12 Landscape and Visual Amenity

12.1 INTRODUCTION

This chapter assesses the impacts of the Project (**Figure 1.2**) on landscape and visual amenity. The Project refers to all elements of the application for the construction of Letter Wind Farm (**Chapter 2: Project Description**). Where negative effects are predicted, the chapter identifies appropriate mitigation strategies therein. The assessment will consider the potential effects during the following phases of the Project:

- Construction of the Project
- Operation of the Project
- Decommissioning of the Project

Common acronyms used throughout this EIAR can be found in **Appendix 1.2.** This chapter of the EIAR is supported by Figures provided in Volume III and by the following Appendix documents provided in Volume IV of this EIAR:

- **Appendix 12.1 – Viewpoint Assessment**

A Construction and Environmental Management Plan (CEMP) is appended to the EIAR in **Appendix 2.1**. This document will be developed into a Site-Specific Letter CEMP post consent/pre-construction once a contractor has been appointed and will cover construction of the Project. It will include all of the mitigation recommended within the EIAR. For the purpose of this application, a summary of the mitigation measures is included in **Appendix 17.1**.

Landscape Impact Assessment (LIA) relates to changes in the physical landscape brought about by the 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 Development without causing unacceptable adverse changes to its character.

Visual Impact Assessment (VIA) relates to assessing effects on specific views and on 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 Development in conjunction with other developments (associated or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future.

12.1.1 Assessment Structure

In line with the revised EIA Directive and current EPA guidelines 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

12.1.2 Statement of Authority

This Landscape and Visual Assessment (LVIA) report was prepared by Cian Doughan (BSLA, MILI) and reviewed by Richard Barker (MLA MILI) of Macro Works Ltd, a specialist LVIA company with over 20 years' of experience in the appraisal of effects from a variety of energy, infrastructure and commercial developments. Relevant experience includes LVIA work on over 140 onshore 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.

Cian has an honours graduate of Landscape Architecture from UCD and is now a full corporate member of the Irish Landscape Institute. Cian has experience of over seven years working as a Landscape Architect within Ireland with a primary focus on Landscape and Visual Impact Assessment (LVIA) and landscape design. Cian has completed assessments for a wide range of development types across our portfolio, including important water supply projects, as well as a range of wind farm and solar farm applications. Cian has personally

completed the landscape and visual assessment of over 20 wind farms and 50 solar farms, including four SID projects.

12.1.3 Description of the Proposed Development

Planning Permission is being sought by the Developer for the construction of 4 no. wind turbines, a permanent met mast, installation of battery arrays, an on-site 20kV substation and all ancillary works.

The full description of the development assessed hereunder is contained in Chapter 2 of the EIAR Project Description.

12.2 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

12.2.1 Assessment Methodology

Production of this Landscape and Visual Impact Assessment (LVIA) involved baseline work in the form of desktop studies and fieldwork comprising professional evaluation by qualified and experienced Landscape Architects. This entailed the following:

12.2.2 Desktop Study

- Establishing an appropriate Study Area from which to study the landscape and visual impacts of the Development.
- Review of a Zone of Theoretical Visibility (ZTV) map, which indicates areas from which the Development is potentially visible in relation to terrain within the Study Area.
- Review of relevant County Development Plans (CPD), particularly with regard to sensitive landscape and scenic view/route designations.
- Selection of potential Viewshed Reference Points (VRPs) from key visual receptors to be investigated during fieldwork for actual visibility and sensitivity.

12.2.3 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.

12.2.4 Appraisal

- 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 stage and operational stage effects and the mitigation measures that could be employed to reduce such effects.
- Consideration of the significance of residual landscape impacts.
- Consideration of the significance of residual visual impacts aided by photomontages prepared at all of the selected VRP locations.
- Consideration of cumulative landscape and visual effects in combination with other surrounding developments that are either existing or permitted.

12.2.5 Relevant Legislation and Guidance

This LVIA uses methodology as prescribed in 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 (Draft 2015).
- Landscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape and Visual Impact Assessment – Third Addition (2013).
- Scottish Natural Heritage (SNH) Guidance Note: Cumulative Effect of Windfarms (2012).
- Department of the Environment, Heritage and Local Government Wind Energy Development Guidelines (2006/2019 revision) and Preferred Draft Approach to revising the 2006 Guidance published 2017.
- Scottish Natural Heritage (SNH) Visual representation of wind farms: Best Practice Guidelines (version 2.2 - 2017).

12.2.6 Definition of Study Area

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

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

In the case of this project, the blade tips are up to 150m high and, thus, the minimum ZTV radius recommended is 20 km from the outermost turbines of the scheme (see **Figure 12.1)**. This is considered to be appropriate in this instance on the basis that significant impacts are not predicted to occur beyond 20km. Furthermore, there are not considered to be any sites of national or international importance between 20 – 25km and thus, the radius of the study area will remain at 20km. Notwithstanding the full 20km extent of the LVIA study area, there will be a particular focus on receptors and effects within the Central Study Area where there is higher potential for significant impacts to occur. When referenced within this assessment, the 'Central Study Area' is the landscape within 5km of the Site.

12.2.7 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 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.
- Photomontages consisting of existing views, wireframe views and proposed views.

12.2.8 Assessment Criteria for Landscape Effect

The classification system used by Macro Works to determine the significance of landscape and visual impacts is based on the IEMA Guidelines for Landscape and Visual Impact Assessment (2013). When assessing the potential impacts on the landscape resulting from a windfarm development, the following criteria are considered:

- Landscape character, value and sensitivity
- Magnitude of likely impacts
- 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 to its essential characteristics. Landscape Value and Sensitivity is classified using the following criteria (refer to **Table 12.1**):

Table 12.1 Landscape Value and Sensitivity

Sensitivity	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 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 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 (refer to **Table 12.2** below).

Table 12.2 Magnitude of Landscape Impacts

Sensitivity	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 extensive change of the landscape in terms of character, value and quality.
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 a considerable 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 noticeable changes in landscape character, and quality.

Sensitivity	Description
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 that would lead to discernible changes in landscape character, and quality.
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 leading to no material change to landscape character, and quality.

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 (refer to **Table 12.3** below):

Table 12.3 Landscape Impact Significance Matrix

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

Note: Judgements deemed 'substantial' and above are considered to be 'significant impacts' in EIA terms.

12.2.9 Assessment Criteria for Visual Effect

As with the landscape impact, the visual impact of the 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.

12.2.9.1 Visual Sensitivity

Unlike landscape sensitivity, visual sensitivity has an anthropocentric basis. 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 criterion. Susceptibility criteria is extracted directly from the IEMA Guidelines for Landscape and Visual Assessment (2013), 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 the IEMA Guidelines for Landscape and Visual Assessment (3rd edition 2013) 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 on a regular basis and whether this is significant at 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 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.

