

12 LANDSCAPE AND VISUAL AMENITY

12.1 INTRODUCTION

12.1.1 Background and Objectives

This chapter of the EIAR assesses the effects of the Proposed Development on the landscape and visual amenity of the receiving environment. Where significant effects are predicted, the chapter identifies appropriate mitigation strategies therein. The assessment will consider the potential effects during the construction, operational, and Decommissioning phases.

The Proposed Development refers to all elements of the application for the construction and operation of the proposed Derreenacrinnig Wind Farm (refer to **Chapter 2: Project Description**). Common acronyms used throughout this EIAR can be found in **Appendix 1.4: Glossary of Common Acronyms**. This chapter of the EIAR is supported by a portfolio of photomontages provided as a separate booklet, and the following Appendices provided in **Volume III** of this EIAR:

- **Appendix 12.1: Sensitivity and Magnitude of Visual Impacts at Representative Viewpoint Locations**

This LVIA describes the landscape context of the Proposed Development and assesses the likely landscape and visual impacts of the scheme on the receiving environment. Although closely linked, landscape and visual impacts are assessed separately, in accordance with relevant guidance outlined in **Section 12.2.2**:

Landscape Impact Assessment (LIA) relates to changes in the physical landscape brought about by the Proposed Development, which may alter its character, and how this is experienced. This requires a detailed analysis of the individual elements and characteristics of a landscape that go together to make up the overall landscape character of that area. By understanding the aspects that contribute to landscape character, it is possible to make judgements in relation to its quality (integrity) and to identify key sensitivities. This, in turn, provides a measure of the ability of the landscape in question to accommodate the type and scale of change associated with the Proposed Development without causing unacceptable adverse changes to its character.

Visual Impact Assessment (VIA) relates to assessing effects on specific views and the general visual amenity experienced by people. This deals with how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views as a result of the change or loss of existing elements of the landscape

and/or introduction of new elements. Visual impacts may occur from visual obstruction (blocking of a view, be it full, partial or intermittent) or Visual Intrusion (interruption of a view without blocking).

Cumulative landscape and visual impact assessment is concerned with additional changes to the landscape or visual amenity caused by the Proposed Development in conjunction with other developments (associated or separate from it).

12.1.2 Assessment Structure

In accordance with the Landscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape and Visual Impact Assessment – Third Edition (2013) (GLVIA3), the structure of this chapter will consist of separate considerations of landscape effects and visual effects in the following order:

- Assessment of landscape value and sensitivity
- Assessment of the magnitude of landscape effects within the Study Area
- Assessment of the significance of landscape impacts
- Assessment of visual receptor sensitivity
- Assessment of visual impact magnitude at representative viewpoint locations (using photomontages)
- Assessment of visual impact significance
- Assessment of cumulative landscape and visual impacts

12.1.3 Statement of Authority

This Landscape and Visual Impact Assessment was prepared by Bridget Macfarlane, Landscape Architect at Macro Works Ltd (part of APEM Group), in Cherrywood, Dublin.

Macro Works is a specialist LVIA company with over 20 years of experience in the appraisal of effects from a variety of energy, infrastructure and commercial developments. Macro Works' relevant experience includes LVIA work on over 140 on-shore wind farm proposals throughout Ireland, including six Strategic Infrastructure Development (SID) wind farms. Macro Works and its senior staff members are affiliated with the Irish Landscape Institute.

The LVIA has been reviewed by Richard Barker, Divisional Director in Macro Works, and Landscape Architect affiliated with the Irish Landscape Institute. Richard has undertaken LVIA work for over 150 wind farms amongst numerous other development projects in Ireland, and has considerable oral hearing training and expert witness experience.

12.1.4 Description of the Proposed Development

This LVIA considers the impacts of activities and features relating to the construction, operation, and Decommissioning stages. The 10 year planning permission being sought relates to a 40-year operational life from the date of commissioning.

The Proposed Development will consist of the following:

- Construction of 3 No. wind turbines with an overall ground to blade tip height of 119.3 m with a rotor diameter of 82 m and a hub height of 78.3 m.
- Construction of 1 no. permanent 20 kV electrical, all associated electrical plant and equipment, all associated underground cabling, and all ancillary structures and works.
- Construction of one Temporary Construction Compound with associated temporary site offices, parking areas and security fencing.
- Upgrade and reuse of existing hardstands.
- Upgrade and reuse of existing internal site access roads.
- Provision of Biodiversity Enhancement Area.
- All associated underground electrical and communications cabling connecting the wind turbines to the wind farm Electrical Substation.
- Construction of approximately 10.75 km of 20 kV overhead line (OHL) along the Grid Connection route, the OHL to be constructed consists of c. 157 wood poles (ranging from 9 m to 15 m above ground) supporting electrical conductor lines and ancillary structures and equipment.
- Installation of approximately 3.3 km of underground cable ducting and associated electrical cabling, and all other ancillary works including joint bays, culverts, marker posts and all associated developments.
- Construction Haul Route works along the L-8767, L-4711, and L-8765.

A 10-year planning permission and 40-year operational life from the date of commissioning of the entire wind farm is being sought. However, part of the substation and all of the Grid Connection will be handed over to ESB networks to own and operate. As part of the national grid infrastructure, their life can extend beyond the life of the wind farm. Accordingly, permission is sought for the Grid Connection and substation in perpetuity.

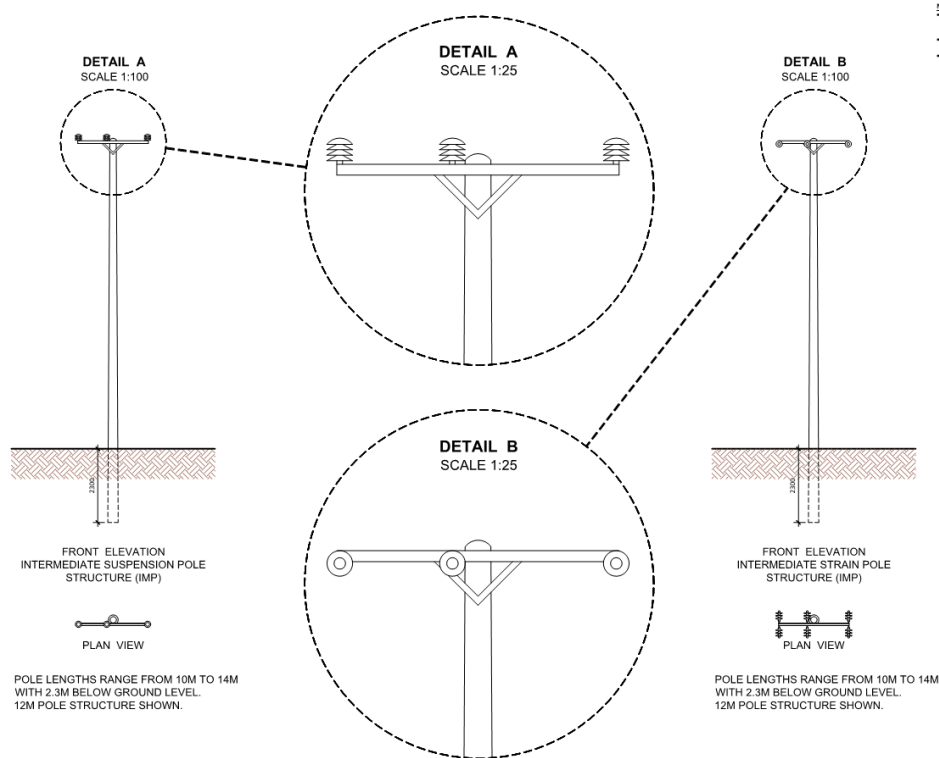


Figure 12.1: Typical 20kV single circuit overhead power line.

A full description of the Proposed Development is provided in **Chapter 2: Project Description**.

12.1.5 Candidate Turbine Scenarios

The Site previously had planning permission (now lapsed) for 7 smaller (79.5 m) turbines. Whilst the work to construct that development began, it was never finished and now the Developer is seeking permission for 3 larger (119.3 m) turbines on the Site. This is considerably less than would normally be required, but it is due to the former permission on the Site. The proposed turbines have a tip height dimension of 119.3 m, a median hub height of 78.3 m, and a median rotor diameter of 82 m. The Project also includes a Grid Connection Route and onsite 20 kV substation which are assessed as part of this chapter.

12.2 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

12.2.1 Assessment Methodology

Production of this LVIA involved Baseline work in the form of desktop studies and fieldwork comprising professional evaluation by qualified and experienced Landscape Architects included in **Chapter 1 - Table 1.3**. This entailed the following:

12.2.2 Definition of Study Area

The Wind Energy Development Guidelines published by the Department of the Environment, Heritage and Local Government (DOEHLG) (2006/2019 revision) (WEDG) specify different radii for examining the zone of theoretical visibility of proposed wind farm projects (ZTV). The extent of this search area is influenced by turbine height, as follows:

- 15 km radius for blade tips up to 100 m.
- 20 km radius for blade tips greater than 100 m.
- 25 km radius where landscapes of national and international importance exist.

In the case of this project, the blade tips are proposed to be 119.3 m high and therefore the minimum ZTV radius recommended is 20 km from the outermost turbines of the scheme. There are not considered to be any sites of national or international importance between 20 – 25 km of the outermost turbines of the Proposed Development and thus, the radius of the Study Area will remain at 20 km. Refer to **Figure 12.2**. Impacts pertaining to other aspects of the Proposed Development such as the Grid Connection route, and the Turbine Delivery Route, are localised to the immediate environment, and as such the consideration of impacts focuses on the immediate landscape context within approximately 500 m. These areas fall within the 20 km Study Area.

The Study Area adopted is in accordance with the WEDG and is consistent with study areas employed for comparable wind energy applications throughout Ireland. It is considered a robust area on which to structure the LVIA, whilst being proportionate to the most notable effects.

Notwithstanding the full extent of the LVIA Study Area, there will be a particular focus on receptors and effects within the Central Study Area where there is a higher potential for significant impacts to occur. When referenced within this assessment, the 'Central Study Area' is the landscape within 5 km of the Site. The remainder of the Study Area beyond 5 km to the 20 km outer limit is referred to as the 'Wider Study Area'. Relevant guidance does not require a Central Study Area, or Wider Study Area to be defined, but it has become standard / best practice to highlight the distinction between the immediate context of the Site, the context of the landscape within the local vicinity of the turbines, and then the context of the wider landscape.

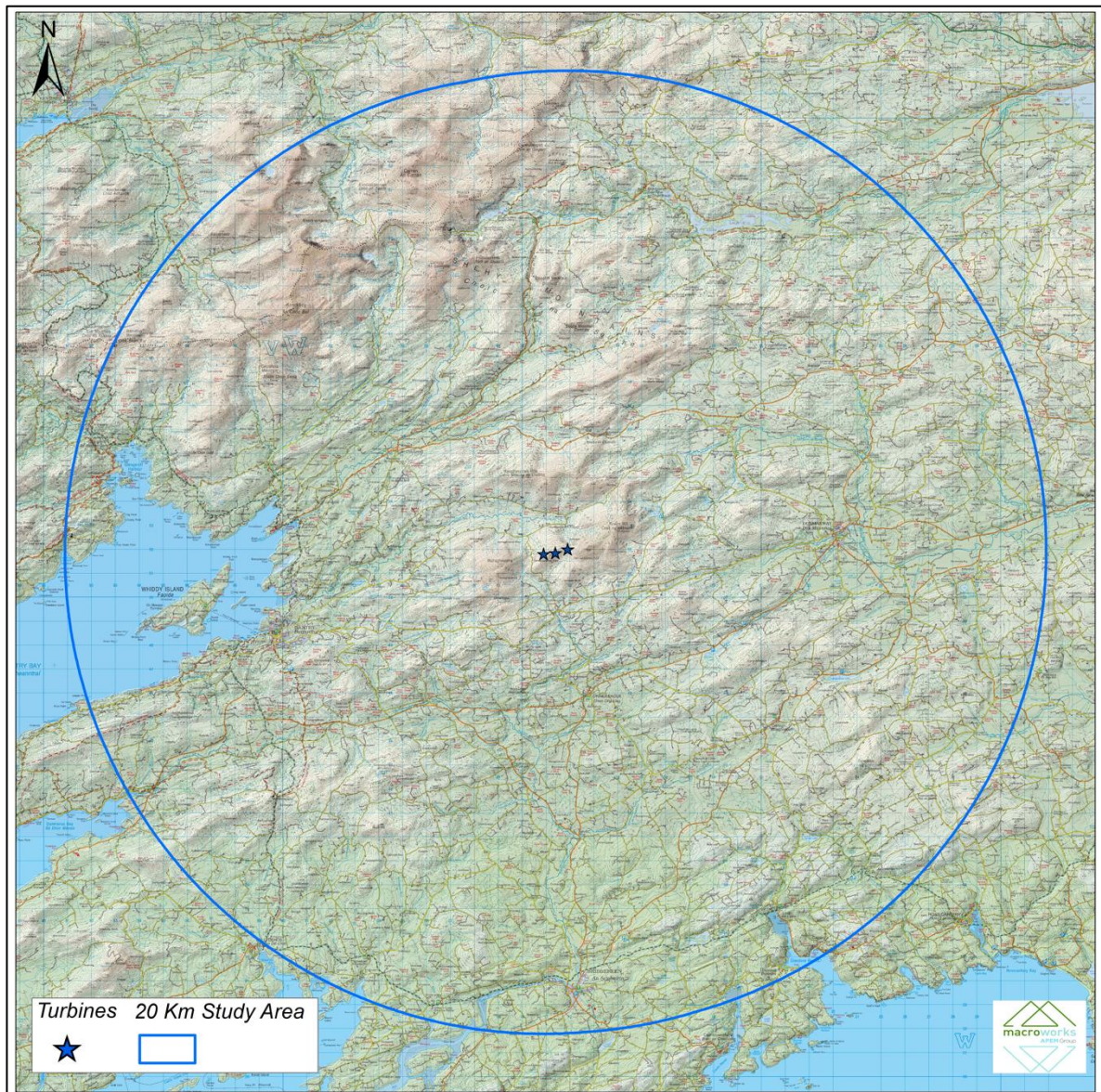


Figure 12.2: LVIA indicating the 20km Study Area.

12.2.2.1 Desktop Study

- Review of a Zone of Theoretical Visibility (ZTV) map, which indicates areas from which the Proposed Development is potentially visible in relation to terrain within the Study Area.
- Review of relevant County Development Plans, particularly regarding sensitive landscape and scenic view/route designations (**Section 12.3.4**).
- Selection of potential Viewshed Reference Points (VRPs) from key visual receptors to be investigated during fieldwork for actual visibility and sensitivity (outlined in due course).

12.2.2.2 Fieldwork

- Recording of a description of the landscape elements and characteristics within the Study Area.
- Selection of a refined set of VRP's for assessment. This includes the capture of reference images and grid reference coordinates for each VRP location for the visualisation specialist to prepare photomontages.

12.2.2.3 Landscape and Visual assessment

The process adopted in regard to the identification of landscape and visual effects (adopting the assessment criteria in 12.2.5 and 12.2.6 respectively) is summarised as follows:

- Selection of a refined set of VRPs for assessment (outlined in due course).
- Consideration of the receiving landscape with regard to overall landscape character as well as the salient features of the Study Area including landform, drainage, vegetation, land use and landscape designations.
- Consideration of the visual environment including receptor locations such as centres of population and houses, transport routes, public amenities and facilities and designated and recognised views of scenic value.
- Consideration of design guidance and planning policies.
- Consideration of potentially significant construction, operational, and Decommissioning stage effects and the mitigation measures that could be employed to reduce such effects.
- Assessment of the significance of residual landscape impacts.
- Assessment of the significance of residual visual impacts aided by photomontages prepared at all of the selected VRP locations.
- Assessment of cumulative landscape and visual effects in combination with other surrounding developments that are either existing or permitted.

12.2.3 Relevant Legislation and Guidance

This LVIA uses a methodology that is in accordance with that prescribed within the following guidance documents:

- Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports (2022) and the accompanying Advice Notes on Current Practice in the Preparation of Environmental Impact Assessment Reports;

- Landscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape and Visual Impact Assessment – Third Edition (2013) (GLVIA3);
- Department of the Environment, Heritage and Local Government Wind Energy Development Guidelines (2006) and Draft Revised Wind Energy Development Guidelines (2019);
- NatureScot: Assessing the cumulative landscape and visual impact of onshore wind energy developments (2021);
- Scottish Natural Heritage (SNH) Visual representation of wind farms: Best Practice Guidelines (version 2.2 - 2017); and
- Landscape Institute Technical Guidance Note (TGN) 06/19 Visual Representation of development proposals (2019).

The above guidance is widely recognised and used by landscape professionals in undertaking LVIA work in Ireland, and is considered to represent best practice in the absence of country-specific LVIA and visualisation guidance/standards.

12.2.4 Computer Generated Images, Photomontages and Wireframes

This LVIA is supported by a variety of computer-generated maps and graphics as well as verifiable photomontages that depict the Proposed Development within the views from a range of represented visual receptor locations. These maps, graphics and visualisations consist of the following:

- Zone of Theoretical Visibility (ZTV) maps; and
- Photomontages consisting of existing views, wireframe views and proposed views.

12.2.5 Assessment Criteria for Landscape Effect

The classification system used by Macro Works to determine the significance of landscape and visual impacts is in accordance with GLVIA3. When assessing the potential impacts on the landscape resulting from a wind farm development, the following criteria are considered:

- Landscape character, value and sensitivity;
- Magnitude of likely impacts; and
- Significance of landscape effects.

