that is the subject of this LVIA, incorporates the following landscape and visual design considerations for good wind farm design:

Strategic Site Selection & Design Considerations

- The turbines are sited strategically within an area designated as a 'Potential Repowering Area' within the Kerry County Development Plan (2022-2028). The turbines are located within a landscape where the suitability of wind energy has already been established by the planning system.
- Chapter 6 of the WEDGs (DoEHLG, 2006) reports 'Aesthetic Considerations in Siting and Design' for Wind Energy Developments and includes the following text: '*It is preferable to avoid locating turbines where they can be seen one behind another, when viewed from highly sensitive key view points (for example, viewing points along walking or scenic routes, or from designated views or prospects), as this results in visual stacking and, thus, confusion.'* Compared with the existing Kilgarvan turbines which will be removed, the Proposed Development includes for an increase in scale of the proposed turbines, but a reduction in the number of turbines visible in the landscape from 28 No. Existing turbines to 11 no. turbines. This equates to slightly larger and more prominent turbines. However, a lesser number of turbines results in less visual stacking, less visual clutter and less visual confusion from most of the key sensitive receptors with visibility of the Proposed Development. This trade-off was comprehensively considered throughout the early-stage design process and it is considered that the scale of the landscape of this site has the capacity to accommodate larger turbines and that lesser turbines ultimately results in a more coherent development when viewed in the landscape from the most sensitive receptors assessed.
- Strategic containment of the proposed turbines within the extent of the Existing Kilgarvan Wind Farm ensures that the Proposed Development does not increase the horizontal extent of turbines visible within most sensitive landscape views assessed (as demonstrated by visualisations in the Volume 2 Photomontage Booklet). In general, the Proposed Development does not include a novel addition of turbines into new areas of the landscape.
- The turbines are sited strategically within a landscape capable of accommodating a wind energy development of this scale. The site is an area surrounded by substantial topographical features which both eliminate visibility of the turbines from a large portion of the LVIA Study Area and provide a sense of scale that causes the turbines to appear congruous and appropriately scaled in the landscape type within which they are viewed.
- Siting of turbines in a sparsely settled upland landscape with large set back distances from residential receptors, large populations centres and other high sensitivity visual receptors.
- All proposed turbines have been sited greater than 500 metres from residential receptors in order to protect residential visual amenity in accordance with the Wind Energy Development Guidelines (WEDGs (DoEHLG, 2006) ('the Guidelines). All the proposed turbines are greater than c. 900m from residential receptors, adhering to the 4 times tip height set-back distance explicitly set out for residential visual amenity prescribed by the *'Draft Revised Wind Energy Development Guidelines for Planning Authorities'* published by the Department of Housing, Planning and Local Government in 2019 - Hereafter referred to as the 'draft Guidelines' (DoHPLG, 2019)'.

- In consideration of visual effects on proximate residential receptors to the east of the site, early-stage photomontage visualisations were used in combination with topography maps to strategically micro site turbines so that they are appropriately positioned at lower contours on the Proposed Development site (west) of prominent ridgelines (at the east of the site) reducing their prominence in the landscape and impacts on local residential visual amenity.
- The Proposed Development makes use of the existing wind farm infrastructure of the Existing Kilgarvan Wind Farm. This reduces the requirement for new internal site roads or grid infrastructure, therefore reducing the extent of direct Landscape Effects on the site.

13.1.6 Assessments of Other Alternative Turbine Layouts

The landscape and visual impacts were considered as part of the early-stage planning process. Alternative turbine layouts were generated for a series of preliminary Zone of Theoretical Visibility (ZTV) maps and photomontages in order to assess the extent to which alternative turbine configurations may give rise to visual effects. These early-stage assessments enabled the choice of suitably sited turbines for the Proposed Development with regard to mitigating any potential adverse landscape and visual effects. For more information on alternative designs, please see Chapter 3 of this EIAR – *Consideration of Reasonable Alternatives*.

Numerous turbine layouts have been considered throughout the differing design phases of the Proposed Development. The current proposed turbine layout utilises far fewer turbines than was previously proposed in earlier design iterations. The Proposed Development location and current layout 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.

13.1.7 Scoping Replies/Pre-Planning Meetings

A scoping and consultation exercise has been carried out by MKO, as detailed in Chapter 2 of this EIAR. All feedback and communications from planning authorities on Landscape and Visual queries has been taken on board when compiling the chapter and assessment.

Several pre-application consultations were held separately with Kerry County Council and An Bord Pleanála throughout 2022 and 2023. The meetings were attended by representatives of the various planning authorities (Kerry County Council, An Bord Pleanála), Orsted and MKO. In each meeting, MKO presented an overview of the scope of the LVIA including ZTV mapping and a selection of the photomontages that had been produced. The opening SID meeting was held with the Board on the 7th of December 2022. Specific requests made by An Bord Pleanála in this meeting are reported below.

An Bord Pleanála SID Meeting - December 2022

An Bord Pleanála highlighted that landscape and visual impacts should be considered in relation to the following receptors:

- N22 National Road
- Recreational Routes (e.g. Way Marked Walking Trails)

A3 Photomontage Booklet Scoping Request

An Bord Pleanála *have* requested that A3 photomontages be included with the application. The following two guidance documents are considered the industry benchmark for producing photomontages specifically for wind energy developments:

- 'Visual Representation of Development Proposals' (Landscape Institute Technical Guidance Note 06/19, 2019) (hereafter, LI TGN 06/19);
- 'Visual Representation of Wind Farms: Version 2.2' (hereafter, SNH Guidance v.2.2) (hereafter SNH, 2017);

MKO adheres to the guidance for the production of photomontages set out in the documents listed above. Typically, MKO presents verified photomontages on A1 banner sheets, including a view within a 53.5° horizontal field of view. The 53.5° view presents the Proposed Development at a 150% enlargement factor, in line with the guidance. Holding the A1 banner sheets at 53.5° at arm's length is considered the best representation of the Proposed Development in a photomontage. The photomontages in the Volume 2 Photomontage Booklet are therefore printed on A1 paper to these specifications. As the board have specifically requested A3 paper, an additional Appendix (Appendix 13-5) has been produced to include photomontage visualisations in this format. These views will be presented at 27° on A3 in order to align with the guidance and are the equivalent of the 53.5° views on A1.

The impact assessments have focussed on using the A1 banner views in the Volume 2 photomontage booklet (equivalent of 27 on A3), as a wider horizontal extent of the landscape is seen. This enables a more robust assessment of cumulative visual effects with other wind energy developments in the wider landscape. Use of the banner booklet also enables adherence to some of the other criteria such as the use of panoramas, specified in the SNH, 2017 Guidance.

Kerry County Council – March 2023

The consideration of impacts on the following receptors were highlighted by Kerry County Council:

- Designated Co. Kerry Archaeological landscapes – Mangerton and the Paps Mountains

With the aid of photomontages, the likely significant landscape and visual effects on all of the receptors listed above have been comprehensively assessed in this Chapter.

13.2 Brief Methodology and Assessment Criteria

This section broadly outlines the methodology and the guidance used to undertake the landscape and visual impact assessment of the proposed development; a more detailed description of the methodology is outlined in *Appendix 13-1*. There are six main sections to this assessment:

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

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

This Chapter follows the naming conventions and definitions detailed in Section 1.1.1 of Chapter 1. For the purposes of this chapter, where the 'Proposed Development', or 'the site' is referred to, this relates to the primary study area and immediate environment in which the Existing Kilgarvan Wind Farm is located. The Proposed Development site is discussed in some detail in terms of its landscape character in Section 13.4.

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

> *"The study areas should include the site itself and the full extent of the wider landscape around it which the Proposed Development may influence in a significant manner."*

Landscape and visual baseline mapping and viewpoint selection are based on a wider study area referred to as the 'LVIA Study Area'. As detailed in the LVIA Methodology - *Appendix 13-1* (and below), the geographical parameters for this LVIA were determined by desktop studies, survey work undertaken, the professional judgement of the assessment team, experience from other relevant projects and policy guidance or standards, such as:

- *Appendix 3,* the Guidelines– DoEHLG, 2006 (including reference to the draft Guidelines DoHPLG, 2019)
- The Guidelines for Landscape and Visual Impact Assessment 3rd Edition published by the British Landscape institute and the Institute of Environmental Management and Assessment (2013) – Hereafter referred to as the 'GLVIA3, (Landscape Institute & IEMA, 2013)'.

The distance at which a ZTV is set from a proposed wind farm development usually defines the parameters of the LVIA Study Area. In most cases, ZTV mapping will be produced within a radius of 20 km from the proposed turbines, however, the 2006 Wind Energy Development Guidelines (WEDG's) (Department of Environment, Heritage and Local Government (DoHPLG)) for Planning Authorities require that:

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

Killarney National Park is located approximately 9.5km northwest of the nearest proposed turbine (T7). Killarney National Park was awarded UNESCO Biosphere Reserve status and therefore is deemed to be a landscape of national and international renown. Consequently, the ZTV shown in Figure 13-1 (Section 13.4.1, Visibility of the Proposed Development) has been extended to 25km, from the proposed turbines in all directions, to include this landscape to a distance of 25km. The LVIA Study Area has been established as 25km from the proposed turbines in all directions. Through experience conducting LVIA for other wind energy development projects, the assessment team determined that no significant effects on landscape character are likely to arise beyond distances of 15km from the proposed turbines. Therefore, a LVIA Study Area of 15km is deemed appropriate for effects on landscape character in relation to the assessment of effects upon designated Landscape Character Areas (A comprehensive assessment of LCAs is included in Appendix 13-2).

Furthermore, on the basis of desk studies and survey work undertaken, the professional judgement of the assessment team, experience from other relevant projects and policy guidance or standards (Section 1.3 of Methodology Appendix13-1), the following topic areas have been scoped out of the assessment:

- Effects on landscape and visual receptors that have minimal or no theoretical visibility (as predicted by the 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 landscape character and designated Landscape Character Areas beyond a 15km radius from the Proposed Development, where it is judged that potential significant effects on landscape character are unlikely to occur;

- Effects on visual receptors beyond a 25km radius from the proposed 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 cumulative effects are unlikely to occur;

13.2.2 Guidelines

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

13.2.3 Baseline Landscape and Visual Information

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

Landscape

- Policies and objectives contained in the relevant county development plans (Counties: Kerry and Cork) pertaining to landscape and wind energy;
- Landscape designations in the LVIA Study Area;
- Landscape character of the LVIA Study Area;
- Landscape character of the Proposed Development site based on:
  - Site Surveys undertaken throughout 2022 and 2023;
  - Landscape Character Types identified in Landscape Character Types as a basis for Guidelines: WEDG's for Planning Authorities (Department of the Environment, Heritage and Local Government, 2006) and also the Draft Revised WEDG's (Department of Housing, Planning and Local Government (DoHPLG), 2019)

Visual

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

13.2.4 Assessment of Potential Impacts

The landscape and visual assessment methodology used in this chapter (outlined in Appendix 13-1) includes clearly documented methods based on the GLVIA3 guidelines (LI & IEMA, 2013). This includes consideration of landscape and visual sensitivity balanced with the magnitude of the effect to determine the significance of effects. Mitigating factors are then taken into consideration to arrive at residual landscape and visual effects. Residual landscape and visual effects are graded upon an 'impact assessment classification of significance' scale, as defined by the Environmental Protection Agency of Ireland (EPA, 2022).

Assessment of potential impacts uses photomontages, whereby the potential effects arising as a result of the proposed turbines are assessed from viewpoint locations representative of prominent and sensitive landscape and visual receptors located within the LVIA Study Area. The photomontages are included in Volume 2 of this EIAR and a comprehensive assessment of each viewpoint is included in Appendix 13-3. Detailed information on the methodology used for the production of photomontages and the methods used for landscape and visual impact assessment are presented in the methodology appendix -

Appendix 13-1. Throughout this chapter 'theoretical visibility', is referred to, this is based on Zone of Theoretical Visibility (ZTV) mapping which is addressed in the following section of this chapter (Section 13.3).

13.3 Visibility of the Proposed Development

13.3.1 ZTV Mapping: Theoretical Visibility of the proposed development.

ZTV mapping is an important step in the LVIA process, in that it clearly shows which areas of the LVIA Study Area will have theoretical visibility of the proposed turbines and which areas will have no visibility. The ZTV mapping methodology outlined in Section 1.3 of *Appendix 13-1* was used to examine the theoretical visibility of the 11 No. proposed turbines from all landscape and visual receptors within the LVIA Study Area, using the half blade height of the wind turbines as points of reference. As noted in Appendix 13-1, actual visibility on the ground is significantly less than predicted by the ZTV mapping due to intervening factors such as on-site screening from natural and man-made features, atmospheric weather, and/or localised topography.

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

13.3.1.1 ZTV and Proposed Turbine Range

The Proposed Development includes a range of turbine dimensions (See Section 13.1.3.2 previously). As the turbine range shows, the difference in tip height of the proposed turbines is very minor (50cm). Considering the relatively coarse scale of the elevation model used for the ZTV, the very small difference in scale of turbine model included in the proposed range will have a negligible effect on the ZTV output that would not be discernible in mapping, therefore it is not a tool fit for the purpose of assessing turbine range and has not been used for this purpose in this LVIA. The assessment of the turbine ranges is best assessed using photomontages, and as reported in Section 13.1.3.2 previously, the turbine ranges are presented in the Photomontage Booklet and is assessed in Section 13.7.4.

13.3.2 Half Blade ZTV of the proposed turbines

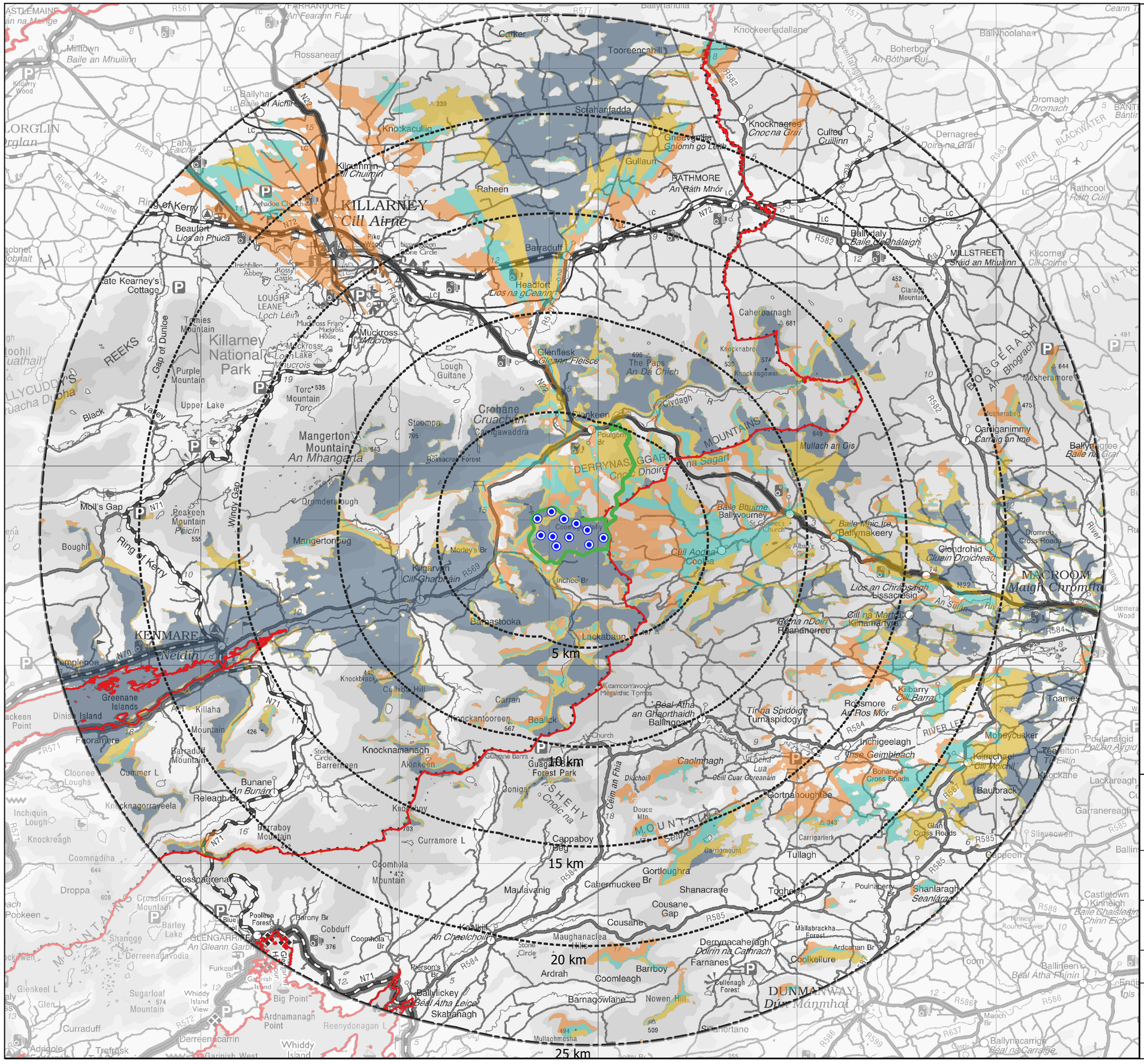
A Half Blade ZTV map is shown in Figure 13-1 below. The ZTV map is used within several mapping figures included in this chapter to enable assessment of theoretical visibility of the proposed turbines from landscape and visual receptors (See Appendix 13-4 - LVIA Baseline Map; Figure 13-5 Landscape Baseline & Half Blade ZTV; Figure 13-15 Visual Baseline & Half Blade ZTV).

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

- Orange: 1-3 turbines theoretically visible
- Teal: 4-5 turbines theoretically visible
- Yellow: 6-8 turbines theoretically visible
- Navy: 9-11 turbines theoretically visible

Figure 13-2 (below) shows the topographical features and elevation gradients existent within the receiving landscape of the LVIA Study Area, the geography of these topographical features defines the distribution of theoretical visibility illustrated in Figure 13-1.

The topographical characteristics surrounding the site and within the southern portion of the LVIA Study Area is defined by the Derrynasaggart Mountains which is generally representative of an upland landscape characterised by relatively steep terrain and narrow valleys. The northern portion of the LVIA Study Area is much flatter, comprising a plain of undulating farmland to the east of Killarney. There is approximately 690 metres difference in elevation from the lowest point (Kenmare Town at sea level, to the southwest) to the highest point (The Paps to the northeast ~690m AOD) across the LVIA Study Area. As demonstrated in the ZTV map, the large topographical features (seen in the landform map) surrounding the site greatly restrict theoretical visibility of the proposed turbines from a vast proportion of the LVIA Study Area.



Map Legend

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

Half Blade ZTV

- 1-3 Turbines Theoretically Visible
- 4-5 Turbines Theoretically Visible
- 6-8 Turbines Theoretically Visible
- 9-11 Turbines Theoretically Visible

Drawing No.

Figure 13-1

Drawing Title

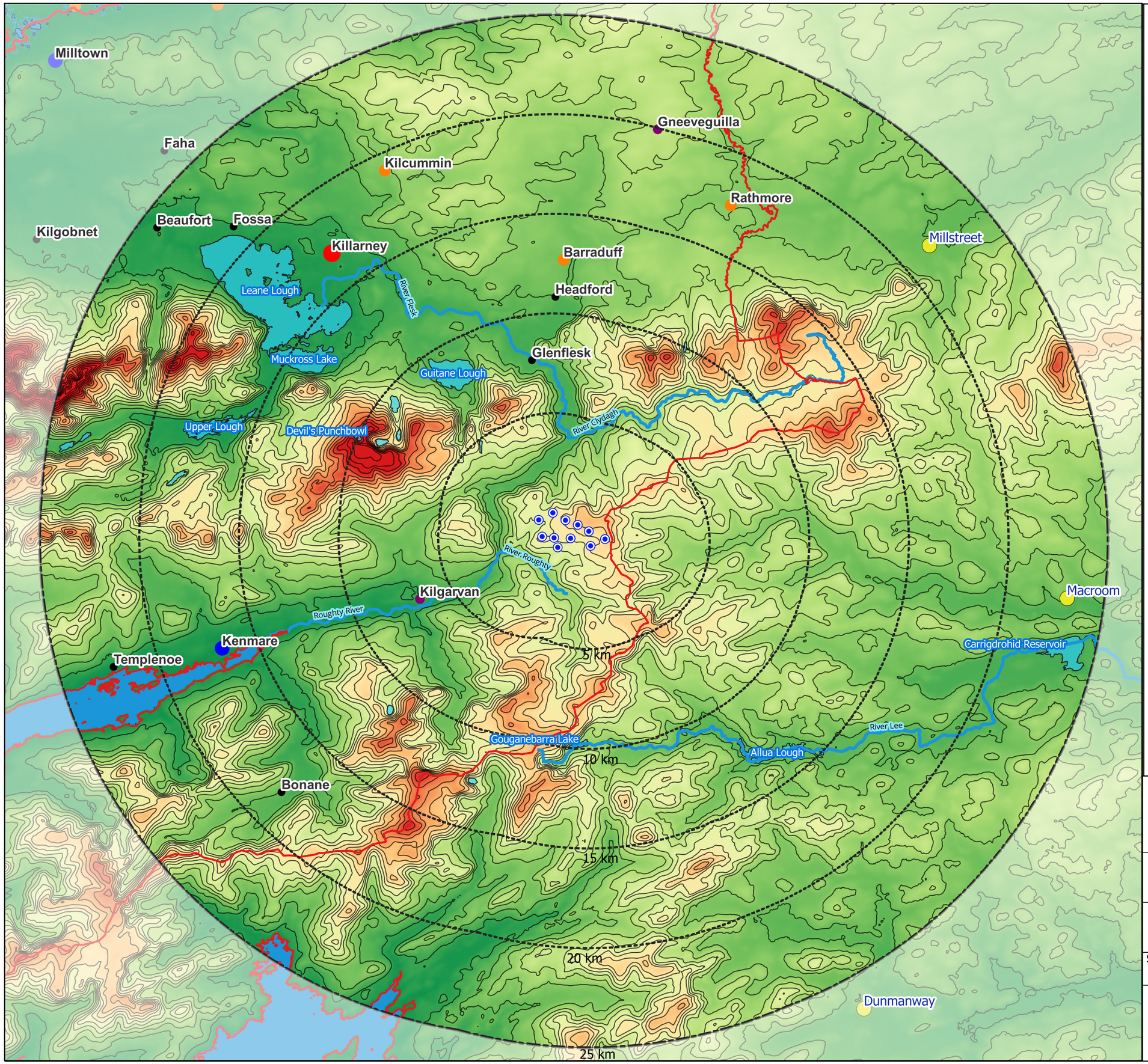
Zone of Theoretical Visibility

Project Title

Proposed Repowering of the Existing Kilgarvan Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:185,000	211107	31.03.2024	SF	JW

MKO Planning and Environmental Consultants



Map Legend

- Proposed Turbine Locations
- LVIA Study Area
- County Borders

Elevation (Above Ordanace Datum)

- 1 metre
- 100 metres
- 200 metres
- 300 metres
- 400 metres
- 500 metres
- 50m contours
- Waterbodies
- Co. Cork Key Tourism Assests

Co. Kerry Settlement Heirarchy

- Key Town
- Regional Town
- District Town
- Village
- Small Village Settlement

Drawing No.

Figure 13-2

Drawing Title

Physical Landscape Features

Project Title

Proposed Repowering of the Existing Kilgarvan Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:185,000	211107	31.03.2024	SF	JW

MKO Planning and Environmental Consultants

Distribution of Theoretical Visibility Within 10km of the Proposed Development

Figure 13-1 indicates that theoretical visibility within 5 km is mainly full to partial, with some pockets of no visibility occurring within the low valleys surrounding the site which are narrow and enclosed by nature. Beyond 5 km of the turbines, and within 10km, there are patches of full and partial visibility in all directions excluding the southeast. In general, theoretical visibility is very limited in areas immediately east of the Proposed Development in County Cork, where visibility of the proposed turbines is limited by the large well-defined ridgelines enclosing the eastern perimeter of the site. Theoretical visibility immediately to the east is mostly reduced to only 1-3 turbines theoretically visible. Immediately north of the proposed turbines, within 5km of the site, theoretical visibility is limited to mostly 6-8 turbines visible with some substantial areas of no theoretical visibility.

To the south and west of the site (within 5km) there is predominately full theoretical visibility of the proposed turbines with small areas of partial to no visibility which mostly occurs within low lying lands. Beyond the Cork and Kerry County border to the south (within 5km) and southeast there is mostly no theoretical visibility due to screening from topography.

Distribution of Theoretical Visibility in the Wider LVIA Study Area (Beyond 10km)

Figure 13-2 above demonstrates the existing topography within the LVIA Study Area. The area surrounding the Proposed Development is very mountainous, enclosing the proposed turbines within steep valleys. As seen on the ZTV in Figure 13-1, the majority of full theoretical visibility is located where the valley slopes down towards the coastline to the southwest. The topography also forms a low-lying valley along the course of the River Flesk which extends to the north of the Proposed Development, between Mangerton Mountain and the Paps. To the north, beyond these topographical features (Mangerton and the Paps) the landscape levels out to a large plain of undulating farmland where there is very little theoretical visibility of the Proposed Development, although there is a large patch of theoretical visibility north of Barraduff. There are some areas of theoretical visibility of 1-3 turbines around the settlement of Killarney and some areas of 4-5 turbines theoretically visible.

The entire LVIA Study Area comprises of 2182.7 km^2, the area within the LVIA Study Area where there is theoretical visibility of the Proposed Development is 651.5 km^2. Only 29.85% of the LVIA Study Area has theoretical visibility of the Proposed Development.

Beyond 10km, there are large areas of no theoretical visibility to the south, northwest and northeast of the proposed turbines. Full theoretical visibility occurs from the site to 25km southwest where the valley slopes down towards Kenmare.

13.3.3 Comparative ZTV of the Existing and Proposed Developments

The Proposed Development is a repowering project, where the proposed turbines are sited within the Existing Kilgarvan Wind Farm. The 28 no. turbines of the Existing Kilgarvan Wind Farm are operational and are currently visible in the existing baseline landscape. The Proposed Development includes removal of all 28 existing Kilgarvan turbines (removal from the landscape and views), and replacement with the 11 no. proposed turbines. One key focus of the assessments reported in this Chapter is to address the difference between the continued landscape and visual effects arising as a result of the Existing Kilgarvan Wind Farm compared with the likely landscape and visual effects of the Proposed Development. ZTV mapping is a useful tool for this element of the assessment. A Comparative ZTV map has been produced as a visual aid to analyse and to compare the difference in the spatial distribution of theoretical visibility between the Existing Kilgarvan Wind Farm and the Proposed Development in the LVIA Study Area.

The Comparative Half-Blade ZTV Map (Figure 13-3 below) compares the theoretical visibility of the existing Kilgarvan turbines with the proposed turbines. The Comparative ZTV accounts for the differing dimensions of the two turbine layouts (existing and proposed). Three separate colour bands are used on the ZTV map to indicate the areas of theoretical visibility of the existing turbines, as well as the additional areas of theoretical visibility of turbines as a result of the Proposed Development. The legend on each map shows the number of visible turbines for each corresponding colour, which are as follows:

- **Teal:** Only the existing Kilgarvan turbines are Visible
- **Yellow:** Only the Proposed Kilgarvan Turbines are Visible
- **Navy:** areas where the turbines from the existing are already theoretically visible. The turbines of the Proposed Development will also be theoretically visible within these areas.

The ZTV map is used to enable assessment of theoretical visibility from landscape and visual receptors, where there may be views of turbines where there were no views previously. Where the proposed turbines increase the theoretical visibility in the LVIA Study Area this is termed 'additional theoretical visibility' in the descriptions below.

Map Legend

- Proposed Turbine Locations
- Existing Kilgarvan Turbines
- LVIA Study Area
- County Borders

Comparative ZTV

- Only existing turbines theoretically visible
- Only proposed turbines theoretically visible
- Both the existing and proposed turbines theoretically visible

Drawing No.

Figure 13-3

Drawing Title

Existing Vs Proposed Comparative ZTV

Project Title

Proposed Repowering of the Existing Kilgarvan Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:185,000	211107	31.03.2024	SF	JW

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Distribution of Additional Theoretical Visibility Resulting from the Proposed Development

Theoretical visibility of the existing Kilgarvan turbines is described here for comparison purposes in relation to any additional theoretical visibility of the Proposed Development. As seen from Figure 13-1, theoretical visibility of the Proposed Development is heavily influenced by the undulating mountainous topography within the LVIA Study Area (seen above in Figure 13-2).

As discussed previously, theoretical visibility of the Proposed Development is heavily constrained to the southwest and north of the site, due to the steep mountainous terrain forming valleys around the site. Overall, theoretical visibility is very limited beyond 10km. Within 10km of the site there are a small number of patches of additional theoretical visibility from the proposed turbines. This additional visibility is located at the edges of the extent of theoretical visibility currently existent in this part of the LVIA Study Area.

While there are some small areas of additional theoretical visibility at the edges of the existing extent of theoretical visibility in the southern half of the LVIA Study Area, the main areas of additional theoretical visibility are located to the north of the LVIA Study Area beyond 15km. There is additional theoretically visibility to the northwest of the LVIA Study Area around Killarney as a result of the proposed turbines. These areas of additional theoretical visibility are located more than 15km from the Proposed Development in this direction, for the most part.

The areas of additional theoretical visibility are assessed later in this report where the additional and existing theoretical visibility is used to inform viewpoint selection. The additional visual exposure indicated by the ZTV as a result of the Proposed Development comprises a very small portion of the overall LVIA Study Area.