12.2.9.2 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 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. Instead, the 2012 Fáilte Ireland survey entitled 'Visitor Attitudes On The Environment – Windfarms' found that

"Compared with other types of development in the Irish landscape, windfarms elicited a positive response when compared to telecommunication masts and steel electricity pylons"

…. and that

"most (tourists) *felt that their presence did not detract from the quality of their sightseeing, with the largest proportion (45%) saying that the presence of the windfarm had a positive impact on their enjoyment of sightseeing…*".

The purpose here is not to suggest that turbines are either inherently liked or disliked, 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 windfarm 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 Development 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 derived from the Guidelines for Landscape and Visual Impact Assessment (refer to **Table 12.4** below):

Table 12.4 Magnitude of Visual Impacts

Sensitivity	Description
Very High	The proposal obstructs or intrudes into a large proportion or critical part of the available vista and is without question the most noticeable element. An extensive degree of visual change will occur within the scene completely altering its character, composition and associated visual amenity
High	The proposal obstructs or 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 change will occur within the scene substantially altering its character, composition and associated visual amenity
Medium	The proposal represents a moderate intrusion into the available vista and is a readily noticeable element. A noticeable degree of visual change will occur within the scene perceptibly altering its character, composition and associated 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 influence the visual amenity of the scene

12.2.9.3 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.

12.2.9.4 Quality and Duration 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 landscape and visual effects will almost always be negative, rather than positive or even neutral. Unless otherwise stated, the quality of 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 the 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.

12.3 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 proposal 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).

A description of the landscape context of the proposed wind farm site and wider 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 in **Section 12.3.10.**

12.3.2 Landform and Drainage

The Development is located on elevated rolling transitional lands north of Corry Mountain (428m AOD) and northeast of Carrane Hill (458m AOD). The Development is situated along sloping lands situated at between c. 230-260m AOD and is intersected by a small stream that flows in a southerly direction through the Site. This stream merges with the Owengar River, which meanders through a small valley immediately south of the Site and empties into Lough Allen, the largest waterbody within the study area, situated some c. 5km southeast of the Site. In general, the study area comprises a complex and varied mix of terrain, including upland rugged mountainous terrain, broad lowland valleys and low-rolling lakeside farmland. Some of the most notable landscape features within the central and wider study area include Lough Allen (c.5km southeast of the Site), Lackagh Mountain (c. 8km northeast of the Site), the River Shannon (c.9km east of the Site), Benbo Mountain (c.12km north of the Site), Lough Gill (c. 12km northwest of the Site) and Lough Arrow and Lough Key (c. 13km and 17km southwest of the Site, respectively).

Plate 12-1 Elevated upland ridge west of Corry Mountain looking north towards the Site and wider northern extent of the study area.

12.3.3 Vegetation and Land use

In similar circumstances to the landform of the study area, the land use and land cover are similarly varied. The Development is located across elevated transitional terrain cloaked in a mix of moorland and extensive commercial conifer forest plantations (see **Figure 12.2** and **Figure 12.3)**. West and south of the Site, as the terrain begins to ascend towards the more elevated uplands, the land cover is similar, albeit the most elevated lands are principally cloaked in broad areas of moorland and upland bog. To the east, as the terrain transitions to low elevations, the land cover transitions to more typical rural land uses, such as an intricate patchwork of small pastoral fields bound by mixed hedgerow vegetation. Many of the winding valleys that traverse the study area are similarly flanked by pastoral farmlands, whilst their more elevated slopes are cloaked in conifer forest. Indeed, whilst the uplands and elevated lands throughout the study area are cloaked in broad areas of conifer forest, upland bog and mountain moorland, the most prominent single land use throughout the study area is that of pastoral farmland, typically comprising small to medium-sized geometric fields.

The study area also comprises a broad mix of utilitarian land uses. Within the central study area, several existing wind farm developments are situated across the broad upland plateau to the west and south of the Site, whilst the small settlement of Drumkeeran accounts for the nearest and most notable urban centre within the central study area. The wider study area also comprises a variety of urban settlements, whilst numerous major transport routes traverse the central and wider study area. There is a notable presence of extractive industries on the elevated lands in the southern half of the study area.

Plate 12-2 Typical transitional land uses within the central study area comprising farmed fields, blocks of conifer forest, isolated dwellings and existing wind energy development.

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)

The Wind Energy Development Guidelines (2006/2019 revision) provide guidance on wind farm siting and design criteria for a number of different landscapes types. The Site of the proposed development is considered to be located within a relatively complex landscape setting that is most consistent with the 'Transitional Marginal Landscape' type from the Wind Energy Development Guidelines. However, the wider context does encompass characteristics from a mix of the landscape types including, 'Mountain Moorland' and 'Hilly and Flat Farmland'.

The most relevant recommendations for the 'Transitional Marginal' Landscape type are set out below, but with consideration of the guidance relating to other relevant landscape types considered thereafter.

Transitional Marginal Landscapes:

Location – *"As wind energy developments, for reasons of commercial viability, will typically be located on ridges and peaks, a clear visual separation will be achieved from the complexity of lower ground."*

"wind energy developments might also be located at lower levels in extensive areas of this landscape type, where they will be perceived against a relatively complex backdrop. In these situations it is important to minimise visual confusion such as the crossing by blade sets of skylines, buildings, utility lines and varied landcover."

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

"4(a)Wind energy development with regular spacing and linear layout – may not be appropriate due to the undulation of the land from as well as limited field pattern."

"4(b)Wind energy development with irregular spacing and random layout -is more appropriate given the relative undulation of the setting."

"4(c)Large wind energy development straddling two landscape character types within the same visual unit can create visual ambivalence and, thus, negative tension between the two character types involved."

Spacing - *"All options are possible, depending on the actual landscape characteristics. However, irregular spacing is likely to be most appropriate."*

Layout - *"The likely location of wind energy developments on ridges suggests a linear or staggered linear layout whereas on broader hilltops they could be linear or clustered."*

Height - *"…where the upper ground is relatively open and visually extensive, taller turbines may be more appropriate."*

"…the profile can be even or uneven, depending on the profile and visual complexity of the terrain involved. The more rugged and undulating, the greater the acceptability of an uneven profile provided it does not result in significant visual confusion and conflict."

Cumulative - *"This would have to be evaluated on a case-by-case basis, but great caution should be exercised. The spatial enclosure often found in transitional marginal landscapes is likely to preclude the possibility of seeing another wind energy development. However, should two or more wind energy developments be visible within a confined setting a critically adverse effect might result, depending on turbine height and wind energy development extent and proximity."*

It is considered that the siting and design of the proposed Wind Farm is generally consistent with the guidance noted above for the 'Transitional Marginal Landscapes' landscape type. In combination with the recommendations for 'Transitional Marginal Landscapes' landscape type, the siting and design recommendations for the 'Mountain Moorland' and 'Hilly and Flat Farmland' landscape types have also been considered when designing the turbine layout for the proposed Letter Wind Farm as a result of the varied nature of the landscape within

the central and wider study area. Most design options appear to be appropriate for 'Transitional Marginal Landscapes' and vary depending on the specific site. In respect of the proposed wind farm, the proposed development responds well to the guidance in relation to the spatial extent, which states "*Wind energy developments in these landscapes should be relatively small in terms of spatial extent*", in addition to the layout guidance, which states "*the likely location of wind energy developments on ridges suggests a linear or staggered linear layout".*

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 *"500 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 nearest residential dwelling is 710m from the nearest turbine, which exceeds the setback distance outlined in both the current 2006 Guidelines and the Draft Revised Guidelines (2019).