The sensitivity of the landscape to change is the degree to which a particular landscape receptor (Landscape Character Area (LCA) or feature) can accommodate changes or new features without unacceptable detrimental effects on its essential characteristics. Landscape Value and Sensitivity is classified using the following criteria:

Table 12.1: Landscape Value and Sensitivity

Criteria	Description
Very High	Areas where the landscape character exhibits a very low capacity for change in the form of development. Examples of which are high value landscapes, protected at an international or national level (World Heritage Site/National Park), where the principal management objectives are likely to be protection of the existing character.
High	Areas where the landscape character exhibits a low capacity for change in the form of development. Examples of which are high value landscapes, protected at a national or regional level (Area of Outstanding Natural Beauty), where the principal management objectives are likely to be considered conservation of the existing character.
Medium	Areas where the landscape character exhibits some capacity and scope for development. Examples of which are landscapes which have a designation of protection at a county level or at non-designated local level where there is evidence of local value and use.
Low	Areas where the landscape character exhibits a higher capacity for change from development. Typically, this would include lower value, non-designated landscapes that may also have some elements or features of recognisable quality, where landscape management objectives include, enhancement, repair and restoration.
Negligible	Areas of landscape character that include derelict, mining, industrial land or are part of the urban fringe where there would be a reasonable capacity to embrace change or the capacity to include the Proposed Development proposals. Management objectives in such areas could be focused on change, creation of landscape improvements and/or restoration to realise a higher landscape value.

The magnitude of a predicted landscape impact is a product of the scale, extent or degree of change that is likely to be experienced as a result of the Proposed Development. The magnitude takes into account whether there is a direct physical impact resulting from the loss of landscape components and/or a change that extends beyond the Site Boundary that may have an effect on the landscape character of the area.

Table 12.2: Magnitude of Landscape Impacts

Criteria	Description
Very High	Change that would be large in extent and scale with the loss of critically important landscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an overall change of the landscape in terms of character, value and quality.

Criteria	Description
High	Change that would be more limited in extent and scale with the loss of important landscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an overall change of the landscape in terms of character, value and quality.
Medium	Changes that are modest in extent and scale involving the loss of landscape characteristics or elements that may also involve the introduction of new uncharacteristic elements or features that would lead to changes in landscape character, and quality.
Low	Changes affecting small areas of landscape character and quality, together with the loss of some less characteristic landscape elements or the addition of new features or elements.
Negligible	Changes affecting small or very restricted areas of landscape character. This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing landscape or are hardly perceivable.

The significance of a landscape impact is based on a balance between the sensitivity of the landscape receptor and the magnitude of the impact. The significance of landscape impacts is arrived at using the following matrix:

Table 12.3: Landscape Impact Significance Matrix

Scale/Magnitude	Sensitivity of Receptor				
	<i>Very High</i>	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>Negligible</i>
<i>Very High</i>	Profound	Profound-substantial	Substantial	Moderate	Slight
<i>High</i>	Profound-substantial	Substantial	Substantial-moderate	Moderate-slight	Slight-imperceptible
<i>Medium</i>	Substantial	Substantial-moderate	Moderate	Slight	Imperceptible
<i>Low</i>	Moderate	Moderate-slight	Slight	Slight-imperceptible	Imperceptible
<i>Negligible</i>	Slight	Slight-imperceptible	Imperceptible	Imperceptible	Imperceptible

Note: Judgements deemed 'substantial' and above are considered to be 'significant effects' in EIA terms. Substantial-moderate judgements are considered borderline significant.

12.2.6 Assessment Criteria for Visual Effect

As with the landscape impact, the visual impact of the Proposed Development will be assessed as a function of receptor sensitivity versus magnitude. In this instance, the sensitivity of visual receptors weighed against the magnitude of visual effects.

12.2.6.1 Visual Sensitivity

As with landscape sensitivity, the sensitivity of a visual receptor is categorised as Very High, High, Medium, Low, and Negligible. Unlike landscape sensitivity, however, the sensitivity of visual receptors has an anthropocentric (human) basis. It considers factors such as the perceived quality and values associated with the view, the landscape context of the viewer, the likely activity the viewer is engaged in and whether this heightens their awareness of the surrounding environment.

Visual sensitivity is a two-sided analysis of receptor susceptibility (people or groups of people) versus the value of the view on offer at a particular location.

To assess the susceptibility of viewers and the amenity value of views, the assessors use a range of criteria and provide a four-point weighting scale to indicate how strongly the viewer/view is associated with each of the criteria. Susceptibility criteria are extracted directly from the GLVIA3, whilst the value criteria relate to various aspects of a view that might typically be related to high amenity including, but not limited to, scenic designations. These are set out below:

- **Susceptibility of receptor group to changes in view.** This is one of the most important criteria to consider in determining overall visual sensitivity because it is the single category dealing with viewer susceptibility. In accordance with GLVIA3 visual receptors most susceptible to changes in views and visual amenity are:
 - *“Residents at home*
 - *People, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focussed on the landscape and on particular views*
 - *Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience*
 - *Communities where views contribute to the landscape setting enjoyed by residents in the area*
 - *Travellers on road rail or other transport routes where such travel involves recognised scenic routes and awareness of views is likely to be heightened”.*

“Visual receptors that are less susceptible to changes in views and visual amenity include:

- *People engaged in outdoor sport or recreation, which does not involve or depend upon appreciation of views of the landscape*
- *People at their place of work whose attention may be focussed on their work or activity, not their surroundings and where the setting is not important to the quality of working life”.*

Values typically associated the visual amenity

- **Recognised scenic value of the view** (County Development Plan designations, guidebooks, touring maps, postcards etc). These represent a consensus in terms of which scenic views and routes within an area are strongly valued by the population because in the case of County Development Plans, at least, a public consultation process is required.
- **Views from within highly sensitive landscape areas.** Again, highly sensitive landscape designations are usually part of a county's Landscape Character Assessment, which is then incorporated with the County Development Plan and is therefore subject to the public consultation process. Viewers within such areas are likely to be highly attuned to the landscape around them.
- **Intensity of use, popularity.** Whilst not reflective of the amenity value of a view, this criterion relates to the number of viewers likely to experience a view regularly and whether this is significant at the county or regional scale.
- **Connection with the landscape.** This considers whether or not receptors are likely to be highly attuned to views of the landscape i.e. commuters hurriedly driving on busy national route versus hill walkers directly engaged with the landscape enjoying changing sequential views over it.
- **Provision of elevated panoramic views.** This relates to the extent of the view on offer and the tendency for receptors to become more attuned to the surrounding landscape at locations that afford broad vistas.
- **Sense of remoteness and/or tranquillity.** Remote and tranquil viewing locations are more likely to heighten the amenity value of a view and have a lower intensity of development in comparison to dynamic viewing locations such as a busy street scene, for example:
- **Degree of perceived naturalness.** Where a view is valued for the sense of naturalness of the surrounding landscape it is likely to be highly sensitive to visual intrusion by obvious human interventions.
- **Presence of striking or noteworthy features.** A view might be strongly valued because it contains a distinctive and memorable landscape feature such as a promontory headland, lough or castle.

- **Historical, cultural or spiritual value.** Such attributes may be evident or sensed at certain viewing locations that attract visitors for the purposes of contemplation or reflection heightening the sense of their surroundings.
- **Rarity or uniqueness of the view.** This might include the noteworthy representativeness of a certain landscape type and considers whether other similar views might be afforded in the local or the national context.
- **Integrity of the landscape character in view.** This criterion considers the condition and intactness of the landscape in view and whether the landscape pattern is a regular one of few strongly related components or an irregular one containing a variety of disparate components.
- **Sense of place.** This criterion considers whether there is a special sense of wholeness and harmony at the viewing location.
- **Sense of awe.** This criterion considers whether the view inspires an overwhelming sense of scale or the power of nature.

Those locations where highly susceptible receptors or receptor groups are present and which are deemed to satisfy many of the view value criteria above are likely to be judged to have a high visual sensitivity and vice versa.

12.2.6.2 Visual Impact Magnitude

The magnitude of visual effects is determined on the basis of two factors; the visual presence of the proposal and its effect on visual amenity.

Visual presence is a somewhat quantitative measure relating to how noticeable or visually dominant the proposal is within a particular view. This is based on a number of aspects beyond simply scale in relation to distance. Some of these include the extent of the view as well as its complexity and the degree of existing contextual movement experienced such as might occur where turbines are viewed as part of/beyond a busy street scene. The backdrop against which the Proposed Development is presented and its relationship with other focal points or prominent features within the view is also considered. Visual presence is essentially a measure of the relative visual dominance of the proposal within the available vista and is expressed as such i.e. minimal, sub-dominant, co-dominant, dominant, highly dominant.

For wind energy developments, a strong visual presence is not necessarily synonymous with adverse impact, specifically being 'noticed' by viewers and contributing memorably to the experience of that view or location – positive or negatively. Instead, the 2018 Fáilte

Ireland survey entitled 'Report on Visitor Awareness and Perceptions of the Irish Landscape' summarised results as below:

- *"The majority of visitors appear not to notice the majority of development – even very large and visually prominent structures such as wind turbines and powerlines.*
- *It appears that there are significant divergences between the what can be seen and what is noticed.*
- *The majority of visitors expressed very limited desire to change developments that they do notice.*
- *The visibility of developments of all types give rise to significantly less adverse effects on the impression of landscape than may often be assumed in the decision-making process.*
- *The majority of visible development does not appear to have any adverse effects on the impression of the quality of the landscape."*

With specific regard to wind farms, the following is mentioned within the main report:

- *"Visibility at Locations - Windfarms or Wind Turbines were visible from four locations, they were mentioned by visitors at one location – Cobh. At this site 11% of visitors mentioned noticing wind energy projects.*
- *Visibility en-route to locations - Wind Energy projects were mapped as being visible en-route to six sites, they were mentioned by less than 5% of all visitors."*

The purpose here is not to suggest that turbines are unlikely to be noticed, regardless of the visual presence, but rather to highlight that the assessment of visual impact magnitude for wind turbines is more complex than just the degree to which turbines occupy a view. Furthermore, a clear and comprehensive view of a wind farm might be preferable in many instances to a partial, cluttered view of turbine components that are not so noticeable within a view. On the basis of these reasons, the visual amenity aspect of assessing impact magnitude is qualitative and considers such factors as the spatial arrangement of turbines both within the scheme and in relation to surrounding terrain and land cover. It also examines whether the Project contributes positively to the existing qualities of the vista or results in distracting visual effects and disharmony.

It should be noted that as a result of this two-sided analysis, a high order visual presence can be moderated by a low level of effect on visual amenity and vice versa. Given that wind turbines do not represent significant bulk; visual impacts result almost entirely from visual 'intrusion' rather than visual 'obstruction' (the blocking of a view). The magnitude of visual impacts is classified in the following **Table 12.4** derived from GLVIA3:

Table 12.4: Magnitude of Visual Impacts

Criteria	Description
Very High	The proposal intrudes into a large proportion or critical part of the available vista and is without question the most noticeable element. A high degree of visual disorder or disharmony is also generated, strongly reducing the visual amenity of the scene.
High	The proposal intrudes into a significant proportion or important part of the available vista and is one of the most noticeable elements. A considerable degree of visual disorder or disharmony is also likely to be generated, appreciably reducing the visual amenity of the scene.
Medium	The proposal represents a moderate intrusion into the available vista, is a readily noticeable element and/or it may generate a degree of visual disorder or disharmony, thereby reducing the visual amenity of the scene. Alternatively, it may represent a balance of higher and lower order estimates in relation to visual presence and visual amenity.
Low	The proposal intrudes to a minor extent into the available vista and may not be noticed by a casual observer and/or the proposal would not have a marked effect on the visual amenity of the scene.
Negligible	The proposal would be barely discernible within the available vista and/or it would not detract from, and may even enhance, the visual amenity of the scene.

12.2.6.3 Visual Impact Significance

As stated above, the significance of visual impacts is a function of visual receptor sensitivity and visual impact magnitude. This relationship is expressed in the significance matrix in **Table 12.3** above.

12.2.6.4 Quality and Timescale of Effects

In addition to assessing the significance of landscape/townscape effects and visual effects, EPA Guidance requires that the quality of the effects is also determined. This could be negative/adverse, neutral, or positive/beneficial.

- Positive Effects: A change which improves the quality of the environment;
- Neutral and/or balanced Effects: No effects, or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
- Negative/adverse Effects: A change that reduces the quality of the environment

The same EPA guidelines also set out categories of impact duration:

- Temporary – Lasting for one year or less;
- Short Term – Lasting one to seven years;

- Medium Term – Lasting seven to fifteen years;
- Long Term – Lasting fifteen years to sixty years; and
- Permanent – Lasting over sixty years.

In the case of commercial wind energy developments and the associated introduction of new moving structures within rural and upland areas, the quality of the landscape and visual effects will almost always be negative, rather than positive or even neutral. Unless otherwise stated, the quality of the landscape and visual effect judgements herein can be taken as negative.

In terms of duration, the proposed turbines will have a long-term impact, as permission is being sought for a 40 year period after which the turbines will be decommissioned. Some other elements of the Proposed Development relating to access tracks and elements of the Grid Connection will likely remain in perpetuity and will therefore have Permanent effects.

12.2.7 Assessment Criteria for Cumulative Effects

The WEDG references the need to assess the cumulative effects of the scheme (at 4.7.4, P41 of the 2019 revision) as including the “wind energy development and the Grid Connection and any other works which are ancillary to the Proposed Development of the wind energy development” in order that the planning application addresses the cumulative impacts of the whole project. Cumulative in this context relates the Project as a whole, and has been the approach adopted in the main assessment (as outlined in 12.2.2).

NatureScot’s ‘Guidance – Assessing the Cumulative Effects of Onshore Wind Farms’ (2021) is considered a key reference with regard to cumulative landscape and visual impacts. GLVIA3 provides comparable guidance in relation to cumulative issues, whilst recognising that it is an emerging area of study.

The principal focus of wind energy cumulative impact assessment guidance relates to other wind farms - as opposed to other forms of development. This will also be the main focus herein, albeit with subsequent consideration of cumulative impacts with other forms of notable development (existing, permitted or proposed).

In relation to cumulative landscape impacts, the NatureScot guidance states:

“Cumulative landscape impacts can change either the physical fabric or character of the landscape, or any special values attached to it. For example:

- *Cumulative impacts on the physical fabric of the landscape arise when two or more developments affect landscape components such as woodland, dykes, rural roads or hedgerows. Although this may not significantly affect the landscape character, the cumulative effect on these components may be significant – for example, where the last remnants of former shelterbelts are completely removed by two or more developments.*
- *Cumulative impacts on landscape character arise when two or more developments introduce new features into the landscape. In this way, they can change the landscape character to such an extent that they create a different landscape character type, in a similar way to large scale afforestation. That change need not be adverse; some derelict or degraded landscapes may be enhanced as a result of such a change in landscape character, especially where opportunities for new woodland planting, or peatland restoration are maximised, for example.”*

In relation to cumulative visual impacts, the NatureScot guidance states:

Cumulative impacts on visual amenity can be caused by ‘combined visibility’ and/or ‘sequential impacts’:

- *Combined visibility occurs where the observer is able to see two or more developments from one viewpoint. Assessments should consider the combined effect of all wind farms which are (or would be) visible from relevant viewpoints. Combined visibility may either be in combination (where several wind farms are within the observer’s arc of vision at the same time) or in succession (where the observer has to turn to see the various wind farms).*
- *Sequential impacts occur when the observer has to move to another viewpoint to see different developments. Sequential impacts should be assessed for travel along regularly-used routes like major roads, railway lines, ferry routes, popular paths, etc. The magnitude of sequential effects will be affected by speed of travel and distance between viewpoints’*

The WEDG describes a cumulative effect as “*the perceived effect on the landscape of two or more wind energy developments visible from any one place*”, and provides guidance as to the aesthetic effects of multiple turbine developments in various landscape contexts. It also requires that cumulative effects are represented using Zone of Theoretical Visibility maps that show other wind energy developments.

Based on both sets of guidance, cumulative impacts can be experienced in a variety of ways.

In terms of landscape character, additional wind energy developments might contribute to an increasing sense of proliferation. A new wind farm might also contribute to a sense of being surrounded by turbines with little relief from the view of them.

In terms of visual amenity, there is a range of ways in which an additional wind farm might generate visual conflict and disharmony with other wind energy developments. Some of the most common include visual tension caused by disparate extent, scale or layout of neighbouring developments. A sense of visual ambivalence might also be caused by adjacent developments traversing different landscape types. Turbines from a proposed wind farm that are seen stacked in perspective against the turbines of nearer or further developments tend to cause visual clutter and confusion. Such effects are exacerbated when, for example, the more distant turbines are larger than the nearer ones and the sense of distance is distorted.

Table 12.5 provides Macro Works' criteria for assessing the magnitude of cumulative impacts. The approach adopted is informed by the NatureScot Guidelines (2021) and GLVIA3, but adopts a study area that is consistent with the main assessment to retain a proportionate focus on the most notable effects. As industry-specific guidance for the assessment of cumulative landscape and visual effects, this guidance is widely adopted for LVIA work and is considered best practice in Ireland, and the approach adopted in relation to many other schemes across Ireland.

Other wind energy developments are the most relevant type of development in a cumulative LVIA assessment given the comparable characteristics. In this regard, small and domestic-scale wind turbines are generally not considered relevant given their proportions and potential to generate notable cumulative effects. Given the potentially extensive scope of including all other types of development within a cumulative LVIA, a proportionate level of consideration is given to schemes that are considered to have the potential to significantly alter the cumulative landscape and visual Baseline environment. Factors such as scale and proximity of a Proposed Development are important factors, in addition to the characteristics of the Proposed Development in question.