13.3.4 ZTV versus Actual Visibility

In general, actual visibility of a proposed development is far less than as indicated by ZTV maps. In the case of the Proposed Development - a repowering project, the existing turbines already exist and are visible in the landscape and can be directly compared with the ZTV (existing turbines mapped on comparative ZTV). Multiple visibility appraisals conducted during site visits confirmed that actual visibility of the existing turbines is far less than the ZTV indicates due to screening by localised landform (not accounted for in ZTV model), vegetation and built form. As the proposed turbines are less in number and are sited within the existing footprint of the existing turbine layout, the existing turbines provide a good point of reference and indication of where the proposed turbines will actually be visible from within the landscape. The assessments in this chapter (and selection of photomontage viewpoints) are therefore guided by visibility appraisals of the existing turbines conducted during site visits as well as ZTV mapping.

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

The Comparative ZTV map shows there is little difference between the geographic spread of theoretical visibility of the proposed and existing turbines in close proximity to the site. Most visual receptors such as roads and residential dwellings in close proximity to the site (within 5km) are located at low elevation, at the floor of the relatively narrow valleys surrounding the site where the land is slightly flatter. Within 5km of the site, the areas of additional theoretical visibility from the proposed turbines have a limited occurrence in the lower portion of these valleys where most visual receptors are located. Therefore, during visibility appraisals, the existing Kilgarvan turbines were a useful guide for determining the actual likely visibility of the Proposed Development from receptors aligned along the local road network and were informative points of reference in the Route Screening Analysis reported below.

Route Screening Analysis

In order to comprehensively demonstrate the varying characteristics of the roads in close proximity to the site and to record the actual visibility of the proposed turbines in comparison to the theoretical visibility, a methodology was developed termed Route Screening Analysis, and this was undertaken from all public roads within a five-kilometre radius of the proposed turbines. The full methodology is outlined in Appendix 13-1 and the categories recorded were as follows:

- Little/No Screening – mainly open and with some very light vegetation (see Plate 13-1)
- Intermittent/Partial Screening – light deciduous roadside vegetation and vegetation with short gaps which would allow intermittent or partial views (see Plate 13-2)
- Full Screening – vegetation which is dense enough to block views e.g. coniferous forestry (see Plate 13-3)

Plate 13-1 below was taken in the townland of Kilfadda Beg and represents the classification 'Little/No Screening'. In this instance (image below), there is open visibility of the existing Kilgarvan turbines and a very high likelihood that the proposed turbines will be visible from here too.

Plate 13-1 An Example of 'Little/No Screening' – Open visibility of the existing Kilgarvan turbines and a high likelihood of visibility of the proposed turbines.

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

Plate 13-3 An Example of 'Full Screening'

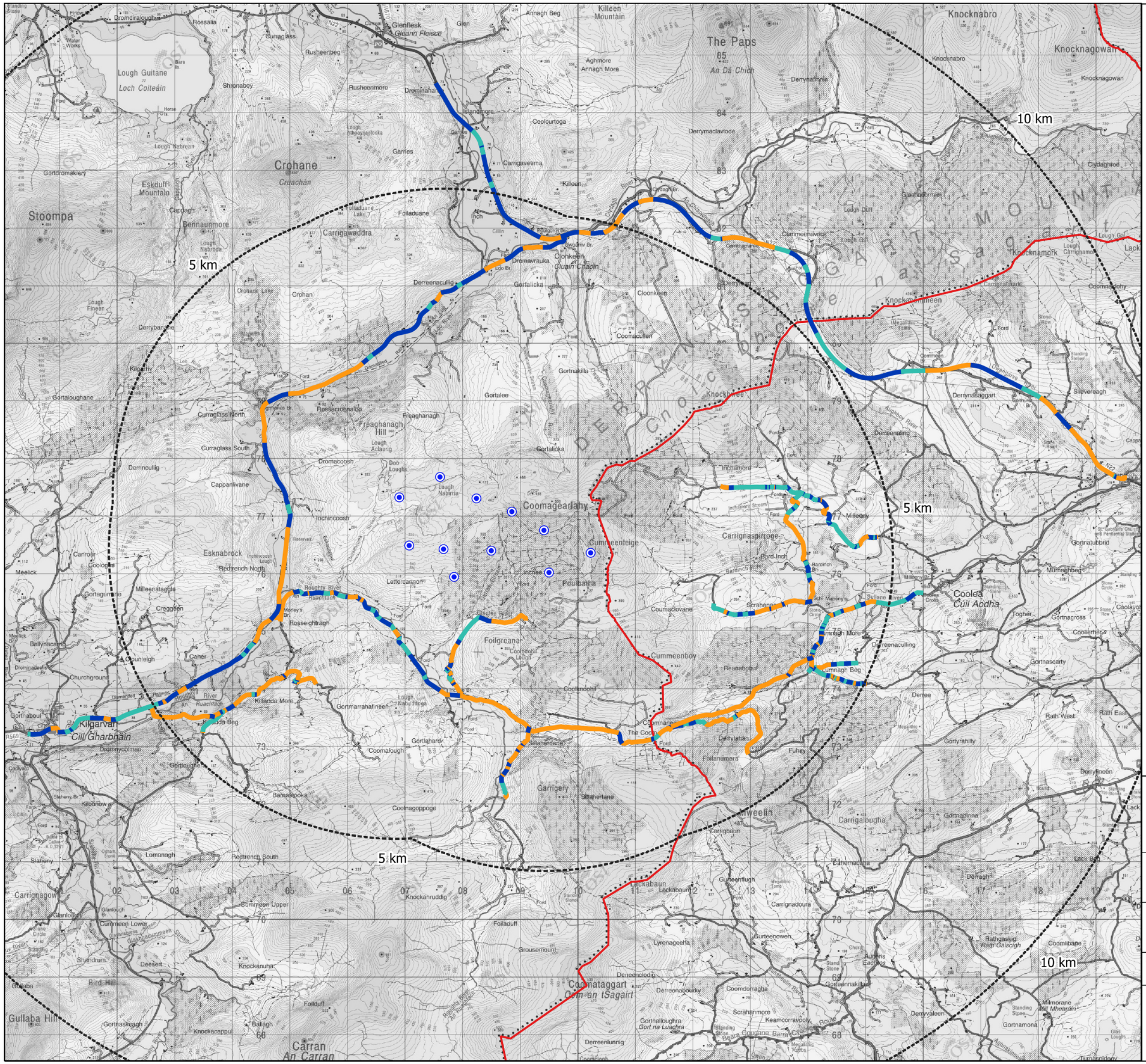
Within 5 km of the proposed turbines there are tracts of mature coniferous plantation forestry interspersed throughout the landscape. Where these are located close to roads views are restricted and closed due to their presence as shown in Plate 13-3 above.

The route screening analysis determines the extent and density of screening present in the immediate vicinity of the proposed site. This allows the actual likely visibility of turbines to be considered and assessed in an objective and quantitative manner reducing the level of subjectivity involved in determining how visible the proposed turbines will be in the local landscape immediately around the site. Table 13-1 shows the distribution of the screening classes on 65.05 km of public road recorded during the survey within 5 km of the proposed turbines (including all public roads within 5 km of the proposed site).

Table 13-1 Distribution of Screening recorded (within 5km) during Route Screening Analysis.

Screening Class	Length of Road Mapped in Figure 13.4	Percentage Distribution of Screening on the Surveyed Roads
Little/No Screening	12.8km	19.74%
Partial Intermittent Screening	23.1km	44.72%
Full Screening	29.1km	35.54%

'Partial/Intermittent' was recorded for just under half (44.72%) of the surveyed roads and was the most common class recorded. 'Full Screening' was recorded for 35.54% of the roads surveyed and 'Little/No Screening' was recorded for approximately one fifth (19.74%) and was by far the least common class recorded. Actual visibility within 5 km of the Proposed Development site is likely to be less than is indicated by the ZTV mapping in Figure 13-1 which shows widespread theoretical visibility of all turbines in a majority of this area.



Map Legend

- Proposed Turbine Locations
- County Borders

Route Screening Analysis

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

Drawing No.

Figure 13-4

Drawing Title

Route Screening Analysis

Project Title

Proposed Repowering of the Existing Kilgarvan Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:64,000	211107	31.03.2024	SF	JW

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13.4 Landscape Baseline

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

Baseline Landscape Receptors:

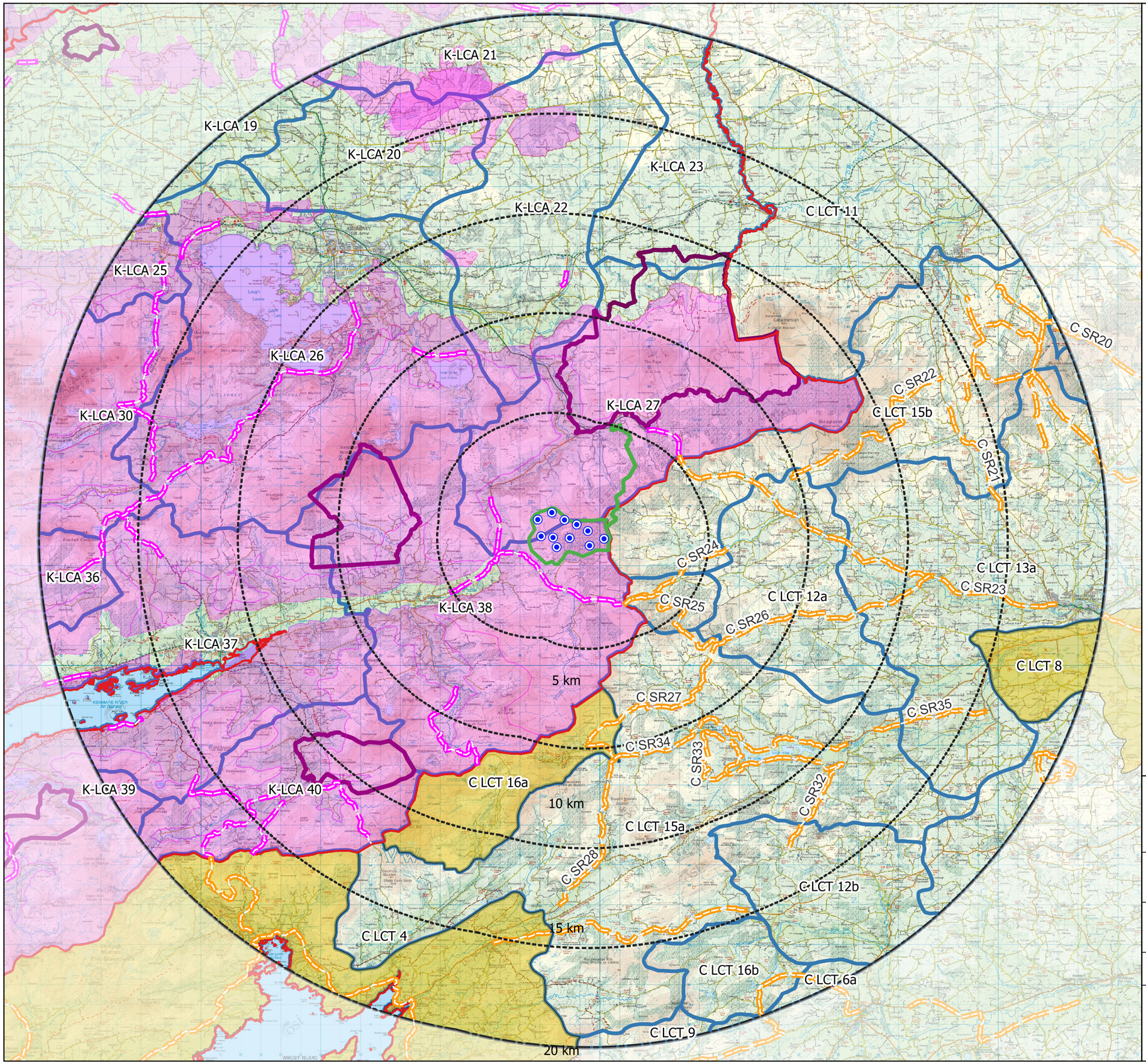
- **Landscape Designations and Policy Context** - Policy setting pertaining to the location and nature of the Proposed Development site from a landscape perspective based on:
  - Kerry County Development Plan 2022-2028 (KCDP)
  - Cork County Development Plan 2022-2028 (CCDP)
- **Landscape Character of the Proposed Development site** – A description of the physical landscape and characteristics of the Proposed Development site and its immediate setting, this includes the following considerations:
  - Landscape characteristics based upon findings from site visits conducted in 2021 and 2022.
  - An appraisal of landscape value and the susceptibility of the landscape to change, and a determination of landscape sensitivity.
- **Landscape Characterisation in The WEDG's for Planning Authorities** – A review of the Guidelines and draft Guidelines (DoEHLG, 2006; DoHPLG, 2019) and siting guidance relating to the landscape characteristics of the Proposed Development Site.
- **Landscape Character of the Wider Landscape Setting**– A description of the wider landscape setting, including the identification of designated Landscape Character Areas (LCAs) located within 15 km of the proposed turbines and a preliminary analysis using ZTV mapping.

13.4.1 Landscape Designations and Policy Context

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

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

As demonstrated by ZTV mapping (Figure 13-1), Cork County is located in the LVIA Study Area and comprise areas with theoretical visibility of the proposed turbines. Consequently, the Cork County Development Plan 2022-2028 was also consulted to identify relevant landscape designations within the LVIA Study Area.



Map Legend

- Proposed Turbine Locations
- EIAR Site Boundary
- County Borders
- LVIA Study Area
- Co. Kerry Landscape Character Areas and Co. Cork Landscape Chatacter Types

Co. Kerry

- Co. Kerry Archaelogical Landscapes
- Co. Kerry Visually Sensitive Areas
- Co. Kerry Scenic Routes

Co. Cork

- Co. Cork High Value Landscapes
- Co. Cork Scenic Routes

Drawing No.

Figure 13-5

Drawing Title

Landscape Baseline

Project Title

Proposed Repowering of the Existing Kilgarvan Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:185,000	211107	31.03.2024	SF	JW

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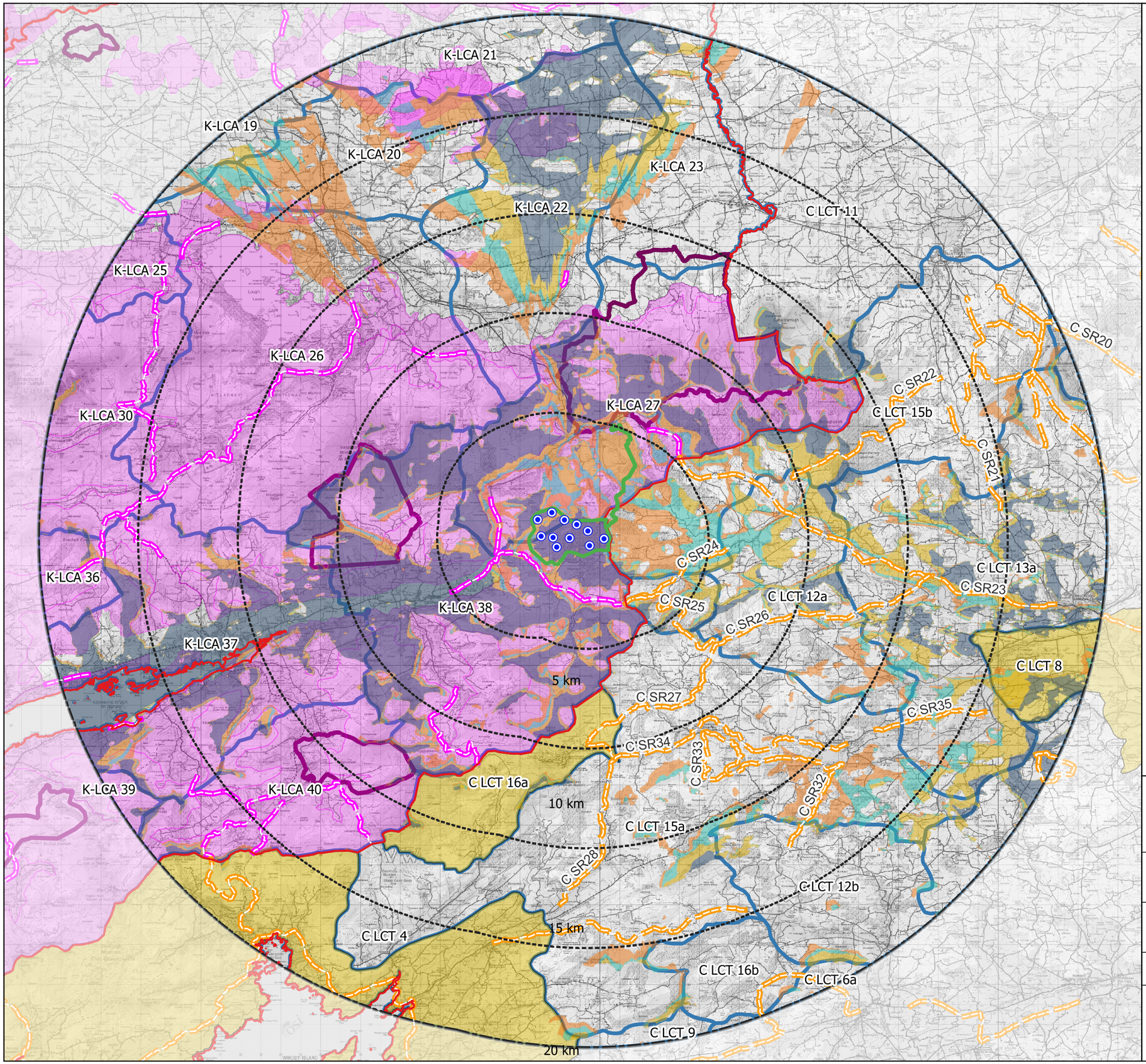

Map Legend

- Proposed Turbine Locations
- EIAR Site Boundary
- County Borders
- LVIA Study Area
- Co. Kerry Landscape Character Areas and Co. Cork Landscape Chatacter Types

Co. Kerry

- Co. Kerry Archaelogical Landscapes
- Co. Kerry Visually Sensitive Areas
- Co. Kerry Scenic Routes

Co. Cork

- Co. Cork High Value Landscapes
- Co. Cork Scenic Routes

ZTV

- 1-3 Turbines Theoretically Visible
- 4-5 Turbines Theoretically Visible
- 6-8 Turbines Theoretically Visible
- 9-11 Turbines Theoretically Visible

Drawing No.

Figure 13-6

Drawing Title

Landscape Baseline & ZTV

Project Title

Proposed Repowering of the Existing Kilgarvan Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:185,000	211107	31.03.2024	SF	JW

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13.4.1.1 Kerry County Development Plan (2022-2028)

13.4.1.1.1 *Landscape Sensitivity*

The KCDP notes that *"the outstanding landscapes of Kerry are one of the County's defining features and one of its most important economic assets. There are significant areas of landscape importance, which are important not only for their intrinsic value as places of natural beauty but also because they provide a real asset for residents and visitors alike in terms of recreation, tourism and other uses."* The KCDP sets out objectives on landscape in *Chapter 11 Environment*. The following objectives deal with the landscape sensitivity in County Kerry:

> *"It is an objective of the Council to:*
>
> ***KCDP 11-76*** *Have regard to any future National Landscape Character Assessment, Regional Landscape Assessments and Landscape Character Map, and the publication of Section 28 Guidelines on Landscape Character Assessment.*
>
> ***KCDP 11-77*** *Protect the landscapes of the County as a major economic asset and an invaluable amenity which contributes to the quality of people's lives.*
>
> ***KCDP 11-78*** *Protect the landscapes of the County by ensuring that any new developments do not detrimentally impact on the character, integrity, distinctiveness or scenic value of their area. Any development which could unduly impact upon such landscapes will not be permitted."*

As outlined previously in Section 13.1.5 above, the final Proposed Development design is the subject of an extensive iterative design process informed by early-stage design input and impact assessment work including ZTV mapping and photomontage preparation. Therefore, in relation to policy *KCDP 11-78*, every effort has been made to bring forward the optimum design for the Proposed Development with respect to minimising impact on the landscape and scenic amenity.

13.4.1.1.2 *Landscape Designations*

The Landscape Review of County Kerry, a supporting document for the KCDP, is relied upon within Section 11.6.3 of the KCDP to provide two landscape designations for the county, these two landscape designations are:

- Visually Sensitive Areas
- Rural General

Section 11.6.3 of the KCDP goes on to state that:

> *"It is important that development in all areas be integrated into its surroundings in order to minimise the effect on the landscape and to maximise the potential for development. Development in areas outside of designated areas, should, in their designs take account of the topography, vegetation, existing boundaries and features of the area.*
>
> *Permission will not be granted for development which cannot be integrated into its surroundings."*

Section 11.6.3.1 of the KCDP states that Visually Sensitive Areas are "*particularly sensitive to development."* Figure 13-7 below shows Map 4 (O) of the KCDP with the locations of the Proposed Development. As seen from the map the proposed turbines are located within a County Kerry designated Visually Sensitive Area.

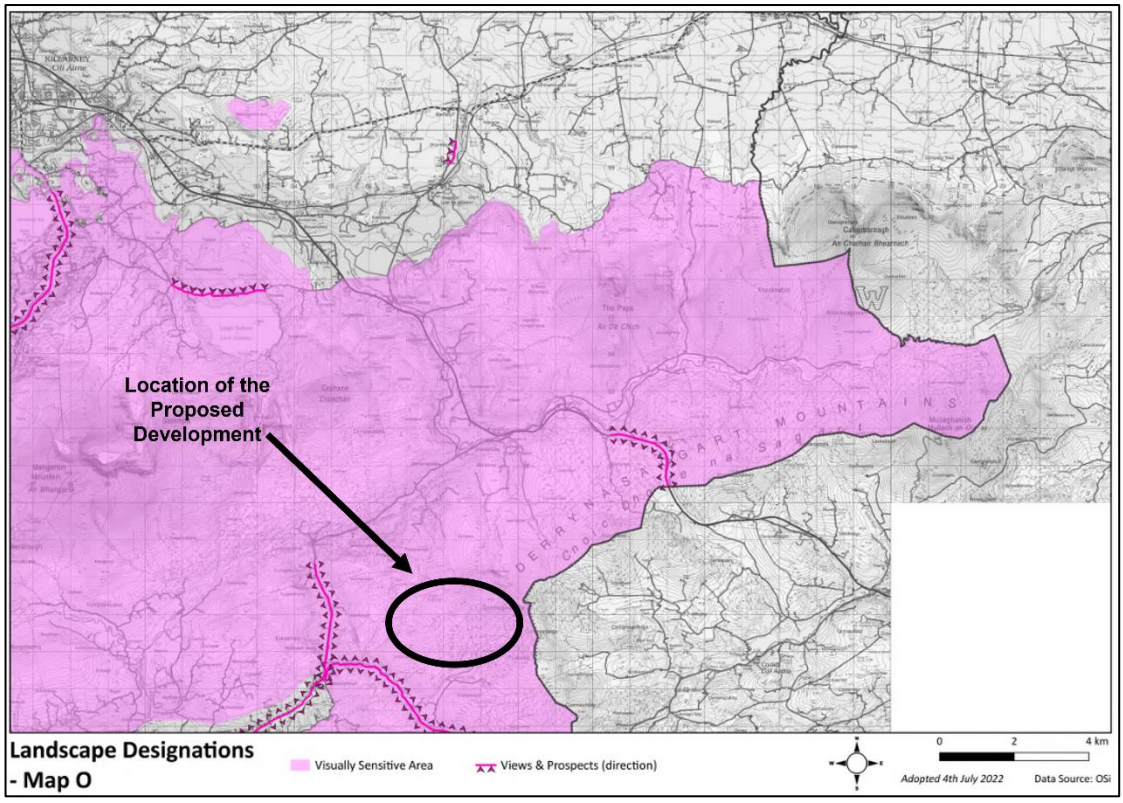


Figure 13-7 Kerry Landscape Designations – Map 4 (O) within Volume 4 of the KCDP 2022-2028

Figure 13-6 above shows large areas of full and partial visibility of the Proposed Development within 10km of the site in the Visually Sensitive Area. Beyond 10km there is generally no theoretical visibility of the Proposed Development within the Visually Sensitive Area. As shown in the comparative ZTV in Figure 13-3 within 10km of the site there are very limited areas where there are new views of turbines as a result of the Proposed Development. A full assessment of the likely effects of the Proposed Development on this designated Visually Sensitive Area is included later in this Chapter.

13.4.1.1.3 Archaeological Landscapes

Section 8.3.2 of the KCDP designated a number of Archaeological Landscapes and states:

> *"These landscapes are of regional, national and in some cases international significance and every effort should be made to ensure their protection and preservation. The nineteen landscapes identified are described in detail in Volume 3. These important landscapes are listed for special protection with special emphasis on objectives that protect the monuments and their landscape settings but also their visual aspect and monument inter-visibility."*

The KCDP contains the following policy objective in relation to these Archaeological Landscapes:

> *"**KCDP 8-28** Ensure the active protection of the 19 identified, significant archaeological landscapes outlined in Volume 3 with particular emphasis on the landscape settings, views to and from the landscapes and monument/feature inter-visibility within these landscapes."*

As seen in Figure 13-5- *Landscape Baseline Map* and Figure 13-8 below, there are 3 Archaeological Landscapes located within the LVIA Study Area.

- 13. The Paps
- 15. Mangerton/Cumeenduvassig/Bausheen/Slaght/Knockeens
- 18. Dromagorteen/Crinagort/Curragraigue/Erneen

As stated by Kerry County Council, "these important landscapes are listed for special protection with special emphasis on objectives that protect the monuments and their landscape settings but also their visual aspect and monument intervisibility." These three Archaeological Landscapes are described in detail in Volume 3 of the KCDP and discussed further in Chapter 13 – Cultural Heritage of this EIAR. The effects on these landscapes as a result of the Proposed Development are discussed in Section 13.7.3.1.