12.3.5 Leitrim County Development Plan 2023-2029

12.3.5.1 Leitrim Landscape Character Assessment 2020 Review

The current Landscape Character Assessment review identifies 17 contrasting Landscape Character Types (LCTs) within County Leitrim and a further 14 Landscape Character Areas (LCAs). The proposed development is contained within the LCT 6 – Moorland Hills, although

the landscape a short distance to the west of the Site transitions to LCT 5 – Moorland Plateau, whilst a short distance east of the Site, the lower terrain transition to LCT 8 – Valley Farmland. LCT 6 – Moorland Hills "*are generally located between 200 and 300 m AOD and comprise relatively steep sided slopes leading up to the plateaus areas or mountain tops. These comprise marginal land with little or no hedgerow enclosure or field pattern. Hillsides generally allow long views across the surrounding lowlands except where woodland cover is extensive…….. Large tracts of plantation coniferous forest are dispersed throughout. Some deciduous woodland and scrub occupies the lower slopes."*

With regard to LCAs in County Leitrim, the proposed development is wholly located in LCA11 – Corry Mountain (refer to **Figure 12.4**), which is described as *"an upland area which overlooks Lough Allen and lowlands from the west. The area features extensive tracts of peat bog, transitional woodland and scrub……In the agricultural landscapes on the lower slopes hedgerow enclosure results in a more intimate landscape".*

With regard to landscape sensitivity and quality of LCA 11, the current Landscape Assessment states *"the landscape quality and condition is partially affected by the presence of wind turbines, in particular the upland areas where these and associated access tracks interrupt the otherwise remote and tranquil character of the mountain moorland plateaus."* Furthermore, the "*upland plateaus are sensitive landscapes due to their visual exposure and intervisibility with the lowlands*", whils*t "the lowland farmed landscapes may be less sensitive to change due to the extent of wooded vegetation cover*".

The landscape assessment also identifies 'valued and sensitive attributes' within this LCA, which include *"the skyline of Corry Mountain, albeit featuring wind turbines, form a distinctive backdrop to the lowland landscapes to the east and also the setting of the town of Drumkeeran."*

The current landscape assessment also includes several conservation recommendations for this LCA, some of which are relevant to the proposed development and are outlined below:

- *"Native species hedgerows planting to field boundaries is preferable to post and wire fencing*
- *Views to and from distinctive mountain skylines and Lough Allen to be conserved"*

Whilst the most relevant LCA to the proposed development is LCA11, several other LCAs are located within the study area, the nearest and most relevant of which include;

- LCA 6 – The Doons and Crockauns
- LCA 7 – Benbo
- LCA 8 – The Boleybrack Uplands
- LCA 9 – The Northern Glens and Central Lowlands
- LCA 10 – Slieve Anierin

12.3.5.2 Leitrim CDP – Appendix VII – Review of Landscape Designations

In addition to the review of the landscape assessment, the current Leitrim County Development Plan includes a review of landscape designations throughout the county. The review includes an updated map of the proposed landscape designations for County Leitrim, which includes eight 'Areas of Outstanding Natural Beauty' (AONB) and twelve 'Areas of High Visual Amenity' (AHVA). Whilst the proposed development is neither directly located in a AONB or AHVA designation, both an AHVA and AONB designation are located within the southern half of the central study area. The nearest of these is the AHVA known as B7-Corry Mountain, which is situated just over c.500m south of the Site, whilst an AONB designation known as A7 – Lough Allen (refer to Appendix VII, figure 5.1 of the CDP and **Figure 12.5** of, is situated just over 4.5km southeast of the Site. A summary of each of these susceptible designations is included below.

Area of High Visual Amenity: B7 – Corry Mountain

B7 Corry Mountain AHVA *"comprises a mountain moorland landscape, the summit of which is Seltannasaggart or Corry Mountain which presents as a distinctive landmark overlooking the surrounding lowlands to the east and Lough Allen. The landscape with its bleak moorland landcover has some qualities of wildness and tranquillity albeit these qualities are somewhat eroded due to the presence of wind turbines."*

The importance of this landscape is attributed to several special qualities, some of which relate to the proposed development and are included below;

- *"Panoramic views of Lough Allen and adjacent mountain range associated with Slieve Anierin;*
- *Minor roads winding through the mountain moorland landscape from which dynamic changing views of distant mountainous areas are attained further afield;*
- *The Miner's Way & Historic Trail walking route crosses the southern edge of this area and is enjoyed by visitors and locals; and*
- *High levels of tranquillity and sense of remoteness away from settlements, roads and wind turbines."*

Area of Outstanding Natural Beauty: A7 - Lough Allen

A7 Lough Allen AONB *"is a large scale vast expansive lakeland landscape. The lake margin features gently undulating farmland with mature hedgerows and intermittent small areas of woodland near the lake margin. Small minor roads pass through the farmed landscape and as these approach the lake, a sense of surprise and drama is experienced as the open nature and vast expansiveness of the lakeland landscape is suddenly experienced by the viewer at many locations. Such views have a wide range and are far reaching towards other landscapes outside this area."*

The importance of this landscape is attributed to several special qualities, some of which relate to the proposed development and are included below;

- *"Vast expansive lakeland landscape of unusually large scale compared with others in Ireland and forming part of the catchment of the River Shannon (longest river in Ireland);*
- *Minor roads in secluded woody landscapes approach the lake margin where expansive views of the lake and surrounding landscape are revealed leading to a sense of surprise;*
- *The Leitrim Way long distance walking route is enjoyed by visitors and locals; and*
- *High levels of tranquillity and sense of remoteness away from settlements and roads."*

Landscape policy and objectives are included in section 11.3 of the current Leitrim County Development Plan. Some of the most relevant landscape policy and objectives to the proposed development are included below;

Policy

LCA POL 2*: To protect, enhance and contribute to the physical, visual and scenic character of Co. Leitrim and to preserve its unique landscape character.*

LCA POL 3*: To ensure that landscape sensitivity and the preservation of the uniqueness of a landscape character area (where appropriate) is an important consideration in determining the appropriateness of development uses and proposals in areas of landscape sensitivity, (scenery, nature conservation or archaeology) in conjunction with the siting, design and materials proposed.*

LCA POL 4*: To seek to ensure that local landscape features, including historic features and buildings, hedgerows, shelter belts and stone walls, are retained, protected and enhanced where appropriate, so as to preserve the local landscape and character of an area, whilst providing for future development.*

Objectives

LCA OBJ 1: *To protect and enhance the quality, character, and distinctiveness of the physical, visual and scenic character of landscapes of the county in accordance with national policy and guidelines and the recommendations of the Leitrim Landscape Character Assessment (2020) which forms Appendix VI of this Plan.*