Table 12.5: Magnitude of Cumulative Impacts

Criteria	Description
Very High	<ul style="list-style-type: none"> The proposed wind farm will strongly contribute to wind energy development being the defining element of the surrounding landscape. It will strongly contribute to a sense of wind farm proliferation and being surrounded by wind energy development. Strongly adverse visual effects will be generated by the proposed turbines in relation to other turbines.
High	<ul style="list-style-type: none"> The proposed wind farm will contribute significantly to wind energy development being a defining element of the surrounding landscape. It will significantly contribute to a sense of wind farm proliferation and being surrounded by wind energy development. Significant adverse visual effects will be generated by the proposed turbines in relation to other turbines.
Medium	<ul style="list-style-type: none"> The proposed wind farm will contribute to wind energy development being a characteristic element of the surrounding landscape. It will contribute to a sense of wind farm accumulation and dissemination within the surrounding landscape. Adverse visual effects might be generated by the proposed turbines in relation to other turbines.
Low	<ul style="list-style-type: none"> The proposed wind farm will be one of only a few wind farms in the surrounding area and will be viewed in isolation from most receptors. It might contribute to wind farm development becoming a familiar feature within the surrounding landscape. The design characteristics of the proposed wind farm accord with other schemes within the surrounding landscape and adverse visual effects are not likely to occur in relation to these.
Negligible	<ul style="list-style-type: none"> The proposed wind farm will most often be viewed in isolation or occasionally in conjunction with other distant wind energy developments. Wind energy development will remain an uncommon landscape feature in the surrounding landscape. No adverse visual effects will be generated by the proposed turbines in relation to other turbines.

12.3 BASELINE DESCRIPTION

12.3.1 Landscape Baseline

The landscape Baseline represents the existing landscape context and is the scenario against which any changes to the landscape brought about by the Proposed Development will be assessed. This also includes reference to any relevant landscape character

appraisals and the current landscape policy context (both are generally contained within County Development Plans). The relevant County Development Plan (CDP) covering the Site is the Cork CDP (2022-2028). A small part of the Wider northwest Study Area falls within the Kerry CDP (2022-2028).

A description of the landscape context of the proposed wind farm Site and Study Area is provided below under the headings of landform and drainage, vegetation and land use, centres of population, transport routes and public amenities and facilities as well as the immediate site context.

Additional descriptions of the landscape, as viewed from each of the selected viewpoints, are provided under the detailed assessments later using a similar structure. Although this description forms part of the landscape Baseline, many of the landscape elements identified also relate to visual receptors i.e., places and transport routes from which viewers can potentially see the Proposed Development. The visual resource will be described in greater detail below. **Figure 12.3** shows the Site in its landscape context and the immediate surroundings.

12.3.2 Landform and Drainage

The Proposed Development is sited at the summit of Nowen Hill Far West Top, at an elevation of 405 m AOD, located in the southern part of the Shehy Mountain range. The River Ilen and its tributaries emerge approximately 1 km to the west of the Site, flowing southward. To the north, the Mealagh River flows westward, about 1.3 km from the proposed turbines. Prominent landforms in the immediate vicinity include Mullaghmesha to the west, with a summit height of 494.3 m AOD, and Nowen Hill SW Top to the east, reaching 509 m AOD, while Nowen Hill, to the northeast, rises to 532.2 m AOD.

On a broader scale, the wider study area depicts a varied and dynamic landscape made up of a range of landforms and landscape features (**Figure 12.4**). The wider study area can best be described in a series of thirds characterised by the prevailing landform. The immediate vicinity, as well as much of the north and northwest, is dominated by rugged uplands and mountainous terrain with rocky outcrops, characteristic of the Shehy Mountain Range. Numerous other elevated hills, upland ridges and mountaintop summits occur throughout the Wider Study Area, most notably along the Kerry – Cork County border. The landscape to the south and eastern portion of the study area, comprises of rolling hills and lowlands. The western and parts of the southern periphery consist of a highly dynamic and varied coastal landscape. It features a combination of steep, rugged cliffs, rolling hills, and

sheltered bays, interspersed with numerous small peninsulas and inlets. The coastline is punctuated by prominent headlands and rocky outcrops. Other notable waterbodies within the study area include the River Bandon, which flows through the northern and eastern parts, and Lough Allua, located approximately 14 km northeast of the nearest turbine. In terms of other notable landforms, the Gougane Barra complex, is a distinctive glacial landform with a broad lake enclosed by steep escarpments and surrounding ridges, located some c.14 km north of the Site.

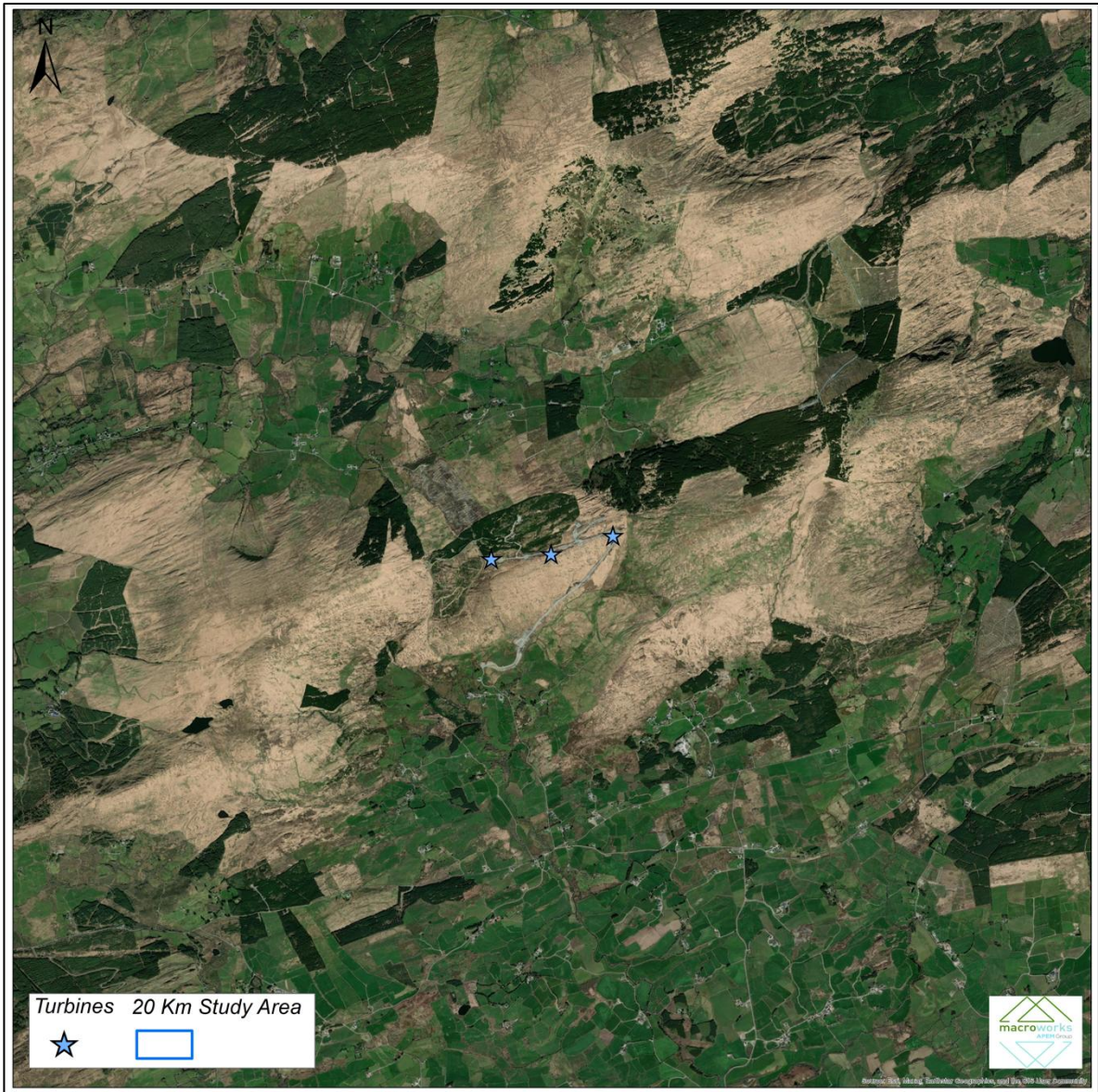


Figure 12.3: Aerial photograph showing the landscape context of the Site and its immediate surrounds

12.3.3 Vegetation and Land use

The Proposed Development is sited in an upland area characterised by extensive mountain moorland and large conifer plantations. Nonetheless, the primary land cover within the study

area is that of pastoral farmlands bound by networks of hedgerow vegetation and mature treelines. These are typically found in the low-lying, well-drained portions of the study area however, in areas, larger pastoral fields also occupy the lower slopes and valleys of distinctive rolling hills and ridges within the study area. Blocks of commercial conifer forests are also prominent within the study area, many of which cloak the upland ridges and hills. A number of modest-sized examples of urban landcover occur within the wider study area, however these are principally concentrated towards the outermost periphery of the study area. In general, there is a relatively low proportion of urban land cover located within the bounds of the study area. Nonetheless, the Wider Study Area comprises several notable settlements, including Bantry, Drimoleague and Dunmanway. The study area also encompasses numerous existing wind farm developments, the nearest of which is Millane wind farm, which is situated approximately 5.2 km southeast of the Site. Wind Energy developments are frequent throughout the Study Area concentrated in its northern and eastern portions.

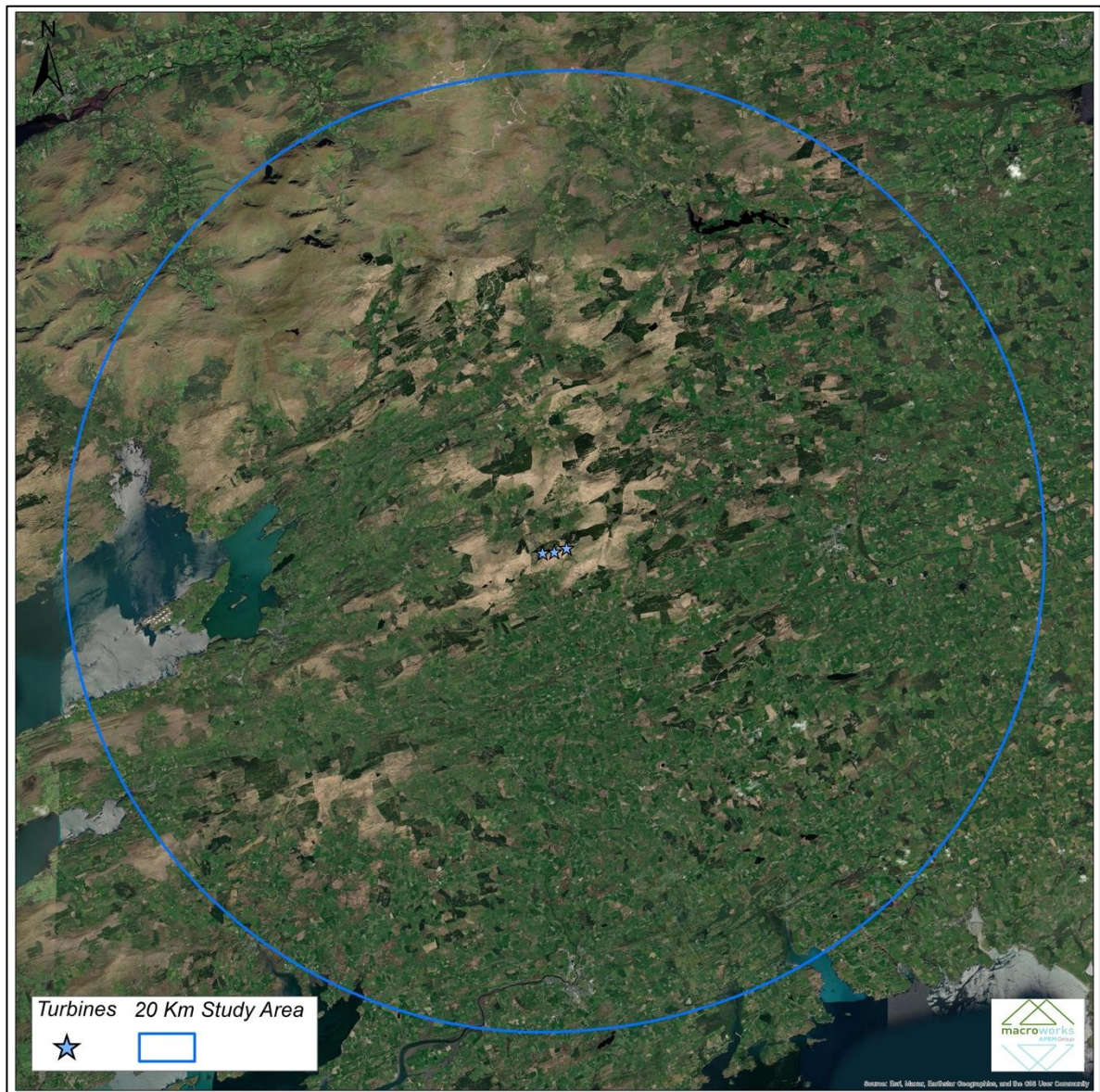


Figure 12.4: Aerial photograph showing the landscape context of the Wider Study Area

12.3.4 Landscape Policy Context and Designations

12.3.4.1 *The Department of Environment, Heritage and Local Government Wind Energy Development Guidelines (2006/2019 revision)*

The WEDG provide guidance on wind farm siting and design criteria for a number of different landscape types. The Site of the Proposed Development is considered to be located within a landscape setting that is most consistent with the 'Mountain Moorland' landscape type from the Wind Energy Development Guidelines.

The most relevant recommendations for the 'Mountain Moorland' Landscape Type are set out below:

Mountain Moorland

Location - *"It may be acceptable to locate wind energy developments on ridges and peaks... in a saddle between two peaks where they will be partially contained or "framed". A third acceptable location is lower down on sweeping mountainsides."*

Spatial extent - *"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."*

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."*

Layout - *"All layout options are usually acceptable... 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."*

Height - *"Generally no height restrictions on mountain moorlands as the scale is so great. Profile, whether even or uneven, is dependent on topography... the more rugged and undulating the more uneven it will be."*

Cumulative - *"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.."*

It is considered that the Proposed Development at Derreenacrinnig is generally consistent with the guidelines recommended for the Mountain Moorland landscape types as per the Wind Energy Guidelines where most design options appear to be appropriate for 'Mountain Moorland' and vary depending on the specific site.

Siting in Relation to Individual Properties ('Setback')

Section 6.18 of the Draft Revised Wind Energy Development Guidelines (December 2019) refers to appropriate setback distances for visual amenity purposes. The guidelines outline a mandatory minimum setback distance of '480 meters' or the distance of "4 times the tip height" of the proposed turbines "between the nearest point of the curtilage of any residential property". This is set out in SPPR2 which is included below:

SPPR 2: With the exception of applications where reduced setback requirements have been agreed with relevant owner(s) as outlined at 6.18.2 below, planning authorities and An Bord Pleanála (where relevant), shall, in undertaking their development planning and development management functions, ensure that a setback distance for visual amenity purposes of 4 times the tip height of the relevant wind turbine shall apply between each wind turbine and the nearest point of the curtilage of any residential property in the vicinity of the Proposed Development, subject to a mandatory minimum setback of 500 metres from that residential property. Some discretion applies to planning authorities when agreeing separation distances for small scale wind energy developments generating energy primarily for onsite usage. The planning authority or An Bord Pleanála (where relevant), shall not apply a setback distance that exceeds these requirements for visual amenity purposes.

After a review of the study area, it appears there are no dwellings located within the '480 m' setback distance, and thus, the setback distance outlined in the both the current 2006 Guidelines and the Draft Revised Guidelines (2019) has been adhered to. This will help to ensure that the turbines do not appear overbearing from surrounding residential receptors.

12.3.4.2 Cork County Development Plan (2022-2028)

The Site is located within the administrative area of Cork County Council and is therefore subject to the land use policies and objectives of the Cork County Development Plan (CCDP) 2022-2028.

The Cork CDP includes Chapter 14 'Green Infrastructure and Recreation', within which subsection 14.7 relates to landscape. A number of general objectives relating to landscape are noted within this chapter and are included below:

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 maintaining respect for the environment and heritage generally in line with the principle of sustainability.*
- c) *Ensure that new developments 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.”

A Landscape Character Assessment was undertaken as part of the Draft Cork Landscape Strategy (2007) and included in Appendix F of the current CDP. This divides the county into 16 No. Landscape Character Types (LCTs). The Proposed Development is split between two LCTS, two of the proposed turbines are located within LCT 9 – Broad Marginal Middleground and Lowland Basin, which is classified with a ‘Low’ landscape value, ‘Medium’ landscape sensitivity and a ‘Local’ landscape importance. The other turbine is located within LCT 15a – Ridged and Peaked Upland which is classified with a ‘High’ landscape value, ‘High’ landscape sensitivity and a ‘County’ landscape importance. The Central Study Area also encompasses three other contrasting LCT’s including LCT 16b ‘Glaciated Cradle Valleys’ to the northeast of site which is designated a ‘Low’ landscape value, ‘Medium’ landscape sensitivity and ‘Local’ landscape importance. To the southeast, LCT 6a ‘Broad Fertile Lowland Valleys’ has a ‘High’ landscape value, ‘High’ landscape sensitivity and ‘County’ landscape importance. The western side of the Central Study Area includes LCT 4, Rugged Ridge Peninsulas’ which extends all the way out to the coast and is designated a ‘Very High’ landscape value, ‘Very High’ landscape sensitivity and ‘National’ landscape importance.

Within the Cork Landscape Strategy (2007), LCT 9 is described as; *“a broad shallow basin serving the River Ilen and its tributaries enclosed by rugged ridges and rocky outcrops characterises this landscape in respect of landform. Contained by Mullaghmesha, Nowen Hill and Millane Hill to the north, Mount Kid to the west and Carrigfadda to the east, it falls*

gently southwards, gradually expanding its width in an east-west direction and southwards towards Skibbereen and ultimately beyond to the coastal fringe and the sea..."