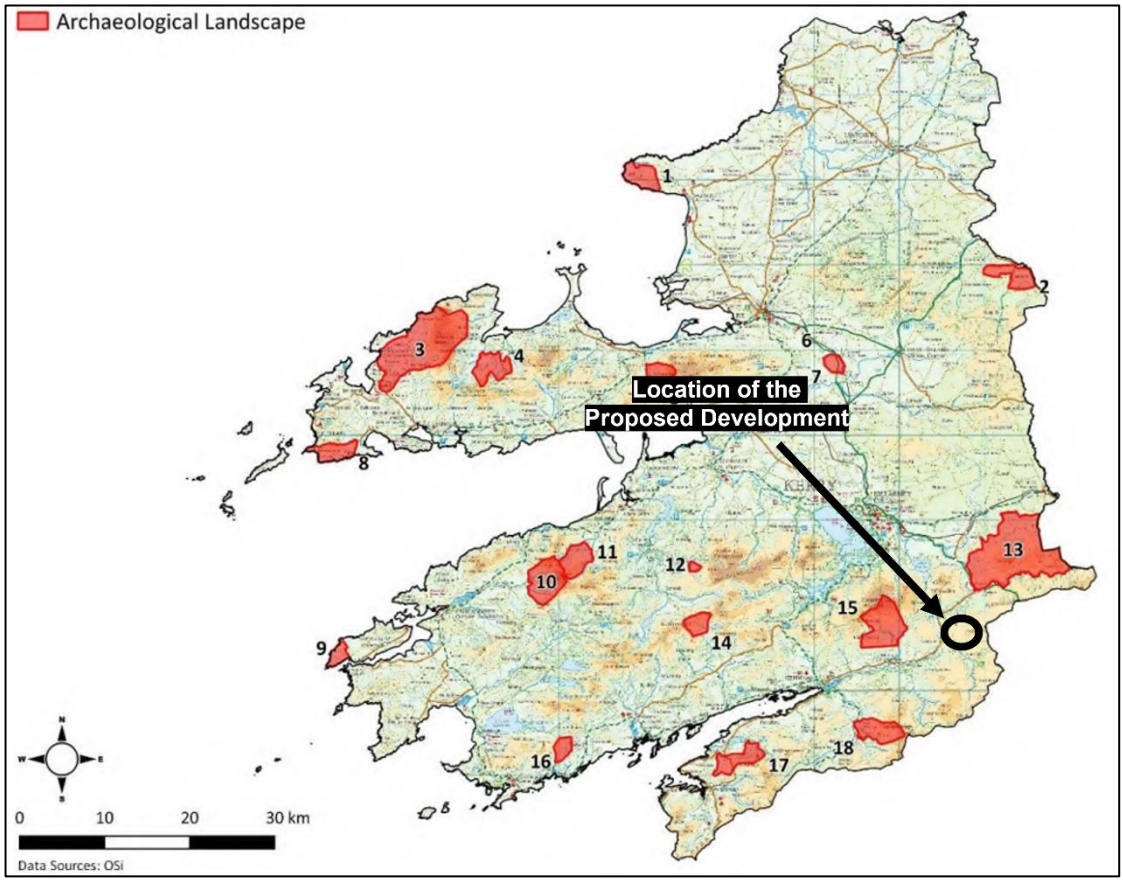


Figure 13-8 Location of the Proposed Development in relation to the Archaeological Landscapes within County Kerry (Source: Map 8.2 within the KCDP 2022-2028)

13.4.1.1.4 Landscape Character Assessment

The Landscape Review of County Kerry contains a landscape character assessment for the County. Section 4 of the Landscape Review of County Kerry identifies 40 landscape character areas (LCAs). These are shown on Map 7.20 of the Landscape Review of County Kerry, which is reproduced below in Figure 13-9 with the Proposed Development location. There are 7 LCAs located within the 15 km LVIA Study Area for effects on landscape character:

- LCA-27 Upper Clydagh River, The Paps and the Derrynasaggart Mountains
- LCA-38 Owbaun, Slaheny and Roughty River Valleys
- LCA-22 Quagmire River and River Flesk Valley
- LCA-26 Lough Leane and Killarney National Park
- LCA-37 Kenmare River Valley
- LCA-40 Upper Sheen River Valley
- LCA-23 Munster Blackwater Valley

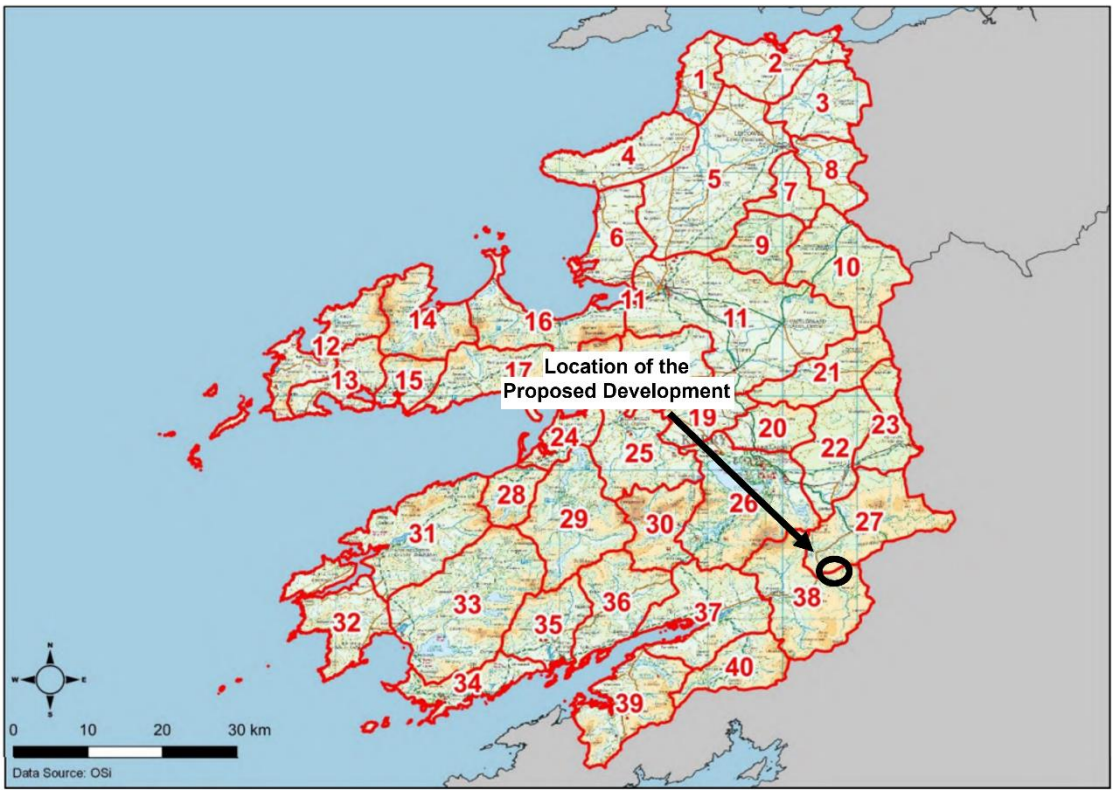


Figure 13-9 Kerry Landscape Character Areas Map – Map 7.20 within Appendix 7 in Volume 1 of the KCDP 2022-2028

The proposed turbines are located within LCA 27 and LCA 38. LCA 27 - Clydagh River, The Paps and Derrynasaggart Mountains is described in Appendix 7 within Volume 1 of the KCDP as:

> *"This area is surrounded by a rim of mountains with the exception of the Loo River and the River Flesk valleys to the west. The Clydagh River valley is also contained within the area. The northern boundary is formed by the ridge of mountains extending from Crohane, north of The Paps and on to Knocknabro. The southern boundary of the area is made up of the Derrynasaggart Mountains. The western boundary continues on an arc of high topography connecting to Crohane."*

LCA 38 - Kilgarvan and Roughty River Valley is described in Appendix 7 within Volume 1 of the KCDP as:

> *"This area is surrounded by mountains. The northern boundary corresponds to the mountain ridge between Knockbrack, Dromderalough, Mangerton Mountain and Stoompa, extending eastwards to the western end of the Derrynasaggart Mountains. The southern boundary is marked by the high ridge that divides Kerry from Cork. It contains the Owbaun, Slaheny and Roughty River Valleys."*

Appendix 7 in Volume 1 of the KCDP assesses visual sensitivity for each LCA. The full methodology for assessing visual sensitivity is set out on page 192 of Volume 1 of the KCDP. The definition of each sensitivity level (as stated in table 7.1 of Volume 1 of the KCDP) is detailed below:

> *"**High** - The key characteristics and qualities of the landscape are highly sensitive to change.*
> ***Medium/High** - The key characteristics and qualities of the landscape are sensitive to change.*
> ***Medium** - Some of the key characteristics and qualities of the landscape are sensitive to change.*
> ***Low/Medium** - Few of the key characteristics and qualities of the landscape are sensitive to change.*

***Low** - Key characteristics and qualities of the landscape are robust and are less likely to be adversely affected by change."*

Both LCAs are given an overall sensitivity of Medium/High within the KCDP. Other LCAs within the 15km LVIA Study Area for effects on landscape character are listed in

Table *13-2* below. A comprehensive assessment of effects on landscape character is contained below in Section 13.7.3.1.3.

Table 13-2 LCAs within County Kerry in the 15km LVIA Study Area for Effects on Landscape Character

LCA	LCA Name	Sensitivity
LCA 22	Quagmire River and River Flesk Valley / Quagmire and Owneyskeagh Rivers	Medium
LCA 23	Munster Blackwater Valley / River Blackwater and Rathmore	Medium
LCA 26	Lough Leane and Killarney National Park	High
LCA 27	Clydagh River, The Paps and Derrynasaggart Mountains	Medium / High
LCA 37	Kenmare River Valley	Medium / High
LCA 38	Kilgarvan and Roughty River Valley	Medium / High
LCA 40	Upper Sheen River Valley / Bonane and Sheen River Valley	Medium / High

13.4.1.1.5 Policy Pertaining to Wind Energy Development

Section *12.5.4.1* of the KCDP refers to wind energy development in County Kerry.

"It is the policy of the Council to support, in principle and in appropriate locations, the sustainable development of wind energy resources in County Kerry. This policy document builds upon previous policies in place to develop an updated tool for identifying potentially suitable locations for wind energy development and to guide future assessment of wind energy planning applications in the County.

It is an objective of the Council to:

***KCDP 12-18** Ensure that projects shall be designed and developed in line with the Draft Revised Wind Energy Development Guidelines (DHPLG, 2019) and any update of these guidelines in terms of siting, layout and environmental assessment."*

The LVIA conducted in this chapter has been informed by and is following the guidance detailed in the Guidelines (DoEHLG, 2006) and the draft Guidelines (DoHPLG, 2019). This guidance is discussed below in Section 13.4.3 in relation to the character of the Proposed Development site and design of the Proposed Development.

Map 12.4 within Volume 4 of the KDCP displays the wind zoning within County Kerry. As shown below in *Figure 13-10*, the Proposed Development is located within a 'Potential Repowering Area'.

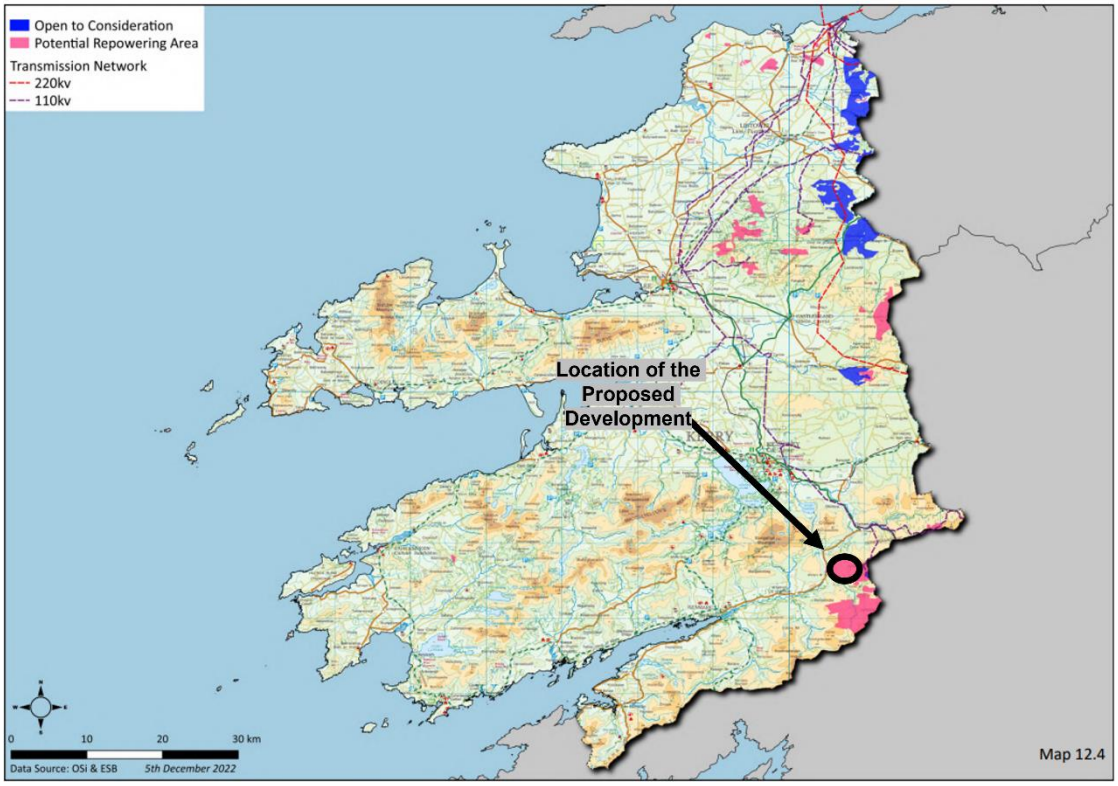


Figure 13-10 Kerry Wind Zoning Map – Map 12.4 within Volume 4 of the KCDP 2022-2028

Kerry County Council recognises that *"repowering proposals differ from new applications in so far as they may be able to avail of the existing infrastructure"*. The Proposed Development is a repowering proposal and will be availing of most of the Existing Kilgarvan Wind Farm infrastructure (including, substation, etc) and therefore minimises potential impacts on the landscape.

13.4.1.1.6 County Kerry Views and Prospects

Section 11.6.5 of the KCDP contains the following relevant policy in relation to views and prospects within the County:

> *"KCDP 11-79 Preserve the views and prospects as defined on Maps contained in Volume 4.*
>
> *KCDP 11-80 Facilitate the sustainable development of existing and the identification of new Viewing Points along the route of the Wild Atlantic Way in conjunction with Fáilte Ireland, while ensuring the protection of environmental attributes in the area through the implementation of environmental protection objectives, standards and guidelines of this Plan.*
>
> *KCDP 11-81 Prohibit developments that have a material effect on views designated in this plan from the public road or greenways towards scenic features and/or public areas."*

The designated views and prospects from the KCDP can be seen in Map 4 within Volume 4 of the KCDP and above on Figure 13-5 Landscape Baseline. There are 217 designated views in the KCDP, 21 of these are located within the LVIA Study Area. As these 21 scenic amenity designations are of a visual nature, they are comprehensively addressed in Section 13.5 of this Chapter – *Visual Baseline*, where ZTV mapping and on-site appraisals determine the likely visibility of the Proposed Development within these scenic views. These designated views are discussed in further detail in Section 13.5.1.1 and assessed in Section 13.7.3.2.

13.4.1.2 Cork County Development Plan (2022-2028)

13.4.1.2.1 General Landscape Policy

Section 14.8 of CCDP outlines the protection of landscapes within County Cork and contains the following relevant policy objectives:

> ***"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."*

13.4.1.2.2 High Value Landscapes

Section 14.8.8 of the CCDP states that

> *"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 Proposed Development is not located adjacent to a High Value Landscape (HVL). There are three HVLs within the LVIA Study Area, LCT 4, LCT 8 and LCT 16a. LCT 16a is located approximately 7.2km south of the nearest proposed turbine (T2). Both LCT 4 and LCT 8 are located greater than 17km from the Proposed Development. These can be seen on Figure 13-5 – Landscape Baseline. There is no theoretical visibility of the Proposed Development from LCT 4 and LCT 16a and there is very limited theoretical visibility from LCT 8 (Figure 13-6). These landscape receptors are screened out from further assessment at this stage.

13.4.1.2.3 Landscape Character Assessment

The Landscape Character Assessment of County Cork identifies 76 Landscape Character Areas (LCAs) within the county. The LCAs were then amalgamated into a set of 16 generic Landscape Character Types (LCTs) based on similar physical and visual characteristics. The following LCTs are located within the 15 km LVIA Study Area for effects on landscape character:

- C-LCT-15b Ridged and Peaked Upland
- C-LCT-16c Glaciated Cradle Valleys
- C-LCT-15a Ridged and Peaked Upland
- C-LCT-12a LCT 12a Rolling Marginal Middleground
- C-LCT-16a LCT 16a Glaciated Cradle Valleys
- C-LCT-11 Broad Marginal Middleground Valleys
- C-LCT-13a Valleyed Marginal Middleground

A comprehensive assessment of effects on landscape character is contained below in Section *13.7.3.1.3* and in *Appendix 13-2.*

13.4.1.2.4 County Cork Views and Prospects

In relation to views and prospects, and scenic routes, the CCDP contains the following relevant policy objectives within Section 14.9:

> *"GI 14-12: General Views and Prospects*
> *Preserve the character of all important views and prospects, particularly sea views, river or lake views, views of unspoilt mountains, upland or coastal landscapes, views of historical or cultural significance (including buildings and townscapes) and views of natural beauty as recognized in the Draft Landscape Strategy.*
>
> ***GI 14-13: Scenic Routes***
> *Protect the character of those views and prospects obtainable from scenic routes and in particular stretches of scenic routes that have very special views and prospects identified in this Plan. The scenic routes identified in this Plan are shown on the scenic amenity maps in the CDP Map Browser and are listed in Volume 2 Heritage and Amenity Chapter 5 Scenic Routes of this Plan.*
>
> ***GI 14-14: Development on Scenic Routes***
> *a) Require those seeking to carry out development in the environs of a scenic route and/or an area with important views and prospects, to demonstrate that there will be no adverse obstruction or degradation of the views towards and from vulnerable landscape features. In such areas, the appropriateness of the design, site layout, and landscaping of the proposed development must be demonstrated along with mitigation measures to prevent significant alterations to the appearance or character of the area.*
> *b) Encourage appropriate landscaping and screen planting of developments along scenic routes (See Chapter 16 Built and Cultural Heritage).*

GI 14-15: Development on the Approaches to Towns and Villages
Ensure that the approach roads to towns and villages are protected from inappropriate development, which would detract from the setting and historic character of these settlements."

There are 118 designated Scenic Routes across the County and 19 are located within the LVIA Study Area. These scenic routes are detailed in full in Table 2.5.1 of Volume 2 of the CCDP and are shown on Figure 13-5 – Landscape Baseline. As these 19 No. scenic amenity designations are of a visual nature, they are comprehensively addressed in Section 13.5 of this Chapter – Visual Baseline, where ZTV mapping and on-site appraisals determine the likely visibility of the Proposed Development from each route. The 19 Scenic Routes located within the LVIA Study Area are discussed in further detail below in Section 13.5.1.1.

13.4.2 Landscape Character of the Proposed Development Site

13.4.2.1 Site Visit Findings

The Existing Kilgarvan Wind Farm site was visited on 21st September 2022, where a preliminary assessment of topography, drainage, landcover and land use was conducted in conjunction with other LVIA surveys. Information gathered during these visits has informed the following descriptions.

Topography and Landform

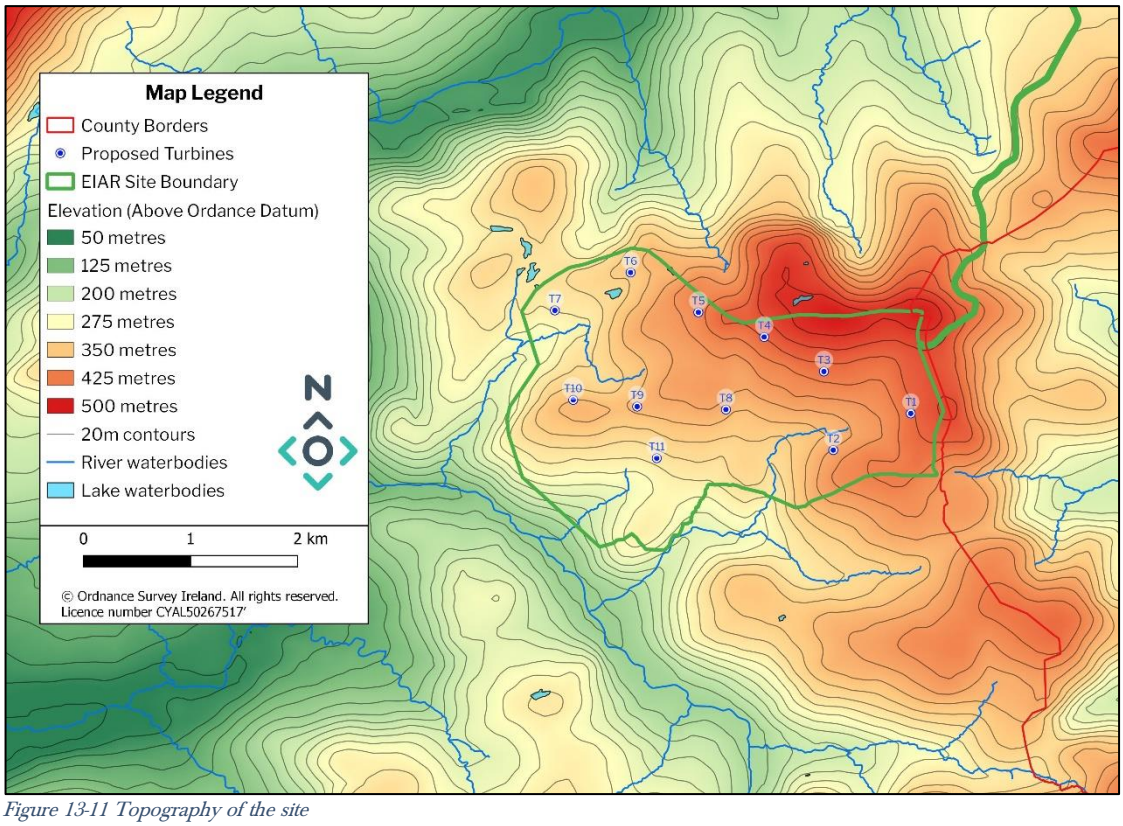


Figure 13-11 Topography of the site

The Proposed Development site is located on the western slopes of the Derrynasaggart Mountain Range, Co. Kerry and consequently resembles a remote, elevated upland landscape. The landscape surrounding the site comprises irregular, undulating topography. The prominent ridgeline to the north and east of proposed turbine T4 encloses the area, to the east. The topography frames views of the turbines to the west of the site as the topography tapers down into the valley. The Proposed

Development site is characterised by mountainous terrain with moderate to steep slopes in places. The elevation of the site itself ranges from approximately 190 to 500mOD (metres above Ordnance Datum), with the lowest turbine sited at approximately 300m (T7) and the highest at approximately 435m (T4).

Plate 13-4 Views from within the site to the southwest

Within the site, the local topography generally slopes to the south and southwest towards the Roughty River as seen in Plate 13-4 above. The land is characterised by abundant protruding ridges of bedrock outcrop with peat deposits between the ridges.

Plate 13-5: undulating topography within the site

Drainage

The Proposed Development site is characterised by mountainous terrain with moderate to steep slopes in places. Within the Wind Farm Site, the local topography generally slopes to the south and southwest towards the Roughty River. The Proposed Development site has areas of coniferous forestry, transitional woodland scrub and upland blanket bog. The Proposed Development site is drained by several mountain streams which flow to the southwest. The Proposed Development site is located in the Dunmanus-Bantry-Kenmare surface water catchment and the south of the site drains to the Roughty River.

Plate 13-6 Stream within the site

The north of the Proposed Development site drains to the Flesk River and a small section of the Proposed Development site drains to the Sullane River. In places the natural drainage is further facilitated by a network of manmade drains. These manmade drains are concentrated within the areas of coniferous forestry and along sections of the Existing Kilgarvan Wind Farm site access roads.

Plate 13-7 Drainage ditch within the site

Landcover

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

The site is part of a remote mountainous landscape and is a mosaic of blanket bog with transitional woodland scrub and conifer forest interspersed. Existing windfarm infrastructure includes: 28 no. turbines, internal access roads and a single 110kV sub-station. Plate 13-8 below shows an image of the existing infrastructure on site. The majority of the access roads, and the existing onsite 110kV Coomagearlahy substation (Plate 13-14) on site will be used for the Proposed Development. The Proposed Development site is bordered by a mixture of forestry, blanket bog and agricultural land.

Plate 13-8 Existing hardstand, turbines and access roads on site

Plate 13-9 transitional woodland scrub within the Proposed Development Site

Plate 13-10 blanket bog within the Proposed Development Site

Site surveys found that the site is dominated by blanket bog, wet heath and coniferous forestry plantations as seen in Plate 13-10 and Plate 13-11. Plate 13-10 above shows the current landcover of the site, throughout the site there are protruding ridges of bedrock outcrop with peat deposits between the ridges.

Plate 13-11 coniferous forestry plantation within the Proposed Development Site

Land Use

Current land-use on the site comprises of commercial forestry around the Existing Kilgarvan Wind Farm turbines. As Kilgarvan Wind Farm is an existing site, renewable energy production is the primary feature of the land use of the site at present. These land uses are clearly demonstrated by the images shown below. Land use in the wider surrounding area comprises primarily of peat bogs and forestry plantations with agricultural lands located further to the east.

Plate 13-12: View showing the current land use conditions of the site.

Plate 13-13: View showing the current land use condition of the site

The existing onsite 110kV Coomagearlahy substation is located to the east of the site. This substation supports the renewable energy production which is the primary feature of the land use of the site and will continue to be used for the Proposed Development.

Plate 13-14: Existing onsite 110kV Coomagearlahy substation within the Kilgarvan Windfarm Site

Figure 13-12 Existing Kilgarvan Turbine Layout Vs Proposed Kilgarvan Turbine Layout

As seen in Figure 13-12 above, the Proposed Development aims to utilise the existing infrastructure within the site as much as possible. Several of the proposed turbines will be located on existing roads and hardstands where existing turbines are already sited. Those turbines not located on existing development infrastructure will be sited in close proximity to existing infrastructure to reduce construction effects. Plate 13-11 and Plate 13-13 above shows coniferous forestry tracts on site where two of the proposed turbines (T8 and T11) will be located.

13.4.2.2 Landscape Value and Sensitivity of the Proposed Development Site

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

Determination of landscape value takes into consideration the scenic amenity designations, the sensitivity and value designations found in the local landscape policy as well as other indications of landscape value attached to undesignated landscapes. Table 13-3 below describes various factors that aid in identifying landscape value. These factors and indicators were appraised collectively to determine a landscape value for the Proposed Development Site. The Landscape value and susceptibility to change were then considered in forming a landscape sensitivity classification of either **Low, Moderate, High** or **Very High** for the Proposed Development site (See *Appendix 13-1* for the different classifications referred to here).

Table 13-3 Indicators of Landscape Value

Indicator	Description
Landscape Designations	The Proposed Development site is located within Kerry LCA 27 - Kenmare River Valley and Kerry LCA 38 - Owbaun, Slaheny and Roughty River Valleys. Both LCAs have been designated as Medium/High sensitivity within the KCDP. The site is located with an area designated as a "*Potential Repowering Area*" within the KCDP.

Indicator	Description
	The site is located within a Kerry designated Visually Sensitive Area. There are 4 scenic routes (K-SR01, K-SR02, C-SR25 and C-SR24) located within 5km of the Proposed Development. However, no designated scenic routes or views are located on the site itself.
Landscape Elements Quality/Condition	This refers to the physical state of the landscape and the condition of individual elements. It is a heavily modified working landscape due to the dominant presence of the existing wind farm and forestry and utility of the land for these purposes. The landscape is modified by artificial drainage, access roads and agricultural infrastructure.
Scenic or Aesthetic Qualities	The part of the site dedicated to commercial forestry has few notable aesthetic qualities. There are some impressive long-distance views from areas of high elevation, in particular to the southwest towards Kenmare that have high aesthetic quality.
Rarity or Conservation Interests	The site is part of a remote mountainous landscape with transitional woodland scrub and conifer forest interspersed. The site is dominated by Blanket Bog and Wet Heath habitat which have biodiversity value. A comprehensive assessment of the Ecology on site is included in Chapter 6 – *Terrestrial Biodiversity*
Wildness/Naturalness	The site itself is an existing wind farm with 28 existing Kilgarvan turbines surrounded by mountainous terrain interspersed by blanket bog, coniferous forestry and woodland scrub.
Recreational Value	The Proposed Development site comprises privately owned land and is not used for any public recreational activities.
Cultural Meaning / Associations	There are several national monuments located within the site. The nearest Archaeological Landscape (The Paps) is located approximately 4.1km north of the closest proposed turbine (T6). A comprehensive assessment of the Cultural Heritage on site is included in Chapter 13.

In consideration of the factors detailed in Table 13-3 above, the landscape value of the site is deemed to be of High value given the location within a designated Visually Sensitive Area and proximity to the Archaeological Landscapes. However, it is relevant that the site of the Proposed Development is currently an existing wind farm development. Considering this factor, as well as the designation of the site as a 'Potential Repowering Area' within the KCDP, the susceptibility of the landscape of the site to the proposed change is Low. Overall, on balance, the sensitivity of this landscape to the Proposed Development is deemed to be Medium.

13.4.3 Landscape Characterisation in the Wind Energy Development Guidelines

The following section considers both the Guidelines (DoEHLG, 2006) and the draft Guidelines (DoHPLG, 2019) – Hereafter referred to as the WEDGs and Draft WEDGs. These guidelines offer guidance for the siting and design of wind energy developments in various landscape contexts by defining six landscape character types that represent most situations where wind turbines may be proposed. The guidance is intended to be indicative and general and notes that it represents the 'best fit' solutions to likely situations.

The six landscape character types include 'Mountain Moorland', 'Hilly and Flat Farmland', 'Flat Peatland', Transitional Marginal Land', 'Urban/industrial' and 'Coastal' landscape character types. The guidelines note that where a wind energy development is located in one landscape character type but is visible from another, it will be necessary to decide which might more strongly influence the approach adopted for the assessment.

Landscape character types of Flat Peatland, Urban/Industrial and Coastal could be ruled out from the beginning, leaving Hilly and Flat Farmland, Mountain Moorland and Transitional Marginal Land. Hilly and Flat Farmland was not applicable to the site as Proposed Development site does not have "a mix of small fields, tight hedgerows and shelterbelts". Although the Proposed Development site has similar characteristics to that of Transitional Marginal Landscapes, the key characteristics and siting and design of Mountain Moorland is most prevalent for the Proposed Development Site. Further details of this landscape character type are provided below.

Plate 13-15 View showing Mountain Moorland landscape type within the Proposed Development Site.

Plate 13-16 View showing Mountain Moorland landscape type within the Proposed Development Site.

The key characteristics of the 'Mountain Moorland' landscape type include:

- "Peaked, ridged or rolling mountains and upland with steep slopes or gently formed valleys;
- Generally unenclosed;
- Landcover comprising of blanket bog, a mottling of heather, wild grasses and some rush in wet flushes;
- A landscape type of relative remoteness and often comprising pristine, unspoilt and remote landscapes.

Given exposure and smoothness of terrain, these landscapes are often sought for wind energy development. The exposure of mountains and the preference for wind energy developments to be located at high elevations result in high visibility.

Mountain moorland may be inappropriate for wind energy development for reasons of natural heritage and the fact that some of these landscapes are of rare scenic quality and/or support some of the last wilderness areas of relatively pristine, unspoilt and remote landscapes.

However, many examples of these landscapes should be open for consideration subject to appropriate design and landscape siting to minimise adverse impact and optimise aesthetic effect."

The best practice siting and design guidance given for 'Mountain Moorland' in the WEDGs (DoEHLG, 2006) and the Draft WEDGs (DoHPLG, 2019) is set out below:

Location

"It may be acceptable to locate wind energy developments on ridges and peaks. They may also be appropriate, in certain instances, in a saddle between two peaks where they will be partially contained or "framed". A third acceptable location is lower down on sweeping mountainsides."

In terms of **location,** site selection was at the forefront of the project design. At a project level, siting of proposed turbines at lower elevations relative to the adjacent ridgelines provide visual containment of the proposed turbines, reducing visual exposure from receptors in the landscape. The proposed turbines are located on the slopes of Coomagearlahy. When viewed from the west, where they are most visible, the proposed turbines are framed by the surrounding topography and peaks to the east and north.

Spatial Extent

"Given the typical extensive areas of continuous unenclosed ground, larger wind energy developments can generally be accommodated because they correspond in terms of scale. However, the spatial extent of a wind energy development would need to be reduced where a suggestion of smaller scale is provided by nearby landscape features."

In terms of **spatial extent,** the wider landscape area within which the proposed turbines are located is a large-scale, remote landscape, capable of effectively absorbing a wind farm of this scale and spatial extent**.**

Spacing

"All spacing options are usually acceptable. Where a wind energy development is clearly visible on a crest or ridge there is considerable scope to vary the rhythm, though on simple ridges, regular spacing may be more appropriate. On sweeping and continuously even areas of mountain moorland or upland plateaux regular spacing may be most desirable."