LCA OBJ 2: *To ensure that the management of development will have regard to the value of the landscape, its character, importance, sensitivity and capacity to absorb change as outlined in Appendix VI of this Plan - Leitrim Landscape Character Assessment (2020) and its recommendations.*

12.3.5.3 Leitrim Renewable Energy Strategy 2022

The current Leitrim CDP includes a Renewable Energy Strategy in Appendix IX. This comprises 'Part A – Renewable Energy Strategy for County Leitrim' and 'Part B – Landscape and Visual Capacity Study for Wind Farms and Wind Turbine'. Section 6.1 Wind Energy of the Part A document is of most relevance to the proposed development and states that *"having combined the technical and mapping analysis (Step 1) and the Landscape and Visual Capacity Assessment (Step 2), opportunities for a new wind farm are limited. There are no areas where new wind turbines would be considered 'acceptable in principle'".*

Nonetheless, the Wind Energy Strategy outlines areas with 'Viable Wind Speeds' and 'Available Areas' on figure 6.3 of the Part A document. Whilst the current Wind Energy Strategy notes that areas identified a 'Available Areas' "do not correspond with 'acceptable in principle' status for wind energy", these take account of constraints posed by features such as *"European and Ramsar protected sites, heritage and monuments, settlements and existing infrastructure/ material assets……and also take into account a setback distance of 500m from all sensitive receptors consistent with the Wind Energy Guidelines of 2006 and the draft 2019 WEDGs."*

The Part B document gives a comprehensive analysis of all LCAs within Leitrim and their potential capacity to accommodate wind farm development. With regard to LCA 11, *"this landscape is considered to have some limited capacity to accommodate wind turbines. The rolling topography and simple landcover of blanket bog and heath are characteristics which indicate that some potential to accommodate wind turbines may exist subject to detailed design and assessment. Views across and from Lough Allen are an important consideration together with the setting of the town of Drumkeeran and recreational walking routes such as the Miner's Way. Some limited areas to the north west of Corry Mountain where commercial forestry is present may be considered subject to detailed design, having regard*

for landscape and visual constraints. In these areas, there is potential for adverse cumulative effects with the nearby wind farms and that associated with Carrane Hill in Sligo."

The Part B study concludes with an overall summary in relation to potential wind energy capacity in County Leitrim and states although "*there is limited capacity to accommodate future development in the form of wind turbines and wind farms, it is acknowledged that areas of upland moorland where rolling landform and consistency of landcover could be deemed worthy of further assessment to ascertain capacity to accommodate a limited number of wind turbines. Such areas may also comprise altered landscapes due to man made influences such as commercial forestry".*

Policy and objectives relating to wind energy designations is included in section 6.1.6 of the current Renewable Energy Strategy, the most relevant of which is included below:

Objective W1: *Promote appropriate wind energy development in Leitrim.*
Policy W1.1: *Proposals for on-shore wind farm development will be determined in accordance with the Wind Energy Development Guidelines and County Development Plan policy framework.*

12.3.6 Sligo County Development Plan 2017-2023

Whilst the proposed development is wholly contained within County Leitrim, the Sligo County boundary is some 2.6km west of the Site at its nearest point, and thus, it is important to consider landscape policy and context in the current Sligo County Development Plan.
The current Sligo County Development Plan does not contain a Landscape Character Assessment of the traditional form that objectively identifies geographically distinct landscape character units. Instead, it identifies areas of 'Normal Rural landscape' and 'Sensitive Rural Landscape' as well as 'visually vulnerable' linear features such as ridgelines and coastlines. The nearest parts of Sligo to the proposed development are contained in a mix of all three of the landscape classifications outlined above, albeit the predominance of the landscape in the western half of the study area within Sligo is contained in 'Normal Rural' landscape.

Sensitive Rural Landscapes are defined as; *"areas that tend to be open in character, highly visible, with intrinsic scenic qualities and a low capacity to absorb new development – e.g. Knocknarea, the Dartry Mountains, the Ox Mountains, Aughris Head, Mullaghmore Head etc"*.

Visually Vulnerable Areas are defined as; *"distinctive and conspicuous natural features of significant beauty or interest, which have extremely low capacity to absorb new development – examples are the Ben Bulben plateau, mountain and hill ridges, the areas adjoining Sligo's coastline, most lakeshores etc"*.

Relevant Landscape and Visual Policies:

Sligo County Development Plan lists a number of landscape and visual related policies in Chapter 7. The most relevant of these to the proposed development include:

P-LCAP-1*: Protect the physical landscape, visual and scenic character of County Sligo and seek to preserve the County's landscape character.*

Planning applications that have the potential to impact significantly and adversely upon landscape character, especially in Sensitive Rural Landscapes, Visually Vulnerable Areas and along Scenic routes, may be required to be accompanied by a visual impact assessment using agreed and appropriate viewing points and methods for the assessment.

P-LCAP-2*: Discourage any developments that would be detrimental to the unique visual character of designate Visually Vulnerable Areas.*

P-LCAP-4: *Strictly control new development in designated Sensitive Rural Landscapes, while considering exceptions that can demonstrate a clear need to locate in the area concerned. Ensure that any new development in designated Sensitive Rural Landscapes:*

- *does not impinge in any significant way on the character, integrity and distinctiveness of the area;*
- *does not detract from the scenic value of the area;*
- *meets high standards of siting and design;*
- *satisfies all other criteria with regard to, inter alia, servicing, public safety and prevention of pollution.*

12.3.7 Roscommon County Development Plan 2022-2028

Whilst the proposed development is wholly contained within County Leitrim, the Roscommon County boundary is less than 5km south of the Site at its nearest point, and thus, it is important to consider landscape policy and context in the current Roscommon County Development Plan.

A landscape character assessment was carried out for County Roscommon and is included in the current county development. The landscape character assessment identifies 36 landscape character areas within County Roscommon, with the nearest and most relevant of these LCA 14 – Arigna Mountains and LCA 1 – Lough Allen and Arigna Foothills. Both of these character areas have been classified with a 'Very High Value'. Both of these

landscape areas are noted for their scenic quality, much of which relates to Lough Allen in LCA 1 and to elevated upland views in LCA 14.

Relevant policies relating to the landscape are included below:

NH 10.25: *Minimise visual impacts on areas categorised within the County Roscommon Landscape Character Assessment including "moderate value"," high value", "very high value" and with special emphasis on areas classified as "exceptional value" and where deemed necessary, require the use of Visual Impact Assessment where proposed development may have significant effect on such designated areas.*

12.3.8 Cavan County Development Plan 2022-2028

Whilst the proposed development is wholly contained within County Leitrim, the Cavan County boundary is less than 10km northeast of the Site at its nearest point, and thus, it is important to consider landscape policy and context in the current Cavan County Development Plan.

The current Cavan CDP includes a landscape categorisation for County Cavan which subdivides the county into 5 Landscape Character Areas. The most relevant of these to the proposed development is LCA 1 – Cuilcagh-Anierin Uplands of West Cavan.