LCT 15a to the north is described as; *the ridged, peaked and forested upland landscape type flanks much of the mid-western boundary of County Cork, from the vicinity of Bantry in the south to Millstreet in the north. This landscape type has been glaciated and comprises a fairly rugged and rolling mountainous topography at a relatively high elevation. ... the area around the Cousane Gap provides a good example of this landscape type which is inclined towards the rugged whereas the southern slopes of the Boggeragh Mountains further to the north in type 15B are a somewhat smoother example, thus adding to the openness of the moorland... The landscape, with its rapid and steep rising and falling, seems to tumble down along the valleys. The rugged and diverse landcover, involving moorland, heath and scrub, lends a strong sense of the naturalistic..."*

LCTs that feature within the Wider Study Area include LCT16a Glaciated Cradle Valleys in the northwest, LCT12 Rolling Marginal Middle ground and LCT10a Fissured Fertile Middle ground in the wider northeast. LCT7a Rolling Patchwork Farmland and LCT3 Indented Estuarine Coast feature in the wider southeast.

The Cork CDP also designates various areas within the county as 'High Value Landscapes' (HVL). The value of the landscape in county Cork "*is defined as the environmental or cultural benefits, including services and functions, which are derived from various landscape attributes. Value is evaluated using criteria ranging from Very High to Low*". The nearest HVL designation is located within the western quadrant of the Study Area c.2 km from the nearest turbine and relates to 'LCT4 – Rugged Ridge Peninsulas' that extends out to the western coastline (refer to **Figure 12.5**).

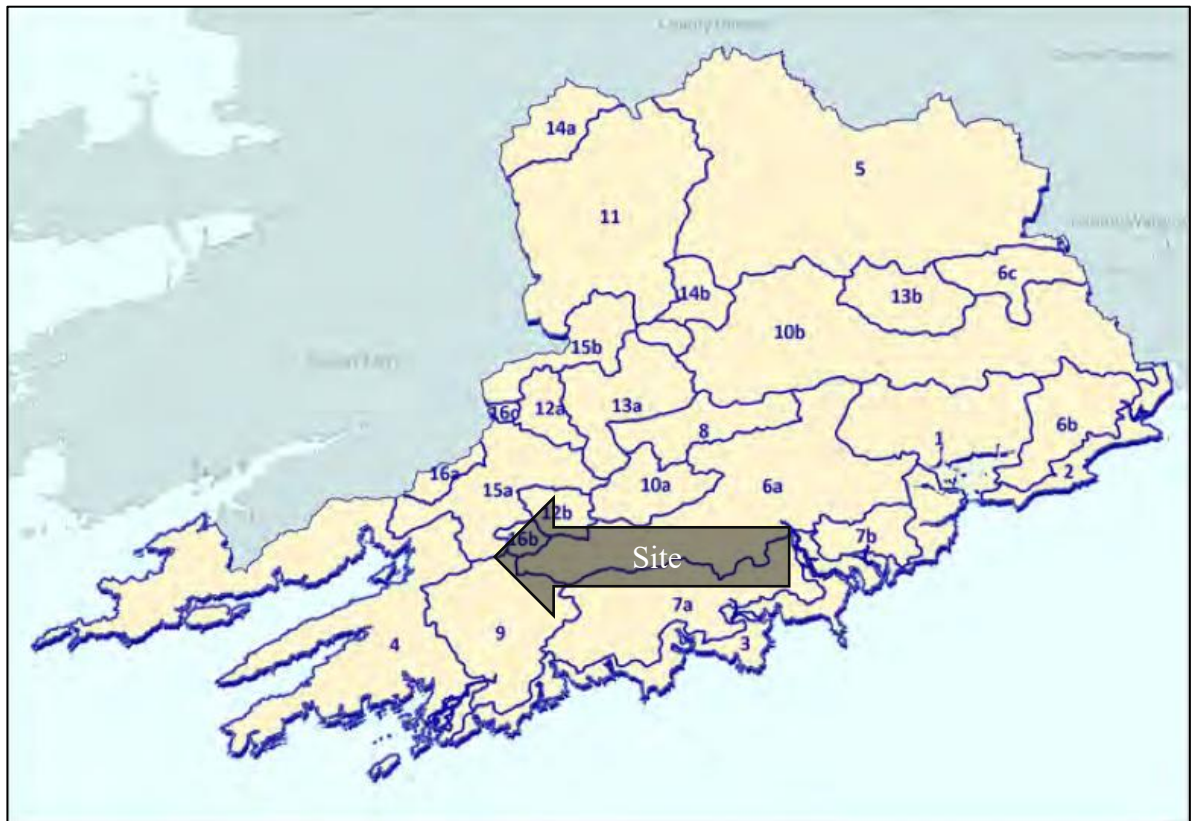


Figure 12.5: Map of Landscape Character Types within County Cork in relation to the Proposed Development site

A number of general recommendations are outlined in the Draft landscape strategy (2007) regarding LCT 9 – ‘Broad Marginal Middleground and Lowland Basin’, some of which relate to the development in question;

- *Maintain the visual quality of the upland areas by appropriate siting of new development in visually unobtrusive sites.*
- *Ensure that the approach roads, particularly the scenic routes, to settlements of Drimoleague, Drinagh and Skibbereen are protected from inappropriate development which would detract from the setting of these settlements.*
- *Have regard to the impact of windfarms on the landscape. Such developments will need to be planned and located in a sensitive manner.*

A number of general recommendations are outlined in the Draft landscape strategy (2007) regarding LCT 15a – ‘Ridged and Peaked Upland’, some of which relate to the development in question;

- *Protect the unique setting and character of villages like Ballingeary and Inchigeelagh.*
- *Recognise the value of the upland areas (Shehy Mountains) in this LCT particularly as a tourism resource for hill walking.*

The Cork CDP then subdivides these LCT's into relevant Landscape Character Areas. Landscape Character Areas represent smaller physical units with more detail in their physical description.

High Value Landscape

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 designated as High Value Landscapes (HVL), (refer **Figure 12.6**).

“Within these High Value Landscapes considerable care will be needed to successfully locate large scale developments without them becoming unduly obtrusive. Therefore, the location, siting and design of large-scale developments within these areas will need careful consideration and any such developments should generally be supported by an assessment including a visual impact assessment which would involve an evaluation of visibility and prominence of the Proposed Development in its immediate environs and in the wider landscape.”

As can be seen in (refer **Figure 12.6**), there is a designated HVL less than 4 km to the west of the nearest turbine. Another HVL is located just over 10 km north/northwest of the proposed wind farm.

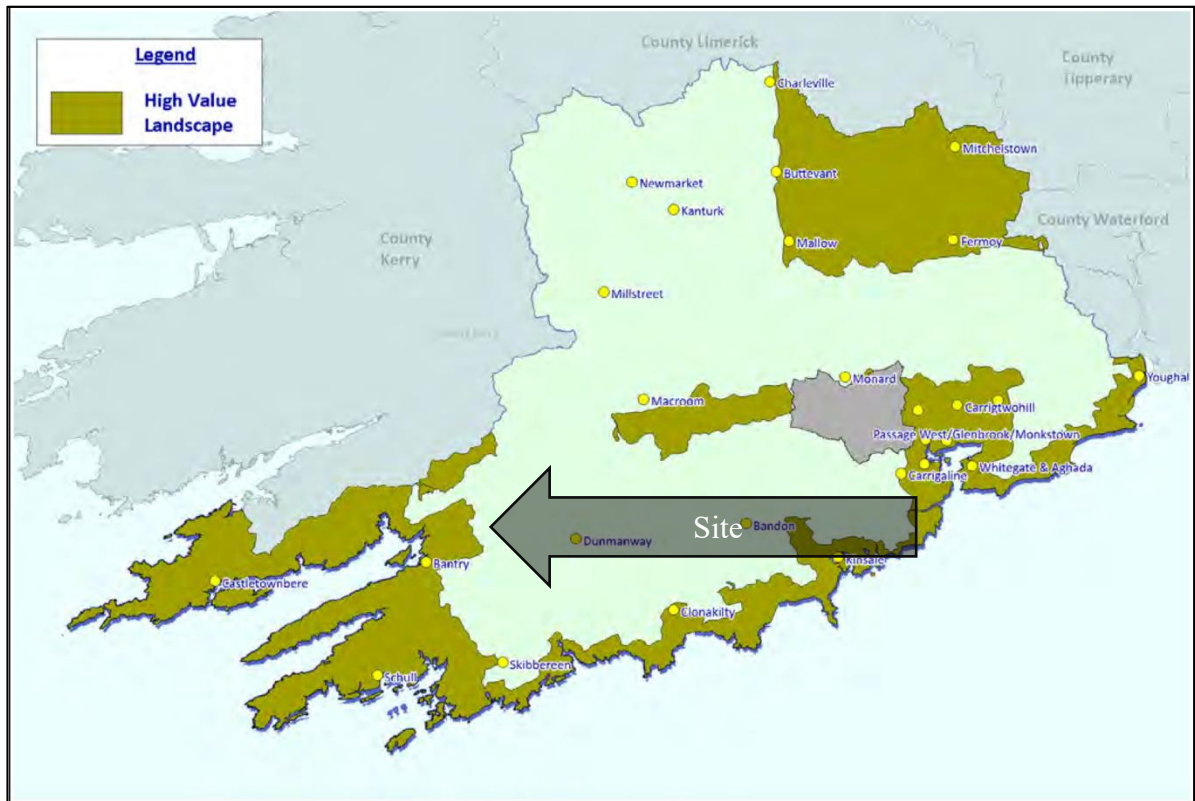


Figure 12.6: Excerpt from County Cork Draft Landscape Strategy 2007. Map 1 showing the approximate location of proposed site in relation to High Value Landscapes

Cork County Development Plan 2022-2028 – Wind Energy Policy

Section 13.6 of the Cork County Development Plan 2022-2028 covers onshore wind energy within County Cork. A number of objectives relating to the Proposed Development are outlined therein:

County Development Plan Objective ET 13-4: Wind Energy - *In order to facilitate increased levels of renewable energy production consistent with national targets on renewable energy and climate change mitigation as set out in the National Energy and Climate Plan 2021-2030, the Climate Action Plan 2021, and any updates to these targets, and in accordance with Ministerial Guidelines on Wind Energy Development, the Council will support further development of on-shore wind energy projects including the upgrading, repowering or expansion of existing infrastructure, at appropriate locations within the county in line with the Wind Energy Strategy and objectives detailed in this chapter and other objectives of this plan in relation to climate change, biodiversity, landscape, heritage, water management and environment etc.*

County Development Plan Objective ET 13-5: Wind Energy Projects (b) - *On-shore wind energy projects should focus on areas considered ‘Acceptable in Principle’ and ‘Areas*

Open to Consideration' and generally avoid "Normally Discouraged" areas as well as sites and locations of ecological sensitivity.

Cork County Council developed a wind energy strategy for the County Development Plan 2014 using the guidance provided in the "Planning for Wind Energy Development Guidelines 2006" and the SEAI Manual 'A Methodology for Local Authority Renewable Energy Strategies' April 2013. The 2006 Guidelines included a methodology for a sieve mapping analysis of the key environmental, landscape, technical and economic criteria to identify the most suitable location for wind energy development.

The Wind Strategy identifies three categories of 'Wind Deployment Area' for large-scale commercial wind energy developments – 'Acceptable in Principle', 'Open to Consideration' and 'Normally Discouraged'. With regard to the Proposed Development, the two easternmost turbines are contained within the 'Acceptable in Principle' zoning. The turbine to the west is contained within an 'Open to Consideration' zone (refer **Figure 12.7**).

With regard to 'Open to Consideration' Section 13.6.7 of the Cork CDP states;

"This area comprises almost 50% of the County area. Within these areas there are locations that may have potential for wind farm developments but there are also some environmental issues to be considered. This area has variable wind speeds and some access to the grid. Urban areas, metropolitan/town green belts, and Natural Heritage Areas (NHA's) within this area are not generally considered suitable for wind farm developments. The area excludes Natura 2000 sites..... The cumulative effect of wind energy developments with regard to landscape and visual impacts and also impacts on Natura 2000 sites will also be a consideration. High design standards in terms of environmental protection measures are likely to be required to be included in projects located in sensitive catchments."

The Cork CDP outlines several objectives in relation to "Open to Consideration' these include;

ET 13-7: Open to Consideration

"Commercial wind energy development is open to consideration in these areas where proposals can avoid adverse impacts on:

- *Residential amenity particularly in respect of noise, shadow flicker and visual impact;*
- *Urban areas and Metropolitan/Town Green Belts;*
- *Natura 2000 Sites (SPA's and SAC's), Natural Heritage Areas (NHA's), proposed Natural Heritage Areas and other sites and locations of significant ecological value.*
- *Architectural and archaeological heritage;*

- *Visual quality of the landscape and the degree to which impacts are highly visible over wider areas.*
- *In planning such development, consideration should also be given to the cumulative impacts of such proposals*

ET 13-9: National Wind Energy Guidelines

“Development of on-shore wind should be designed and developed in line with the ‘Planning Guidelines for Wind Farm Development 2006’ and ‘Draft Wind Energy Development Guidelines 2019’ and any relevant update of these guidelines.”

ET 13-10: Development in line with Best Practice

“Ensure that wind energy developments in County Cork are undertaken in observance with best industry practices, and with full engagement of communities potentially impacted by the Proposed Development. In accordance with the Code of Practice ‘Good Practice for Wind Energy Development Guidelines 2016’, wind energy development operators are required to put in place an effective complaints procedure in relation to all aspects of wind energy development projects, where members of the public can bring any concerns they have about operational difficulties, including noise and nuisance to the attention of the wind energy development operator.”

ET 13-7: Open to Consideration

Consider proposals where it can be shown that significant impacts on the following can be avoided:

- *“Residential amenity particularly in respect of noise, shadow flicker and visual impact;*
- *Urban areas and Metropolitan/Town Green Belts;*
- *Sites designated for nature conservation, protected species, and habitats of conservation value;*
- *Architectural and archaeological heritage: and;*
- *Visual quality of the landscape and the degree to which impacts are highly visible over wider areas.”*

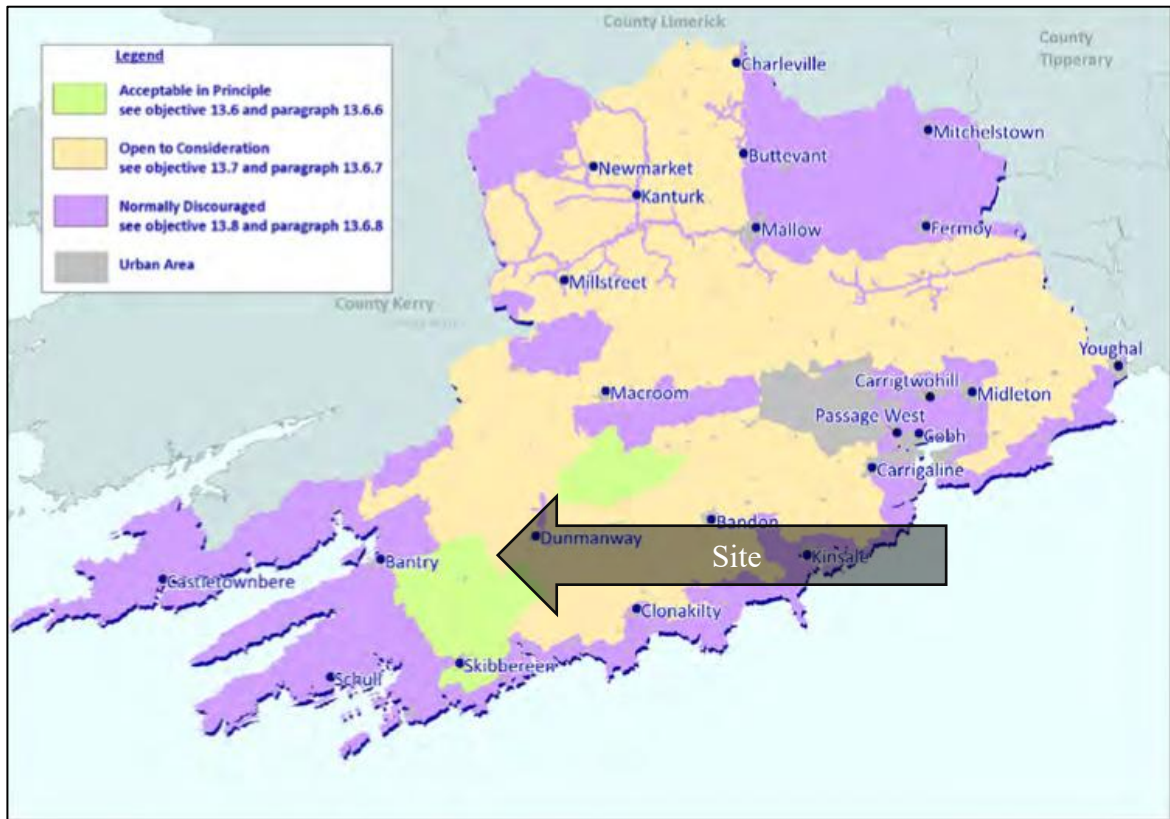


Figure 12.7: Wind Energy Strategy Map (excerpt from Cork CDP) in relation to the approximate location of the Proposed Development

12.3.4.3 Kerry County Development Plan (2022-2028)

Whilst the Proposed Development is entirely contained within County Cork, the northwestern section of the Study Area falls within County Kerry, c. 14.5 km from the Proposed Development at its closest point. At this distance, the Landscape Character Assessment and Wind Energy Strategy are not considered relevant to the Proposed Development. However, the landscape review identifies ‘Visually Sensitive Areas’ described within the landscape as;

“..the outstanding landscapes throughout the County which are sensitive to alteration. Rugged mountain ranges, spectacular coastal vistas and unspoilt wilderness areas are some of the features within this designation... These areas are particularly sensitive to development....”

The entire part of County Kerry contained within the Study Area has a ‘Visually Sensitive’ overlay.

With regard to Landscape Sensitivity the Kerry CDP outlines the following objectives:

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.”*

12.3.4.4 Zone of Theoretical Visibility (ZTV)

Only those parts of the Study Area that potentially afford views of the Proposed Development are relevant to this part of the assessment. Therefore, the first part of the visual Baseline is establishing a ZTV and subsequently, identifying visual receptors on which to base the visual impact assessment.