In terms of **spacing**, the turbines of the Proposed Development are appropriately spaced in a regular staggered arrangement across the topography. As the proposed turbines are not located on ridges and are instead located at lower elevations than the surrounding ridgelines, regular spacing is appropriate in this landscape character type. Compared with the existing Kilgarvan turbines which will be removed, the Proposed Development includes for an increase in scale of the proposed turbines, but a reduction in the number of turbines visible in the landscape from 28 No. Existing turbines to 11 no. turbines. This equates to slightly larger and more prominent turbines. However, a lesser number of turbines results in less visual stacking, less visual clutter and less visual confusion.

Layout

"All layout options are usually acceptable. However, the best solutions would either be a random layout, and clustered where located on hills and ridges, or a grid layout on sweeping

and continuously even areas of moorland or plateaux. Where a wind energy development is close to a linear element, such as a river, road or long escarpment, a corresponding linear layout or staggered line might be most desirable."

In terms of **layout**, the proposed turbines of the Proposed Development are arranged in a regular, clustered layout, on the hill side, acceptable in this landscape according to the above guidelines.

Height

"There would generally be no height restrictions on mountain moorlands as the scale of landscape is so great. However, shorter turbines may be more appropriate where they are located on small peaks and outcrops in order to maintain an appropriate scale. Profile, whether even or uneven, is dependent on topography: the more rugged and undulating (e.g., knolls and crags) the more uneven it will be. The profile of the wind energy development should not necessarily run in parallel to that of the topography."

In terms of **height**, the proposed turbines are larger than the existing Kilgarvan turbines. In line with the guidance stated above *('no height restrictions')*, the proposed turbines are appropriately scaled and as demonstrated by the photomontage visualisations, the large scale of the moorland landscape of the site effectively accommodates and absorbs the larger proposed turbines. The Proposed Development as a whole retains a relatively even profile; when viewing the turbines, the nacelles are positioned at relatively even heights, improving visual coherence within the wider landscape.

Cumulative Effect

"The open expanse of such landscapes can absorb a number of wind energy developments, depending on their proximity. The cumulative impact will also depend on the actual visual complexity of landform, whether steeply rolling, undulating or gently sweeping. The more varied and undulating an area is topographically, the greater its ability to absorb and screen wind energy developments. The aesthetic effect of wind energy developments in these landscapes is acceptable where each one is discrete, standing in relative isolation."

In terms of **cumulative effect** there are a number of existing windfarms in the surrounding area. The scale and expanse of the landscape is capable of absorbing a number of wind energy developments, according to the above guidelines, and so it is acceptable that there will be cumulative visibility of the proposed turbines with other wind farms (see Section 13.7.3.2.4 *Cumulative Visual Effects)*. The Proposed Development is located within an undulating and varied landscape area which provides screening of the Proposed Development, and other cumulative developments within the LVIA Study Area.

13.4.4 Landscape Character of the Wider Study Area

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

The Proposed Development is located on the western slopes of the Derrynasaggart Mountain Range, in a rural remote mountainous landscape setting. The Derrynasaggart Mountain Range slopes down to the southwest towards Kenmare and the Atlantic coast. As the topography slopes down from the site the landscape transitions to a rural agricultural landscape with settlements dispersed throughout.

Plate 13-17 View from Kenmare towards the Proposed Development Site

To the north-west of the site lies Mangerton Mountain which is one of the most elevated peaks in the LVIA Study Area. The large landform of Mangerton screens most of the Proposed Development from view from much of Killarney National Park which is located further to the north-west. 'The Paps' are two distinctive peaks located within the Derrynasaggart Mountain Range and are located to the northeast of the Proposed Development. The character of this area (to the north), much like the Proposed Development Site, is a remote landscape with coniferous forestry interspersed throughout. The N22 National Road runs north of the site between the Paps and Mangerton. Beyond these mountains the topography levels and the landscape transitions to a rural agricultural landscape with small settlements dispersed throughout (see Plate 13-18 below). Killarney town is located to the northwest, it is an important tourism town for Co. Kerry due to its location adjacent to Lough Leane and Killarney National Park. From these flatter, low-lying areas north of the site, beyond Mangerton and the Paps, the ZTV shows that there will be very limited theoretical visibility of the Proposed Development. The impact assessments reported later in this chapter (Section 13.7.3.2.3) assess the likely significant landscape and visual effects from key receptors where some theoretical visibility on the ZTV does occur - such as Killarney Town.

Plate 13-18 View north-west from the western summit of the Paps. The view shows the agricultural plain north of the Derrynasaggart Mountains.

Plate 13-19 shows the undulating terrain of the Derrynasaggart mountains as it extends to the north-east, away from the Proposed Development site. The two distinctive peaks which form the Paps are visible to the left of the view. As shown in the image below, this area is remote and sparsely settled landscape; residential dwellings, roads and agricultural lands are primarily located at lower elevations in the small valleys that weave through the irregular terrain.

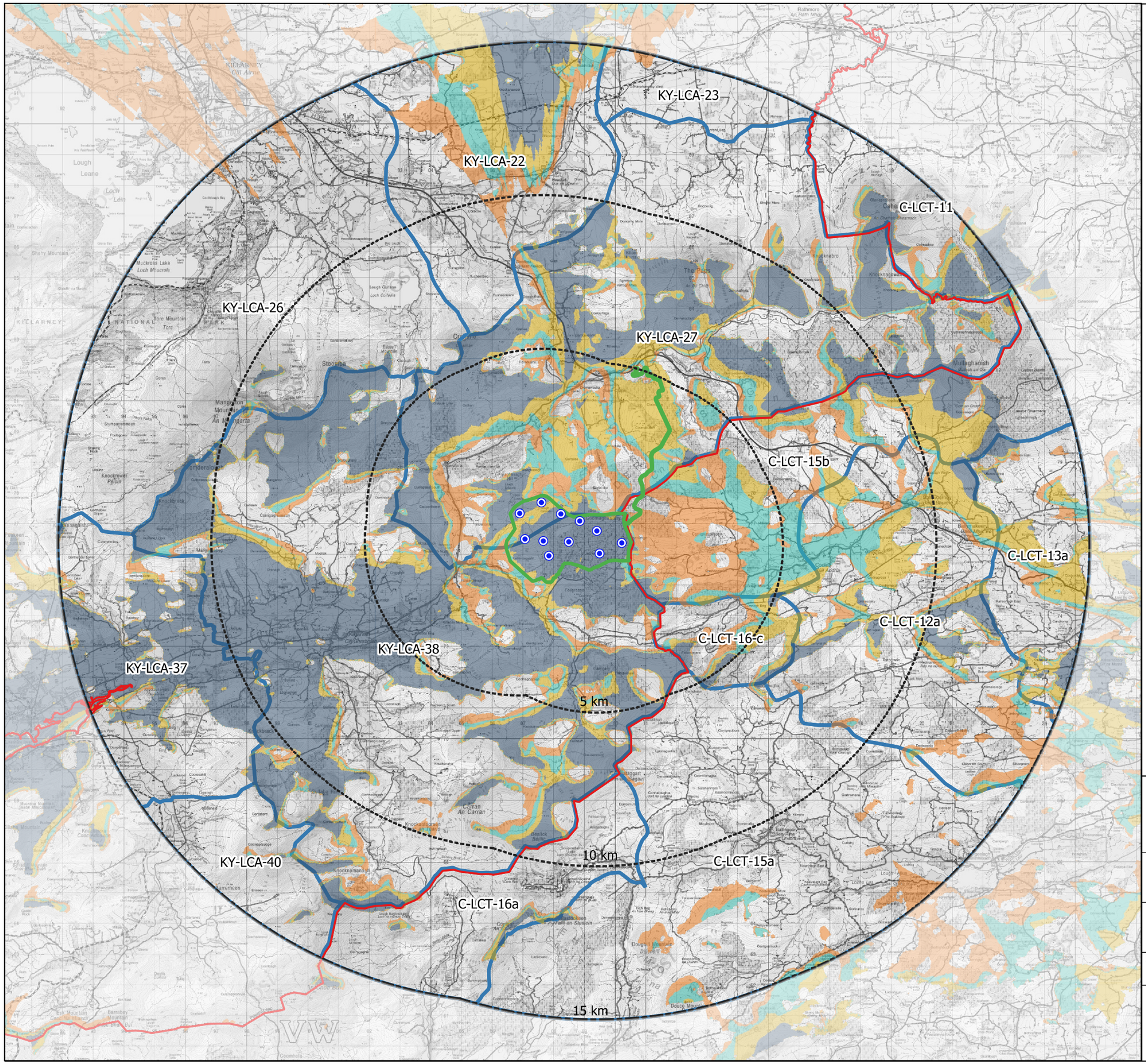
Plate 13-19 View north-east of the Derrynasaggart mountain range from the south of the LVIA Study Area

A large number of coniferous forestry plantations are dispersed across the land throughout the LVIA Study Area. This is a common land use in the upland landscape type which surrounds the site. As seen in Plate 13-20 below, views of the surrounding landscape from within these areas are very limited.

Plate 13-20 View of forestry in the landscape to the south of the Proposed Development Site

13.4.4.1 Designated Kerry Landscape Character Areas (LCAs) and Cork Landscape Character Types (LCTs)

As noted in Section 13.2.1, the LVIA Study Area for assessment on landscape character extends to 15km from the proposed turbines. 7 No. designated LCAs were identified for County Kerry and 7 No. LCTs were identified for County Cork within 15km of the proposed turbines. A map showing all LCAs within 15km and the distribution of theoretical visibility of the Proposed Development occurring in each LCA is shown in Figure 13-13 below.



Map Legend

- Proposed Turbine Locations
- EIAR Site Boundary
- LVIA Study Area (15km for Landscape Character)
- County Borders

Kerry LCAs withing 15km Study Area for Landscape Character

- KY-LCA-22 Quagmire River and River Flesk Valley
- KY-LCA-23 Munster Blackwater Valley
- KY-LCA-26 Lough Leane and Killarney National Park
- KY-LCA-27 Upper Clydagh River, The Paps and the Derrynasaggart Mountains
- KY-LCA-37 Kenmare River Valley
- KY-LCA-38 Owbaun, Slaheny and Roughty River Valleys
- KY-LCA-40 Upper Sheen River Valley

Cork LCTs within 15km Study Area for Landscape Character

- C LCT 11 Broad Marginal Middleground Valleys
- C LCT 12a Rolling Marginal Middleground
- C LCT 13a Valleyed Marginal Middleground
- C LCT 15a Ridged and Peaked Upland
- C LCT 15b Ridged and Peaked Upland
- C LCT 16a Glaciated Cradle Valleys
- C LCT 16c Glaciated Cradle Valleys

ZTV

- 1-3 Turbines Theoretically Visible
- 4-5 Turbines Theoretically Visible
- 6-8 Turbines Theoretically Visible
- 9-11 Turbines Theoretically Visible

Drawing No.

Figure 13-13

Drawing Title

Landscape Character Assessment

Project Title

Proposed Repowering of the Existing Kilgarvan Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:120,000	211107	31.03.2024	SF	JW

MKO Planning and Environmental Consultants

Using the ZTV mapping shown in Figure 13-13, the following section analyses the theoretical visibility of the Proposed Development from within each LCA and LCT in the LVIA Study Area, scoping out any LCA/LCTs with no substantial theoretical visibility. Appendix 13-2 details the key characteristics for each LCU that screened in for further assessment. Using the methodology outlined in Section 1.5.2 of *Appendix 13-1 LVIA Methodology* a sensitivity classification is assigned to each LCA/LCT in *Appendix 13-2 LCA Assessment Tables*.

13.4.4.2 Landscape Receptor Preliminary Assessment

Each LCA and LCT is listed below in Table 13-14, as well as a description of theoretical visibility within each LCA and LCT, as indicated by the ZTV in Figure 13-3 above. Several LCAs and LCTs identified in the LVIA Study Area (15km for landscape character) have very small areas of theoretical visibility indicated by the ZTV map in Figure 13-3. The potential visibility of the Proposed Development was appraised on site (multiple surveys conducted during 2022) from all LCAs and LCTs with very limited or partial theoretical visibility. The ZTV and on-site visibility appraisals determines which LCAs and LCTs are screened in for full assessment later in this chapter (See also Appendix 13-2), the screening result is noted in Table 13-4.

Table 13-4 Landscape Receptors – Landscape Character Areas and Landscape Character Types

Map Ref	LCA	Theoretical Visibility (TV) as indicated by ZTV	Actual Visibility	Screened in for Assessment
Up to 5 km				
KY-LCA-27	Upper Clydagh River, The Paps and the Derrynasaggart Mountains	Large areas of full and partial visibility throughout the LCA	Visibility towards the site from areas within this LCA	Yes
KY-LCA-38	Kilgarvan and Roughty River Valley	Full theoretical visibility	Visibility towards the site from areas within this LCA	Yes
C-LCT-15b	Ridged and Peaked Upland	Large patches of partial theoretical visibility throughout LCA	Visibility towards the site from areas within this LCA	Yes
C-LCT-16c	Glaciated Cradle Valleys	Patches of full and partial theoretical visibility	Actual visibility from this LCA is very limited as there are large tracts of coniferous forestry throughout.	No
C-LCT-15a	Ridged and Peaked Upland	None within 10km and very limited partial theoretical visibility between 10 to 15km	Visibility from areas of partial theoretical visibility is actually very limited due to screening from landscape features such as vegetation and localised landform in this LCT.	No
5 to 10 km				

Map Ref	LCA	Theoretical Visibility (TV) as indicated by ZTV	Actual Visibility	Screened in for Assessment
KY-LCA-22	Quagmire and Owneyskeagh Rivers	Mixed visibility to the north of the LCA	Very little areas of actual visibility due to the screening from vegetation and infrastructure within Barraduff	Yes
KY-LCA-26	Lough Leane and Killarney National Park	No theoretical visibility	None	No
C-LCT-12a	Rolling Marginal Middleground	Patches of full and partial theoretical visibility	Very little areas of actual visibility due to the screening from vegetation	No
C-LCT-16a	Glaciated Cradle Valleys	Very small section of mixed visibility to the east of the LCT	Actual visibility is very unlikely due to screening from topography and vegetation.	No
KY-LCA-37	Kenmare	Full theoretical visibility in the majority of the LCA	Views towards the site from within the valley	Yes
10 to 15 km				
KY-LCA-40	Bonane and Sheen River Valley	No theoretical visibility	None	No
KY-LCA-23	River Blackwater and Rathmore	No theoretical visibility	None	No
C-LCT-11	Broad Marginal Middleground Valleys	Very small section of full theoretical visibility to the south of the LCA	Actual visibility is very unlikely due to topography screening	No
C-LCT-13a	Valleyed Marginal Middleground	Patches of mixed theoretical visibility	Actual visibility is very unlikely due to screening from topography and vegetation throughout the landscape	No

A detailed description of the five LCAs screened in for assessment and the likely effects on landscape character as a result of the Proposed Development are presented in the Landscape Character Assessment Tables that form *Appendix 13-2*. The designated Co. Kerry Visually Sensitive Area, archaeological landscapes and Co. Cork High Value Landscapes within the LVIA Study Area have also been screened in for assessment. A summary of landscape effects on these LCAs and designated landscapes are reported in Section 13.7.3 of this chapter - Operational Phase Effects.

13.5 Visual Baseline

This section identifies key sensitive visual receptors in the LVIA Study Area. The likely visibility of the proposed turbines from each visual receptor is then reported, as determined from ZTV mapping and on-site visibility appraisals. Visual receptors identified in this section are then either screened in or out for assessment later in Section 13.7 of this Chapter.

13.5.1 Visual Receptors

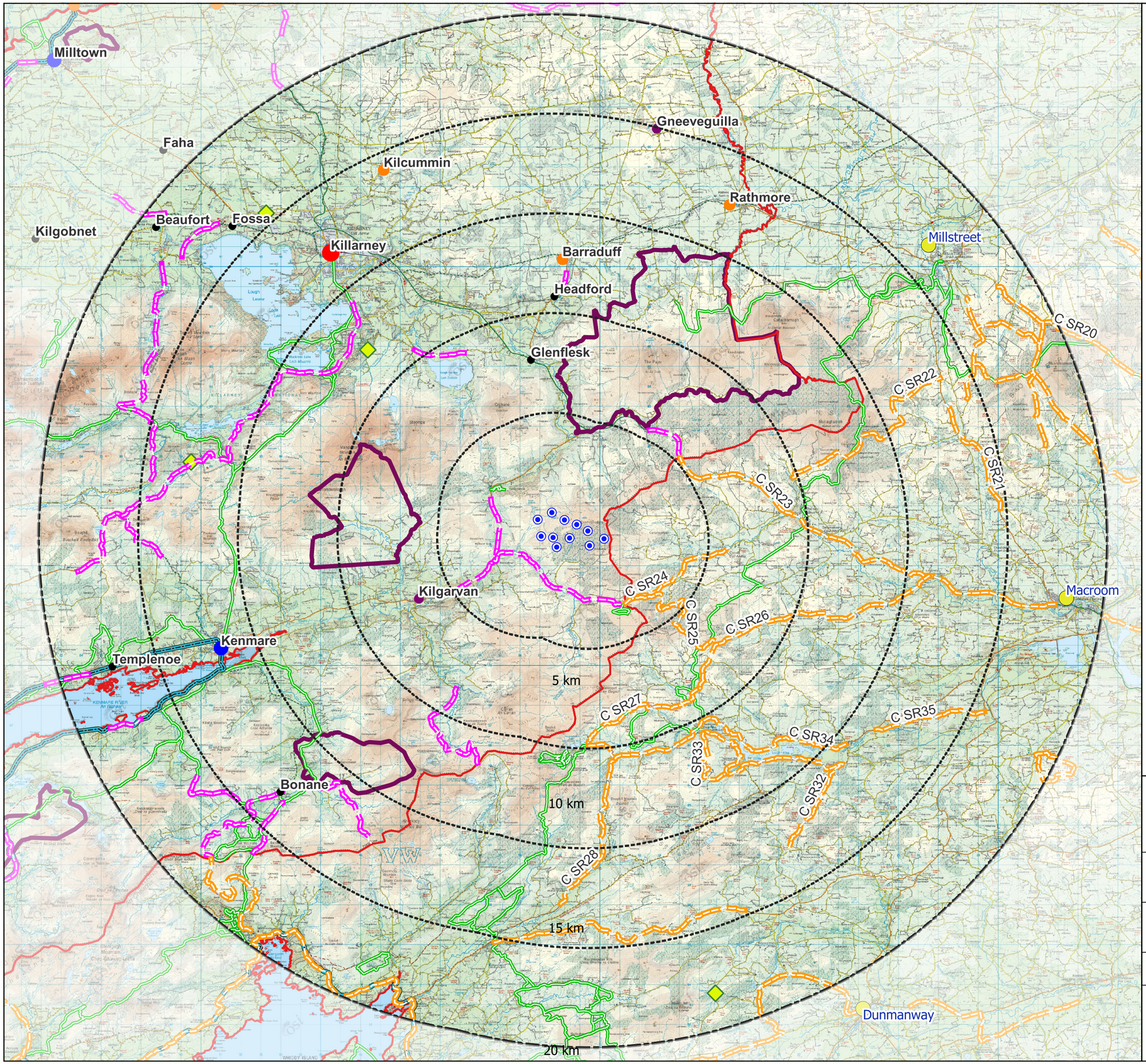
The main purpose of establishing the visual baseline is to identify the key visual receptors that should be considered for viewpoint selection. Viewpoints are locations from which visual effects are assessed using photomontages (See Appendix 13-1- *LVIA Methodology*). To this end, the following visual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

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

All visual receptors identified in the visual baseline are shown on below. These visual receptors are listed in tables in the following sections along with theoretical visibility at those locations indicated by the Visual Baseline and Half-Blade ZTV map – Figure 13-15 below.

During site visits conducted during 2022 and 2023, the likely visibility of the Proposed Development was appraised from receptors where the ZTV has indicated theoretical visibility. Visual receptors are screened out from further assessment when there is either no theoretical visibility of the Proposed Development or where on-site appraisal determined visibility of the Proposed Development to be very unlikely or very limited. As reported in Section 13.3.4, the proposed turbines are less in number than the Existing Kilgarvan Wind Farm and are sited within the existing footprint of the Existing Kilgarvan Wind Farm turbine layout. The existing turbines therefore provide a good point of reference and are a good indication of whether the proposed turbines will actually be visible from certain receptors. The visibility appraisals reported in this section are therefore guided by the degree to which the existing turbines are visible from visual receptors, although great care was taken to consider the differing scale and layout of the Proposed Development, especially when conducting appraisals where additional theoretical visibility is identified.

The designated scenic routes and views were taken from the respective Development Plans of County Kerry and Cork. In addition to theoretical visibility, whether the focus of the scenic route or view is directed towards the proposed turbines is also indicated in the tables presented in this section.



Map Legend

- Proposed Turbine Locations
- County Borders
- LVIA Study Area
- The Wild Atlantic Way - Tourist Route
- OSi Viewing Points
- Way Marked Waling Trails

Co. Kerry

- Co. Kerry Archaelogical Landscapes
- Co. Kerry Scenic Routes

Co. Kerry Settlement Heirarchy

- Key Town
- Regional Town
- District Town
- Village
- Small Village Settlement

Co. Cork

- Co. Cork Scenic Routes
- Co. Cork Key Tourism Assests

Drawing No.

Figure 13-14

Drawing Title

Visual Baseline

Project Title

Proposed Repowering of the Existing Kilgarvan Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:185,000	211107	31.03.2024	SF	JW

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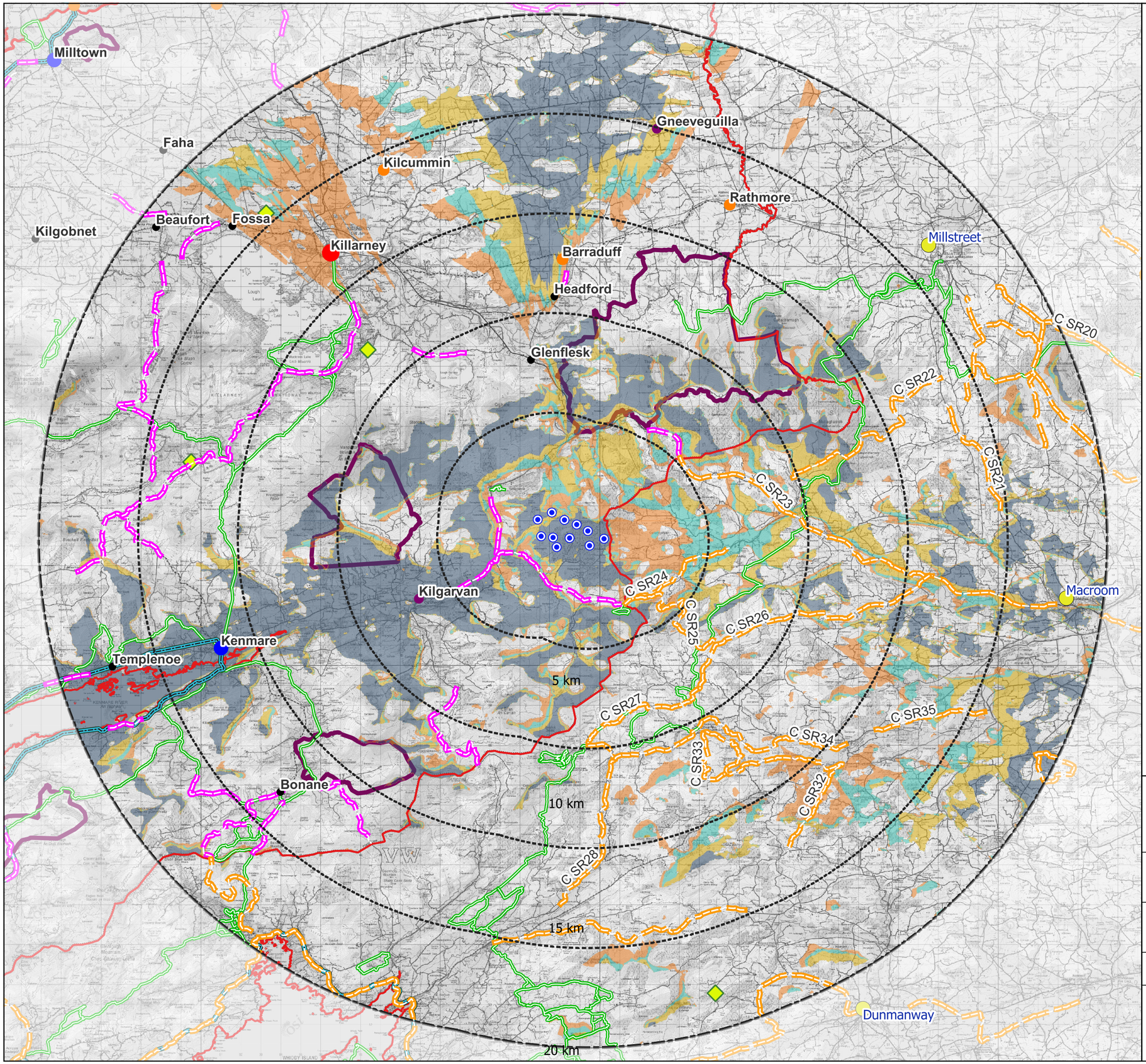

Map Legend

- Proposed Turbine Locations
- County Borders
- LVIA Study Area
- The Wild Atlantic Way - Tourist Route
- OSi Viewing Points
- Way Marked Waling Trails

Co. Kerry

- Co. Kerry Archaelogical Landscapes
- Co. Kerry Scenic Routes

Co. Kerry Settlement Heirarchy

- Key Town
- Regional Town
- District Town
- Village
- Small Village Settlement

Co. Cork

- Co. Cork Scenic Routes
- Co. Cork Key Tourism Assests

ZTV

- 1-3 Turbines Theoretically Visible
- 4-5 Turbines Theoretically Visible
- 6-8 Turbines Theoretically Visible
- 9-11 Turbines Theoretically Visible

Drawing No.

Figure 13-15

Drawing Title

Visual Baseline & ZTV

Project Title

Proposed Repowering of the Existing Kilgarvan Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:185,000	211107	31.03.2024	SF	JW

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13.5.1.1 Scenic Routes

As discussed previously in Section 13.4.1.1.6, the KCDP and CCDP contain the relevant policy in relation to views and prospects within each County. 36 no. designated scenic routes were identified within the LVIA Study Area. These scenic routes are mapped in Figure 13-14 above. Table 13-5 below lists the scenic designations located in the LVIA Study Area as well as any descriptions relating to the direction or object of the view detailed in the relevant county development plan. If detailed in the development plan, the direction of the view and range (field of view) is reported and whether it is likely that the designated scenic amenity is directed towards the Proposed Development Site. Table 13-5 also notes the theoretical visibility of the proposed turbines from these designated locations is as indicated by the ZTV in Figure 13-15. Based upon these initial visibility assessments, scenic amenity designations are either screened in or out for full assessment in this LVIA.