The current Cavan County Development Plan identifies 'Areas of High Landscape Value or Special Interest', which include County Heritage Sites, Scenic Views and View Points, Scenic Routes, Forest Parks and other Parks, Major Lakes and Lake Environ, Lakeside Amenity Areas and Riverside Amenity Areas. The CDP states that *"the scenery and landscape of the County are of enormous amenity value to residents and visitors of the County"* and *"the protection of this asset is vitally important when considering the development of the county".*

The current CDP outline landscape policy and development objectives throughout Sections 10.16 – 10.25, some of which is relevant to the proposed development and are included below;

Development Objectives for Landscape Character Areas

LC1 - Ensure the preservation of the unique landscape character type by having regard to the character, value and sensitivity of a landscape when determining a planning application.

LC2 - Ensure development reflects and reinforces the distinctiveness and sense of place of the landscape character areas. This should include the retention of important features or

characteristics which contribute to their distinctiveness such as geology and landform, habitats, settlement patterns, historic and vernacular heritage.

LC3 - Resist development such as houses, forestry, masts, extractive operations, landfills, caravan parks and large agricultural /horticulture units which would interfere with the character of highly sensitive areas or with a view or prospect of special amenity value.

LC4 - Ensure that new development does not impinge in any significant way on the character, integrity and distinctiveness of highly sensitive areas and does not detract from the scenic value of the area such as visual harm, not in keeping elements of the landscape, causes loss or disturbance of the landscape elements contributing to the local distinctiveness, historic elements that contribute to landscape character and quality, vegetation which is characteristic of a particular landscape and visual conditions of a landscape.

LC5 - Ensure new development meets high standards of siting and design.

LC6 - Protect skylines and ridgelines from development

Special Landscape Policy Areas

SPLA 1 - Maintain the scenic and recreation value of these areas by restricting all adverse uses and negative visual impacts.

12.3.9 Ecological Designations

Ecological designations such as Special Areas of Conservation (SAC's), Special Protection Areas (SPA's) and Natural Heritage Areas (NHA's) are relevant to the landscape and visual assessment as they can identify areas that are likely to exhibit naturalistic character and low levels of built development. They also highlight areas to which landscape conservation values are attached and they are often associated with outdoor amenity facilities where people go to enjoy the landscape setting.

In this instance there are two ecological designations within the central study area, which are included below:

- Corry Mountain Bog - Natural Heritage Area (NHA)
- Carrane Hill Bog – Natural Heritage Area (NHA)

12.3.10 Visual Baseline

Only those parts of the Study Area that potentially afford views of the proposed Development are of interest to this part of the assessment. Therefore, the first part of the visual baseline is establishing a 'Zone of Theoretical Visibility' and subsequently, identifying important visual receptors from which to base the visual impact assessment.

12.3.10.1 Zone of Theoretical Visibility (ZTV)

A computer-generated Zone of Theoretical Visibility (ZTV) map has been prepared to illustrate where the proposed development is potentially visible from (**Figure 12.6** refers). 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 complex vegetation patterns within this landscape, the main value of this form of ZTV mapping is to determine those parts of the landscape from which the proposed development will definitely not be visible, due to terrain screening within the 20km Study Area.

The following key points are illustrated by the 'bare-ground' ZTV map (**Figure 12.6** refers):

- Due to the complex and diverse nature of the terrain within the study area, which comprises elevated rolling hills and ridges, the proposed turbines will not be visible from over half of the study area.
- Nonetheless, where theoretically visibility occurs within the study area, the ZTV identifies that views of all 4 of the proposed turbines will be most common, and there is limited opportunity to afford views of three turbines or less.
- Comprehensive theoretical visibility of all four turbines occurs for up to 2-3km in all directions from the Site, albeit this visibility pattern begins to dissipate beyond this, especially to the south and southwest, where visibility is almost entirely eliminated beyond 5km from the Site.
- Due to the rolling nature of the drumlin hills within the study area, the ZTV presents with a 'sand-ripple' like effect, where visibility is entirely eliminated within the inter-drumlin hollows.
- Whilst some notable areas of theoretical visibility pattern occur in the surrounds of Lough Gill in the northwest quadrant of the study area, the wider northern half of the study area is limited to potential visibility from upland hills and elevated ridges. Some theoretic visibility occurs in the elevated lands in the surrounds of Manorhamilton, albeit the settlement itself will be afforded no views of the proposed turbines.
- To the northeast of the Site, a broad area of theoretical visibility extends 7-8km from the Site and is contained by the elevated uplands in the Boleybrack Mountains.
- East from the Site, the settlement of Drumkeeran has the potential to afford theoretic visibility of the proposed development, a broad pattern of which extends further east across Lough Allen towards the small village settlements of Ballinagleragh and Dowra. Whilst some areas of theoretic visibility extend as far east as the 20km study area boundary, much of this is contained by the uplands in the surrounds of Slieve Anierin.

- Much of the southwest quadrant of the wider study area will be entirely screened from the proposed turbines by the elevated ridges immediately west and south of the Site. There will be no turbine visibility in the surrounds of the several loughs that are located in the wider study area, nor will there be any visibility of the turbines from the Carrokeel Passage Tombs located along elevated lands in the wider south-western periphery of the study area.

12.3.10.2 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 post cards that represent the area.

All of the scenic routes and views in Leitrim, Sligo, Roscommon and Cavan that fall inside the ZTV pattern (see **Figure 12.6**) were investigated during fieldwork to determine whether actual views of the proposed wind farm might be afforded. Where visibility may occur, a viewpoint has been selected for use in the visual impact appraisal later in this chapter.

Table 12.5 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.
Leitrim CDP – Scenic Designations		
V10	**Not Relevant** – view located outside of ZTV and oriented in the opposite direction to the proposed development	-
V12	**Not Relevant** – view located outside of ZTV	-
V13	**Not Relevant** – view oriented in the oppo Site direction to the proposed development	-
V14	**Not Relevant** – view located outside of ZTV	-
V15	**Yes Relevant** – potential for views in the direction of the site	VP2
V16	**Not Relevant** – view located outside of ZTV	-
V17	**Not Relevant** – view located outside of ZTV	-
V18	**Not Relevant** – view located outside of ZTV	-

V19	**Not Relevant** – view oriented in the opposite direction to the proposed development	
V21	**Not Relevant** – view located outside of ZTV and oriented in the opposite direction to the proposed development	-
V22	**Yes Relevant** – potential for views in the direction of the Site	VP20
V29	**Not Relevant** – view located outside of ZTV and oriented in the opposite direction to the proposed development	-
Sligo CDP – Scenic Designations		
SR 13	**Yes Relevant** – potential for views in the direction of the Site	VP3
SR 37	**Not Relevant** – Majority of route located outside of ZTV and views oriented in the opposite direction to the proposed development	-
SR 55	**Not Relevant** – Limited potential for turbine visibility due to the high degree of intervening screening in the direction of the Site in combination with the considerably viewing distances involved (13km +)	VP6 is representative of views from this part of the study area
Roscommon CDP – Scenic Designations		
V1	**Not Relevant** – view located outside of ZTV	-
V2	**Not Relevant** – view located outside of ZTV	-
V3	**Not Relevant** – view located outside of ZTV	-
V4	**Not Relevant** – view located outside of ZTV	-
V5	**Not Relevant** – view located outside of ZTV	-
V6	**Not Relevant** – view located outside of ZTV	-
Cavan CDP – Scenic Designations		
SR 1	**Yes Relevant** – potential for views in the direction of the Site	VP8
SR 2	**Yes Relevant** – potential for views in the direction of the Site	VP8
SR 3	**Yes Relevant** – potential for views in the direction of the Site	VP8