A computer-generated ZTV map has been prepared to illustrate where the Proposed Development is potentially visible. The ZTV map is based solely on terrain data (bare ground visibility) and ignores features such as trees, hedges, or buildings, which may screen views. Given the nature of the topography in parts of the landscape, and the combined influence of successive layers of vegetation throughout the landscape, the main value of this form of ZTV mapping is to determine those areas from which the Proposed Development will not be visible, such as to retain a proportionate focus on locations where there is potential for visibility.

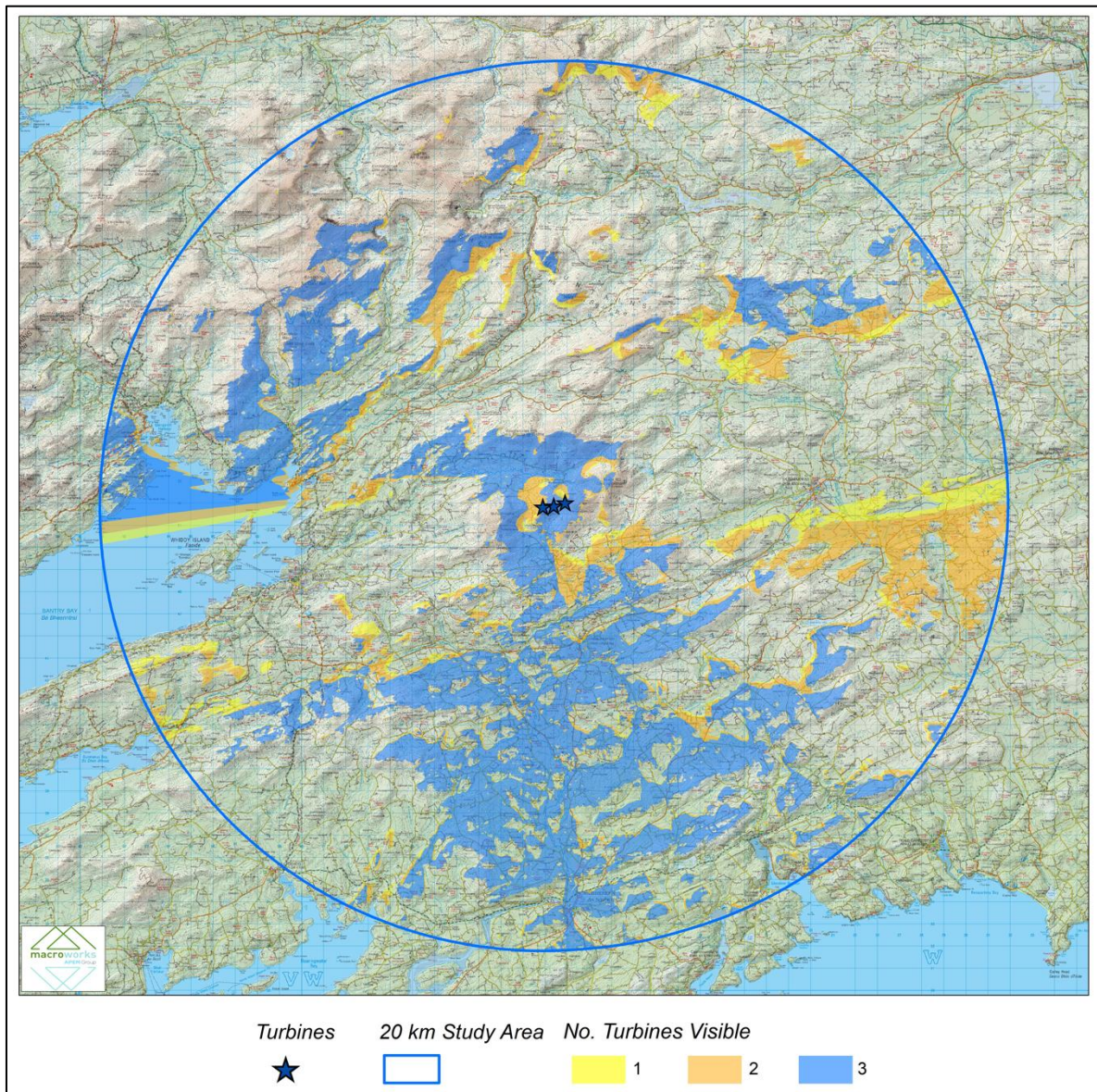


Figure 12.8: Bare-ground ZTV Map based on 180m tip height

The following key points are illustrated by the 'bare-ground' ZTV map (**Figure 12.8** refers):

- As a consequence of the mountainous terrain and elevated ridgelines that occupy the immediate vicinity as well as the northern and western parts of the study area, comprehensive visibility (blue colour) of the proposed turbines is primarily concentrated within the immediate surrounds and southern portions of the study area. Isolated areas of comprehensive visibility can be found within elevated areas of the northeastern portion of the study areas including Carrigierk Hill (approx. 12 km northeast of the nearest turbine) which rises to a height of 343 m AOD.
- Several patches of comprehensive visibility can be seen on the northwestern and western parts of the study area. These include several portions of the coastline on the

northern side of the Bantry Bay coastline and a series of mountaintops on the Kerry border.

- Elevated areas of the landscape are typically afforded a higher degree of visibility of the Proposed Development. However, these upland areas tend to provide a demarcation between full visibility and no visibility. This is proven through the north/north western and eastern periphery of the study area featuring low/no visibility, as a result of the of the Shehy Mountain Range preventing any potential views beyond the highest points.
- The most notable point to make is that over half of the study area will experience no visibility of the Proposed Development due to intervening screening by the elevated landscape in the central, northern and western parts of the study area, which will intermittently screen the turbines to the north, east and west. Furthermore, much of the most highly sensitive aspects of the study area are located in its wider western extents, where there is limited potential for turbine visibility.
- The closest settlement of note Drimoleague, has the potential for comprehensive visibility in the southern part of the study area, however is screened completely to the north of the R596.
- The Wild Atlantic Way which follows the coastline around the wider western and southern periphery of the study area will be screened for the majority of the route despite two small areas around Bantry Bay indicating potential visibility.

12.3.5 Views of Recognised Scenic Value

Views of recognised scenic value are primarily indicated within County Development Plans in the context of scenic views/routes designations, but they might also be indicated on touring maps, guidebooks, roadside rest stops or on postcards that represent the area. The relevant scenic designations (views, prospects, and scenic routes) contained in the CCDP and the KCDP have been identified, and all of those that fall within the 20 km Study Area have been identified in **Table 12.8**.

The number of these locations is numerous throughout the Study Area, and a critical analysis of these viewpoints was undertaken to determine their relevance to the assessment of visual effects. Where these fall outside the ZTV pattern, they have been discounted on the basis that the turbines have no potential to generate visual impacts.

As will be explained later in the assessment, Viewshed Reference Points (VRP's) have been used to study the landscape and visual impact of the proposed wind farm in detail. Those scenic designations that fall inside the ZTV pattern were investigated during fieldwork

to determine whether actual views of the Proposed Development might be afforded. In some instances, the location offers limited potential for any visibility as a result of screening elements, and is therefore not considered to be of relevance to the LVIA. In other instances the primary aspect of view (identified in the Cork CDP) of relevance to the scenic designation, orientates away from the proposals. Where this is the case, the impact on the scenic view is not considered to be of primary relevance and visual effects are structured around other VRPs which are considered representative. Where visibility may occur and the location is considered helpful in understanding effects from parts of the landscape, a VRP has been selected for use in assessing visual impacts.

The analysis is presented in **Table 12.6**.

Table 12.6: Rational for selection of scenic designations within the relevant County Development Plans

Scenic View or Route Reference (CDP):	Relevance to visual impact appraisal	Represented herein by VRP No.
Cork County Development Plan (2022-2028)		
S29 Road to Kealkill via Cousane Gap to Togher	Not Relevant – View is not within the ZTV pattern	-
S28 Scenic road at the Pass of Keimaneig to Gougane Barra	Not Relevant – View is not within the ZTV pattern	-
S27 Road between Gougane Barra and the Mouth of the Glen	Not Relevant – Only a fleeting part of the scenic route falls within ZTV	-
S30 Road between Dunmanway and Coolkellure, Castledonovan and Bantry	Relevant – Potential for views	VRP6,7, 8
S31 Road between Ballineen and Ballincarriga to Dunmanway	Not Relevant – Only a small part of the scenic route has potential for partial visibility. At a distance of over 17km this is not deemed relevant to the Proposed Development.	-
S32 South Lake Road - Inchigeela and Ballingearry to Keimaneigh	Not Relevant – The small part that falls within ZTV has views orientated east and west, not in the direction of the Site.	-
S34 Road between Inchigeela and Ballingearry to Keimaneigh	Not Relevant – View is not within the ZTV pattern	-

Scenic View or Route Reference (CDP):	Relevance to visual impact appraisal	Represented herein by VRP No.
S94 Road between Lahern and Coolconlaghta	Not Relevant – View is not within the ZTV pattern	-
S33 Road between Ballingearry - branch off S. Lake Road - and Kealvaugh	Not Relevant – View is not within the ZTV pattern	-
S25 Winding road joining Coolea - Coom road to Lissacresig road	Not Relevant – Views not oriented in the direction of the Proposed Development	-
S27 Road between Gougane Barra and the Mouth of the Glen	Not Relevant –Majority of scenic route located outside of ZTV; views not oriented in the direction of the Proposed Development	-
S26 Road between Lissacresig and the Mouth of the Glen	Not Relevant – View orientated east and west and not in the direction of the Site.	-
S112 Road from Glengarriff to Kenmare (County Bounds)	Not Relevant –located outside of ZTV	-
S111 Road from Bantry, Snave, Ballylickey and Glengarriff	Relevant –Potential for views	VRP17
S113 Road between Glengarriff, Trafresk, Ardrigole and Castletownbere	Relevant – Potential for views	VRP18
S28 Scenic road at the Pass of Keimaneig to Gougane Barra	Not Relevant –located outside of ZTV	-
S110 Roads from Bantry via Gerahies to Kilcrohane	Not Relevant –located outside of ZTV	-
S108 Road from Bantry via Durrus and Ahakista to Kilcrohane	Not Relevant –located outside of ZTV	-
S79 Road between Roury Bridge and Kilbeg	Not Relevant –located outside of ZTV	-
S93 Road between Ballydehob and Parkana	Not Relevant – Partially in ZTV however views are located to the east and west	-

Scenic View or Route Reference (CDP):	Relevance to visual impact appraisal	Represented herein by VRP No.
S92 Road Between Kissaclarig and Ballybane to Barnaghegeeha and Ardrah	Not Relevant –Views oriented to the east and west and the Proposed Development is located to the northeast	-
S89 Road between aghadown and Turk head	Not Relevant –located outside of ZTV	-
S90 Road between Skibbereen and Ballydehob	Not Relevant –located outside of ZTV	-
S91 Roads near Bealaclara Bridge	Not Relevant – Views to the east and west whereas Proposed Development located to the north	-
S88 Road between Baltimore via Old Court and Skibbereen	Not Relevant –located outside of ZTV	-
S82 Road between Leap and Skibbereen	Not Relevant –Views likely to be substantively precluded by urban foreground.	-
S83 Road between Castletownsend and Rinneen to Union Hall	Not Relevant –located outside of ZTV	-
S81 Road between Rosscarbery and Leap via Glandore	Not Relevant –located outside of ZTV	-
S84 Roads between Union Hall and Reen	Not Relevant –Views oriented to the east and west, whereas the Proposed Development is located to the north	-
Kerry County Development Plan (2021-2027)		
Note: the current Kerry County Development Plan includes a selection of scenic views and prospects in Volume 4. Two of which are located within the Wider Study Area. However, neither of these views are located within ZTV and therefore not considered relevant to the Proposed Development.		

Policy relating to scenic designations in the Cork County Development Plans is included below;

Cork CDP

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 - *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.*

Encourage appropriate landscaping and screen planting of developments along scenic routes (See Chapter 16 Built and Cultural Heritage).

12.3.6 Centres of Population and Houses

The closest settlement of note is Drimoleague located c. 5.5 km south of the Proposed Development on the R586 regional road. The towns of Bantry and Skibbereen are the largest settlements within the study area. Bantry is located along N71 road on the west coastline at the head of Bantry Bay, 11.2 km from the nearest turbine. Skibbereen is located in the wider southern periphery of the study area, and is also on the N71 national route.

Other settlements include; Dunmanaway (10.5 km E), Drinagh (10.5 km SE) Caheragh (8.4 km S/SW), Leap (16.7 km SE), Donemark (110 km W), Ballylickey (10.2 km W), Kealkill (7.2 km NW), Croomhola Bridge (11.8 km NW), Glengarriff (17.8 km E), Ballingeary (15.3 N/NE) and Inchigeelagh (17 km NE).

12.3.7 Transport Routes

With regard to the surrounding road networks, the nearest major route is the R585 regional route which passes through the central study area in a general east-to-west direction 4.2 km north of the nearest turbine. The N71 National Road passes along the western periphery of the study area 9.9 km west of the Site before diverting east through Skibbereen and exiting via the southeast. There are a number of other Regional Roads that traverse the study area which typically connect to the various settlements, these include;

- R586 (traversing diagonally through the southern portion of the study area in a northeast-to-southwest direction located c. 6.2 km south at its nearest point)
- R593 (journeying from Skibbereen to Drimoleage in a general north-south direction located c.6 km south of the Proposed Development at its nearest point)
- R594 (traverses diagonally from the R593 to the R586, 7.6 km southwest of the nearest turbine)
- R584 (traverses in a northeast direction from Ballylickey on the coast before existing the study area via Inchigeelagh.8km northwest of the nearest turbine)
- R599 (11.2 km east)
- R637 (10.9 km southeast)
- R587 (11.9 km east)

12.3.8 Tourism, Heritage and Public Amenity

In terms of tourism, heritage, and recreation, the study area contains a range of notable features. The most significant of these is the Wild Atlantic Way (WAW) Tourist Driving Route, which runs along the western coastline. The route follows the coastline around Bantry Bay, providing expansive views of the rugged coastal landscape to the west, located approximately 10.4 km from the Proposed Development at its closest point. To the southwest, the WAW reemerges near the settlement of Ballydehob, continuing along the N71 national route to Skibbereen, before veering south toward the coast. The route briefly re-enters the study area before exiting again through the small settlement of Glandore to the southeast. This scenic route is a key feature for tourism in Ireland.

The Proposed Development is situated within the Shehy Mountain range, an area valued for its scenic and recreational attributes, particularly through waymarked trails and cycle routes. Notable nearby recreational features include the Sheeps Head Way, a 171 km long-distance walking trail that begins and ends in Bantry, which passes within 450 m west of the nearest turbine. The Mealagh Woods Loop walk is located 1.6 km to the north of the nearest turbine. In addition, there is a network of other hiking routes, particularly concentrated in the western half of the study area. The Skibbereen Cycle Hub includes a

series of looped tracks spread across the southwestern periphery of the study area. The EuroVelo cycle route also traverses part of the western coastline, closely following the Wild Atlantic Way (WAW) driving route. These recreational routes contribute to the area's tourism and scenic value, creating significant visual and experiential links to the surrounding landscape.

With regard to the immediate vicinity of the study area, besides the aforementioned recreational trails, other notable features include Castledonovan located 2.2 km south of the nearest turbine. Castledonovan is a ruined castle that is frequently visited by the public. The Clodagh Standing Stones are a pair of standing stones forming a stone row and national monument located 3.89km southeast of the nearest turbine.

12.3.8.1 Identification of Viewshed Reference Points (VRP) as a Basis for Assessment

The results of the ZTV analysis provide a basis for the selection of VRP's, which are the locations used to study the landscape and visual impact of the proposed wind farm in detail. It is not warranted to include every location that provides a view of the Proposed Development as this would result in an unwieldy report and make it extremely difficult to draw out the key impacts arising from the Project. Instead, a variety of receptor locations was selected that are likely to provide views of the proposed wind farm from different distances, different angles and different contexts.

The visual impact of a Proposed Development is assessed using up to 6 categories of receptor type as listed below:

- Key Views (from features of national or international importance);
- Designated Scenic Routes and Views;
- Local Community views;
- Centres of Population;
- Major Routes; and
- Amenity and heritage features.

Where a VRP might have been initially selected for more than one reason it will be assessed according to the primary criterion for which it was chosen. The characteristics of each receptor type vary as does how the view is experienced. These are described below.

Key Views

These VRPs are at features or locations that are significant at the national or even international level, typically in terms of heritage, recreation or tourism. They are locations

that attract a significant number of viewers who are likely to be in a reflective or recreational frame of mind, possibly increasing their appreciation of the landscape around them. The location of this receptor type is usually quite specific.

Designated Scenic Routes and Views

Due to their identification in the County Development Plan, this type of VRP location represents a general policy consensus on locations of high scenic value within the Study Area. These are commonly elevated, long-distance, panoramic views and may or may not be mapped from precise locations. They are more likely to be experienced by static viewers who seek out or stop to take in such vistas.

Local Community Views

This type of VRP represents those people who live and/or work in the locality of the Proposed Development, usually within a 5km radius of the Site. Although the VRPs are generally located on local level roads, they also represent similar views that may be available from adjacent houses. The precise location of this VRP type is not critical; however, clear elevated views are preferred, particularly when closely associated with a cluster of houses and representing their primary views. Coverage of a range of viewing angles using several VRPs is necessary to sample the spectrum of views that would be available from surrounding dwellings.

Centres of Population

VRPs are selected at centres of population primarily due to the number of viewers that are likely to experience that view. The relevance of the settlement is based on the significance of its size in terms of the Study Area and/or its proximity to the Site. The VRP may be selected from any location within the public domain that provides a clear view either within the settlement or in close proximity to it.