Table 13-5 Scenic routes within the 20km Study Area for Co. Kerry and Cork

Map Ref.	Scenic Route/View Description	Direction and Range of View	Directed to Turbines?	Theoretical Visibility	Screened in for Assessment
Up to 5 km					
Cork SR24	Local Road between Cúil Aodhaand Coom Views of the foothills of the Derrynasaggart Mountains, surrounding hills & the Sullane River	All Directions – 360 Field of View	Yes	Partial	Yes
Cork SR25	Section of winding local road joining The Coom & Reananerree Road Views of Foilanumera, Mweelin & Carrigalougha Mountains	All Directions – 360 Field of View	Yes	Partial	Yes
Kerry SR01	Local Road from Morley's Bridge to The Coom	All Directions	Yes	Partial	Yes
Kerry SR02	Section of the R569 Regional Road east of Kilgarvan	All Directions	Yes	Partial	Yes
5 to 10 km					
Cork SR23	N22, National Primary Route from Macroom to Baile Bhuirne to County Boundary Views of Derrynasaggart Mountains, surrounding hills, the Sullane River Valley & rugged landscape	All Directions – 360 Field of View	Yes	Partial	Yes

Map Ref.	Scenic Route/View Description	Direction and Range of View	Directed to Turbines?	Theoretical Visibility	Screened in for Assessment
Cork SR26	Local Road between Lissacresig and the Mouth of the Glen Views of rugged landscape & valleys	All Directions	Yes	None	No
Cork SR27	Local Road between Guagán Barra and the Mouth of the Glen Views of Coomataggart Mountain, hills, valleys & Guagán Barra	All Directions	Yes	None	No
Kerry SR03	Section of the N22 National Road northeast of the site	All directions	Yes	None	No
Kerry SR04	Local road north of Lough Guitane	South	Yes	None	No
Kerry SR05	Local road in valley between Knockantooreen and Knocknamanagh	East	No	None	No
10 to 15 km					
Cork SR22	Local Road to southeast of Derrynasaggart Mountains from Caumcarrig to Bohill River Views of Derrynasaggart Mountains, rockscape, river valleys & remote rural landscape	All directions	Yes	Partial	Yes
Cork SR34	R584 Regional Road between Inchigeela & Béal Átha an Ghaorthaidh to Keimaneigh Views of Lough Allua, Lee River Valley, Shehy Mountains, hills & surrounding rugged landscape	All directions	Yes	None	No
Cork SR33	Local Road between Béal Átha an	All directions	Yes	None	No

Map Ref.	Scenic Route/View Description	Direction and Range of View	Directed to Turbines?	Theoretical Visibility	Screened in for Assessment
	Ghaorthaidh - branch off S. Lake Road and Kealvaugh Views of Lough Allua, surrounding lakes, hills & remote rural landscape				
Cork SR28	R584 Regional Road, Scenic road at the Pass of Keimaneig to Guagán Barra Views of the surrounding remote rural landscape & rugged mountains	All directions	Yes	None	No
Kerry SR06	Section of the R570 Regional Road south of Barraduff	East	No	None	No
Kerry SR07	N71 National Road from Killarney through Killarney National Park	All directions	Yes	None	No
15 o 20 km					
Cork SR32	Local Roads from South Lake Road - Inchigeela and Béal Átha an Ghaorthaidh, via Curraheen to Tullagh Views of Lough Allua & the surrounding mountains	All directions	Yes	None	No
Cork SR29	R585 Regional Road to Kealkill via Cousane Gap to Derragh Bridge Views of remote mountainous landscape	All directions	Yes	None	No
Cork SR35	Local Road Between Dromcarra and Rossmore Views of rolling hills, open countryside, valley, the River Lee & distant mountain views	All directions	Yes	None	No
Cork SR21	Carriganimmy Catholic Church, which is a protected structure & the	Towards the church	No	None	No

Map Ref.	Scenic Route/View Description	Direction and Range of View	Directed to Turbines?	Theoretical Visibility	Screened in for Assessment
	birthplace of Peadar O'Laoire				
Cork SR20	Local Roads at Mushera in the Boggeragh Mountains and roads from Mushera to Ballynagree, Lackdotia and Rylane Cross. Views of and from the Boggeragh Mountains, views of the Knocknagoun Mountains & remote rural landscape	Not Stated	Possibly	None	No
Kerry SR08	Local Road southwest of the Proposed Development from Priests Leap to St Fiachna's Cemetery	All directions	Yes	None	No
Kerry SR09	Section along the N71 National Road northeast of the Baurearagh Mountain	All directions	Yes	None	No
Kerry SR10	Local road in valley between Esk Mountain and Barraboy Mountain	All directions	Yes	None	No
Kerry SR11	Béara Way	South	No	None	No
Kerry SR12	Ring of Kerry through Molls Gap	All directions	Yes	Very small section of theoretical visibility to the south between 20-25km	No
Kerry SR13	Section of the local road south of Dunloe, through the Gap of Dunloe	All directions	Yes	None	No
20 to 25km					
Kerry SR14	L4040 northwest of Lough Leane	Southeast	Yes	None	No

Map Ref.	Scenic Route/View Description	Direction and Range of View	Directed to Turbines?	Theoretical Visibility	Screened in for Assessment
Kerry SR15	Section of the Ring of Kerry along the N72 National Road	Southeast	Yes	None	No
Cork SR30	Local Roads between Dunmanway and Coolkellure, Castledonovan and Bantry. Views of hills, mountains, the Rivers Clodagh, Ilen & Owennashingaun, Lough Bofinna & the surrounding rugged remote rural landscape	Not Stated	Possibly	None	No
Cork SR36	Local Roads adjoining Teerelton to the east Views of valleys & rugged mountainous landscape	Not Stated	Possibly	Full	Yes
Cork SR111	N71 National Secondary Road from Bantry to Ballylickey & Glengariff Views of Bantry Bay, Whiddy Island, Glengarriff Harbour & Mullaghmesha, Sheehy, Coomhola & Cobduff Mountains	Not Stated	Possibly	None	No
Cork SR112	N71 National Secondary Road from Glengarriff to Kenmare (County Bounds). Views of Glengarriff Harbour & Barraboy, Esk & Caha Mountains	Multiple directions	Possibly	None	No
Cork SR113	R572 Regional Road between Glengariff, Trafresk, Ardrigole and Castletownbere Views of Glengarriff Harbour, Bantry Bay, Whiddy & Bear Islands, Bear Haven, Shrone & Hungry Hills, & the Gowlbeg, Sugarloaf,	Multiple directions	Possibly	None	No

Map Ref.	Scenic Route/View Description	Direction and Range of View	Directed to Turbines?	Theoretical Visibility	Screened in for Assessment
	Caha, Adrigole & Slieve Miskish Mountains				

13.5.1.2 Settlements

Chapter 3.10 of the KCDP outlines the Settlement Strategy and Settlement Hierarchy for the county. The following five classes below are outlined as the respective settlement hierarchy for Kerry County:

- Key Towns
- Regional Town
- District Towns
- Villages
- Small Village Settlements

Chapter 2.15 in the CCDP outlines the Settlement Networks in County Cork. Cork County Council set out a broad strategic aim for each group of settlements in the network.

Table 13-6 below lists the settlements identified from the respective County Development Plans within the 25 km LVIA study area also noting their county status within the settlement strategy and whether there is theoretical visibility indicated by the ZTV. There are no settlements within 5 km of the proposed site.

Table 13-6 Settlements within the 20km Study Area for Co. Kerry and Cork

Settlement	Settlement Hierarchy	Theoretical Visibility	Actual Visibility	Screened In?
5 to 10km				
Kilgarvan	Village	Full	Views towards the site from the east of the village	Yes
Ballyvourney	Small Settlement Cluster	Partial	On site appraisals determined there would be very limited visibility towards the site due to roadside screening.	No
Glenflesk	Small Village Settlement	None	None	No
Coolea	Village Nuclei	Partial	Views towards the site from the west of the village	Yes
10 to 15km				
Barraduff	District Town	Partial	Possible visibility from the south	Yes

Settlement	Settlement Hierarchy	Theoretical Visibility	Actual Visibility	Screened In?
Headford	Small Village Settlement	Partial	On site appraisals determined there would be very limited visibility towards the site due to roadside screening.	Yes
Ballingeary	Small Settlement Cluster	None	None	No
15 to 20km				
Kenmare	Regional Town	Full to Partial	Possible visibility from the south	Yes
Killarney	Key Town	Full to None	Possible visibility from the south	Yes
Rathmore	District Town	None	None	No
Kilcummin	District Town	None	None	No
Gneeveguilla	Village	Partial	On site appraisals determined there would be very limited visibility towards the site due to roadside screening.	No
Bonane	Small Village Settlement	None	None	No
20 to 25km				
Templenoe	Small Village Settlement	Full	On site appraisals determined there would be very limited visibility towards the site due to roadside screening.	No
Beaufort	Small Village Settlement	None	None	No
Fossa	Small Village Settlement	Small section of partial visibility	None	No
Millstreet	County Town	None	None	No

Settlement	Settlement Hierarchy	Theoretical Visibility	Actual Visibility	Screened In?
Macroom	Millstreet	Full	Possible visibility from the west	Yes

13.5.1.3 Recreational and Tourist Destinations

Recreation and tourist destinations were identified after reviewing Sport Ireland and identifying any Way Marked Walking routes within the LVIA Study Area. Kerry County Council also note the Wild Atlantic Way is an important tourist route within Kerry and so has been included for the baseline exercise. The routes are shown on Figure 13-14 and are listed in Table 13-7 below along with theoretical visibility shown on Figure 13-15.

Table 13-7 Recreational Routes and Tourist Destinations within the 20 km Study Area for Co. Kerry and Cork

Route Name	Description	Theoretical Visibility	Screened In?
Up to 5km			
Rossacroo Wood - Milenium Park Trail	Way Marked Walking Trail within Ros an Chru Wood	None	No
Cosan Barr a Chuma	Way Marked Walking Trail opposite Top of the Coon	Full	Yes
5 to 10km			
Sli Gaeltacht Mhuscrai	Way Marked Walking Trail through Cork and Kerry southeast of the site	Partial theoretical visibility to the east within 10km, but no visibility to the south	Yes
The Paps	Walking Trail up the Paps Mountain	Full theoretical visibility to the south of the Paps	Yes
Mangerton	Walking trail up to the top of Mangerton Mountain	Full visibility to the south-east of Mangerton	Yes
10 to 15km			
Kerry Way	Way Marked Walking Trail to the northwest of the site	None	No
Duhallow Way	Way Marked Walking Trail through Kerry and Cork to the northeast of the site	None	No
Cailleach Beara Loop - Bonane Beara	Way Marked Walking Trail loop to south of Kenmare	Small section of full theoretical visibility by Kenmare	No

Route Name	Description	Theoretical Visibility	Screened In?
Druid's Loop - Bonane Beara	Way Marked Walking Trail loop to south of Kenmare	None	No
Gougane Barra - Sli Laoi	Way Marked Walking Trail loop to south of the Proposed Development	None	No
15 to 20km			
Fionn MacCool Loop - Bonane Beara	Way Marked Walking Trail loop to south of Kenmare	None	No
Wild Atlantic Way	Tourist Route along the coast through Kenmare	Full theoretical visibility along route	Yes
Sheep's Head loop	Way Marked Walking Trail north of Kealkill	None	No
20 to 25km			
Aghadoe lookout	Views across Lough Leane towards Ross Castle and Killarney National park	Full	Yes
Coorycommane Loop	Way Marked Walking Trail east of Glengarriff	None	No
Beara Way	Large Way Marked Walking Trail loop through south Kerry and west Cork	Very small section of full theoretical visibility south of Kenmare	No
Glengarriff Nature Reserve	Several walks within Glengarriff Nature Reserve	None	No

13.5.1.4 Major Transport Routes

For the purpose of viewpoint selection national primary and secondary roads were assessed in detail. Preference was given to viewpoint selection on regional routes in cases where they passed through settlement areas or coincided with scenic routes to increase the number of visual receptors. Transport routes within 5 kilometres of the site were also assessed as part of the route screening analysis.

Table 13-8 Significant transport routes within the 20 km study area for Co. Kerry and Cork

Transport Route	Theoretical Visibility	Actual Visibility	Screened In?
Up to 5 km			
N22	Mixed theoretical visibility to the northeast of the proposed site, as the road continues down to the east there is mostly no theoretical visibility.	Likely visibility of the Proposed Development from sections along the route	Yes

Transport Route	Theoretical Visibility	Actual Visibility	Screened In?
R569	Mixed theoretical visibility to the north and west of the site.	Likely visibility of the Proposed Development from sections along the route	Yes
10 to 15km			
R313	Mostly no visibility indicated, with some pockets of partial theoretical visibility beyond 15km	Actual visibility will be very limited due to screening and distance	No
R584	No theoretical visibility.	None	No
15 to 20km			
N72	Mainly no theoretical visibility with a relatively small patch of theoretical visibility to the north-west of the proposed site.	Actual visibility will be very limited due to screening and distance	No
N70	Full theoretical visibility within Kenmare town to the west of the proposed site	Actual visibility within Kenmare will be very limited due to screening and distance	No
N71	No theoretical visibility	None	No
R586	No theoretical visibility	None	No
R582	No theoretical visibility	None	No
R571	Full theoretical visibility within Kenmare town to the west of the proposed site	Actual visibility will be very limited due to screening and distance	No
R569	Full theoretical visibility within Kenmare town to the west of the proposed site	Actual visibility will be very limited due to screening and distance	No
20 to 25km			
R563	Partial	Actual visibility unlikely due to distance and screening from infrastructure within Killarney	No
R568	Small section of full visibility	Actual visibility will be very limited due to screening and distance	No

13.5.2 Visual Receptor Preliminary Analysis

In the previous section visual receptors in the LVIA Study Area were identified in several tables. Each table stated the theoretical visibility from each receptor as indicated by the ZTV mapping. Many visual receptors are scoped out from further assessment due to either lack of theoretical visibility indicated by the ZTV, or that the focus of views (as described in policy) is not directed towards the Proposed Development. All visual receptors scoped out due to these factors (ZTV and direction of view) are listed in Table 13-9 below and are not considered further in this Chapter.

*Table 13-9 Visual Receptors Screened **Out***

Visual Receptor Category	Visual Receptor with no significant visibility found on site (or views focused away from the proposed development)
Designated Scenic Routes and Views	Cork SR26, Cork SR27, Kerry SR03, Kerry SR04, Kerry SR05, Cork SR34, Cork SR33, Cork SR28, Kerry SR06, Kerry SR07, Cork SR32, Cork SR29, Cork SR35, Cork SR21, Cork SR20, Kerry SR08, Kerry SR09, Kerry SR10, Kerry SR11, Kerry SR12, Kerry SR13, Kerry SR14, Kerry SR15, Cork SR30, Cork SR111, Cork SR112, Cork SR113
Settlements	Ballyvourney, Glenflesk, Ballingeary, Rathmore, Kilcummin, Gneeveguilla, Bonane, Templenoe Beaufort, Fossa, Millstreet.
Recreational Routes and Tourist Destinations	Rossacroo Wood - Milenium Park Trail, Kerry Way, Duhallow Way, Cailleach Beara Loop - Bonane Beara, Druid's Loop - Bonane Beara, Gougane Barra - Sli Laoi, Fionn MacCool Loop - Bonane Beara, Sheep's Head loop, Coorycommane Loop, Beara Way, Glengarriff Nature Reserve
Transport Route	R313, R584, N72, N71, N70, R586, R582, R571, R569, R563, R568

Following the pre-assessment exercise, the visual receptors listed below in Table 13-10 have not been screened out for any of the reasons outlined above. Therefore, these receptors are screened in and will be assessed further in the assessment below (Section 13.7.3.2). In order to inform the assessment, individual viewpoints were selected at or along those receptors, from which photomontages were produced. In some instances, a visual receptor may be represented by a photomontage viewpoint that is closer to the Proposed Development site but of similar geographical location and orientation.

*Table 13-10 Visual Receptors Screened **In** For Further Assessment – utilised to establish photomontage locations.*

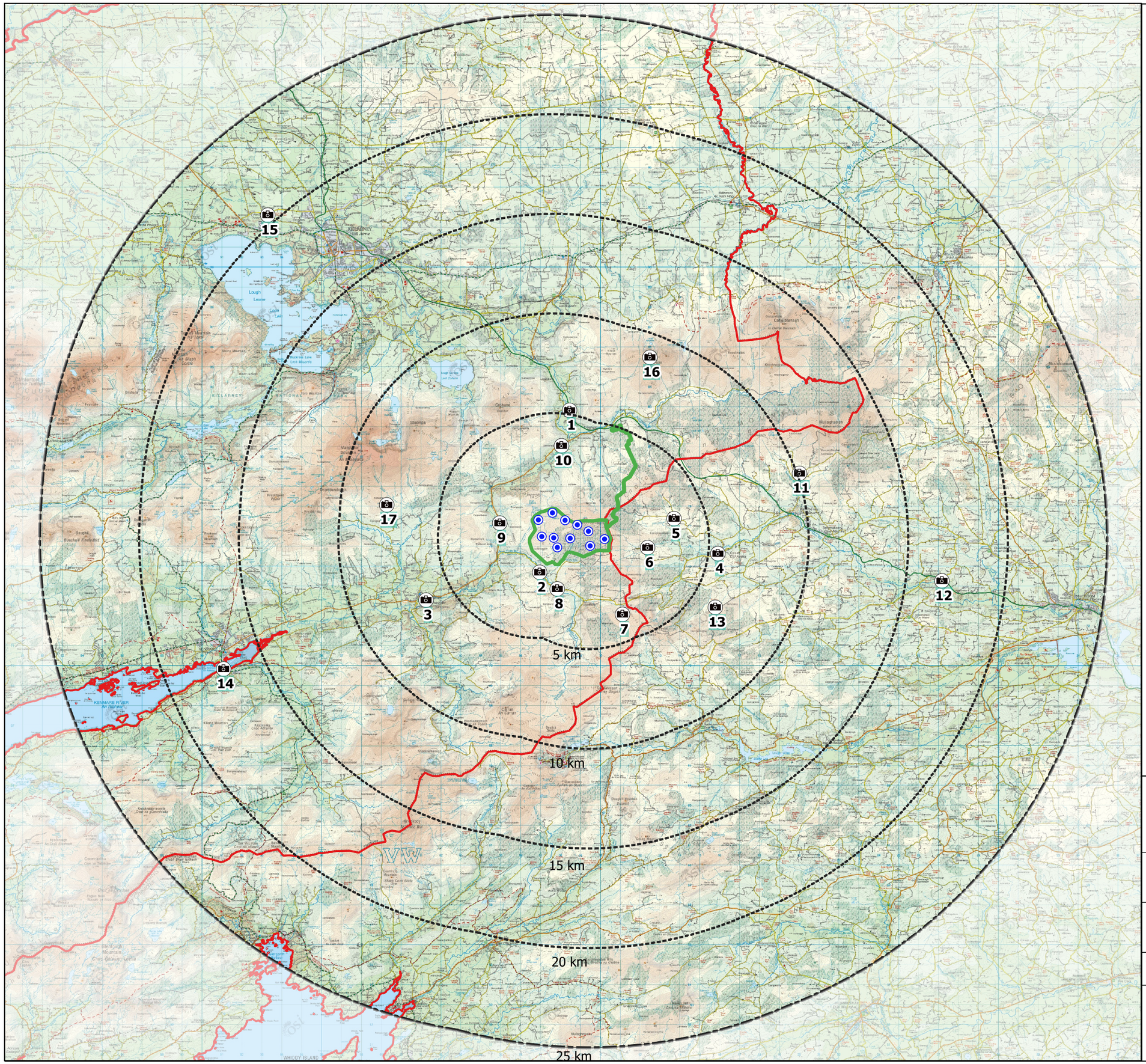
Visual Receptor Category	Description	Viewpoint No.
Designated Scenic Routes and Scenic Views	Cork SR24	VP04
	Cork SR25	Discussed in Section 13.7.3.2.3
	Kerry SR01	VP02, VP08
	Kerry SR02	VP09
	Cork SR23	VP12
	Cork SR22	VP11
	Cork SR36	Discussed in Section 13.7.3.2.3

Visual Receptor Category	Description	Viewpoint No.
Settlements	Kilgarvan	VP03
	Coolea	VP04
	Barraduff	Discussed in Section 13.7.3.2.3
	Killarney	Discussed in Section 13.7.3.2.3
	Kenmare	VP14
	Headford	Discussed in Section 13.7.3.2.3
	Macroom	VP12, Discussed in Section 13.7.3.2.3
Recreational Routes and Tourist Destinations	Aghadoe lookout	VP15
	The Paps	VP16
	Magerton	VP17
	Sli Gaeltacht Mhuscrai	VP13
	Cosan Barr a Chuma (Coom Trail)	VP07
	Wild Atlantic Way	VP14
Transport Routes	N22	VP01, VP12
	R569	VP10, VP03, VP10, VP09

The viewpoints listed above were selected according to the key visual receptors identified in the visual baseline. These receptors are assessed in Section 13.7.3.2 – *Visual Effects*.

Receptors with Additional Visibility (Existing Wind Farm Versus Proposed Development)

In the context of this LVIA of a repowering project, the visual baseline also identifies receptors likely to have visibility of the Proposed Development, but where the Existing Kilgarvan Wind Farm will not be visible – as guided by the 'additional theoretical visibility' indicated on the comparative ZTV map (Figure 13-3). Two viewpoints were specifically chosen to assess the visual impact from sensitive visual receptors where additional theoretical visibility occurs. Photowires from Barraduff and Killarney are included within Section 13.7.3.2.3 to assess the additional visibility of the proposed turbines. Overall, as demonstrated by the ZTV in Figure 13-3 and photowires discussed in Section 13.7.3.2.3 below, there is very little additional visibility of the proposed turbines compared to the existing turbines within the LVIA Study Area. There is no additional visibility from sensitive receptors within the LVIA Study Area.



Map Legend

- Proposed Turbine Locations
- EIAR Site Boundary
- LVIA Study Area
- County Borders
- Photomontage Viewpoint Locations
  Volume 2: Photmontage Booklet

Drawing No.

Figure 13-16

Drawing Title

Viewpoint Locations

Project Title

Proposed Repowering of the
Existing Kilgarvan Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:185,000	211107	31.03.2024	SF	JW

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13.6 Cumulative Context

In terms of cumulative landscape and visual effects, other wind energy projects are of primary focus, as only these would be described as very tall vertical elements in the landscape and have the greatest potential to give rise to significant cumulative effects.

The purpose of this section is to identify all wind farm developments in the LVIA Study Area which potentially contribute to cumulative and in combination landscape and visual effects. This chapter assesses the likely landscape and visual impacts of the Proposed Development, both independently, as well as in combination with all other existing and operational wind farm developments in the LVIA Study Area. This chapter also assesses the Proposed Development in combination with all '*likely future receiving environments'* (EPA, 2022) which includes all existing, permitted and proposed wind farm developments in the LVIA Study Area.

The landscape of the site and its wider setting is a highly suitable area for the development of wind energy and consequently a variety of other wind projects exist within differing stages of the wind farm life cycle (existing, permitted and proposed). All wind farm developments in the LVIA Study Area are identified in this section within one of the following categories:

- **Existing** – Existing wind energy developments currently operational in the baseline landscape at the time of conducting this LVIA;
- **Permitted** – Permitted wind energy developments, permitted (consented) at the time of conducting this LVIA. These developments have a high probability of being operational in a Do-Nothing Scenario – a potential future receiving landscape.
- **Proposed** – All wind farm proposals with project specifications in the public domain at the time of conducting this LVIA. Cumulative effects between the Proposed Development and the development within this category is more uncertain and is reliant on an outcome of the planning and consenting system.

These categories are a useful guide to enable understanding and structure when viewing the photomontage booklet and identification of developments in this section. However, irrespective of how a development is categorised, the assessments of cumulative landscape and visual effects includes all wind farm developments located within the 25km LVIA Study Area.

Presentation of Cumulative Wind Farms in the Volume 2 Photomontage Booklet

A description of how these cumulative categories are presented in the photomontage booklet is comprehensively reported in Section 1.3.2.2 of the Appendix 13-1 – *LVIA Methodology*. All existing turbines are presented in the baseline view and accompanying wireline. The proposed view with cumulative shows all existing, permitted and proposed turbines.

Assessment of Cumulative Landscape and Visual Effects

The effects reported both in this chapter and within the assessment appendices (Appendix 13-2 - *LCA Assessment Tables*; Appendix 13-3 - *Photomontage Assessment Tables*) uses appropriate and logical narrative to discuss cumulative interactions between the Proposed Development and all other wind energy developments irrespective of which category (Existing; Permitted; Proposed) they occur. Discussion of cumulative interactions on specific landscape and visual receptors is relative to the effects on that receptor and proportionate to the likelihood of significant landscape and visual effects occurring.

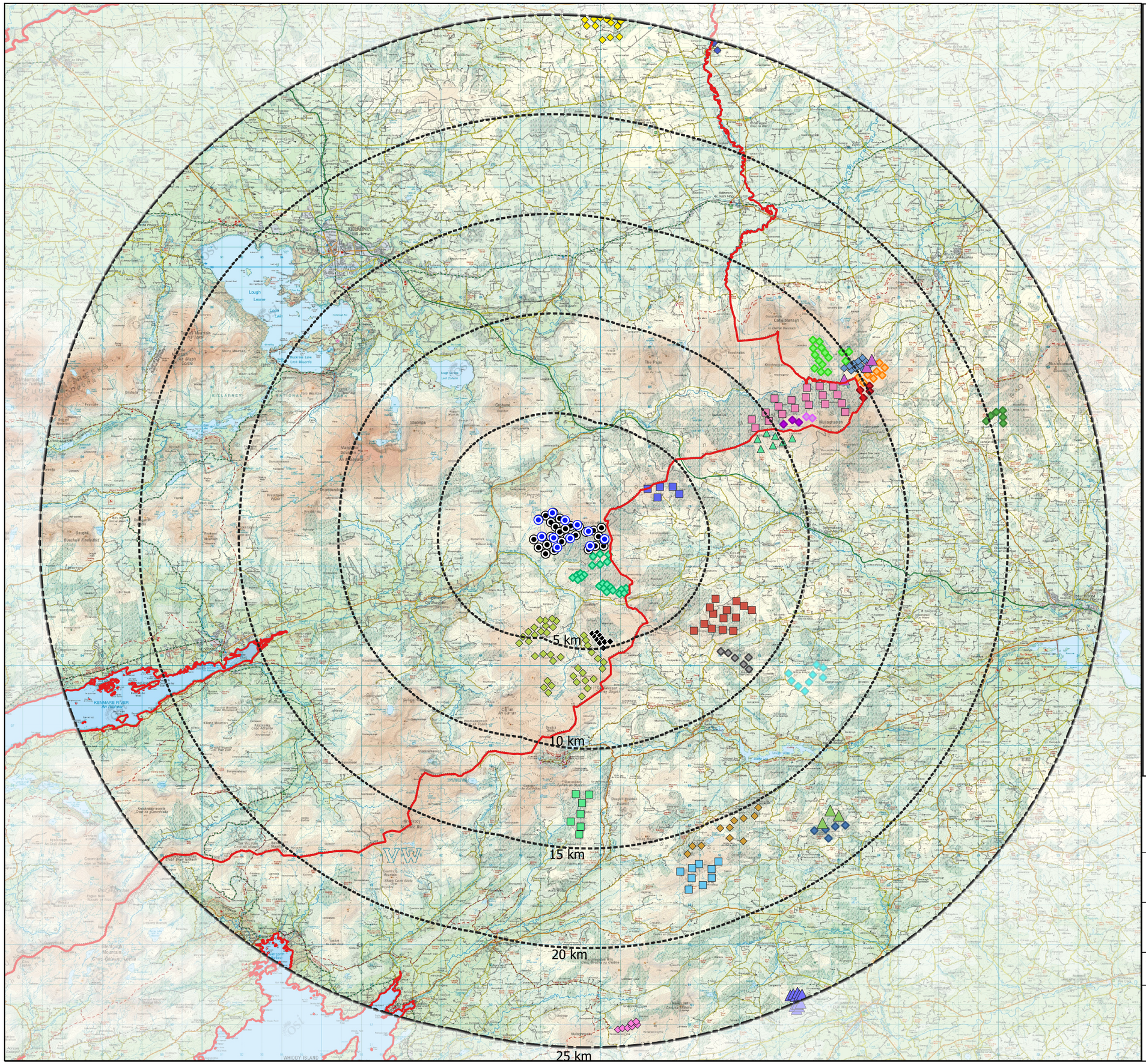
Cumulative Baseline - Identification of Other Wind Energy Developments

Other wind energy developments within 25 km of the Proposed Development were identified by searching past and current planning applications lodged through the various planning authorities (Kerry and Cork County Council and An Bord Pleanála) online planning portals. The information identified in the initial planning search was then used to verify, by means of a desk-based study and ground-truthing, whether the permitted wind energy developments had been constructed. The list of existing, permitted and proposed wind turbines present within the LVIA Study Area are listed in Table 13-11 below:

Table 13-11 Cumulative Baseline: Other Wind Farms within 25km of the proposed turbines

Wind Farm	Status	No. of Turbines	Turbine Tip Height
0 to 5km			
Midas Wind Farm	Existing	23	Tip Height 118m
Sillahertane/Coomagearlaghy II	Existing	10	Tip Height 81m
Grousemount	Existing	38	Tip Height 126
Inchamore	Proposed	5	Tip Height 187.5m
5 to 10km			
Gortyrahilly	Proposed	14	Tip Height 185m
Derragh	Existing	6	Tip Height 150m
Knocknamork	Permitted	7	Tip Height 175m
10 to 15km			
Clydaghroe	Existing	5	Tip Height 109.5m
Clydaghroe/Cummeenabuddoge	Existing	2	Tip Height 99m
Caherdowney	Existing	4	Tip Height 82m
Coomacheo	Existing	15	Tip Height 106.2m
Cleanrath	Permitted	9	Tip Height 149.5
Curragh	Existing	8	Tip Height 121m
Shehy More	Existing	11	Tip height 131m
Gortloughra	Proposed	9	Tip Height 175m
Curraglass	Permitted	7	Tip Height 178.5
Gneeves	Existing	11	Tip Height 91m
Gneeves 2	Permitted	3	Tip Height 76.1m
15 to 20km			

Wind Farm	Status	No. of Turbines	Turbine Tip Height
Carrigarierk	Existing	5	Tip Height 140m
Carrigarierk Extension	Permitted	3	Tip Height 176.5m
20 to 25km			
Derreenacrinnig West	Permitted	7	Tip Height 81m
Bawnmore 2/ Carriganima	Existing	6	Tip Height 120m
Scartglen Wind Farm	Existing	15	Tip Height 126.5m
Lacka Cross	Existing	2	Tip Height 175m
Cummeenabuddoge	Proposed	19	Tip Height 200m
Dromleena	Permitted	11	Tip Height 87m



Map Legend

- Proposed Turbine Locations
- Existing Kilgarvan Turbines
- LVIA Study Area
- County Borders

Cumulative Wind Farm Developments

- Bawnmore 2/ Carriganima (Existing)
- Caherdowney (Existing)
- Carrigarierk (Existing)
- Cleanrath (Existing)
- Clydaghroe (Existing)
- Clydaghroe/Cummeenabuddoge (Existing)
- Coomacheo (Existing)
- Curragh (Existing)
- Derragh (Existing)
- Derreenacrinnig West (Existing)
- Gneeves (Existing)
- Grousemount (Existing)
- Lacka Cross (Existing)
- Midas Wind Farm (Existing)
- Scartaglen Wind Farm (Existing)
- Shehy More (Existing)
- Sillahertane/Coomagearlaghy II (Existing)
- Carrigrierk Extension (Permitted)
- Dromleena (Permitted)
- Gneeves 2 (Permitted)
- Knocknamork (Permitted)
- Cummeenabuddoge (Proposed)
- Curraglass (Proposed)
- Gortloughra (Proposed)
- Gortyrahilly (Proposed)
- Inchamore (Proposed)

N

Drawing No.