Relevant policy relating to scenic designations in Leitrim, Sligo, Roscommon and Cavan is included below:

Leitrim CDP – Policy

LD POL 1 - *To safeguard the protected views and prospects contained in Table 11.8 and identified on Map No. 12 (Volume III - Book of Maps) from intrusive development which would interfere unduly with the character and visual amenity of the landscape.*

LD POL 2 - *To protect Areas of Outstanding Beauty and Areas of High Visual Amenity from inappropriate development and reinforce their character, distinctiveness and sense of place.*

LD POL 3 - *To permit development in an Area of High Visual Amenity only where the applicant has demonstrated a very high standard of site selection, site layout and design and where the Planning Authority is satisfied that the development could not be accommodated in a less-sensitive location.*

LD POL 4 - *To require that a landscape and visual impact assessment, prepared by a suitably qualified professional, be submitted with planning applications for development which may have an impact on the landscape character of the area.*

LD POL 5 - *To ensure that development proposals have regard to the Landscape Character Assessment, the value of the landscape, its character, importance, sensitivity and capacity to absorb change.*

LD POL 6 - *To protect lakeshores from inappropriate development which would detract from the natural amenity of the area.*

Leitrim CDP – Objectives

LD OBJ 1 - *To protect the quality, character and distinctiveness of the landscapes of the county.*

LD OBJ 4 - *To protect Areas of Outstanding Natural Beauty and Areas of High Visual Amenity from inappropriate forms of development. These areas are identified in Table 11.6 and Table 11.7 of this Plan and shown graphically on Map No. 11 'Proposed Landscape Designations' in Volume III (Book of Maps).*

Sligo CDP

P-LCAP-3 - *Preserve the scenic views listed in Appendix F and the distinctive visual character of designated Scenic Routes by controlling development along such Routes and other roads, while facilitating developments that may be tied to a specific location or to the demonstrated needs of applicants to reside in a particular area. In all cases, strict location,*

siting and design criteria shall apply, as set out in Section 13.4 Residential development in rural areas (development management standards).

Roscommon CDP

NH 10.26 *- Protect important views and prospects in the rural landscape and visual linkage between established landmarks, landscape features and views in urban areas.*

Cavan CDP

SVP1 - *Restrict development that would obstruct views and to minimise visual intrusion by only permitting compatible uses.*

SVP2 - *Ensure the location, design and visual prominence of developments are examined, including possible effects on views from the public realm towards sensitive or vulnerable landscape features.*

SR1 - *Regulate development that would seriously obstruct and detract from views of high scenic value from designated Scenic Routes.*

SR2 - *Maintain and protect the natural landscapes visual character which is recognised to be of an exceptional high amenity value.*

12.3.10.3 Centres of Population and Houses

The nearest and most notable centre of population in relation to the Site is the settlement of Drumkeeran, which is situated some c. 2.9km east of the Site. Aside from Drumkeeran, the central study area is relatively sparsely populated and comprises no other notable settlements. The settlement pattern within the central study area principally composes of isolated rural dwellings and farmsteads, small linear clusters of development and small crossroad settlements.

Beyond the central study area, the rural settlement pattern tends to increase and comprises small village and town settlements in addition to some medium-sized settlements. Some settlements of note include Dromahair (c. 9km northwest of the Site), Ballyfarnon (c. 9.5km south of Site), Dowra (c.11km east of Site), Manorhamilton (c. 14km north of Site), Drumshanbo (c. 15km southeast of Site) and Colllooney (c. 18km northwest of Site). Sligo town is one of the most notable settlements in relation to the proposed development Site, albeit it is located just outside the study area, some c. 20.5km northwest of the Site at its nearest point.

12.3.10.4 Transport Routes

The nearest and most notable major transport route in relation to the proposed development is the R280 regional road, which traverses the central and wider study area in a general north-south direction and passes through the settlement of Drumkeeran some c. 2.9km east of the Site at its nearest point. The R200 regional road extends east from Drumkeeran some c.3km east of the Site, whilst the R289 regional road diverges in a north-westerly direction from the R280 some 3.6km north of the Site and are the only two other major routes located within the central study area. Otherwise, the central study area comprises a network of local roads that wind through the small river valleys and along the sloping hillsides of Corry Mountain and its surrounding upland terrain.

Beyond the central study area, the wider study comprises a varied mix of major routes, the most notable of which is the N4 national primary route, which traverses the western half of the study area and is situated c.15km southwest of the Site at its nearest point. The N16 national primary route also traverses the wider northern half of the study area and is situated just under c.15km north of the Site at its nearest point, whilst numerous other regional roads also crisscross the wider extents of the study area.

12.3.10.5 Tourism, Recreational and Heritage Features

Due to the varied nature of the landscape within the study area, which comprises a variety of notable landscape features such as the uplands and large loughs, there is a strong sense of recreational amenity. This is reinforced by the notable number of walking trails and cycling routes that crisscross the central and wider study area. One of the study area's nearest and most notable walking routes is the Miner's Way & Historical Trail National Waymarked Walking Trail. This is a 129km waymarked walking route that traverses the upland and lakeland landscape within County Leitrim and passes through the settlement of Drumkeeran just over 2.5km east of the proposed development at its nearest point. In addition, a section of the Leitrim Way and Cavan Way also traverses the landscape in the eastern half of the wider study area, whilst the Sligo Way passes south of Lough Gill in the northwest quadrant of the study area.

A selection of looped cycling routes also traverses the wider study area and include the Kingfisher Cycle loops located in the eastern half of the study area, whilst the North West Cycling Trail passes the landscape in the northern half of the study area.

The study area also has a strong sense of water-based recreational amenity due to the numerous lakes and rivers. Many of these lakes include small jetties and piers and/or are

notable for their fishing and boating. Furthermore, due to the scenic nature of these lakes, many of the most notable heritage features within the study area are located near lakes or along the lakeside edge. These include Kilronan Castle, northwest of Lough Meelagh and Parks Castle, north of Lough Gill. Numerous other localised heritage features, including old churches and graveyards, are dotted throughout the central and wider study area.

Located along elevated lands some c.17km southwest of the Site is the Carrowkeel megalithic passage tombs situated to the west of Lough Arrow. Built around 3,500 BC, these megalithic monuments sit along a broad elevated limestone ridge and are accessed by a hilltop walking trail.