Major Routes

These include national and regional level roads and rail lines and are relevant VRP locations due to the number of viewers potentially impacted by the Proposed Development. The precise location of this category of VRP is not critical and might be chosen anywhere along the route that provides clear views towards the Site, but with a preference towards close and/or elevated views. Major routes typically provide views experienced whilst in motion and these may be fleeting and intermittent depending on screening by intervening vegetation or buildings.

Tourism, Recreational and Heritage Features

These views are often one and the same given that heritage locations can be important tourist and visitor destinations and amenity areas or walking routes are commonly designed to incorporate heritage features. Such locations or routes tend to be sensitive to development within the landscape as viewers are likely to be in a receptive frame of mind with respect to the landscape around them. The sensitivity of this type of visual receptor is strongly related to the number of visitors they might attract and, in the case of heritage features, whether these are discerning experts or lay tourists. Sensitivity is also heavily influenced by the experience of the viewer at a heritage site as distinct from simply the view of it. This is a complex phenomenon that is likely to be different for every site. Experiential considerations might relate to the sequential approach to a castle from the car park or the view from a hilltop monument reached after a demanding climb. It might also relate to the influence of contemporary features within a key view and whether these detract from a sense of past times. It must also be noted that the sensitivity rating attributed to a heritage feature for the purposes of a landscape and visual assessment, is not synonymous with its importance to the Archaeological or Architectural Heritage record.

The VRPs selected in this instance are set out in **Table 12.7** and their location and orientation are shown on the Map in the photomontage booklet. They have all been selected based on relevant guidance and best practice.

Table 12.7: Outline description of selected Viewshed Reference Points (See Viewpoint Location Map – Figure 12.9)

VRP No.	Location	Representative of*	Distance to nearest turbine (km)	Direction of view
VP1	Local road south of site at Derreenacrinnig West	LCV, AH	900 m	N
VP2	Local road east of site at Cullenagh	LCV	3.2 km	W
VP3	Local road west of site	LCV, AH	600 m	SSE
VP4	Local road northwest of site at Barnagowlane West	LCV, AH	1.7 km	SE
VP5	Local road northeast of site at Coomleagh East	LCV	1.4 km	S
VP6	Scenic Route S30 south of site looking at Castledonovan	DSR, LCV, AH	2.5 km	N
VP7	Scenic Route S30 at Deelish	DSR, LCV	2.9 km	NE
VP8	Scenic Route S30 at Leitry Lower	DSR, LCV	3.2 km	NW
VP9	Clodagh Standing Stones	AH, LCV	4 km	NW
VP10	Local road at Derreenaspeeg	CP	7.7k m	NW
VP11	R586 at Drimoleague	CP, MR	6.2 km	N
VP12	Local road Caheragh	CP	8.6 km	NE
VP13	Local road at Derreenaspeeg	CP, AH	9.5k m	NE
VP14	Skibbereen	CP, MR	17.4 km	N
VP15	Local road at Laharanshermeen	LCV, AH	5 km	ESE
VP16	Local road at Gortnacowly	LCV, AH	3.1 km	SE
VP17	Local road at Snave	CP	12 km	ESE
VP18	Scenic View/ Wild Atlantic Way on the R572	DSR, AH, MR	18.6 km	ESE
VP19	Local road at Ahil Beg	CP, AH	9 km	SE
VP20	Togher	CP	10.1 km	SW

VRP No.	Location	Representative of*	Distance to nearest turbine (km)	Direction of view
VP21	Local road at Kilnadur	CP	15.3 km	NE

*Key Views (KV) / Designated Scenic Routes and Views (DSR) / Local Community views (LCV) / Centres of Population (CP) / Major Routes (MR) / Amenity and heritage features (AH)

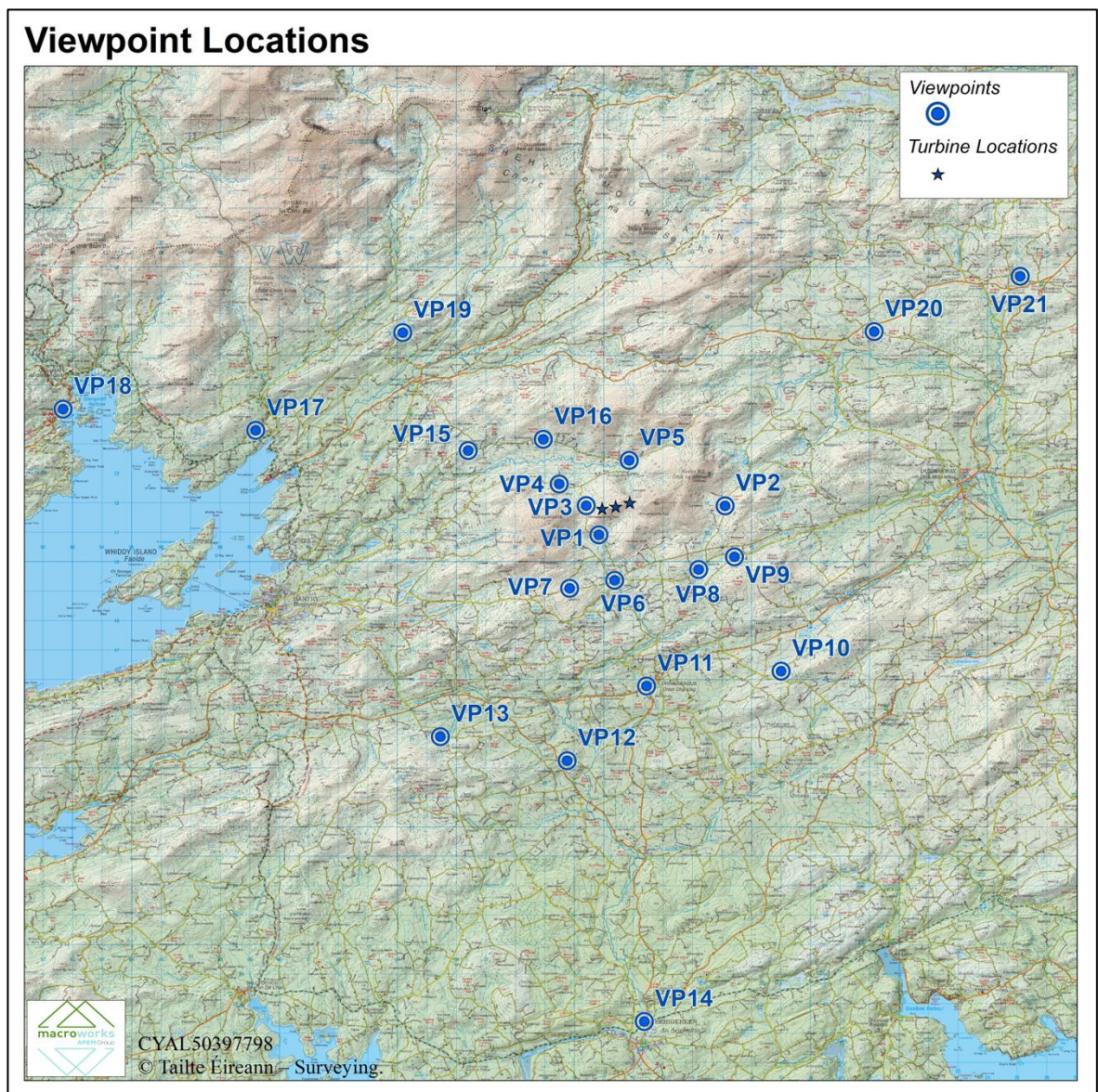


Figure 12.9: Map showing selected representative viewpoints within the Study Area

12.4 MITIGATION MEASURES

In relation to the WEDG, It is considered that the Proposed Development is in keeping with the siting and design criteria presented in the guidance for the 'Mountain Moorland landscape type, with the following noted:

- Location: The Proposed Development is located on a broad elevated ridgeline, which is preferred within the guidance, and is located at a sufficient distance from surrounding properties such that they do not visually dominate them. Their elevated location also ensure that they do not contribute to visual clutter.
- Spatial Extent: The wind farm has a relatively small spatial extent that responds to the scale of this landscape, and the scale of its plateau location.
- Spacing: The turbines are well-spaced, allowing a high degree of visual permeability between the turbines. Their regular spacing corresponds with the scale of the receiving landscape type.
- Layout: The clustered linear layout adopted is advocated for this landscape type.
- Height: The proposed turbines are of a modest height which is considered to be consistent with the moorland landscape which can accommodate a range of heights.

Section 6.18 refers to appropriate setback distances for visual amenity purposes. The guidelines outline a mandatory minimum setback distance of "476 meters" or the distance of "4 times the tip height" of the proposed turbines "between the nearest point of the curtilage of any residential property". This is set out in SPPR2 which is included below:

SPPR 2: With the exception of applications where reduced setback requirements have been agreed with relevant owner(s) as outlined at 6.18.2 below, planning authorities and An Bord Pleanála (where relevant), shall, in undertaking their development planning and development management functions, ensure that a setback distance for visual amenity purposes of 4 times the tip height of the relevant wind turbine shall apply between each wind turbine and the nearest point of the curtilage of any residential property in the vicinity of the Proposed Development, subject to a mandatory minimum setback of 500 metres from that residential property. Some discretion applies to planning authorities when agreeing separation distances for small scale wind energy developments generating energy primarily for onsite usage. The planning authority or An Bord Pleanála (where relevant), shall not apply a setback distance that exceeds these requirements for visual amenity purposes.

The proposals have been designed to ensure that the turbines achieve the minimum setback distance of 470m from residential dwellings, and agreements are in place with regard to the four properties located within this.

All construction activities will follow best practice methods to reduce environmental impacts upon the environment, as outlined in the Construction and Environmental Management Plan (CEMP) which will manage the environmental commitments of the Project through the construction phase, and will be continued through to the commissioning, operation and final Decommissioning phases. It is noted that an Environmental Manager Ecological Clerk of Works (ECoW) with appropriate experience will be appointed for the duration of the construction phase so that the CEMP is effectively implemented.

Full details of the proposals, including works required in relation to the turbine delivery and Grid Connection are outlined in **Chapter 2: Project Description** of this report.

With regard to landscape and visual matters, it is recognised that majority of the construction of the access tracks and hardstands has been completed for the previously consented turbines. Works are therefore limited to upgrades of the existing infrastructure.

The construction methodology has considered the minimisation of landscape disturbance. Temporary works required in relation to the Turbine Delivery Route and 20 kV overhead line (OHL) along the Grid Connection route will require the installation of load bearing surfaces, cable trenches (in-road, and off-road), and the localised disturbance of grass and vegetation.

All areas damaged during construction will be reinstated to their original condition, with the exception of the long-term infrastructure required for the proposed wind farm. Replacement of trees and hedgerows will be undertaken in accordance with approved landscaping plans, with landscape works undertaken in accordance with best practice. The following standards are widely adopted as representing best practice in landscape operations:

- BS 4428:1989 Code of practice for general landscape operations (excluding hard surfaces). BS 5837:2012 – Trees in Relation to design, demolition and construction.
- BS 8545 Trees: from nursery to independence in the landscape - Recommendations.
- BS 3936 - Part 1: Nursery stock specification for trees and shrubs.

Upon Decommissioning, the turbines, and all underground electrical and communications cabling will be removed. Other elements will be retained in situ to serve ongoing forestry and agriculture activity.

No specific landscape or visual mitigation measures are proposed in relation to the proposed wind farm, in addition to the measures outlined.

12.5 MONITORING

Given that there are no specific mitigation measures proposed in regard to the moderation of landscape and visual effects, monitoring measures are not required. It is reiterated however, that an Environmental Manager / Ecological Clerk of Works (ECoW) with appropriate experience will be appointed for the duration of the construction phase so that the CEMP is effectively implemented. This will include replacement landscaping works.

12.6 ASSESSMENT OF POTENTIAL EFFECTS

12.6.1 Landscape Impacts

Landscape impacts are assessed on the basis of landscape sensitivity weighed against the magnitude of physical landscape effects within the Site and effects on landscape character within the wider landscape setting. This wider setting is considered with respect to the Central Study Area (<5 km) as well as the Wider Study Area (5-20 km).

12.6.1.1 *Landscape Character, Value and Sensitivity*

Landscape value and sensitivity are considered in relation to a number of factors that accord with GLVIA3, which are set out below and discussed relative to the Central and Wider Study Area.

Central Study Area (approx. <5 km)

Landscape value and sensitivity are considered in relation to a number of factors highlighted in the Guidelines for Landscape and Visual Impact Assessment 2013, which are set out below and discussed relative to the proposal site and wider study area.

The Central Study Area is a dynamic landscape comprising of varying landscape features and elements that are characterised by a blend of natural and anthropogenic influences. It is predominantly defined by mountainous terrain, with elevated ridgelines, expansive areas of mountain moorland, and scattered rocky outcrops, creating a sense of remoteness and a naturalistic character. However, the Central Study Area also contains numerous anthropogenic features, including extensive commercial coniferous forest plantations that cover a considerable portion of the upland areas. The winding valleys and lower slopes have a strong agricultural influence and are primarily veiled with pastoral farmland and enclosed by hedgerows. There is a notable rural / residential population in these lowland valleys, particularly along the Mealagh Valley. These contrasting features contribute to the Central Study Area's complex character, blending natural and human-made elements.

In terms of scenic designations, there are two designated Scenic Routes within the Central Study Area. Scenic Route 30 (SR30) runs east to west through the southern part of the area, passing within 2.3 km to the south of the Proposed Development at its closest point. SR30 provides views of the surrounding rugged mountains and also passes the ruins of Castledonovan. Similarly, Scenic Route 29, located approximately 4 km to the north at its nearest point, passes through sensitive landscape features such as Cousane Gap. As noted in **Section 12.3.4.4**, there is no potential for visibility of the proposed turbines from this scenic route, but does provide an indication of general scenic amenity relating to the landscape in this area.

The landscape sensitivities of the Central Study Area are primarily defined by its rugged rocky outcrops and expansive areas of mountain moorland. Despite the elevated nature of much of the area, the surrounding landscape also exhibits a working character, largely shaped by the presence of commercial coniferous plantations and agricultural farmland. Within the study area, there are several notable heritage features, including Castledonovan and the Clodagh Standing Stones. The area also offers some recreational amenities, with walking and cycling routes such as the Sheeps Head Way, Castledonovan Loop, Mullaghmesha Loop, and Mealagh Valley Loop, all located within or in close proximity to the Central Study Area. These elements contribute to the area's scenic, historical, and recreational significance.

In terms of landscape designations the Proposed Development is partially located within LCT 9 – Broad Marginal Middleground and Lowland Basin, which is classified with a 'Low' landscape value, 'Medium' landscape sensitivity and a 'Local' landscape importance. The other turbine is located within LCT 15a – Ridged and Peaked Upland which is classified with a 'High' landscape value, 'High' landscape sensitivity and a 'County' landscape importance. The Central Study Area also encompasses three other LCT's including LCT 16b 'Glaciated Cradle Valleys' to the northeast of site which is designated a 'Low' landscape value, 'Medium' landscape sensitivity and 'Local' landscape importance. To the southeast, LCT 6a 'Broad Fertile Lowland Valleys' has a 'High' landscape value, 'High' landscape sensitivity and 'County' landscape importance whereas the western side of the Central Study Area includes LCT 4, Rugged Ridge Peninsulas' which extends all the way out to the coast and is designated a 'Very High' landscape value, 'Very High' landscape sensitivity and 'National' landscape importance. It is important to note that although LCT4 is designated a 'National' landscape importance, the most sensitive features of the LCT are located along the west coast as opposed to the landscape in the Central Study Area. In

terms of High Value Landscape (HVL) the same area that encompasses LCT4 has a further designation as a HVL.

Overall, the Central Study Area is a dynamic landscape featuring a mix of distinct landforms and landscape elements. While the area includes some scenic and sensitive features, much of the surrounding landscape is defined by its robust working upland character, which is further reinforced by the presence of extensive commercial coniferous forest plantations and large areas of agricultural farmland. Furthermore the proposed site has been previously consented for wind energy where construction had begun. The landscape values in the Central Study Area are more closely associated with the functioning rural economy than with highly sensitive or naturalistic qualities. However, the Central Study Area does include designated scenic routes, which are confined to specific road corridors that pass through the more rugged terrain. These scenic routes contribute to the area's landscape value, particularly where they offer expansive views of the surrounding rugged uplands. On the balance of these factors, is considered that the landscape in the immediate context of the Proposed Development site is of a **Medium** landscape sensitivity albeit with localised intricate areas of **High** and **Very High** sensitivity, some of these relate to heritage features and other landscape features.

Wider Study Area (c.5-20 km).

With regard to the wider study area, it is a similarly varied and complex landscape encompassing a broad range of landscape features and values. Most notably, the Shehy Mountain located in the surrounds of the Cork and Kerry County bounds, which encompass the highest mountains in Cork. It should be noted that wind energy is present as a visible, but sub-dominant, element of the landscape across the Wider Study Area, with 14 operational wind farms at present.

In terms of landscape characteristics the Wider Study Area is best described in thirds. The northern, northwest and parts of the Central Study Area comprise of rugged mountainous terrain encompassing the Shehy Mountains Range. Landscape values are associated with the wild rugged ridgelines and sense of remoteness that these depict. Numerous scenic designations and areas of designated sensitivity are located within these areas. The wider western and parts of the southern part of the Study Area is influenced by the rugged Atlantic coastline valued for the highly dynamic and varied coastal landscape. On the contrast much of the study area's wider southern and eastern half accounts for the most notable areas of more typical rural land uses comprising pastoral farmland and smaller blocks of conifer forest.

In terms of recreational amenity, the Wider Study Area encompasses some notable tourism and recreational landscape values and containing a network of waymarked walking trails, local walks, cycling routes and scenic driving routes. The most prominent include sections of the Wild Atlantic Way driving route that traverses the west coast and the Eurovelo Cycling route. Due to the elevated and scenic nature of the landscape of the Wider Study Area, many of the most prominent walking and hiking routes tend to cross over elevated mountaintop summits and broad linear ridges.