Figure 13-17

Drawing Title

Cumulative Context

Project Title

Proposed Repowering of the Existing Kilgarvan Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:185,000	211107	24.04.2024	SF	JW

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5 km
10 km
15 km
20 km
25 km

Map Legend

- Proposed Turbine Locations
- Existing Kilgarvan Turbines
- LVIA Study Area
- County Borders

Cumulative Wind Farm Developments

- Bawnmore 2/ Carriganima (Existing)
- Caherdowney (Existing)
- Carrigarierk (Existing)
- Cleanrath (Existing)
- Clydaghroe (Existing)
- Clydaghroe/Cummeenabuddoge (Existing)
- Coomacheo (Existing)
- Curragh (Existing)
- Derragh (Existing)
- Derreenacrinnig West (Existing)
- Gneeves (Existing)
- Grousemount (Existing)
- Lacka Cross (Existing)
- Midas Wind Farm (Existing)
- Scartaglen Wind Farm (Existing)
- Shehy More (Existing)
- Sillahertane/Coomagearlaghy II (Existing)
- Carrigrierk Extension (Permitted)
- Dromleena (Permitted)
- Gneeves 2 (Permitted)
- Knocknamork (Permitted)
- Cummeenabuddoge (Proposed)
- Curraglass (Proposed)
- Gortloughra (Proposed)
- Gortyrahilly (Proposed)
- Inchamore (Proposed)

Comparative Cumulative ZTV

- Only Proposed Development turbines visible
- Only cumualtive wind farm development turbines visible
- Both Proposed Development and cumulative turbines visible

N

Drawing No.

Figure 13-18

Drawing Title

Comparative Cumulative ZTV

Project Title

Proposed Repowering of the Existing Kilgarvan Wind Farm

Scale	Project No.	Date	Drawn By	Checked By
1:185,000	211107	24.04.2024	SF	JW

MKO Planning and Environmental Consultants

13.6.2 Comparative Cumulative ZTV

Figure 13-18 above compares the cumulative theoretical visibility of all existing, permitted and proposed turbines (represented in navy and orange) with any theoretical visibility as a result of the Proposed Development turbines only (represented in teal). This ZTV has been modelled on a scenario where the existing Kilgarvan turbines have been removed, which would occur as part of the Proposed Development. In most cases, where there is visibility of the Proposed Development turbines only, there may already have been views of the existing turbines. The introduction of the proposed turbines is not a novel prospect or occurrence in these areas. As seen in the ZTV map there are large areas to the northeast and south of the LVIA Study Area where there is theoretical visibility of turbines without theoretical visibility of the proposed Kilgarvan turbines (shown in orange). There are a few small patches of additional theoretical visibility of the proposed turbines to the north, northwest and southwest. There is some additional theoretical visibility along the N22 national road and in Killarney town where only the proposed turbines are theoretically visible. The existing turbines, however, were already visible from this location, so views of turbines in this area are not exceptional. However, from these locations and directions, views of turbines are often screened by the intervening topography and vegetation, and there are limited open views of the proposed turbines.

The ZTV does not account for localised undulations in topography and other screening factors, and actual visibility is often far less than is indicated by the ZTV. Whilst the cumulative ZTV is a useful tool to aid assessment of cumulative effects and screen out areas where certain cumulative impacts will not occur. Considering that the Proposed Development and 26 other surrounding wind energy developments are built and operational, the cumulative landscape and visual impact assessments in this chapter were informed by the photomontage visualisations included in the Volume 2: Photomontage Booklet.

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

13.7 Likely or Significant Landscape and Visual Effects

13.7.1 'Do-Nothing' Scenario

The Proposed Development site currently comprises 28 existing operational turbines of the Existing Kilgarvan Wind Farm. In a Do-Nothing Scenario turbines T16-T28 of the Existing Kilgarvan Wind Farm will be removed when their planning permission expires in 2029. As per the 'Guidelines on the information to be contained in Environmental Impact Assessment Reports' (EPA, 2022), the LVIA in this Chapter considers all *'likely future receiving environments'*. The potential landscape and visual impacts in a 'Do-Nothing Scenario' (which can be considered a potential future receiving environment) are therefore also considered in the impact assessments below.

13.7.2 Construction Phase Effects

As outlined in Section 4.3.1 of Chapter 4, the existing 28 no. turbines onsite will be removed during the construction phase of the Proposed Development. The turbines will be disassembled in reverse order to how they were initially constructed. A crane will be used to remove the blades from the hub. The blades will then be removed following the methodology set out in Section 4.3.1.1 of Chapter 4 of this EIAR.

After removal of the existing turbines, the proposed turbines will be constructed. The Proposed Development aims to utilise the existing infrastructure within the site as much as possible. Five of the proposed turbines will be located on existing roads where existing turbines are already sited. Those turbines not located on existing development infrastructure will be sited in close proximity to existing infrastructure to reduce construction effects. Further details on the construction phase are discussed in Chapter 4.

13.7.2.1 Landscape Effects – Construction Phase

The earthworks such as cut and fill required to facilitate construction of the Proposed Development will have the greatest potential for direct landscape effects where the physical fabric of the landscape is materially altered. Where excavation is required, existing landcover, vegetation and spoil will be removed during the construction phase. In most instances, groundworks and excavation trenches will be re-instated upon completion of construction. Where spoil arising from construction activities is managed within the Proposed Development Site, the vegetative top-soil layer will be removed and re-instated following spoil management taking place. 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. It is considered that this is a short-term, Slight, negative effect in terms of landscape effects.

The Proposed Development makes use of the existing wind farm infrastructure of the Existing Kilgarvan Wind Farm. This reduces the requirement for new internal site roads or grid infrastructure, therefore reducing the extent of direct Landscape Effects on the site. The construction works will be temporary/short-term in nature and completed as soon as practically possible. All construction activities will follow best practice methods to reduce impacts upon the environment and landscape of the Proposed Development Site. Further details are contained in the Construction and Environmental Management Plan (CEMP) contained in Appendix 4-3 of this EIAR.

13.7.2.2 Visual Effects – Construction Phase

Turbines & the Site

The most substantial visual effects during the construction phase will arise from the removal of the existing turbines, removing the blades and disassembling towers, and then the requisite construction activities to build the new proposed turbines, such as building tower sections and erecting the turbines. There will be temporary scenarios during the construction phase where the proposed turbines will be partially constructed and may be seen as either stand-alone tower sections, or incomplete turbines where only one or two blades are visible. The equipment and vehicles required to transport and erect the wind farm components include large cranes and large haulage vehicles. These construction activities will cause Slight, short-term negative visual effects.

The electrical cabling routes within the site will be located underground, therefore the greatest effects attributed to this element of the Proposed Development will occur during the construction phase. The works will include roadside vegetation removal, soil/road surface stripping, excavation and other associated construction activities. These activities will cause temporary change to the physical landscape along the underground electrical cabling route. Changes will be localised to the immediate environment surrounding the underground cabling and will not permanently affect the character of the landscape setting or visual amenity of the wider area. The proposed underground cabling works are likely to cause 'Slight' temporary, negative landscape and visual effects.

General housekeeping measures, necessary for Health & Safety requirements, will ensure that the active construction areas will be kept tidy, mitigating localised visual impacts during the construction phase. A detailed description of the Proposed Development 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 Development:

Grid Connection Underground Electrical Cabling Route – Construction Phase Effects

The Proposed Development will be utilising the existing onsite Coomagearlahy 110kV substation and will be connected to the grid by an overhead line to Clonkeen 110kV Substation. No construction phase effects are to arise from the continued use of the grid connection overhead line from the site to Clonkeen 110kV Substation.

Turbine Delivery Route (TDR) Accommodation Works

Works such as road widening are sometimes required along proposed turbine transport routes to accommodate the large vehicles used to transport turbine components to wind farm sites. In some instances, minor temporary alterations will be required to the existing streetscape, temporary local road widening, temporary relocation of some signs and street furniture. Full details of the assessment are included as part of the traffic impact assessment set out in Chapter 15 of this EIAR.

Removal of forestry and earthworks are required for the provision of temporary widening and a set-down area in order to facilitate turbine delivery as detailed in Section 4.4 in Chapter 4. The landscape value and sensitivity of the site of the TDR accommodation works are deemed to be low and the change to occur will be highly localised. These works are likely to cause 'Slight' temporary, negative landscape and visual effects. However, once planting and reinstatement of these features is implemented and vegetation has re-established, as detailed in Chapter 6, in the operational phase, no significant landscape or visual effects will occur.

Substation

The existing onsite 110kV Coomagearlahy substation on the Proposed Development site will be upgraded within the existing footprint. A full description of these works is located within Chapter 4 Section 4.3.6 of this EIAR. No significant visual or landscape construction phase effects will arise as a result of the existing substation.

Site Access Roads and Hardstand Areas

The proposed access roads and hardstand areas are flat features and will be most visible within their immediate surroundings, within the site where there are no sensitive visual receptors. A full description of the additional and existing road infrastructure layout is included in Figure 4.1 within Chapter 4. Every use will be made of the existing wind farm access roads and other existing roads on site. Some roads will be upgraded appropriately whilst several stretches of new internal roads will need to be constructed. The impact of the construction of these flat and hard surfaces will be very localised. The visual effects arising from the access roads and hardstand areas are considered to be highly localised, short-term and 'Slight'.

Meteorological (Met) Mast

One met mast is proposed as a part of the Proposed Development. This will be a slender structure, 100 metres in height, and will not be an imposing structure in terms of visual impact. The landscape and visual effects of the construction of the proposed mast will be localised, considering that construction activities related to this will be most visible within their immediate surroundings. Within the site and its immediate landscape setting, the landscape and visual effects arising from the construction of the met mast is considered to be of highly localised Negative, Short-Term 'Slight' effects.

Borrow Pit

The proposed borrow pit is an extension to the existing onsite borrow pit. The extraction of rock from the extension to the existing borrow pit will be a temporary operation during the construction phase of the Proposed Development. A full description of the works required for the extension of the existing borrow pit are detailed in Section 4.3.4 in Chapter 4. Considering that construction activities related to this will be most visible within their immediate surroundings, the visual effects arising from the borrow pit area are considered to be highly localised, short-term and 'Slight'.

13.7.3 Operational Phase Effects

13.7.3.1 Landscape Effects

13.7.3.1.1 *Landscape Character of the Proposed Development Site*

There will be a 'Moderate' magnitude of change to the landscape in localised areas of the Proposed Development site where the landscape is materially altered (infrastructure footprint) and direct landscape effects will occur.

In a local context the Proposed Development site is located in a rural landscape. The landscape value of the site is deemed to be of High value given the location within a designated Visually Sensitive Area and proximity to the Archaeological Landscapes. Considering that the site is designated as a 'Potential Repowering Area' within the KCDP (2022-28), the landscape sensitivity of the site is deemed to be Medium.

'Medium' sensitivity balanced with a 'Moderate' magnitude of change amounts to long-term 'Moderate' landscape effects upon the physical fabric of the landscape of the Proposed Development Site. These

direct landscape effects will be highly localised to the footprint of the proposed infrastructure. Every use will be made of the existing wind farm infrastructure and access roads on the site, the proposed design therefore substantially reduces the spatial extent where direct landscape effects could potentially occur, therefore direct residual direct landscape effects are deemed to be 'Slight'.

The landscape of the Proposed Development site will continue to be used for renewable energy generation. With wind turbines already operational within the landscape of the site, the introduction of the new turbines is not a novel prospect or occurrence. As the proposed turbines will be replacing the existing turbines there is limited change in the landscape with regard to landscape character. The main change in terms of landscape character will be lesser number, but larger turbines visible which is deemed to be 'Slight'. Therefore, effects on the perceptual and aesthetic qualities of the character of the Proposed Development site are deemed to be 'Slight'.

13.7.3.1.2 *Effects on Designated Landscape Receptors of High Sensitivity*

Several designated landscape receptors were identified in the landscape baseline as having high sensitivity and some theoretical visibility indicated by the ZTV, the likely landscape effects on these receptors are discussed below.

Co. Kerry Visually Sensitive Areas

The Proposed Development site is located within a Designated Co. Kerry Visually Sensitive Area (KCDP 2022-28). This Visually Sensitive Area is a large area in the south of County Kerry. The landscape sensitivity of this area is deemed to be 'High'. As the proposed turbines are located within this area, there will be a 'Slight' change to the small section of the area where the Proposed Development is located. Approximately 746 km^2 of the 2182.7 km^2 LVIA Study Area is designated as a Visually Sensitive Area. Of this 746 km^2, there is theoretical visibility of the proposed turbines within 321 km^2. As shown in Figure 13-15 the majority of theoretical visibility is located within 10km of the Proposed Development Site. As the Existing Kilgarvan Wind Farm and several other wind farm developments are located within this Visually Sensitive Area, there are numerous views around the area that include wind turbines. The removal of the existing Kilgarvan turbines and then erection of the new turbines, means that the proposed turbines will not be a novel feature in this landscape. In this regard, the Proposed Development will not alter the character, immediate setting or appearance of this Visually Sensitive Area. The Proposed Development will reduce the number of turbines that will be seen throughout the landscape. The proposed turbines are located within a designated "*Potential Repowering Area*" within the KCDP (2022-28). This area is located within the Visually Sensitive Area. Overall, no significant effects are deemed to arise within this landscape.

Designated Archaeological Landscapes

The following landscape receptors assessed below are located in the LVIA Study Area, however, the proposed turbines are not located within these landscapes themselves. The Proposed Development will not directly alter the physical fabric of these landscape receptors and therefore any landscape effects are only likely to impact their character or setting. In all instances there will be no significant impact on the sensitivities of these receptors due to the large set back distances and limited visibility of the Proposed Development from them. All landscape effects reported below are Long-Term. Where appropriate, assessment of visual effects from these landscape receptors are discussed and reported in the following section – *Visual Effects (Operational Phase).*

The Paps

The Paps Archaeological Landscape is located approximately 4.1km north-east of the proposed turbines at its closest point. The summit of the Paps (West) is located approximately 9.2km north-east of the nearest proposed turbine (T4). The Paps is a designated Archaeological Landscape within the KCDP (2022-28). The Proposed Development will not directly alter the physical fabric of this landscape

however, the proposed turbines will be visible from monuments within this landscape. As seen in Figure 13-19 below, the ZTV shows no theoretical visibility of the proposed turbines from any of the national monuments north of the Paps within the Archaeological Landscape. An assessment of the effects of the Proposed Development on archaeological monuments and the Paps Archaeological landscape from a cultural heritage perspective are reported in Section 13.3.2.6 within Chapter 13 – *Cultural Heritage* of this EIAR.

The two summits of the Paps are iconic landmarks and are seen and noticeable throughout the landscape due to their distinctive form, particularly when viewed from the agricultural plains to the north. The KCDP (2022-28) makes several references to the Paps as the object of visual amenity within different Kerry LCAs. In this regard, it is considered that a key landscape sensitivity of the Paps is appreciation of the landform(s) themselves as distinctive and identifiable features in the landscape. As demonstrated throughout the photomontage booklet, the proposed turbines do not interfere, obstruct or intrude upon any landscape views **of** the Paps from any sensitive visual receptors. Whilst the ZTV in Figure 13-19 indicates full theoretical visibility of the proposed turbines within the south of the Archaeological Landscape, actual visibility will be very limited, as determined by appraisals conducted during site visits. Visibility will be limited to areas of high elevation (e.g. summit of the Paps west). From the summit of the Paps west, as seen in VP16, there are open views of the proposed turbines from this location. The impact on visual receptors on this landscape is assessed further in Section 13.7.3.2.3.

The sensitivity of the Paps landscape is deemed to be 'High'. The Proposed Development will be visible from higher elevations within the landscape itself, however, the proposed turbines will not be a novel addition of turbines to landscape views from this landscape and will ultimately have a 'Negligible' magnitude of change to the setting of this landscape. The proposed turbines will also cause no change to the appreciation of this landscape receptor (the Paps) as a resource. High sensitivity and Negligible changes equates to 'Slight' Landscape Effects.

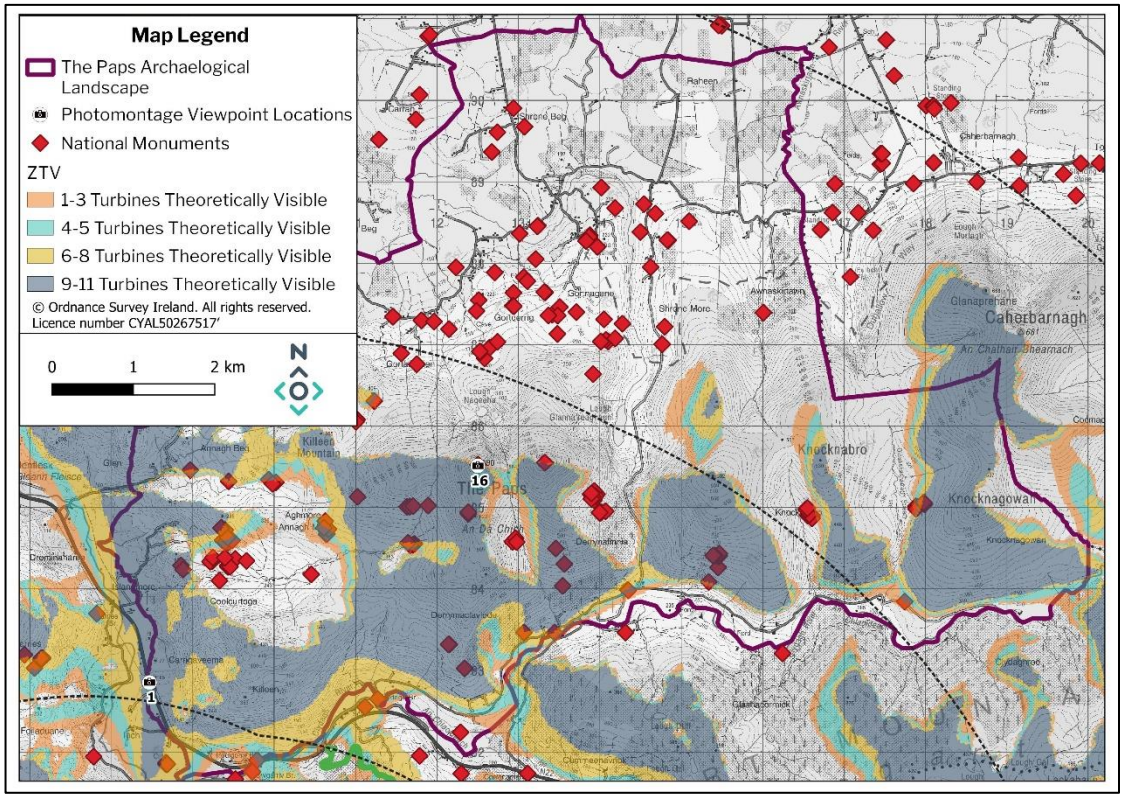

Figure 13-19 The Paps Archaeological Landscape and ZTV

Mangerton

Similar to the Paps, Mangerton Archaeological Landscape is located approximately 6km west of the proposed turbines at its closest point. The Mangerton area has been designated an Archaeological landscape within the KCDP (2022-28) due to the number of monuments located on the slopes of the mountain. Unlike the Paps, the Mangerton Archaeological landscape is not identifiable or celebrated to any particularly distinctive features or landform. As seen in Figure 13-19 the majority of these monuments are located on the slopes where there is no visibility of the proposed turbines. VP17 within the Volume 2: Photomontage Booklet was taken in close proximity to several national monuments located on the southern slopes of Mangerton with theoretical visibility of the proposed turbines. The visual effects of the proposed turbines from this location are discussed in Section 13.7.3.2.3. The effect on the Archaeological Landscape and archaeological monuments within the Mangerton landscape are discussed further in Section 14.3.2.6 within Chapter 14 – *Cultural Heritage* of this EIAR.

The sensitivity of the Mangerton Archaeological Landscape is deemed to be 'High'. The Proposed Development will be visible from higher elevations within the landscape itself, however, the proposed turbines will not be a novel addition of turbines to landscape views from this landscape and will ultimately have a 'Negligible' magnitude of change to the setting of this landscape. High sensitivity and Negligible changes equates to 'Slight' Landscape Effects.

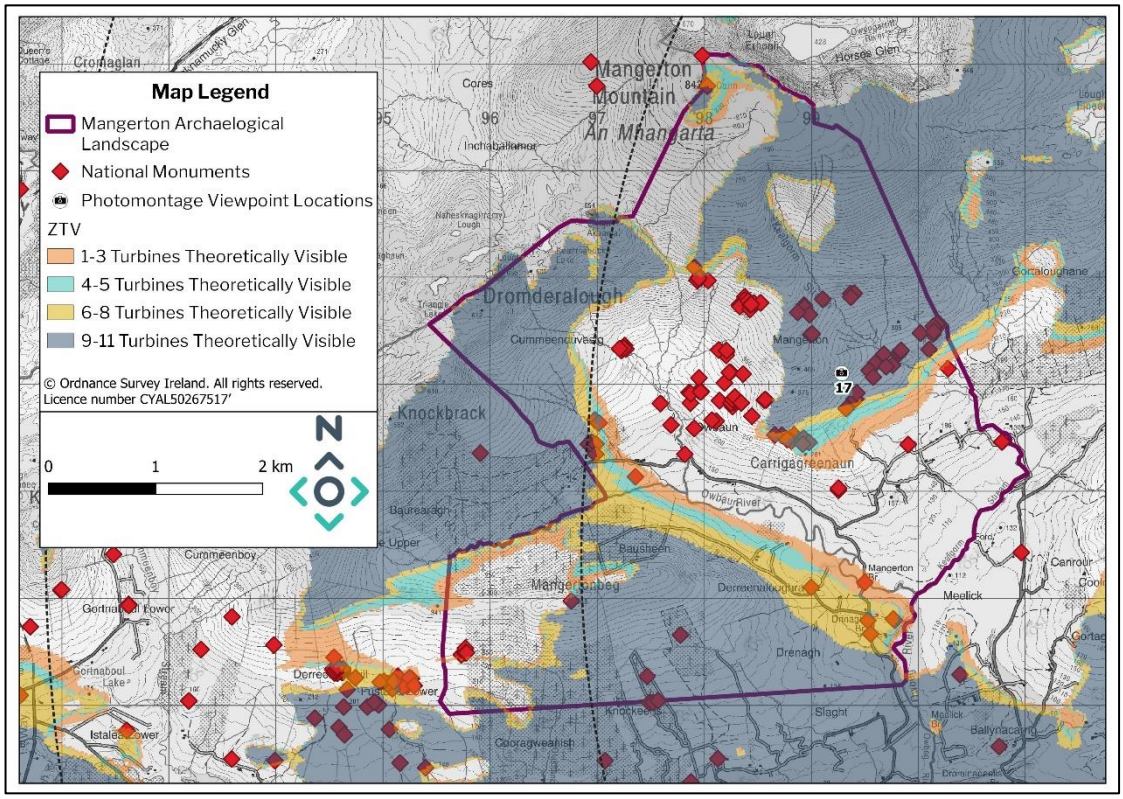

Figure 13-20 National Monuments within the Mangerton Archaeological Landscape and ZTV

Co. Cork High Value Landscapes

3 No. Co. Cork High Value Landscapes (HVL) are located within the LVIA Study Area. As shown on Figure 13-15, the two HVL located to the south of the site will have no visibility of the proposed turbines. There are areas of full and partial visibility within one HVL located approximately 19km to the east of the site. site visits determined that there will be no visibility of the proposed turbines due to distance and screening from vegetation and topography. Therefore, no significant landscape effects will occur.

Killarney National Park

Killarney National Park is a 'Very High' Sensitivity Landscape receptor located in the LVIA Study Area. As demonstrated by the ZTV and on-site visibility appraisals, the proposed turbines are not likely to be visible from this landscape receptor and will have no impact on the character of this landscape and no significant effects will occur. There will be some very slight visibility of several proposed turbines from a viewpoint overlooking Killarney National Park (VP15), visual effects from this viewpoint are assessed and reported in the following section – *Visual Effects (Operational Phase).*

13.7.3.1.3 Landscape Character Areas

An assessment of the effects on landscape character was undertaken for the ten designated Landscape Character Areas within the LVIA Study Area for Landscape Character (within 15 km from the site) that were identified as having potential for visibility of the proposed turbines in the Landscape Receptor Preliminary Assessment previously in Section 13.4.4.1. The individual assessments for each LCA are summarised in Table 13-12 below and are included in detail in *Appendix 13-2* of this EIAR - *Landscape Character Assessment Tables*. The assessment criteria and grading scales which aided the assessment of landscape effects are detailed in Section 1.5.2 of the methodology appendix – *Appendix 13-1.*

Table 13-12: Landscape Character Effects of LCAs and LCTs within the LVIA Study Area.

Landscape Character Area	LCA Sensitivity to Wind Farm Development	Magnitude of Change	Significance of Landscape Character Effect
LCA 27 - Clydagh River, The Paps and the Derrynasaggart Mountains	High	Moderate	Moderate
LCA 38 - Owbaun, Slaheny and Roughty River Valleys / Kilgarvan and Roughty River Valley	High	Moderate	Moderate
LCA 22 - Quagmire River and River Flesk Valley / Quagmire and Owneyskeagh Rivers	Medium	Slight	Not Significant
LCA 37 - Kenmare River Valley	High	Slight	Slight
LCT 15b - Ridged and Peaked Upland	Medium	Slight	Slight

Discussion of Landscape Effects on LCAs

The largest magnitude of change will occur in LCA 27 (Clydagh River, The Paps and the Derrynasaggart Mountains) and LCA 38 (Kilgarvan and Roughty River Valley). The proposed turbines are located within these LCAs and will alter the landscape of these LCAs due to the of change to larger turbines. As the existing Kilgarvan turbines are already located within these LCAs the introduction of the proposed turbines into the landscape of the proposed site is not a novel prospect or occurrence.

4 of the proposed turbines are sited within LCA 27 and 7 proposed turbines are sited within LCA 38. Both LCAs have been designated as 'High' sensitivity to wind farm development due to the designations within the KCDP (2022-28) as visually sensitive landscapes and the designated scenic routes. The magnitude of change was deemed to be 'Moderate' as the change to larger turbines will likely cause a change in landscape character in a localised area but will not redefine the character of the LCAs. Considering the designation of the site as a 'Potential Repowering Area' in the KCDP, it is deemed acceptable and envisioned in local planning policy for this change (the Proposed Development) to occur in the portions of these LCAs where the site is located. The residual effects on the character of these LCA are deemed to be 'Moderate'.

The Proposed Development will not materially alter any of the other LCAs in the LVIA Study Area. However, when the proposed turbines will be visible from another LCA, they will likely cause a 'Slight' or 'Not Significant' impact on landscape character, as reported for the remaining LCAs within the LVIA Study Area for effects on landscape character in Kerry and Cork. (See *Appendix 13-2* of this EIAR - *Landscape Character Assessment Tables* for a full comprehensive assessment of each LCA).

13.7.3.1.4 Cumulative Landscape Effects

The proposed turbines will contribute to cumulative effects on the landscape character of the LVIA Study Area due to the many wind energy developments located in the area. The largest cumulative landscape effects occur within Kerry LCA 27 and LCA38. Considering the number of turbines sited in these LCAs and adjacent to its boundary, some cumulative landscape effects occur, and the Existing Kilgarvan Wind Farm contributes toward these cumulative effects. The Proposed Development will have a similar contribution to cumulative landscape effects, although ultimately less turbines will be visible in the landscape than are currently seen at the Existing Kilgarvan Wind Farm. Wind energy development is already well established, and has been appropriately accommodated in many areas of these LCAs (including the Proposed Development Site), consequently, a lot of these areas are now designated as 'Potential for Repowering' in the KCDP (2022-28). Therefore, it is a landscape where it is envisioned in local planning policy where some cumulative landscape effects will continue to occur.

As seen within the cumulative ZTV (Figure 13-18) there is a small area to the north of the proposed turbines where there is additional theoretical visibility of the proposed turbines where no other cumulative turbines are visible. However, the existing Kilgarvan turbines are already visible in this location so the proposed turbines will not add additional turbines to the existing view. Within the rest of these LCAs there are large areas of the cumulative ZTV where the proposed turbines are theoretically visible with other wind farm developments and where there is theoretical visibility of other wind farm developments without views of the proposed turbines. In reality, views of the proposed turbines will be very limited within these areas of theoretical visibility as seen in VP10 and discussed further within Section 13.7.3.2.4. A discussion of the specific cumulative effects in the character of each LCA is included in *Appendix 13-2,* reported in the LCA Assessment Tables.

In a general sense the landscape of the site and LVIA Study Area is an undulating, upland landscape of a large scale capable of absorbing and accommodate many wind turbines. From areas within the wider LVIA Study Area, the turbines may be viewed as small features in the background of landscapes as a collective unit with other wind turbines in proximity. Compared with the existing Kilgarvan turbines, the Proposed Development will reduce the number of wind turbines visible from many locations within the LVIA Study Area (also a lesser number of turbines visible when compared with a Do-Nothing Scenario). The Proposed Development will equate to very little change on the landscape and its character compared with the Existing Scenario. In consideration of all factors and the well established nature of wind energy on the landscape of the site, cumulative effects on the landscape are not deemed to be significant. Discussion of Cumulative effects on visual amenity is reported in Section 13.7.3.2.4 – *Cumulative Visual Effects*

13.7.3.2 Visual Effects

13.7.3.2.1 *Selection of Photomontage Viewpoints*

Photomontages were used to aid the assessment of the visual effects arising as a result of the proposed turbines from 17 no. viewpoint locations, which are presented in EIAR Volume 2: Photomontage Booklet. These 17 No. viewpoint locations are shown on Figure 13-16 above in Section 13.5.3 as well as the A0 Map – *Appendix 13-4 LVIA Baseline Map*. The locations chosen for photomontages follow a detailed and extensive process including review of baseline information, site visits and high-quality photo taking at multiple locations within the LVIA Study Area. Many locations, which based on a desktop review had the potential for views of the proposed turbines, had complete intervening screening or were screened to such an extent that the completion of photomontages was not considered useful in terms of the assessment process i.e., little or no visibility towards the proposed turbines.