12.3.10.6 Identification of Viewshed Reference Points as a Basis for Assessment

The results of the ZTV analysis provide a basis for the selection of Viewshed Reference Points (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 each and every location that provides a view of this 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) (KV);
- Designated Scenic Routes and Views (SR/SV);
- Local Community Vews (LCV);
- Centres of Population (CP);
- Major Routes (MR); and
- Amenity and heritage features (AH).

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 the way in which 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 EIA 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 in order 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 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 Viewshed Reference Points selected in this instance are set out in **Table 12.6** below and shown on the VP selection Map in the Photomontage Booklet.

Table 12.6 Outline description of selected Viewshed Reference Points (See Figure 12.7)

VRP No.	Location	Distance to Nearest Turbine(km)	Representative of	Direction of view
VP1	N16 at Cornastauk, west of the River Bonet	14.2km (T1)	Major Route Centre of Population Amenity and Heritage Feature	S
VP2	Local road at Carrigeencor, north of Carrigeencor Lough	10.6km (T1)	Amenity and Heritage Feature Scenic View	SE
VP3	R268 at Corwillick north of Lough Gill	14.6km (T1)	Amenity and Heritage Feature Major Route Scenic Route	SE

VRP No.	Location	Distance to Nearest Turbine(km)	Representative of	Direction of view
VP4	Residential Housing Estate at Dromahair	9.4km (T1)	Centre of Population Amenity and Heritage Feature	SE
VP5	R289 at Drumkeel	4.0km (T1)	Local Community Views Major Route	S
VP6	Residential Housing Estate at Ballintogher	11.5km (T1)	Major Route Centre of Population	SE
VP7	Local road at Drumcashlagh	2.4km (T1)	Local Community Views	S
VP8	R207 at Dowra	11.6km (T4)	Centre of Population Scenic Route Amenity and Heritage Feature	W
VP9	R280 at Lavagh	2.4km (T1)	Local Community Views Major Route	SW
VP10	L8281 local road at Turpaun	851m (T1)	Local Community Views	SW
VP11	Local road at Beagh	2.8km (T1)	Local Community Views	SE
VP12	Residential Housing Estate south of Collooney	19.6km (T2)	Major Route Centre of Population	E
VP13	R280 at Drumkeeran	2.7km (T4)	Centre of Population Amenity and Heritage Feature Major Route Local Community Views	W
VP14	L4282 at Corloughcahill	1.5km (T4)	Local Community Views	W

VRP No.	Location	Distance to Nearest Turbine(km)	Representative of	Direction of view
VP15	Local road at Greaghnadarragh	965m (T4)	Local Community Views	W
VP16	Local road (L4284) at Letter	710m (T4)	Local Community Views	NE
VP17	Local road at Ballinagleragh	11.6km (T4)	Centre of Population Amenity and Heritage Feature	
VP18	Local road (L4284) at Bargowla	592m (T4)	Local Community Views	N
VP19	Local road at Liscuillew Lower	3.1km (T4)	Local Community Views	NW
VP20	R207 at Cleighran More	11.5km (T4)	Major Route Scenic Views Amenity and Heritage Feature	NW
VP21	Local road at Ballynashee	5.5km (T4)	Scenic Route Amenity and Heritage Feature	N

12.3.11 Cumulative Baseline

The SNH Guidelines relating to the Cumulative Effects of Wind Farms (2005) and GLVIA - 2013 identify that cumulative impacts on visual amenity consist of combined visibility and sequential effects. The same categories have also been subsequently adopted in the Landscape Institute's 2013 revision of the Landscape and Visual Impact Assessment Guidelines:

> *"Combined visibility occurs where the observer is able to see two or more developments from one viewpoint. Combined visibility may either be in combination (where several windfarms 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 windfarms).*
>
> *Sequential effects occur when the observer has to move to another viewpoint to see different developments. The occurrence of sequential effects may range from frequently sequential (the features appear regularly and with short time lapses*

between, depending on speed of travel and distance between the viewpoints) to occasionally sequential (long time lapses between appearances, because the observer is moving very slowly and / or there are large distances between the viewpoints.)"

Cumulative impacts of windfarms tend to be adverse rather than positive, as they relate to the addition of moving manmade structures into a landscape and viewing context that already contains such development. Based on guidance contained within the SNH Guidelines relating to the Cumulative Effects of Wind Farms (2005) and the DoEHLG Wind Energy Guidelines (2006/2019 revision), 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 windfarm might also contribute to a sense of being surrounded by turbines with little relief from the view of them. The term 'skylining' is used in the SNH Guidelines to describe the effect:

"Where an existing windfarm is already prominent on a skyline the introduction of additional structures along the horizon may result in development that is proportionally dominant. The proportion of developed to non-developed skyline is therefore an important landscape consideration."

In terms of visual amenity, there is a range of ways in which an additional windfarm might generate visual conflict and disharmony in relation to 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 windfarm 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 12.7** below provides criteria for assessing the magnitude of cumulative impacts.

Table 12.7 Outline Magnitude of Cumulative Impact

Magnitude of Impact	Description
Very High	- The proposed windfarm will strongly contribute to wind energy development being the defining element of the surrounding landscape. - It will strongly contribute to a sense of windfarm proliferation and being surrounded by wind energy development.

Magnitude of Impact	Description
	- Strongly adverse visual effects will be generated by the proposed turbines in relation to other turbines.
High	- The proposed windfarm will contribute significantly to wind energy development being a defining element of the surrounding landscape. - It will significantly contribute to a sense of windfarm 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	- The proposed windfarm will contribute to wind energy development being a characteristic element of the surrounding landscape. - It will contribute to a sense of windfarm accumulation and dissemination within the surrounding landscape. - Adverse visual effects might be generated by the proposed turbines in relation to other turbines.
Low	- The proposed windfarm will be one of only a few windfarms in the surrounding area and will be viewed in isolation from most receptors. - It might contribute to windfarm development becoming a familiar feature within the surrounding landscape. - The design characteristics of the proposed windfarm accord with other schemes within the surrounding landscape and adverse visual effects are not likely to occur in relation to these.
Negligible	- The proposed windfarm 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.

Within the Study Area there are 15 operational wind farms, 2 consented wind farm developments and 1 wind farm development in planning. The cumulative developments are set out below and identified in **Figure 12.8** below.

Table 12.8 Cumulative Windfarms within the Study Area

Wind Farm	Status	No. of Turbines	Approximate Distance to the Site Boundary	Direction from the Development
Altagowlan	Operational	9	4.6km	South-East
Black Banks (I & II)	Operational	12	1.4km	South-West
Carrane Hill	Operational	4	4.0km	South-West
Carrickeeny	Operational	4	18.9km	North-West
Corrie Mountain	Operational	8	3.2km	South-East
Croagh*	In-Planning	10	2.4km	West
Derrysallagh (Kilronan II)	Operational	10	6.2km	South-West

Wind Farm	Status	No. of Turbines	Approximate Distance to the Site Boundary	Direction from the Development
Faughary	Operational	3	19.1km	North
Garvagh Glebe	Operational	13	920m	South-West
Geevagh	Operational	6	5.7km	South-West
Kilronan	Operational	10	9.3km	South
Moneenatieve I & II	Operational	5	2.9km	South-East
Seltannavenny	Operational	2	6.7km	South-East
Spion Kop	Operational	2	4.2km	South-East
Tullynahaw	Operational	11	5.7km	South-East
Tullynamoyle I, II & III	Operational	15	7.1km	North-East
Tullynamoyle (V)	Consented under planning application P19/26	4	6.9km	North-East
Tullynamoyle (V)	Consented by An Bord Pleanála under case reference (PI12.312895)	4	6.6km	North-East

* Croagh Wind Farm was recently refused planning permission by An Bord Pleanála (23/10/2023). However, for the purposes of a comprehensive appraisal, it has been included in the cumulative assessment as the decision has the potential to be appealed and overturned.