The scenic value of the surrounding landscape is reflected in the presence of several scenic designations within the Wider Study Area, many of which are situated along elevated routes that offer panoramic views of the surrounding landscape and prominent scenic features. Some of the most visually sensitive areas of the wider landscape include the Gougane Barra complex, located in the northwest quadrant of the study area, which is surrounded by steep cliffs and rugged escarpments. Other areas of high sensitivity include the immediate environs of Lough Allua and the coastal sections of the study area, which are particularly susceptible to visual change due to their distinctive topography and natural beauty.

In terms of landscape designations, the study area encompasses some highly sensitive landscape character types in its wider surrounds, all of which are associated with the aforementioned highly sensitive landscape areas and features. The most sensitive landscape character types include LCT4 – Rugged Ridge Peninsulas (Very High Landscape Sensitivity, Very High Landscape Value, National Landscape Importance) and LCT16a – Glaciated Cradle Valleys (High Landscape Sensitivity, High Landscape Value, National Landscape Importance). It is important to note that all three of these landscape character types are also designated with Cork CDPs 'High Value Landscape' designations. The current Cork CDP describes these landscape areas as "*our most valuable landscapes*". Overall, the Wider Study Area comprises an array of landscape areas which comprise contrasting values and sensitivities. Nonetheless, the Wider Study Area also encompasses large areas of more typical rural and upland landscapes, where the landscape values tend to relate to the subsistence of the rural economy as opposed to any other highly susceptible landscape values. On balance of the reasons outlined above, the landscape sensitivity of the Wider Study Area is deemed **Medium**, however, it is important to note that there are some areas of **High** and even **Very High** sensitivity, which typically relate to areas such as Gougane Barra, the west coastline and other highly susceptible landscape features and areas.

12.6.1.2 Magnitude of Landscape Effect

The physical landscape as well as the character of the Proposed Development and its Central Study Area (<5 km) is affected by the proposed wind turbines as well as ancillary development such as access and circulation roads, areas of hard standing for the turbines, 20 kV overhead line (OHL) along the Grid Connection route and the substation compounds. By contrast, for the wider landscape of the Study Area, landscape impacts relate exclusively to the influence of the proposed turbines on landscape character.

Those aspects of the Proposed Development that are likely to have an impact on the physical landscape and landscape character are described in **Chapter 2: Project Description**, with construction processes described in the Construction and Environmental Management Plan (CEMP) at **Appendix 2.1**.

Construction Stage Effects on Landscape Character

It is considered that the Proposed Development will have a modest physical impact on the landscape within the Site as the Proposed Development features have a small 'footprint' and will not unduly impose on the receiving landscape character. Furthermore work had already commenced for the previously consented turbines. The topography and land cover of the proposed site will remain largely unaltered with construction being limited to Access Tracks, Turbine Hardstands, the On-site Substation and Control Building compound, and Temporary Construction Compound. Excavations will tie into existing ground levels and will be the minimum required for efficient working. Any temporary excavations or stockpiles of material will be re-graded to marry into existing site levels and reseeded appropriately in conjunction with advice from the Project ecologist.

The internal access track layout has already been constructed for the previously permitted seven turbine development. It was designed to avoid environmental constraints, and follow the natural contours of the land wherever possible reducing the extent of 'cut and fill'. Because the track network and hard stands at the subject turbine locations are already substantially in place, the normal intensity of construction stage activity associated with constructing these feature will be substantially reduced. The main construction stage works will relate to the erecting of the turbines. This will consist of the movement of heavy machinery and materials, but this will be of a temporary duration. The construction stage effects on landscape character from these activities will be minor.

There will be one 20 kV on-site substation constructed to collect the generated power from the Proposed Development before connecting to the national grid at the Ballylickey 110 kV

substation via a Grid Connection. The on-site substation will be located at the south west of the Site. The proposed substation compound will be enclosed by a 2.5 metre high steel palisade fence, and will be heavily screened by the surrounding vegetation.

All internal site cabling will be underground and will follow site access tracks without the need for trenching through open ground. Indeed, the land cover of the Site will only be interrupted as necessary to build the structures of the proposed wind farm and to provide access. Impacts from land disturbance and vegetation loss at the Site are considered to be modest in the context of this landscape setting that is influenced by an array of working rural land uses.

The Grid Connection cabling will run from the onsite substation to the 110 kV Ballylickey Substation via townlands outlined in the Project description. This will comprise of approximately 10.75 km of 20 kV overhead line (OHL) along the Grid Connection route, the OHL to be constructed consists of c. 157 wood poles (ranging from 9 m to 15 m above ground) supporting electrical conductor lines and ancillary structures and equipment.

Site activity will be at its greatest during the construction phase due to the operation of machinery on site and the movement of heavy vehicles to and from the Site. This phase will have a more notable influence on the character of the Site and cable routes than the operational phase, but it is a 'temporary' impact that will cease as soon as the Proposed Development is constructed and becomes operational.

There will be some long-term/permanent construction stage effects on the physical landscape in the form of Turbine Foundations and Hardstands, access tracks, a substation and overhead cable but only the substation and overhead cable are likely to remain in perpetuity as part of the national grid network. It is likely, that except for some residually useful access tracks, all other development features will be removed from the Site and it will be reinstated/restored to the prevailing land cover. Ground workings of this scale are of a very localised influence only. As such, the construction stage landscape effects of the Proposed Development are largely reversible.

There will be some construction stage effects on landscape character generated by the intensity of construction activities (workers and heavy machinery) as well as areas of bare ground and stockpiling of materials as identified in the Construction and Environmental Management Plan (CEMP), which accompanies this application.

Impacts during the construction stage will inherently be most notable at the immediate landscape level, and with distance, the comparative influence of these effects will diminish. Overall, construction stage landscape effects are considered to be of a **High-Medium** magnitude within the Site and its immediate environs (within approximately 1km), reducing to **Medium** and **Medium-low** for the remainder of the Central Study Area at increasing distances.

Beyond the Central Study Area (5km from the Site) and relevant to the Wider Study Area, the magnitude of landscape impact during the construction phase is deemed to reduce to **Low** and **Negligible** at increasing distances. The quality of the landscape effects would remain **Negative**.

Such effects will be **temporary** in duration and are an inevitable consequence of the Proposed Development.

Operational Stage Effects on Landscape Character

For most commercial wind energy developments, the greatest potential for landscape impacts occurs as a result of the change in character of the immediate area due to the introduction of tall structures with moving components. Thus, wind turbines that may not have been a characteristic feature of the area become a defining element of that landscape character. In this instance, wind turbines are an existing feature within the existing landscape context, with existing wind turbines being located 5.2 km to the southeast. Indeed, the entire study area encompasses over 100 existing turbines. Thus, the overall effect therefore, is one of intensification and extension of an established land use and not the introduction of a new and unfamiliar one.

In terms of scale and function, the proposed wind farm and ancillary elements are well absorbed within the context of the Central Study Area. This is due to the broad scale of the landform, landscape elements and varying land use patterns. These attributes prevent the height and extent of the proposed wind farm causing the type of scale conflict that can occur in more intricate landscape areas. The broad hills, ridgelines and mountaintop summits in the central surrounds of the wind farm site comprise some utilitarian character due to the presence of working rural land uses such as agriculture and commercial-scale forestry. Although the Proposed Development represents a stronger human presence and level of built development than currently exists on the Site, it will not detract significantly from the surrounding upland and working rural landscape. Furthermore, existing utilitarian

infrastructure is already present on the Site, with the partially constructed Turbine Foundations, Hardstands and tracks.

It is important to note that in terms of duration, this development proposal represents a long term, but not permanent impact on the landscape and is reversible. The lifespan of the Project is 40 years, after which time it will be dismantled and the landscape reinstated to prevailing conditions. Within 2-3 years of Decommissioning there will be little evidence that a wind farm ever existed on the Site.

The Decommissioning phase will have similar temporary impacts as the construction phase with the movement of large turbine components away from the Site. There may be a minor loss of roadside and trackside vegetation that has grown during the operational phase of the Project, but this can be reinstated upon completion of Decommissioning. Areas of hard standing that are of no further use will be reinstated and reseeded to blend with the prevailing surrounding land cover of the time. It is expected that the Decommissioning phase would be completed within a period of approximately 3 months.

In summary, there will be physical impacts on the land cover of the Site and cable route as result of the Proposed Development during the operational phase, but these will be relatively minor in the context of this working upland landscape where existing wind energy development and areas of commercial conifer forest are an established activity. The Proposed Development is of a modest scale comprising three relatively small turbines and OHL that are well accommodated within its rugged upland landscape context. For these reasons the magnitude of the landscape impact is deemed to be **High-medium** within the Site and its immediate environs (c.1 km) reducing to **Medium** and **Medium-low** for the remainder of the Central Study Area at increasing distances. The quality of the landscape effects is deemed **Negative**. Beyond 5 km from the Site, the magnitude of landscape impact is deemed to reduce to **Low** and **Negligible** at increasing distances as the wind farm becomes a proportionately smaller and integrated component of the overall landscape fabric.

Decommissioning Stage Effects on Landscape Character

The Decommissioning phase will have similar impacts as the construction phase primarily as a result of the removal of turbines and the movement of large turbine components away from the Site. There may be a minor disturbance to roadside and trackside vegetation that has grown during the operational phase, and temporary stockpiling of material, albeit this these aspects would be temporary and readily reinstated upon completion of

Decommissioning. Areas of hard standing that are of no further use will be reinstated and reseeded to blend with the prevailing surrounding land cover of the time, albeit some will be retained and utilised for forestry activities. Any such elements being retained in the longer term would have a negligible influence on landscape character.

It is expected that the Decommissioning phase will be completed within one year and that within a relatively short period of time following Decommissioning (approximately 2-3 years) there will be little evidence that a wind farm was present. Effects will therefore be **temporary/short-term** in duration and are an inevitable consequence of the Proposed Development. Overall, Decommissioning stage landscape effects are considered to be of no greater than a **Medium** magnitude in relation to the Central Study Area, reducing to **Low** and **Negligible** in relation to the Wider Study Area with increasing distance.

Such effects will be **temporary** in duration and are an inevitable consequence of the Proposed Development.

12.6.1.3 Significance of Potential Landscape Effects

The significance of landscape impacts is a function of landscape sensitivity weighed against the magnitude of landscape impact. This is derived from the significance matrix (**Table 12.3**) used in combination with professional judgment.

Central Study Area

Based on a Medium sensitivity judgement and a High-medium magnitude of construction stage landscape impact within the Site and its immediate environs (within approximately 1km), the significance of the impact is considered to be **Moderate / Negative / Temporary** during construction. With distances, the Medium and Medium-low magnitude of construction stage landscape impact would result in the significance reducing to **Moderate-slight/Negative/Temporary**.

The construction phase landscape effects in relation to the Central Study Area are not considered to be significant.

Based on a Medium sensitivity judgement and a High-medium magnitude of operational stage landscape impact within the Site and its immediate environs (within approximately 1 km), the significance is considered to be **Moderate / Negative / Long-term** during the operational phase. With distance, the Medium magnitude of operational stage landscape impact would result in the significance reducing to **Moderate-slight / Negative / Long-term**.

The operational phase landscape effects in relation to the Central Study Area are not considered to be significant.

Based on a Medium sensitivity judgement and a Medium and Medium-low magnitude of Decommissioning stage landscape impact within the Central Study Area, the significance of the impact is considered to be no greater than **Moderate-slight / Negative / Short-term** during Decommissioning. This would progressively reduce with distance.

The Decommissioning phase landscape effects in relation to the Central Study Area are not considered to be significant.

Wider Study Area

Based on a Medium sensitivity judgement and a Low tending to Negligible magnitude of construction stage landscape impact, the significance of the impact is considered to be no greater than **Slight / Negative / Temporary** during construction. In more sensitive parts of the landscape as outlined previously, the High and in places Very High sensitivity, combined with the Low tending to Negligible magnitude of construction stage landscape impact, would result in the significance being no greater than **Moderate-Slight/Negative/Temporary**.

The construction phase landscape effects in relation to the Wider Study Area are not considered to be significant.

Based on a Medium sensitivity judgement and a Low tending to Negligible magnitude of operational stage landscape impact, the significance of the impact is considered to be no greater than **Slight / Negative / Long-term** during the operational phase. In more sensitive parts of the landscape as outlined previously, the High and in places Very High sensitivity, combined with the Low tending to Negligible magnitude of construction stage landscape impact, would result in the significance being no greater than **Moderate-Slight/Negative/Long-term**.

The operational phase landscape effects in relation to the Wider Study Area are not considered to be significant.

Based on a Medium sensitivity judgement and a Low tending to Negligible magnitude of Decommissioning phase landscape impact, the significance of the impact is considered to be no greater than **Slight / Negative / Temporary** during the Decommissioning phase. In more sensitive parts of the landscape as outlined previously, the High and in places Very High sensitivity, combined with the Low tending to Negligible magnitude of construction stage landscape impact, would result in the significance being no greater than **Slight / Negative / Short-term**.

The Decommissioning phase landscape effects in relation to the Wider Study Area are not considered to be significant.

12.6.2 Visual Effects

In the interests of brevity and so that this chapter remains focussed on the outcome of the visual assessment (rather than a full documentation of it), the visual impact assessment at each of the 25 selected representative viewpoint locations has been placed into **Appendix 12.1**, and this section should be read in conjunction with it.

Reference should also be made to the associated photomontage set contained in a separate booklet accompanying the EIAR. A summary table (**Table 12.8**) collates the assessment of visual impacts. A discussion of the results is provided thereafter.

Table 12.8: Summary of Visual Impact Assessment at Representative Viewpoint Locations (refer to Appendix 12.1)

VP No.	Distance to nearest turbine	Visual Receptor Sensitivity	Magnitude of Visual Impact	Significance / Quality / Duration of Impact
VP1	900 m	Medium	Medium-Low	Moderate-slight/ Negative/ Long-term
VP2	3.2 km	Medium-low	Negligible	Imperceptible/ Neutral/ Long-term
VP3	600 m	Medium	Medium-low	Moderate-Slight/ Negative/ Long-term
VP4	1.7 km	Medium	Medium-Low	Moderate-slight / Negative/ Long-term
VP5	1.4 km	Medium - Low	Medium-low	Slight / Negative/ Long-term
VP6	2.5 km	High-Medium	Medium-low	Moderate/ Negative/ Long-term
VP7	2.9 km	High-Medium	Low	Moderate-Slight/ Negative/ Long-term
VP8	3.2 km	Medium	Negligible	Imperceptible/ Neutral/ Long-term
VP9	4 km	Medium	Negligible	Imperceptible/ Neutral/ Long-term
VP10	7.7 km	Medium - Low	Low	Slight / Negative/ Long-term
VP11	6.2 km	Medium-Low	Negligible	Imperceptible/ Neutral/ Long-term
VP12	8.6 km	Medium - Low	Negligible	Imperceptible/ Neutral/ Long-term
VP13	9.5 km	Medium	Low-Negligible	Slight-Imperceptible/ Negative / Long-term
VP14	17.4 km	Medium - Low	Negligible	Imperceptible/ Neutral/ Long-term
VP15	5 km	Medium	Medium-Low	Moderate-slight/ Negative/ Long-term
VP16	3.1 km	Medium-low	Medium-low	Moderate-Slight/Negative/Long-term
VP17	12 km	Medium-low	Low-negligible	Slight-imperceptible/Negative/Long-term
VP18	18.6 km	High-Medium	Negligible	Imperceptible/ Neutral/ Long-term
VP19	9 km	Medium - Low	Negligible	Imperceptible/ Neutral/ Long-term

VP No.	Distance to nearest turbine	Visual Receptor Sensitivity	Magnitude of Visual Impact	Significance / Quality / Duration of Impact
VP20	10.1 km	Medium - Low	Negligible	Imperceptible/ Neutral/ Long-term
VP21	15.3 km	Medium - Low	Negligible	Imperceptible/ Neutral/ Long-term

12.6.3 Visual Impact summary by receptor type

The significance of visual impacts is a function of visual receptor sensitivity and visual impact magnitude, determined through professional judgement as informed by the significance matrix in **Table 12.3**. Visual impacts are summarised below by receptor type.

12.6.3.1 Visual Impacts on Designated Views

With regard to the proposed project, there are a notable number of scenic routes located throughout the central and Wider Study Area, which are represented by 4 of the selected VRPs (VP6, VP7, VP8, & VP18). The nearest and most relevant scenic routes to the Proposed Development include the S30, S29 and S113 (which is further recognised as the Wild Atlantic Way). S30 will afford some visibility of the Proposed Development at a near distance whereas S29 is entirely screened by the intervening landform and therefore not represented by a VRP. S113 (WAW) is located on the western periphery of the study with the potential to experience fleeting visibility along part of its journey. It is important to note that the depicted viewpoints along these scenic route represent a static view. However, in reality, these routes are experienced as a journey and not as a series of fixed views. Thus, the representative viewpoints typically reflect the worst-case scenario in terms of turbine visibility. Furthermore, for many of these scenic routes, the proposed turbines have the potential to be heavily and, in some cases, entirely screened by surrounding terrain and vegetation.

Of these three, the highest visual impact assessed related to VP6 which is deemed to have a 'Moderate' significance. VP6 affords a clear view of the proposed turbines with the heritage feature Castledonavan located in the foreground. Two of the proposed turbines present in a clear and legible manner and are viewed against a rugged mountain range. These turbines will contribute to the intensification of wind energy development and detract slightly from the visual amenity of the view. The second highest visual impact relates to VP7 which is deemed to have a 'Moderate-slight' impact. VP7 affords a clear and legible view of the Proposed Development on the horizon line in the distance. Although the turbines are a noticeable feature, they do not appear incongruous within this landscape which has a notable proportion of anthropogenic activity. Finally in VP8 and VP18 the proposed turbines

are completely screened by the intervening landform and therefore have a visual impact significance of 'Imperceptible'.