13.7.3.2.2 *Summary of Viewpoint Assessment*

Visual effects were assessed using the assessment methodology described in Appendix 13-1. Each viewpoint location is shown in Figure 13-16. A comprehensive and detailed assessment of each individual photomontage location is presented in Appendix 13-3 of this EIAR – *Photomontage Assessment Tables*. The determination of visual effects for each viewpoint is included in Appendix 13-3 as well as Table 13-13 below. Appendix 13-3, Table 13-13 and Figure 13-16 should be read in conjunction with the EIAR Volume 2: Photomontage Booklet.

The visual effects of the proposed turbines were assessed from each viewpoint in terms of the sensitivity of the visual receptors, along with the magnitude of change, as recommended in the GLVIA3 (LI & IEMA, 2013) guidelines following the methodology detailed in Section 1.6.2 of *Appendix 13-1 – LVIA Methodology*. This, in conjunction with a detailed review of the photomontages themselves as well as the likely visibility of the proposed turbines within the LVIA Study Area informed the assessment of visual effects.

Whilst the visual impact assessment tables in Appendix 13-3 compares and considers the Proposed Development against both the 'Existing' and 'Do-Nothing' Scenarios, the ultimate determination of significant visual effects uses professional judgement to determine the impact of the Proposed Development on its own merit upon each viewpoint. However, it is material to the determination of residual visual effects that wind energy is well established and has been acceptably accommodated in the landscape of the site and turbines will exist in both an 'Existing' and 'Do-Nothing' Scenario.

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

The Photomontage Booklet should be viewed whilst reading Appendix 13-3. Each viewpoint is comprehensively assessed in Appendix 13-3 including the potential for cumulative visual effects. Factors which mitigate the visual effects from each viewpoint location are also noted in Appendix 13-3 to give a residual visual effect. The significance of each residual visual effect for each viewpoint is summarised in Table 13-13 below.

Table 13-13: Viewpoint Assessment Summary

VP No	Description	Grid Ref.	Visual Sensitivity of Receptor(s) (at viewpoint)	Magnitude of Change	Residual Significance of Visual Effect
1	View from the N22 National Road in the townland of Inch. This viewpoint is located approximately 5.2km north from the nearest proposed turbine (T6).	E: 508437 N: 582919	**Medium**	**Moderate**	**Slight**
2	View from a County Kerry designated Scenic Route in the townland of Gortmarrahafineen. This viewpoint is located approximately 1.5km south-west from the nearest proposed turbine (T11).	E: 506936 N: 574792	**High**	**Moderate**	**Moderate**
3	View from Kilgarvan Village along the R569 Regional Road. This viewpoint is located approximately 6.6km south-west of the nearest proposed turbine (T10).	E: 501229 N: 573398	**Medium**	**Slight**	**Slight**
4	View from Coolea Village along County Cork Designated Scenic Route 24. This viewpoint is located approximately 5.7km south-east of the nearest proposed turbine (T1).	E: 515884 N: 575728	**High**	**Slight**	**Slight**
5	View from a local road in the townland of Milleeny. This viewpoint is located approximately 3.6km east from the nearest proposed turbine (T1).	E: 513682 N: 577485	**Medium**	**Moderate**	**Slight**
6	View from a local road in the townland of Coumaclovane. This viewpoint is located approximately 2.2km east from the nearest proposed turbine (T1).	E: 512355 N: 576032	**Medium**	**Slight**	**Slight**
7	View from the Coom Trail Way Marked Walking Trail in the townland of Sillahertane. This viewpoint is located	E: 511095 N: 572680	**High**	**Slight**	**Slight**

VP No	Description	Grid Ref.	Visual Sensitivity of Receptor(s) (at viewpoint)	Magnitude of Change	Residual Significance of Visual Effect
	approximately 3.8km south of the nearest proposed turbine (T2).				
8	View from a County Kerry designated Scenic Route in the townland of Inchee. This viewpoint is located approximately 2.1km south from the nearest proposed turbine (T11).	E: 507818 N:573956	**High**	**Moderate**	**Moderate**
9	View from a County Kerry designated Scenic Route in the townland of Inchincoosh. This viewpoint is located approximately 1.9km west from the nearest proposed turbine (T7).	E: 504932 N: 577259	**High**	**Negligible**	**Not Significant**
10	View from the Regional Road R569 in the townland of Derreenacullig. This viewpoint is located approximately 3.4km north of the nearest proposed turbine (T6).	E: 508032 N: 581140	**Low**	**Slight**	**Not Significant**
11	Views along the County Cork Designated Scenic Route SR22 in the townland of Coomnaclohy. This viewpoint is located approximately 10.3km east from the nearest proposed turbine (T1).	E: 519983 N: 579756	**High**	**Moderate**	**Moderate**
12	View from the N22 National Road in the townland of Lissacressig. This viewpoint is located approximately 17km south-east of the nearest proposed turbine (T1).	E: 527136 N: 574361	**High**	**Slight**	**Slight**
13	View from a Way Marked Walking Trail in the townland of Gortyrahilly. This viewpoint is located approximately 6.5km south-east of the nearest proposed turbine (T1).	E: 515756 N: 573036	**High**	**Slight**	**Slight**

VP No	Description	Grid Ref.	Visual Sensitivity of Receptor(s) (at viewpoint)	Magnitude of Change	Residual Significance of Visual Effect
14	View from Our Lady's Bridge in Kenmare Town along the N71 National Road. This viewpoint is located approximately 17.3km south-west of the nearest proposed turbine (T10).	E: 491066 N: 569941	**High**	**Negligible**	**Not Significant**
15	Views from the Aghadoe Overlook Viewing Point in the townland of Parkavonear. This viewpoint is located approximately 20.5km north-west from the nearest proposed turbine (T7).	E: 493284 N: 592714	**Very High**	**Negligible**	**Slight**
16	View from the top of the West Paps in the townland of Annagh Beg. This viewpoint is located approximately 9.2km north-east of the nearest proposed turbine (T4).	E: 512470 N: 585579	**High**	**Moderate**	**Moderate**
17	View from the southern slope of the Mangerton Mountain in the townland of Mangerton. This viewpoint is located approximately 7.7km west of the nearest proposed turbine (T7).	E: 499257 N: 578175	**High**	**Moderate**	**Moderate**

The assessment of visual effects determined the residual significance of the visual effects to range from 'Moderate to 'Not Significant', with the number of findings at each level of significance listed in Table 13-14 below.

Table 13-14: Summary of Viewpoint Impact Assessment Results

Significance of Residual Visual Effect	Description	No. of Viewpoints
Profound	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment	0
Very significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment	0
Significant	An effect, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment	0
Moderate	An effect that alters the character of the environment in a manner consistent with existing and emerging baseline trends	5
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities	9
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.	3
Imperceptible	An effect capable of measurement but without significant consequences	0

The significance of the residual visual effect was not considered to be "Profound", "Very Significant" or "Significant" at any of the 17 viewpoint locations. A residual visual effect of "Moderate" was deemed to arise at five of the viewpoint location. All other viewpoints were assessed as resulting in Slight (9) and Not Significant (3) residual visual effects. The viewpoint assessment results (See Appendix 13-3) are summarised and discussed in more detail in the following sections.

13.7.3.2.3 *Visual Effects in the overall LVIA study area*

Journey Scenario Along the N22 Southbound from Killarney

During the pre-planning and scoping stages of this project, the Planning Authority (ABP) suggested a comprehensive assessment of the visual impacts on the N22 National Road, particularly from the north of the Proposed Development where there is most likely to be open visibility of the proposed turbines from visual receptors. To this end, visual effects on south-bound visual receptors in a journey scenario are reported below.

The N22 National Road heads south-east from Killarney to Macroom, passing through the small village settlement of Glenflesk, the road then roads to the east of the Proposed Development site as it enters

Co. Cork. In a journey scenario, south bound visual receptors on the N22 will only experience views of the proposed turbines for a short stretch of road and a short period of time (approx. 1km). No visual effects will occur for north-bound receptors on this stretch of the N22. There is no visibility of the proposed turbines from Killarney to Garries Bridge. Plate 13-21 below shows the first open view towards the proposed turbines from the N22 where it passes Garries Bridge, although this open view will only occur momentarily for southbound travellers due to screening from the woodland adjacent to the river.

Plate 13-21 View towards the Proposed Development south of Garries Bridge

After the bridge the road bends to the south and open views are framed down the valley in the direction of the Proposed Development Site, as seen in Plate 13-22 below. Views of the turbines will be available intermittently for approximately 1km southbound along this route from Garries Bridge. Visual receptors on this section of the route generally comprise motorised traffic, as well as occasional residential receptors which are generally well set back and have limited primary open views towards the site due to orientation and other screening factors.

Plate 13-22 view southbound along the N22 south of Garries Bridge towards the Proposed Development

Figure 13-21 shows a view of the proposed turbines taken from VP01 within the Volume 2: Photomontage Booklet. This location is the last location where there are open views of the proposed turbines along the N22 in a southbound direction, and also one of the closest viewpoints to the proposed turbines. Beyond this location to the south, the road bends to the east and views of the turbines are screened by roadside vegetation screening and topography. This viewpoint (VP01) has been given a 'medium' sensitivity on account of the N22 National Road as a well trafficked route through a relatively scenic area. This road is not a designated Scenic Route, but it is located in a relatively high sensitivity landscape (KY LCA 27). The magnitude of change was deemed to be 'Moderate' for this viewpoint as the proposed turbines appear larger and more prominent than the

existing turbines. As the Existing View already comprises wind turbines, the Proposed Development is not a novel addition of turbines into this area of the landscape view. The proposed turbines are also viewed as background features beyond the distant ridgeline, similar to how the existing turbines appear in the landscape. The residual effect was deemed to be 'Slight'.

The view presented represents the only small stretch of the N22 National Road where the Proposed Development is visible to southbound receptors. Due to the enclosed nature of the steep valleys in the area and roadside vegetation, views of the proposed turbines will only occur along this very small stretch of this road. Northbound receptors will not have visibility of the turbines when travelling along this stretch of the road.

Figure 13-21 Extract from VP01 within the Volume 2: Photomontage Booklet of view towards the Proposed Development along the N22

Journey Scenario Along the N22 Northbound from Macroom

The N22 is a Co. Cork designated scenic route from Macroom to the Cork/Kerry border. In a journey scenario, visual receptors will only experience momentary views of the proposed turbines from very few limited sections of the road. The entirety of this route (along the Scenic Route and National Road) was driven from Macroom to north of the Proposed Development (Viewpoint 02). VP12 was taken from a location along the N22 approximately 5.5km west of Macroom, this is the first location northbound along the road from Macroom where there are views of the proposed turbines. Visual Receptors on the scenic route will only experience the open view presented in VP12 momentarily. This viewpoint was given a 'High' sensitivity on account of its location along County Cork designated Scenic Route 23 and the N22 National Road. The magnitude of change is deemed to be 'Slight' and the residual visual effect was deemed to be 'Slight'. The proposed turbines are located >17km from this viewpoint and appear as small features in the background of the view. The turbines are appropriately scaled within the mountainous landscape visible in the view. Residents along this road are very limited and generally do not have open views towards the site.

The view presented represents the only small stretch of the N22 National Road where the Proposed Development is visible to northbound receptors. Due to the enclosed nature of the steep valleys in the area and roadside vegetation, views of the proposed turbines will only occur along this very small stretch of this road. Southbound receptors will not have visibility of the turbines when travelling along this stretch of the road.

Scenic Routes and Transport Routes

There are 19 Co. Kerry Designated Scenic Routes located within the LVIA Study Area. The majority of these scenic routes are in areas where there is no theoretical visibility of the proposed turbines. Several scenic routes located in close proximity to the Proposed Development will have visibility of the proposed turbines. The visual effects of the Proposed Development on all scenic routes screened in for assessment in the Visual Baseline Preliminary Analysis (Section 13.5.2) are discussed below.

Kerry Scenic Routes to the South and West of the site

Two Co. Kerry designated scenic routes are located within 5km of the proposed turbines. These routes (labelled Kerry Scenic Route 1 and 2 within Table 13-5) are located where there are areas of full and partial theoretical visibility. A section of scenic route 1 (to the south) has no theoretical visibility. VP02, VP08 and VP09 within the Volume 2: Photomontage Booklet were taken along these routes. VP02 and VP08 were taken along the Scenic Route south of the Proposed Development Site. Both viewpoints were given a 'High' sensitivity on account of the location along the scenic routes. From these locations there are open views towards the proposed turbines. These viewpoints were also located in close proximity to residential dwellings, however, site visits found that the dwellings were located along stretches of the road that had roadside screening so visibility of the proposed turbines will be limited. Both VP02 and VP08 were given a 'Moderate' magnitude of change (with due consideration to the 'Do-Nothing Scenario' where turbines visible in this view would come down). Cumulative effects occur at VP08 as the existing Grousemount and Sillahertane/Coomagearlaghy II turbines are visible from behind this viewpoint. Cumulative visual effects are discussed in further detail in Section 13.7.3.3 below. Overall, both viewpoints were deemed to have 'Moderate' residual visual effects.

VP09 is located along the R569 Regional Road, a Co. Kerry Designated Scenic Route, that runs within 5km to the west of the Proposed Development Site. The ZTV shows theoretical visibility along the majority of the Scenic Route. VP09 is located in a section along the road that shows partial theoretical visibility in the ZTV. This viewpoint was given a 'High' sensitivity on account of its location along this Scenic Route. From this location the blade tip of one of the proposed turbines is visible in the background of the view behind the topography. The magnitude of change was deemed to be 'Negligible' as the character of the view would be substantially unaltered. Overall, residual effects were deemed to be 'Not Significant'. Plate 13-23 below shows a view along the R569, on a section designated a Scenic Route, where the ZTV shows full theoretical visibility of the proposed turbines. As seen in Plate 13-23 there is no visibility of the existing turbines from this location, a photomontage was produced from here and no visibility of the proposed turbines will occur due to screening from localised topography (this localised topography not accounted for in the ZTV). This is the case for the majority of the Scenic Route. No significant effects will arise along this scenic route as a result of the Proposed Development.

Plate 13-23 View from a section of the R569 Scenic Route that shows full theoretical visibility from the ZTV

Co. Cork Designated Scenic Routes

Co. Cork designated Scenic Route SR22 is located north-east of the Proposed Development Site. The ZTV shows that the majority of the route is located outside the ZTV and therefore has no visibility of the proposed turbines. A section of the road furthest west has partial theoretical visibility of the proposed turbines. VP11 was taken from the end of this scenic route closest to the proposed turbines. This viewpoint was given a 'High' sensitivity on account of its location along the designated scenic route. 6 of the proposed turbines are visible from this location in comparison to the 5 of the existing

turbines visible in the existing view. The proposed Inchamore turbines are located in front of the proposed turbines on a ridgeline in closer proximity to this viewpoint and the permitted Knocknamork turbines will be visible in close proximity to this viewpoint, to the north, in an opposite field of view to that presented in the photomontages. A 'Moderate' magnitude of change was given for this viewpoint location, in mind of cumulative visual effects. Overall, residual visual effects were deemed 'Moderate'. Cumulative visual effects are discussed in further detail in Section 13.7.3.3 below.

The majority of Co. Cork designated Scenic Route SR24 is located within 5km of the Proposed Development Site. The ZTV shows that a large section of the road within 5km has no theoretical visibility of the proposed turbines. There is partial theoretical visibility of the proposed turbines from a small section of the road within 7km of the site. The village of Coolea is located along the scenic route approximately 5.7km east of the proposed turbines. VP04 is located just outside Coolea along the Scenic Route and effects on this viewpoint are discussed in further detail below. No significant effects on the Scenic Route are deemed to arise as a result of the proposed turbines.

The ZTV showed that sections of SR25 have partial theoretical visibility within 5km of the Proposed Development Site. In reality these areas of partial visibility are located within an area of coniferous forestry. As seen in *Plate* 13-24 below the dense forestry restricts views and there will be no views of the proposed turbines. No significant effects are deemed to arise along this Scenic Route.

Plate 13-24 – Scenic Route SR36 Co. Cork

Co. Cork designated Scenic Route SR36 is located approximately 24.2km south-east of the Proposed Development Site. The ZTV shows that the section of the route within the LVIA Study Area has full theoretical visibility of the proposed turbines. In reality from this distance, visibility of the proposed turbines will be very limited. Along the route there are several sections with dense roadside screening where there will be no visibility towards the Proposed Development Site. No significant visual effects are deemed to arise along this Scenic Route as a result of the Proposed Development.

VP10 is located north of the proposed turbines along the R569 Regional Road. A few residential dwellings are located approximately 900m to the west of this viewpoint. The residents along this stretch of road will have limited views towards the Proposed Development site due to the vegetation screening throughout the landscape. VP10 was taken from a section of the road where there was a gap in the vegetation. The viewpoint was given a 'Low' sensitivity as there are a lack of visual receptors in close proximity to this viewpoint. The magnitude of change was deemed to be 'Slight' as the proposed turbines appear larger than the existing turbines in the view. In the 'Do-Nothing' Scenario the existing turbines would no longer be visible and so there is a larger change with the addition of the proposed turbines. Overall, residual effects were deemed to be 'Not Significant'. Due to the lack of turbines along the remainder of the route and from residential receptors, no significant effects are deemed to arise as a result of the Proposed Development.

Residential Receptors within 5km of the Proposed Development

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

105 residential dwellings are located within 3km of the Proposed Development Site. 7 of the 17 viewpoints captured for the photomontage booklet are located within 5km of the Proposed Development Site, with 4 of the 7 viewpoints located within 3km of the Proposed Development.

VP05 and VP06 were taken from clusters of residences to the east of the site. Both viewpoints were given a 'medium' sensitivity on account of the locally sensitive receptors within 5km of the site. These residential receptors already have views of the existing Kilgarvan and Midas turbines. The addition of the proposed turbines is not a novel addition of turbines into this area of the landscape view. Only a small number of the proposed turbines will be visible from residential receptors in this area. The magnitude of change was deemed to be 'Moderate' as the proposed turbines appear larger in the view than the existing turbines. In consideration of visual effects on these proximate residential receptors to the east of the site, early-stage photomontage visualisations were used in combination with topography maps to strategically micro site turbines so that they are appropriately positioned at lower contours on the wind farm side (west) of prominent ridgelines (at the east of the site) reducing their prominence in the landscape and impacts on local residential visual amenity. Overall, residual effects were deemed to be 'Slight'.

VP02 and VP08 are located south of the Proposed Development site in proximity to several residents along a local road. VP09 is located along the R569 Regional Road within 5km of the site. The majority of residents within this area have limited views towards the site due to roadside screening. Visual effects from residential receptors in this area were discussed for these viewpoints in this area in the *Scenic Routes* section above.

Popular Tourist Destinations (Archaeological Landscapes)

The Paps

The western summit of the Paps is located approximately 9km north-east of the Proposed Development. VP16 within the Volume 2: Photomontage Booklet displays a long-distance panoramic view of the Derrynasaggart Mountains from the western summit of the Paps. This viewpoint was given a high sensitivity on account of the visitors to the Paps for recreational and cultural heritage purposes. As discussed previously in Section 13.7.3.1.2, the Paps is a designated Archaeological Landscape. The effects of the proposed turbines on the cultural heritage of the Paps are discussed in further detail in Section 13.3.2.6 of Chapter 13 Cultural Heritage.

All 11 of the proposed turbines are visible from this viewpoint. As shown in Figure 13-22 below, the Proposed Development and other wind energy developments are well absorbed in the landscape in the context of the large-scale and expansive panoramic views from the western summit of the Paps. The magnitude of change was deemed to be 'Moderate' due to the cumulative effects. These cumulative visual effects are discussed in further detail in Section 13.7.3.3 below. The Paps are distinctive features of the landscape and are specifically referenced within local protected views and prospects (*Appendix 7 Landscape Review* of the KCDP). However, these protections include **views of** and **appreciation of** the Paps as distinctive features from other areas of the landscape. Scenic Amenity **from the** Paps of the existing landscape is not protected in local planning policy. As demonstrated throughout the photomontage booklet, the proposed turbines do not interfere, obstruct or intrude upon any landscape views **of** the Paps from any sensitive visual receptors. Overall, residual effects were deemed to be 'Moderate'.

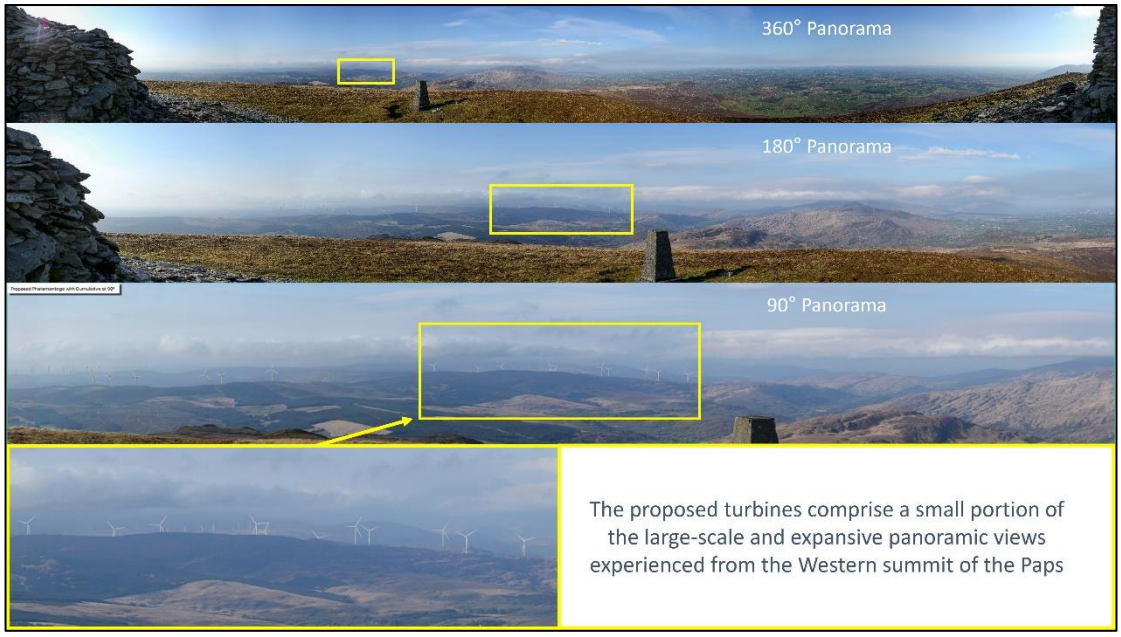

Figure 13-22 View of the turbines from the western summit of the Paps

Mangerton

Mangerton mountain is located approximately 7.7km west of the nearest proposed turbine (T7). As seen in Figure 13-20 (Section 13.7.3.1.2) the majority of National Monuments located within the Mangerton Archaeological Landscape are outside the ZTV. Site visits determined that visibility of the proposed turbines is limited to the southern slopes of Mangerton. The effects of the proposed turbines on the cultural heritage of Mangerton is discussed in further detail in Section 13.3.2.6 of Chapter 13 Cultural Heritage. There is no designated trail for visual receptors on the southern slopes of Mangerton. A walking trail is available to the north of the mountain however there will be no views from this location due to topography screening. As seen on the ZTV in Figure 13-1 visibility of the turbines will be limited to a small area on the summit of Mangerton and then to the southern slopes.

VP17 in the Volume 2: Photomontage Booklet shows a view from the southern slope of the mountain in close proximity to several archaeological monuments. The image shows a long ranging panoramic view of the landscape to the southeast and the Derrynasaggart Mountains. This viewpoint was given a 'High' sensitivity on account of the proximity to the archaeological monuments and as a representative location for the summit of Mangerton. 24 of the existing Kilgarvan turbines can be seen in the background of the existing view. All 11 of the proposed turbines will be visible from this viewpoint along with several other wind farm developments. Cumulative visual effects are discussed in further detail in Section 13.7.3.3 below. The magnitude of change was deemed to be 'Moderate'. Although the proposed turbines appear larger in the view than the existing Kilgarvan turbines, within the scale of the view and landscape type, the proposed turbines still appear appropriately scaled within the mountainous landscape visible throughout the view. The proposed turbines also do not extend the horizontal extent of turbines visible, they are contained within the same bowl of upland as the Existing Kilgarvan Wind Farm, where wind energy has already been established. Overall, residual effects were deemed to be 'Moderate' from this viewpoint.

Popular Tourist Destinations (Way Marked Walking Trails)

Several way-marked walking trails are located within the LVIA Study Area. Two of these trails have been screened in for assessment on account of the visibility of the proposed turbines from sections along the route.

Cosan Barr a Chuma (Coom Trail)

The Coom Trail is located on an elevated landform to the south within 5km of the Proposed Development Site. VP07 within the Volume 2: Photomontage Booklet shows a view from an elevated point along the Coom Trail. The viewpoint was given a 'High' sensitivity on account of the receptors on the route due to their experience of the landscape and scenic amenity in a recreational capacity. The residual effect was deemed to be 'Slight'. The proposed turbines are visible in the background of the view behind the existing Midas turbines. Cumulative effects occur; however, the proposed turbines appear to be similar in size to the Midas turbines and together look like one coherent wind farm development. Cumulative visual effects are discussed in further detail in Section 13.7.3.2.4 below. The proposed turbines do not obstruct any landscape features of unique aesthetic quality, views of a higher scenic value are directed to the west. Views from this trail are limited to elevated areas along the trail. Figure 13-23 below shows a view from the bottom of the Coom Trail. From this location at the bottom of the Coom Trail none of the proposed turbines are visible due to screening from the topography.

Figure 13-23 View from the road at the bottom of the Coom Trail

Sli Gaeltacht Mhuscrai

This Way Marked walking trail is located to the east of the Proposed Development Site. The Sli Gaeltacht Mhuscrai is a very long route (72km) and there is no theoretical visibility along the majority of the route. VP13 within the Volume 2: Photomontage Booklet shows a view from a section of the trail where there is theoretical visibility. The viewpoint was given a 'High' sensitivity on account of the receptors on the route due to their experience of the landscape and scenic amenity in a recreational capacity. The magnitude of change was deemed to be 'Slight'. The proposed turbines will be seen in combination with other wind farms from this viewpoint. The Proposed Development actually reduces the number of turbines visible within this landscape view. Cumulative visual effects are discussed in further detail in Section 13.7.3.3 below. Residual effects were deemed to be 'Slight' as the proposed turbines appear appropriately scaled in the background of the view and no significant cumulative effects occur from this viewpoint.

Wild Atlantic Way

The closest section of the Wild Atlantic Way is located approximately 16.9km south-west of the proposed turbines in Kenmare. As shown in the visual baseline and ZTV in Figure 13-15 above, there is full theoretical visibility of the proposed turbines from this location. In reality, as the townscape surrounding the route at this location limits views towards the Proposed Development Site. VP14 within the Volume 2: Photomontage Booklet shows a view towards the Proposed Development from Our Lady's Bridge, south of Kenmare town along the Wild Atlantic Way. This viewpoint was given a 'High' sensitivity on account of its location along the Wild Atlantic Way. The magnitude of change was deemed to be 'Negligible'. Due to the distance of over 17km the turbines appear as small objects in the background of the view. The turbines do not detract from the scenic views in the opposite direction over Kenmare Bay and when visible the turbines are visible in a location where wind energy has already been established and acceptably accommodated within the landscape, therefore residual effects were deemed to be 'Not Significant'.

Aghadoe Lookout

The Aghadoe Lookout is a designated OSI viewing point north of Killarney National Park. The view from an elevated position shows open and expansive views of Lough Leane, Killarney National Park and several Kerry mountains. VP15 in the Volume 2: Photomontage Booklet was taken from this location. This viewpoint was given a 'Very High' sensitivity on account of the visitors coming to this location in a recreational capacity to appreciate the landscape views of Killarney National Park and Lough Leane. Even though the wireline of the existing view shows that the blade of one existing turbine is visible, no existing turbines are visible from this view to the naked eye. The proposed view from VP15 shows that 4 of the 11 turbines are slightly visible to the left of the view. T4 and T5 are partially visible from hub height with the blade tips of T2 and T3 partially visible. In reality from this view T4 and T5 will only be visible to the naked eye from this viewpoint.

The Proposed Development introduces turbines into this view. However, the proposed turbines comprise a very small portion of the large-scale and expansive panoramic views experienced from this viewpoint. As seen in Figure 13-24 below, the proposed turbines are very small in scale at this distance (>20km), and they alter the character of a very small portion of this expansive landscape. The Proposed Development does not intrude upon key scenic landscape sensitivities such as views of Lough Leane, the mountains of Killarney National Park or MacGillyCuddy Reeks. The magnitude of change was deemed to be 'Negligible' and residual effects were deemed to be 'Slight'.

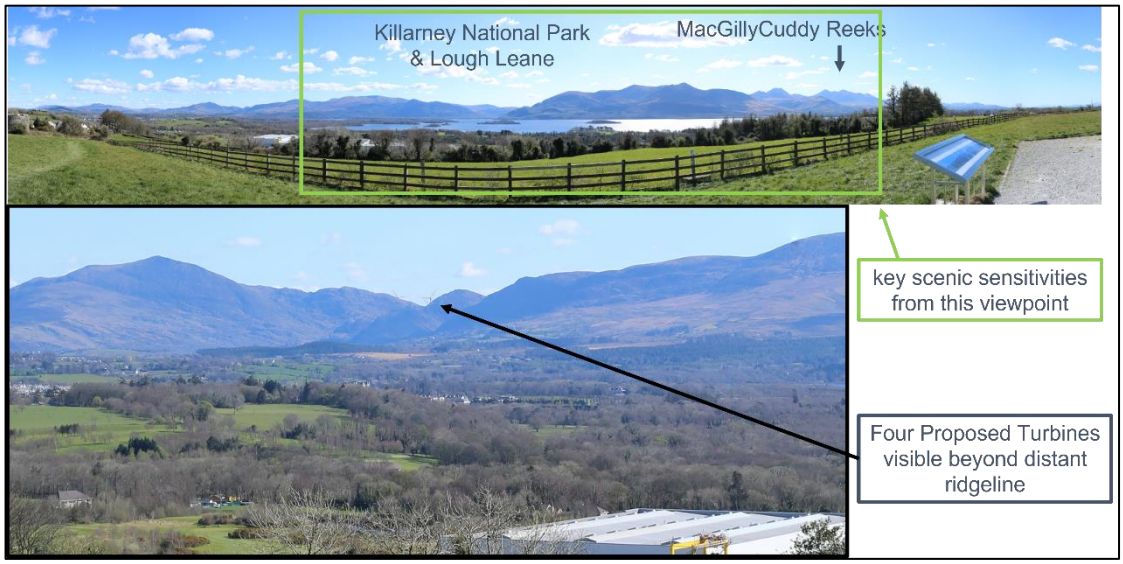

Figure 13-24 Expansive view and location of the proposed turbines from the Aghadoe Lookout

Settlements

Kilgarvan

Kilgarvan village is located approximately 6.9km south-west of the nearest proposed turbine (T10). From site visits it is apparent that there are very limited views from Kilgarvan as the screening from residential dwellings and infrastructure limits views. VP03 within the Volume 2: Photomontage Booklet shows a view towards the Proposed Development from the east of Kilgarvan. The viewpoint was taken along the R569 Regional Road just outside Kilgarvan village. This is one of the only locations from around the village where there will be views of the proposed turbines. 'Slight' residual effects were recorded from this viewpoint as the proposed turbines are visible as a coherent wind farm in the background of the view. There are less turbines visible in the proposed view compared with the existing view and there is greater spacing between turbines causing less visual stacking and less visual confusion. Cumulative visual effects are discussed in further detail in Section 13.7.3.2.4 below.

Kenmare

Kenmare town is located approximately 16.9km south-west of the proposed turbines. The ZTV shown in Figure 13-1 shows full theoretical visibility of the proposed turbines within Kenmare. Site visits found that actual visibility within the town was very limited due to screening from the built infrastructure of the townscape and vegetation. VP14 within the Volume 2: Photomontage Booklet shows a view towards the Proposed Development from Our Lady's Bridge, south of Kenmare town. This viewpoint was given a 'High' sensitivity on account of its location along the Wild Atlantic Way and in consideration of Kenmare town as a popular destination. This viewpoint is located approximately 17.3km from the nearest proposed turbine (T10). The magnitude of change was deemed to be 'Negligible' as the turbines appear as small features in the background of the view and do not detract from the character of the scenic views from this viewpoint. Overall, residual effects were deemed to be 'Not Significant'.

Coolea

The village of Coolea is the closest settlement to the Proposed Development, located approximately 5.7km east of the nearest proposed turbine (T1). Within the village there are no views of the proposed turbines due to screening from residential infrastructure and vegetation. VP04 within the Volume 2: Photomontage Booklet is located east of the village on the Co. Cork designated scenic route 24. This viewpoint has been given a 'High' Sensitivity on account of its location on the Designated Scenic Route and proximity to Coolea Village. The magnitude of change was deemed to be 'Slight' as the proposed turbines appear similar to the existing turbines from this location. Minor cumulative effects occur between the proposed turbines and existing Midas turbines. Cumulative visual effects are discussed in further detail in Section 13.7.3.2.4 below. Residual effects were deemed to be 'Slight'.

Killarney

Killarney town is located approximately 17km north-west of the proposed turbines. Site visits and early-stage photomontage production determined there likely to be no visibility of the Proposed Development from Killarney town and surrounding areas where there is theoretical visibility indicated by the ZTV, excepting elevated vantage points such as the Aghadoe Lookout (VP15) discussed above. Site visits and early- stage photomontage production determined there likely to be no visibility of the Proposed Development from Killarney town and surrounding areas where there is theoretical visibility indicated by the ZTV, excepting elevated vantage points such as the Aghadoe Lookout (VP15) discussed above. The comparative ZTV between the existing turbines and proposed turbines, presented in Figure 13-3, shows added theoretical visibility as a result of the proposed turbines. In reality site visits found that visibility is likely to be very limited in these areas of 'additional theoretical visibility' due to screening from infrastructure within the town and topography and vegetation screening to the south. Figure 13-25 below shows an image from outside Killarney town towards the Proposed Development Site. There is no visibility of the Proposed Development from this location. Screening encloses the N71 National Road to the right, limiting views along the road.

Figure 13-25 View from the N71 south outside Killarney town to the south-east

Figure 13-26 View from Mahony's Point across Lough Leane towards the proposed turbines

The comparative ZTV shown in Figure 13-3, shows that there is additional theoretical visibility around Killarney town and Lough Leane. As shown in Figure 13-26 above, there is no visibility of the proposed turbines from this location along Lough Leane. This is one of the only locations along the shore of Lough Leane where there are open views towards the Proposed Development Site. The majority of the lake is bordered by dense shrub (as seen on the opposite side of the lake in Figure 13-26) and views are restricted.

Macroom

Macroom town is located approximately 22.5km east of the Proposed Development. The ZTV in Figure 13-15 showed that there is full theoretical visibility of the proposed turbines from within the town. Site visits determined that there will actually be no visibility of the proposed turbines from within the town due to screening from built infrastructure of the townscape and vegetation. From this direction the first time the turbines will be visible is from the location of VP12 along the N22 National Road discussed above. No significant effects will arise in Macroom as a result of the Proposed Development.

Barraduff

Barraduff is located approximately 12.7km north of the Proposed Development Site. The ZTV (in Figure 13-1) shows that there is partial visibility of the proposed turbines. In Figure 13-3, the comparative ZTV showed that there was additional visibility of the proposed turbines in this area, compared to the visibility of the Existing Kilgarvan Wind Farm. In reality there are no views of the proposed turbines from this location due to screening within the village. Figure 13-27 shows a view from the road as it exits the town to the south. As seen below there are no views of the proposed turbines from this location. The proposed met mast is visible to the right of the image in the photowire, however in reality this slender lattice structure will not be visible from this distance. No significant effects will arise in Barraduff.

Figure 13-27 Photowire view from Barraduff towards the Proposed Development Site

13.7.3.2.4 Cumulative Visual Effects

The cumulative visual effects reported in this section have been informed by observations made during site visits, as well as assessment of photomontage visualisations included in the Volume 2 Photomontage Booklet. Appendix 13-3 includes viewpoint assessment tables where a visual impact assessment has been conducted for each viewpoint. The visual interaction of the Proposed Development and other wind energy developments visible in each view (and in some cases in opposing views to the views presented) are described in the Appendix 13-3 impact assessment tables. Any cumulative effects were factored in to the 'Magnitude of Change' determined for each viewpoint and therefore ultimately the residual visual effect.

The Proposed Development is located within a 'Potential Repowering Area' as designated by Kerry County (KCDP 2023-2028), which is a landscape where wind energy has already been acceptably established and well accommodated. Consequently, the immediate setting of the Proposed Development is heavily influenced by wind energy development. Due to its siting in an area designated for wind and in close proximity to other wind farms, the proposed turbines will therefore contribute to cumulative visual effects on visual receptors in this area. There are 22 No. existing, permitted and proposed wind farms within the LVIA Study Area. As reported throughout this chapter (and impact assessment appendices) the proposed turbines will not cause significant visual impacts on any sensitive visual receptors.

Overall, the Proposed Development reduces the number of turbines visible within the area as the Existing Kilgarvan Wind Farm is made up of 28 turbines and the Proposed Development reduces this to 11 turbines. From the 17 viewpoint locations, cumulative effects are only likely to arise at 11 of these locations. There will be no potential cumulative visual effects from 6 of the viewpoints (VP01, VP10, VP09, VP14 and VP15).

Cumulative Effects from Receptors to the North

Viewpoints VP01, VP10, VP15 and VP16 are located to the north of the Proposed Development. As shown by the photomontages (and verified where possible during site visits) cumulative effects from the north only occur within open views of the landscape from very elevated vantage points in the landscape (e.g. The Western summit of the Paps VP16). No cumulative effects occur from the N22 National Road as seen within VP01 and the journey scenario discussed above in Section 13.7.3.2.3. The N22 trails through the valley between the Paps and Crohane. Due to the low-lying nature of the route the proposed turbines will only be visible briefly and not visible with any other wind farm developments.

No cumulative effects occur along the R569 Regional Road to the north of the site either as shown in VP10, only the tips of the proposed Kilgarvan turbines are visible over the ridgeline.

VP15 was taken from the Aghadoe Lookout north of Killarney. No existing wind farm developments are visible from this location. The hub of one of the proposed turbines and blades of 3 of the proposed turbines are visible from this view. The blade tips of 4 of the proposed Inchamore turbines are visible to the left of the view. Topography visually separates the two wind farm developments, and the two developments are barely discernible in the context of the expansive panoramic landscape views, that no significant cumulative effects are deemed to occur.

VP16 was taken from the western summit of the Paps. As this viewpoint is located at one of the most elevated vantage points in the LVIA Study Area, there are expansive views of the landscape and several wind farm developments. The Proposed Development will be viewed in combination with the existing Grousemount, Midas, Coomagerlaghy II and Caherdowney wind turbines. Several other existing, permitted and proposed wind farms will be visible to the east, beyond the eastern summit of the Paps, therefore some in-combination sequential cumulative visual effects occur. Considering the number of turbines visible from this viewpoint, cumulative visual effects occur. The proposed turbines are all sited within the footprint of the Existing Kilgarvan Wind Farm a landscape designated as a 'Potential Wind Repowering Area' in local planning policy, where turbines are already established in the landscape. As the site is a designated repowering area, it is envisioned that some cumulative visual effects will occur.

It is worth noting that the build-up of wind energy development viewed from the Paps presented in the photomontage visuals for VP 25 and discussed in the Appendix 13-3 impact assessment table includes a number of other 'proposed' developments. There is a large level of uncertainty as to whether these other proposed wind developments will be seen in these landscape views. Irrespective of the status of turbines (existing, permitted or proposed), the build-up of wind energy is effectively absorbed within this large scale and expansive panoramic landscape and many of the existing turbines are mostly or partially screened by intervening topography. Cumulative visual effects are deemed to be acceptable from the western summit of the Paps. The visual impact assessment of VP16 (See Appendix 13-3 for full impact assessment table) accounts for change arising due to potential cumulative effects, and ultimately a 'Moderate' residual visual effect is deemed to arise.

Cumulative Effects from Receptors to the East

From the east of the Proposed Development site there are several locations where cumulative effects occur. VP05 and VP06 were taken from settlement clusters to the east of the site within 5km. From both of these locations, the existing Midas turbines are visible to the left of the proposed Kilgarvan turbines. The Proposed Development reduces the number of turbines visible in the landscape views from that of the existing development and reduces the horizontal extent of turbines in the view. However, as the proposed Kilgarvan turbines appear larger in scale than the existing Midas turbines visible from this location a minor cumulative effect occurs due to the slight incongruity between the larger and smaller turbines.

VP04 was taken from the west of Coolea village within 7km of the proposed turbines. Minor cumulative effects will occur with the existing Midas turbines to the left of the 5 visible proposed turbines from this location. The proposed Inchamore turbines are also visible in this view to the right of the proposed turbines. There is distance and visual separation between the proposed turbines and proposed Inchamore turbines, these proposed turbines are all perceived to be of similar size from this viewpoint, no significant cumulative visual effects are deemed to arise.

VP13, located along a Way Marked Walking Trail and VP11 located along a Designated Scenic Route are located within 5-10km of the site. These viewpoints are located at slightly higher elevations within the landscape to the east of the LVIA Study Area. From VP13, existing Midas and proposed Gortyrahilly wind farm developments will be visible with the proposed Kilgarvan turbines. The viewpoint is located within the proposed Gortyrahilly wind farm and so there is potential for substantial

change to occur in mind of cumulative effects for receptors at this location. However, it is to be noted that there is a degree of uncertainty as to whether these specific cumulative visual effects (Proposed Development and Proposed Gortyrahilly) will occur on this receptor, as the proposed Gortyrahilly is reliant on outcomes of the consenting process. In the background of this view the proposed turbines appear relatively congruent with the existing Midas turbines. From VP11, the proposed turbines are visible in combination with the existing Midas and proposed Inchamore turbines. The proposed turbines appear larger than the existing Midas turbines and smaller than the proposed Inchamore turbines. Due to the incongruity of scale within the same viewshed some cumulative visual effects occur.

VP12 is located from the east section of the N22 National Road. As seen in the wireline of VP12, the existing Midas, Grousemount, Derragh and Cleanrath turbines and proposed, Inchamore and permitted Knocknamork are visible. In reality, and as shown in the proposed view photomontage, many of these developments are not (existing) or will not (permitted and proposed) be visible from this location due to the screening from the vegetation and infrastructure within the view. The proposed Kilgarvan turbines will potentially be visible in combination with the proposed Gortyrahilly wind turbines in a potential future receiving environment. Due to the topography and the separation distance between the two proposed wind farms they appear as 2 separate wind farms, visually separate in the landscape. No significant cumulative visual effects were deemed to arise as a result of the Proposed Development from this viewpoint.

Cumulative Effects from Receptors to the South

A Co. Kerry Designated Scenic Route is located to the south of the Proposed Development site within 5km. Two viewpoints are located along this route. VP02 is located to the west of the route south of the proposed turbines. No other wind farm developments are visible from this location. VP08 is located towards the east of the route. No other wind farms are visible in combination with the proposed Kilgarvan turbines, however, 6 turbines of the existing Grousemount Wind Farm and 7 turbines of the existing Sillahertane/Coomagearlaghy II Wind Farm are visible behind this viewpoint, set back above the ridgeline to the south. These wind farm developments along with the Proposed Development will result in combined in succession cumulative effects where turbines are visible in differing fields of view from the same viewpoint. No significant cumulative effects are deemed to arise at this viewpoint location. This location along the road is the only location where there will be cumulative effects occurring. There is no visibility of the proposed turbines with any other wind farm along this route.

VP07 is located along an elevated section of the Coom Trail, south of the site. The proposed turbines are visible in combination with the existing Midas turbines. The Proposed Development reduces the number of turbines visible in the proposed view from that of the existing view. There are a few instances where the Midas and proposed turbines overlap and cause visual stacking. The proposed turbines appear to be similar in size to the Midas turbines and together look like one coherent wind farm development. No significant visual cumulative effects are deemed to arise from this viewpoint location when compared with the existing view.

Cumulative Effects from Receptors to the West

Four of 11 viewpoints within the Volume 2: Photomontage Booklet are located to the west of the Proposed Development Site. VP09 is located within 5km of the site along the R569 Regional Road and Co. Kerry Designated Scenic Route. No other wind farm developments are visible from this viewpoint or along this section of the road.

Kilgarvan village is located approximately 6.9km south-west of the site. VP03 was taken from along the road to the east of the village as there are no views of the turbines within the village. From this location there are a large number of wind turbines seen in the background of the view. The existing Midas turbines are visible to the right of the proposed turbines and are seen to be of much smaller scale than the proposed turbines. The Midas turbines are at a greater distance from this viewpoint beyond the

most elevated ridgeline. Therefore, there is some visual separation between the developments in this view, demarking the Midas turbines as a separate development to the Proposed Development from this perspective. Although there are a large number of turbines visible from this location, the Proposed Development reduces the number of turbines visible in the proposed view from that of the existing view. No significant cumulative visual effects are likely to arise from Kilgarvan.

Kenmare town is located approximately 17.3km south-west from the Proposed Development Site. VP14 was taken from a location south of the town where there are views towards the proposed turbines. No other wind farm developments are visible within this view. No cumulative effects will arise as a result of the proposed turbines.

VP17 was taken from the slopes of Mangerton. A large number of other existing, permitted and proposed wind farms are visible from this viewpoint. The Proposed Development will be viewed in combination with the existing Clydaghroe, Clydaghroe & Cummeenabuddoge, Curragh, Coomacheo, Grousemount, Coomagearlaghy and Caherdowney turbines. As well as the existing Gneeves and Knocknamork and proposed Inchamore and Cummeenabuddoge turbines. The proposed Kilgarvan turbines appear in the centre of the image separate from the cluster of turbines to the left and right of the view. Considering the number of turbines visible from this viewpoint, cumulative visual effects occur. However, this is to be anticipated as the turbines are located within a landscape designated as a 'Potential Wind Repowering Area' it is envisioned that some cumulative visual effects will occur. Although there are a large number of turbines visible from this location, the Proposed Development reduces the number of turbines visible in the proposed view from that of the existing view. No significant cumulative visual effects are likely to arise from this location.

13.7.3.3 Ancillary Project Elements including Grid Connection – Landscape & Visual Effects

For the purposes of this LVIA, a number of individual elements of the Proposed Development, ancillary to the proposed wind turbines, have been grouped together for the assessment of effects, given the similar nature of the works required. These operational project elements that are part of the Proposed Development, include areas of new proposed access road, turbine hardstand areas, a met mast, upgrades to the existing onsite 110kV Coomagearlahy substation and underground electrical cabling route may all give rise to potentially similar landscape and visual effects. Details of these components of the Proposed Development and the required works to construct them are contained in Chapter 4 of this EIAR.

Due to the screening from vegetation and topography surrounding the site, most visibility of the lower (shorter), less visually prominent Proposed Development components will occur in their immediate surroundings; hence, visual effects will be localised and are predominantly confined to within the Proposed Development site itself.

Substation

The Proposed Development includes for minor upgrades to the existing onsite 110kV Coomagearlahy substation, such as an extended footprint of the substation compound. However, no change is proposed to visually prominent features such as substation buildings and other tall elements. As shown throughout the Volume 2: Photomontage Booklet, the existing onsite 110kV Coomagearlahy substation is not visible from any of the 17 viewpoints and it was not identified from any visual receptors during visibility appraisals on-site. Therefore, no visual effects are deemed to arise as a result of the proposed amendments to the existing onsite 110kV Coomagearlahy substation from any receptors outside of the site. Any landscape and visual effects are likely to be highly localised to the site itself, they will be long-term and will be 'Slight'.

Site Access Roads and Hardstand Areas

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

Met Mast

One met mast is proposed as a part of the proposed Development site, it is located to the west of the site between proposed turbines T10 and T7. This will be a slender structure, 100 metres in height, and will not be an imposing structure in terms of visual impact. The landscape and visual effects of the proposed met mast will be localised, considering that it will be significantly less visible than any turbine given its shorter and slender lattice form and will fade from view at a distance of anything more than a few kilometres (approx. 2km) where it will have little to no impact. Where potentially visible, the proposed met mast has been included in all photomontage and wireline visualisations. As shown in the EIAR Volume 2: Photomontage Booklet, the met mast is only likely to be visible in VP02. Within the Proposed Development Site, the landscape and visual effects arising from the met mast is considered to be 'Slight'.

Grid Connection

The electrical cabling routes within the site will be located underground, therefore the greatest effects attributed to this element of the Proposed Development will occur during the construction phase. The existing onsite 110kV Coomagearlahy substation is already connected to the grid and therefore no subsequent grid connection works are required.

13.7.4 Discussion of Turbine Range and Landscape and Visual Effects

The dimensions presented below are the range of hub height, blade length and overall tip height assessed within differing chapters of this EIAR:

- Turbine Tip Height – Maximum Height 200m, Minimum Height 199.5m
- Hub Height - Maximum Height 125m, Minimum Height 118m
- Rotor Diameter – Maximum Length 163m, Minimum Length 149m

The Nordex N163 model, with a rotor diameter of 163m and a hub height of 118m, is considered throughout the EIAR assessment and is a representative illustration of the Proposed Development. This combination of rotor diameter and hub height (Minimum Hub Height and Maximum Rotor Diameter, 199.5m Tip Height, Model 2) is the turbine presented for every photomontage viewpoint in the photomontage booklet. The other turbine models considered throughout this assessment and outlined in Table 4-2 of Chapter 4 are:

- Model 1:
  - Hub Height - 125m
  - Rotor Diameter - 149m
  - tip height - 199.5m
- Model 3:
  - Hub Height - 122.5m
  - Rotor Diameter - 155m
  - Tip height - 200m

Irrespective of which combination of hub height and blade length within the model range outlined above is installed on site, the significance of residual landscape and visual effects will not be altered. However, for the avoidance of doubt, in Appendix 13-3, the entire range of turbines was fully assessed using a number of photomontages comparing the proposed turbine models. The two alternative turbine model configurations have been presented for 3 selected viewpoints included in the photomontage booklet accompanying this chapter. The viewpoints selected are representative of short-range views (VP02 <1.5 km from the proposed turbines) and medium range views (VP01 <5.5km from the proposed turbines, and VP03 <7km from the proposed turbines). The photomontage assessment tables (Appendix 13-3) for these viewpoints contained in Volume 2 Photomontage Booklet include a comment addressing the alternative turbine configurations and confirm that the turbine configuration ultimately installed on site will not alter the assessment of residual visual effects.

As demonstrated by the turbine ranges presented in the Photomontage Booklet, irrespective of which combination of hub height and blade length within the model range outlined in this application is installed on site, the significance of residual landscape and visual effects will not be altered.

13.7.5 Decommissioning Phase Effects

The wind turbines proposed as part of the Proposed Development are expected to have a lifespan of approximately 35 years. Following the end of the operational life of the wind farm, the wind turbines may be retained and the operational life extended or replaced with a new set of turbines, subject to planning permission being obtained. In the event that neither of the above options are implemented, the Proposed Development will be removed fully as agreed with the Planning Authority. The existing onsite 110kV Coomagearlahy substation will remain in place as it forms a permanent part of the national electricity grid.

The landscape and visual effects during decommissioning are anticipated to be of a similar nature to those occurring during the construction phase. The important element of decommissioning from a landscape and visual impacts perspective is the dismantling and removal of the wind turbines. This will occur for a limited period of time and will predominately involve cranes adjacent to the turbines during the dismantling process.

Upon decommissioning of the Proposed Development, the wind turbines would be disassembled in reverse order to how they were erected. All above ground turbine components would be separated and removed off-site for recycling. Turbine foundations would remain in place underground and will be covered with earth and reseeded as appropriate. Leaving the turbine foundations in-situ is considered a more environmentally prudent option, as to remove that volume of reinforced concrete from the ground could result in significant environment nuisances such as noise, dust and/or vibration. Site roadways will be left in situ, to facilitate access for the landowners. Underground cables will be removed and the ducting left in place.

Removal of the turbines and ancillary infrastructure from the Proposed Development site will result in a Short-term, Slight, Negative landscape and visual effect. A Decommissioning Plan has been prepared and included as Appendix 4-5 of this EIAR, which will be agreed with the local authority prior to any decommissioning. The plan provides details of the methodologies that will be adopted, throughout decommissioning, the environmental controls that will be implemented, the Emergency Response Procedure to be adopted, methods for reviewing compliance and an indicative programme of decommissioning works.

13.8 Conclusion

This Chapter assesses the likely significant landscape and visual impacts arising as a result of the Proposed Development. Although all elements of the Proposed Development are assessed, the Chapter focusses upon the proposed turbines, as they are deemed to be the essential aspects of the proposal under assessment from a landscape and visual perspective. The Chapter describes the baseline

landscape and assesses the direct effects on the landscape of the Proposed Development Site, as well as effects on landscape character and the impact on sensitive landscape receptors and Landscape Character Areas (LCAs). Visibility of the proposed turbines was assessed from receptors within a study area extending 25km from the proposed turbines – termed the 'LVIA Study Area'; and an assessment of visual effects was conducted from sensitive visual receptors in the LVIA Study Area. Landscape and Visual effects were determined from information gathered during multiple site visits as well as use of other tools such as ZTV mapping, Route Screening analysis and production of photomontage visualisations (17 No. Photomontages in the Volume 2 Photomontage Booklet).

The Proposed Development is a repowering project, where the proposed turbines are sited within the footprint of the Existing Kilgarvan Wind Farm. The proposal includes for removal of the 28 no. existing Kilgarvan turbines from the landscape and addition (installation) of 11 no. larger proposed turbines. Also in a Do-Nothing Scenario, 13 No. of the Proposed turbines will be removed when their planning permission expires in 2029. Whilst this LVIA compares and considers the Proposed Development against both the 'Existing' and 'Do-Nothing' Scenarios, the ultimate determination of significant landscape and visual effects uses professional judgement to determine the impact of the Proposed Development on its own merit upon the landscape and upon visual amenity. However, it is material to the determination of residual landscape and visual effects that wind energy is well established and has been acceptably accommodated in the landscape of the site and turbines will exist in both an 'Existing' and 'Do-Nothing' Scenario.

The Proposed Development site is located on the western slopes of the Derrynasaggart Mountain Range, Co. Kerry, a remote, elevated upland landscape. The landscape surrounding the site comprises irregular, undulating topography. The Proposed Development is located in Kerry LCA 27 and LCA 38. Both of which have been deemed to have 'High' sensitivity to Wind Farm Development due to the majority of these LCAs being designated as a Visually Sensitive Area within the KCDP 2022-28. However, the landscape of the Proposed Development site and several other areas within these LCAs and the designated Visually Sensitive Area are designated as 'Potential Repowering Areas' in local planning policy (KCDP). The landscape of the site is therefore well established as an area acceptable for accommodating wind energy and where local planning policy deems repowering developments, such as the Proposed Development to be acceptable. Two designated Archaeological Landscapes (The Paps and Mangerton) were identified as sensitive landscape receptors located within 6km of the proposed turbines.

The Proposed Development site is characterised by mountainous terrain with moderate to steep slopes in places. Landcover comprising blanket bog, forestry and infrastructure of the Existing Kilgarvan Wind Farm. The Proposed Development has been strategically designed to makes use of the Existing Kilgarvan Wind Farm infrastructure such as access roads, substation and grid connection with only upgrades and small areas of new infrastructure required. Where possible, this reduces the requirement for new internal site roads or grid infrastructure, therefore reducing the extent of direct Landscape Effects on the site. The landscape value of the site is deemed to be of High value given the location within a designated Visually Sensitive Area and proximity to the Archaeological Landscapes. However, it is relevant that the site of the Proposed Development is currently an existing wind farm development. Considering this factor, as well as the designation of the site as a 'Potential Repowering Area' within the KCDP, the susceptibility of the landscape of the site to the proposed change is Low. Overall, on balance, the sensitivity of this landscape to the Proposed Development is deemed to be Medium.

The largest magnitude of change will occur within the site itself which includes areas of Co. Kerry LCA 27 and LCA 38. The proposed turbines will materially alter the landscape of the site and these LCAs due to the addition of larger turbines. As the existing Kilgarvan turbines are already located within these LCAs the introduction of the proposed turbines into the landscape of the proposed site is not a novel prospect or occurrence. The magnitude of change was deemed to be 'Moderate' as the addition of larger turbines will likely cause a change in landscape character in a localised area but will not redefine the character of the LCAs and the site itself. Considering the designation of the site as a 'Potential Repowering Area' in the KCDP, it is deemed acceptable and envisioned in local planning policy for this change (the Proposed Development) to occur within the portions of these LCAs where

the site is located. The residual effects on the character of these LCA are deemed to be 'Moderate'. No significant landscape effects were deemed to arise within any other Kerry LCA or Cork LCT in the LVIA Study Area.

Onsite visibility appraisals, ZTV mapping, a route screening analysis and assessment of visual effects from photomontage viewpoint locations determined that visibility of the proposed turbines is likely to be very limited throughout the LVIA Study Area. Siting of the turbines in an upland landscape enclosed by large landforms and ridgelines largely restricts visual exposure from vast areas in the wider landscape of the LVIA Study Area, as demonstrated by the ZTV. Visibility of the Proposed Development is limited to localised areas of high elevation and locations within the valleys to the west and north of the site. Most visual receptors such as roads and residential dwellings in close proximity to the site (within 5km) are located at low elevation, at the floor of the relatively narrow valleys surrounding the site where the land is slightly flatter. Visibility of the proposed turbines can be in general quite limited from these locations, due to the narrow, enclosed nature of these steep sided valleys.

Photomontages were used to assess the visual effects arising as a result of the Proposed Development from 17 No. viewpoint locations. Considering the limited visibility of the proposed turbines throughout the LVIA Study Area, the assessment of visual effects was focused on sensitive receptors with open views of the proposed turbines. The significance of the residual visual effect was not considered to be "Profound", "Very Significant" or "Significant" at any of the 17 viewpoint locations. A residual visual effect of "Moderate" was deemed to arise at five of the viewpoint location. All other viewpoints were assessed as resulting in Slight (9) and Not Significant (3) residual visual effects.

As demonstrated by the turbine ranges presented in the Photomontage Booklet, irrespective of which combination of hub height and blade length within the model range outlined in this application is installed on site, the significance of residual landscape and visual effects will not be altered.

The proposed Kilgarvan turbines will contribute to cumulative landscape and visual effects in the LVIA Study Area due to the many wind energy developments located in the area. The largest cumulative landscape effects occur within Kerry LCA 27 and LCA38. Considering the number of turbines sited in these LCAs and adjacent to its boundary, some cumulative landscape effects occur, and the Existing Kilgarvan Wind Farm contributes toward these cumulative effects. Overall, the Proposed Development reduces the number of turbines visible within the area as the Existing Kilgarvan Wind Farm is made up of 28 turbines and then Proposed Development reduces this to 11 turbines. From the 17 viewpoint locations, cumulative effects are only likely to arise at 11 of these locations. In some instances, cumulative visual effects occur when there is incongruity with other existing turbines which are of smaller scale when viewed alongside the proposed turbines in the landscape. Assessments determined that no significant cumulative effects were deemed to occur as a result of the proposed Kilgarvan turbines.

The Proposed Development is viewed as a coherent development, appropriately scaled and visually balanced within a large landscape type where wind energy has already been well established and appropriately accommodated. It is not anticipated that the Proposed Development will cause any significant landscape and visual effects on receptors within the LVIA Study Area.