It is **not considered that the Proposed Development will generate significant visual impacts** in respect of these designated views.

12.6.3.2 Visual Impacts on Local Community Views

Local Community views are considered to be those experienced by people who live, work and move around the area within approximately 5 km of the Site (i.e., the Central Study Area). These are generally the people who are most likely to have their visual amenity affected by a wind energy proposal due to proximity to the turbines, a greater potential to view turbines in various directions, or having turbines as a familiar feature of their daily views. Owing to proximity, local community views understandably tend to have the highest likely visual impact significance of all receptors within the Study Area.

In total, of the 21 viewpoints assessed as part of this LVIA, 11 (VP1- 9, 15 and 16) were selected as being relevant to a consideration of visual effects in relation to the local community.

The sensitivity ranges between High-Medium and Medium-low with the higher-ranging sensitivities associated with designated scenic areas, where comparatively broad, and long-ranging views are afforded across the wider landscape. Those receptors identified with a 'medium' to 'medium-low' sensitivity are more typical views influenced by the surrounding working landscape, such as broad areas of pastoral farmland and extensive blocks of commercial conifer forestry.

VP6 experienced the highest visual impact recorded of 'Moderate' Visual Impact Significance (however this relates more to the sensitivity of the location as opposed to the magnitude of impact), and five of the viewpoints (VP1, 3, 4, 7 and 16) experienced a 'Moderate-slight' Visual Impact Significance. All of the other viewpoints experienced a 'Slight' or 'Imperceptible' Visual Impact Significance, which reflected the more distant nature of views as well as the more partial and interrupted nature of views as a result of the upland terrain and vegetation. The proposed turbines will become one of the more defining features in this local landscape context, although the modest scale and lateral extent of the proposed turbines will not obstruct views of the distant landscape where available, nor will they be overbearing even in the immediate surrounds.

As such, it is **considered that the Proposed Development will not generate significant visual impacts** for local community receptors.

12.6.3.3 Visual impacts on centres of population

As previously set out in **Section 12.3**, there are a number of settlements throughout the Study Area, particularly in the wider study area. In total, ten viewpoints (VP10, 11, 12, 13, 14, 17, 18, 19, 20, 21) are located within centres of population, albeit it is recognised that the landscape is widely settled and there are numerous properties dispersed throughout the wider landscape (many of which are represented by these viewpoints).

The sensitivity of these views ranges between High-Medium and Medium-low with the higher-ranging sensitivities associated with designated scenic routes, where comparatively broad, and long-ranging views are afforded across the wider landscape.

VP15 experienced the highest visual impact recorded from any of the centres of population; that of 'Moderate-Slight' Visual Impact Significance which represents a community of residential dwellings dispersed along the Mealagh Valley along with a way-marked trail for hill walkers. From this location, the turbines will be revealed on the horizon line at just under 5km away. All of the remaining viewpoints are attributed a significance of either a 'Slight', 'Slight-imperceptible; or 'Imperceptible' Visual Impact Significance.

As a result of the reasons outlined above, it is **not considered that the Proposed Development will result in significant visual impacts** on Centres of Population within the Study Area.

12.6.3.4 Visual impacts on major routes

As previously set out in **Section 12.3**, there are a few major routes within the Wider Study Area. In total, of the 21 viewpoints assessed as part of this LVIA, three (VP11, 14 and 18) representing both regional roads and national roads.

The sensitivity ranges between High-Medium and Medium-low with the higher ranging sensitivities associated with designated scenic routes. All of the viewpoints were deemed to experience a likely visual impact of 'Imperceptible'.

As a result of the reasons outlined above, it is **not considered that any significant visual impacts will occur** for visual receptors on major routes.

12.6.3.5 Visual Impacts on Tourism, Recreational & Heritage Features

As previously set out in **Section 12.3**, there are numerous tourism, recreational & heritage features within the Study Area, some of which are considered to be of international importance. In total, of the 21 viewpoints assessed as part of this LVIA, ten (VP 1,3,4,6,9,13, 15, 16,18,19,) adhere to this receptor type.

The sensitivity of these views ranges between High-medium and Medium. The higher-ranging sensitivities (VP6 and 18) are associated with Wild Atlantic Way and the heritage ruins of Castledonovan which are further recognised as a designated scenic view. VP9 represents the Clodagh Standing Stones which are a historical landmark and consequently designated a 'Medium' sensitivity. The remaining viewpoints relate the various way-marked walking and cycling trails located across the study area and designated a 'Medium' sensitivity.

One of the viewpoints (VP6) experienced the highest likely visual impact recorded; that of 'Moderate' Visual Impact Significance. However in this instance the impact relates more to the sensitivity of the receptor as opposed to magnitude of impact. VP1, 3, 4, 15 and 16 which reflect users of the various waymarked trails and experienced a 'Moderate-slight' (VP1, 3, 4 and 16) and 'Slight' (VP15) visual impact significance respectively.

It is **not considered that the Proposed Development will generate significant visual impacts** concerning views from these tourism, recreational, and heritage features, and routes.

12.6.3.6 Summary of Visual Impacts

Based on the visual impact assessments outlined above, the residual visual impacts range between 'Moderate' to 'Imperceptible'. The majority of the higher impacts relate to the nearest views of the Proposed Development, which principally represent scenic designations, amenity and heritage sites and local community receptors. Whilst the Proposed Development will be noticeable and will present at a considerable scale from some of the nearest views, the proposed turbines appear well accommodated in this upland landscape in terms of their scale and function. In regards to the 10.75 km of overhead line Grid Connection (ranging from 9 m to 15 m above ground) and associated pylons, any visual impacts generated from these elements are considered to be localised and not deemed to be significant.

Overall, it is not considered that the proposed project will result in significant visual impacts. Furthermore, the surrounding landscape context is already somewhat influenced by the previously consented wind farm at Derreenacrinnig which had begun construction.

12.6.4 Visual impacts Conclusion

Based on the visual impact assessment outlined in **Sections 12.4.4.1 - 12.4.4.5** above, it is not considered that the Proposed Development will generate significant visual impacts at receptors in the Central Study Area or Wider Study Area.

12.6.5 Decommissioning Phase

The Decommissioning phase will see the removal of all turbines and infrastructure from the Site, with areas of hard standing that are of no further use reinstated and reseeded to blend with the prevailing surrounding land cover of the time.

The Decommissioning phase will see a similar nature of effects to the construction stage due to the movement of heavy machinery within the Site and to and from the Site removing turbine components. However, such effects will be temporary in duration and decrease in scale as turbines are removed from view and the landscape is substantially reinstated.

As with construction stage impacts, Decommissioning stage effects are not considered to be significant.

12.6.6 Cumulative Impacts

Within the Study Area there are 14 existing wind farms and 6 consented wind farm developments. There is also 1 wind farm at the pre-planning stage within the Study Area.

The cumulative developments are set out below.

Windfarm Name	Number of Turbines	Distance and Direction from the Proposed Development Site Boundary	Status
Barnastooka Wind Farm	14	19 km north	Existing
Carrigariek Wind Farm	5	13 km northeast	Existing
Cleanrath Wind Farm	11	18.9 km northeast	Existing
Coomatallin Wind Farm	4	13.7 km southeast	Existing
Currabwee Wind Farm	7	11.1 km southeast	Existing

Windfarm Name	Number of Turbines	Distance and Direction from the Proposed Development Site Boundary	Status
Derragh	6	18.6 km north/northeast	Existing
Glanta Commons	21	10.17 km southwest	Existing
Grousemount Windfarm	24	16.8 km north/northwest	Existing
Killaveenoge	10	7.5 km southeast	Existing
Kilvinane	3	19.1 km east	Existing
Millane Hill	9	5.2 km southeast	Existing
Reenascreena	5	19.1 km southeast	Existing
Shehy More	12	8.8 km northeast	Existing
Sillahertane Kilgarvan	10	19 km north	Existing
Carrigariak 2	3	13 km northeast	Consented
Coomatallin Ext	2	13.7 km southeast	Consented
Curraglass	7	9.8 km northwest	Consented
Dromleena	9	6.6 km east	Consented
Knockeenboy	7	8.6 km southeast	Consented
Lahanaght Hill Windfarm Ltd	5	8 km southeast	Consented
Gortloughra Wind Farm	9	7.08 km north	Proposed
Gortyrachilly Wind Farm	15	19 km north	Proposed

A cumulative ZTV map is provided in **Figure 12.10**. A colour grading has been employed to illustrate the following types of visibility:

- Blue wash: indicates parts of the Study Area where theoretical visibility of the Proposed Development occurs in isolation and therefore where the proposed turbines will not be seen in combination with existing turbines in the landscape;
- Pink wash: indicates parts of the Study Area where the Proposed Development has the potential to be seen cumulatively with the existing wind farms;
- Green wash: indicates parts of the Study Area where the Proposed Development would not be visible, but existing wind turbines would be.

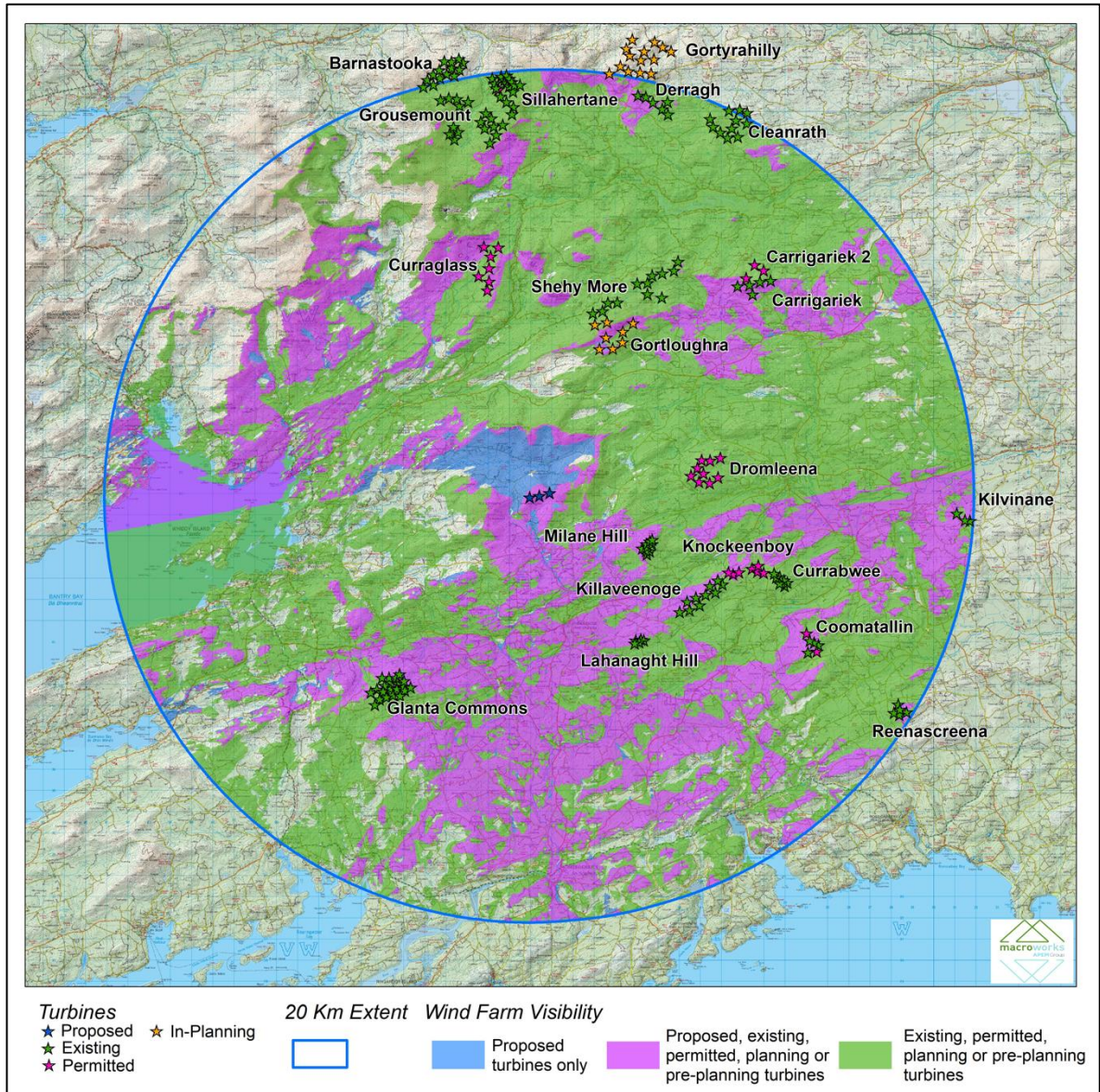


Figure 12.10: Cumulative ZTV (Zone of Theoretic Visibility) showing the theoretical potential for cumulative visibility of the Proposed Development and other existing wind farm developments within the Study Area.

The cumulative ZTV map shows the potential cumulative visibility between the proposed turbines and all other existing and consented developments within the 20 km study area. At present, there are 14 existing (operational) wind farms and 6 consented wind farm developments. The nearest existing wind farm to the Proposed Development is the existing Millane Hill development comprising of 9 turbines dispersed along an upland ridge located 5.2 km to the southeast of site. Whilst wind energy development is a familiar feature that can be viewed from the central study area, it is important to note that the majority of existing and consented developments within the study area are located outside the Central Study Area predominately in the upland areas of the northern and eastern portions of the Study

Area. Indeed, not including the previously consented Derreenacrinnig turbines in the same location as the Proposed Development there are no other wind farms within the Central Study Area.

The notable amount of existing and consented wind farms and wind turbines within the study area is highlighted on the cumulative ZTV map (based on a bare-ground scenario – see **Figure 12.10**), which identifies that only 25.8% of the study area has the potential to afford visibility of existing, consented developments in addition to the Proposed Development. Indeed, the high degree of existing turbine visibility is evident on the cumulative ZTV map, which shows that the Proposed Development only has the potential to be viewed in isolation is limited to approximately 5% of the study area (in the areas immediately north of the Proposed Development). 16.5% of the entire study area has the potential to afford no visibility of existing, consented or the Proposed Development, which further reflects the fact that existing wind turbines are a familiar feature of this landscape context.

As forementioned all of the existing and consented development are located outside of the Central Study Area with a notable offset from the Proposed Development, the most notable potential for cumulative visual effects relates Millane Hill c.5.2 km to the southeast. Furthermore a notable cluster of existing and consented wind farms are located within immediate surrounds of Millane Hill which contribute to additional cumulative effects. However not all of these turbines have the potential to be viewed in combination with the Proposed Development at Derreenacrinnig.

In terms of sequential cumulative effects, the proposed, consented and operational developments have the potential to be viewed from numerous linear receptors within the study area, including scenic routes, national waymarked walking trails throughout the central and Wider Study Area. Some of the more notable linear receptors in relation to the Proposed Development include the scenic route designations within the Central Study Area. One of the scenic routes S30 scenic route, which occurs to the south of the Site and passes through the Central Study Area in a general east to west direction. Whilst the cumulative ZTV identified the potential for theoretical cumulative visibility of the proposed, existing and consented development along this route, it is important to note that this does not account for screening from surrounding vegetation. In the viewpoint selected to represent S30 (VP6,VP7 and VP8) there is no instance where the proposed wind farm is viewed in combination with any existing turbines as a result of intervening landform and vegetation screening any cumulative views. Overall, whilst the Proposed Development will form part

of an existing and consented array of 20 wind farm developments within the study area, it does not generate any notable cumulative visual effects, albeit it will marginally increase the intensity of wind energy within the Central and Wider Study Area.

On balance of the reasons above, it is considered that the proposed Derreenacrinnig Wind Farm development will contribute to a cumulative landscape and visual impact in the order of **Low** in respect of the current cumulative scenario. Despite the considerable number of existing wind farm developments within the study area, the Proposed Development is principally viewed distinctly separate to these.

12.6.6.1 Potential Future Cumulative Scenario

Whilst still currently in-planning, it is important to consider the potential cumulative effects of the proposed project in combination with proposed wind farm developments that are currently in the planning system. In this instance there are two other developments, one located 7.08km north, this being the Gortloughra wind farm that consists of nine turbines. As per the cumulative ZTV, four of the Gortloughra turbines in planning theoretically have the potential to be viewed in combination with the proposed turbines. However as a result of the intervening mountainous terrain between the two wind farms, any combined views of the proposed development are likely to be glimpse views. The other development is located within the northern periphery of the Wider Study Area, this being the Gortyrhilly wind farm. In this instance only one of the turbines from this proposed scheme is contained within the Study Area with the remainder falling outside of the Study Area.

As per the cumulative ZTV, the Gortyrhilly turbines in planning theoretically have the potential to be viewed in combination with the Proposed Development. However at a distance of over 19 km it is not considered that the Proposed Development at Derreenacrinnig will cause any additional cumulative effects in respect of the potential future cumulative scenario.

12.7 SUMMARY OF SIGNIFICANT EFFECTS

It is not considered that there will be any significant effects arising from the proposed Derreenacrinnig West Wind Farm.

12.8 STATEMENT OF SIGNIFICANCE

Based on the landscape, visual and cumulative assessment contained herein, it is considered that there will not be any significant effects arising from the proposed Derreenacrinnig West Wind Farm.

12.9 REFERENCES

- Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports (2022) and the accompanying Advice Notes on Current Practice in the Preparation of Environmental Impact Assessment Reports;
- Landscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape and Visual Impact Assessment – Third Edition (2013);
- NatureScot: Assessing the cumulative landscape and visual impact of onshore wind energy developments (2021);
- Department of the Environment, Heritage and Local Government Wind Energy Development Guidelines (2006) and Draft Revised Wind Energy Development Guidelines (2019);
- Scottish Natural Heritage (SNH) Visual representation of wind farms: Best Practice Guidelines (version 2.2 - 2017); and
- Landscape Institute Technical Guidance Note (TGN) 06/19 Visual Representation of development proposals (2019)