In addition, there are two wind farms at pre-planning stage within 20km:

Wind Farm	Status	No. of Turbines	Approximate Distance to the Site Boundary	Direction from the Development
Charafena	Pre-Planning	7	18.1km	North
Lissinagroagh	Pre-Planning	20	17.4km	North-East

12.4 ASSESSMENT OF POTENTIAL EFFECTS

12.4.1 Do Nothing Effects

In this instance the do-nothing effect would be that the receiving landscape stays in the same or similar condition as it currently is, managed for a combination pastoral farmland and/ or forestry or left as semi-naturalistic moorland.

12.4.2 Landscape Impacts

Landscape impacts are assessed on the basis 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 in respect of the immediately surrounding landscape (<5 km) as well as the broader scale of the Study Area (5-20km).

12.4.2.1 Landscape Character, Value and Sensitivity

Central Study Area (<5km)

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 proposed Site and wider Study Area.

The Central Study Area is a varied landscape that comprises numerous landscape types, areas and landscape features. The landscape of the central study area is principally influenced by several notable landscape features which include Corry Mountain and Carrane Hill, both of which are situated in the southern and western half of the central study area and represent the most elevated parts of the central study area. North and east of these elevated lands the terrain comprises of rolling ridges and low rolling hills that descend towards lower valleys and the lakeside landscape in the surrounds of Lough Allen. Overall, the central study area presents with robust working landscape values, even in the uplands, which are notably influenced by existing wind energy development and extensive commercial conifer forest plantations. Furthermore, the lowland landscape in the surrounds of these uplands has similar working landscape values, which tend to relate to rural productivity and the subsistence of the rural economy as opposed to any susceptible naturalistic values.

Despite the working nature of the landscape within the central study area, there are some scenic and recreational values associated with the central study area due to the elevated landscape features combined with the surrounding lakes. Whilst only one scenic designation occurs within the study area, and is relatively contained to Belhavel Lough, there is a notable degree of undesignated scenic amenity within the wider landscape which generally relates to elevated views of Lough Allen and the surrounding rolling landscape. Pleasant views of Corry Mountain and its surrounding elevated rolling ridges and hills are also afforded from the settlement of Drumkeeran and its surrounding local and regional roads. In similar circumstances to scenic amenity, many of the most notable aspects of recreational value are also heavily influenced by the uplands and lakes throughout the

central study area. A brief section of the Miner's Way National Waymarked Trail traverses through the settlement of Drumkeeran and the southern half of the central study area.

With regard to landscape designations, the central study area encompasses the 'B7 Corry Mountain Area of High Visual Amenity'. The Leitrim CDP identifies that the importance of this landscape is attributed to several special qualities, which include views of Lough Allen and the surrounding uplands, the Miner's Way & Historic Trail and high levels of tranquillity and sense of remoteness away from settlements roads and wind turbines. It is also worth noting that the 'Lough Allen Area of Outstanding Natural Beauty' is located along the southeast periphery of the central study area.

Overall, the central study area comprises a mix of landscape features and types, albeit it is considered to be a robust working landscape. Whilst there are some susceptible scenic and recreational values, which are generally attributed to the elevated upland and lakes within the study area, the central study area is also strongly influenced by existing wind energy development (40 + existing wind turbines located within the central study area) and extensive areas of commercial conifer forestry. Furthermore, much of the low rolling landscape in the surrounds of the upland has typical rural landscape values that relate to agriculture. On balance of the reasons outlined above, the landscape sensitivity of the central study area is deemed Medium-low due to its robust working character, which is heavily influenced by existing wind energy development.

Wider Study Area (c.5-20km)

The landscape of the wider study comprises a much broader array of landscape area, types and features. This is evident in the current Leitrim, Sligo, Cavan and Roscommon County Development Plans, all of which occur within the wider study area and encompasses an extensive array of scenic designations and sensitive landscape areas. Within areas of Leitrim in the wider study area there are 5 'Areas of Outstanding Natural Beauty'. Areas of Sligo within the wider study area encompass numerous 'Sensitive Rural Landscapes' and 'Visually Vulnerable Areas', whilst parts of Roscommon and Cavan within the wider study area include areas of 'high landscape value' and 'very high landscape value'. In similar circumstances to the central study area, some of the most notable landscape features within the wider study area include upland areas and broad lake lands, both of which present with strong scenic and recreational values. Throughout all 4 counties within the wider study area, there is a strong presence of designated scenic amenity in the form of scenic routes and scenic views, which often relate to broad views across the lakes and waterbodies or views to and from upland areas. The susceptible scenic nature of these areas is further reinforced

by the numerous walking trails and cycling routes that traverse the uplands and flanks the extensive number of lakes within the wider study area.

Nonetheless, whilst there are some highly susceptible landscape areas throughout the wider study area, there is also a strong anthropogenic influence within the wider study area. Existing wind energy development has a considerable presence in the upland's parts of the wider southern half of the study area and northeast quadrant of the wider study area. Within the wider study area alone, there are over 70+ existing wind turbines. Combined with the additional existing wind turbines within the central study area, this equates to more than 100 existing wind turbines within the 20km study area. Several notable major route corridors also traverse the wider study area and connect some notable urban centers. Furthermore, there is a strong presence of the forestry industry within the wider study area, with extensive blocks of commercial conifer forestry dotted throughout the entire 20km extents. A number of active quarries are also located throughout the wider study area, whilst the settlement of Arigna in the southern half of the wider study area has strong historical association with coal mining and now encompasses a mining exhibition and tours of the old underground mines.

On balance of the reasons outlined above, it is considered that the landscape of the study area is highly complex and richly diverse in terms of sensitivities and landscape values. The wider landscape encompasses some highly sensitive and susceptible landscape features and landscape areas, whilst also comprising notable areas of more typical rural landscapes. An overall landscape sensitivity judgement of **Medium** is deemed appropriate for the landscape of the wider study area, albeit some parts of the Study Area, such as the uplands and lake lands, have a landscape sensitivity of **High** (lake lands) and in some cases **Very High** (mountain summits).

12.4.2.2 Magnitude of Landscape Effect

The physical landscape as well as the character of the proposed Development and its central Study Area (<5km) 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, borrow pit, grid connection and the substation compound. By contrast, for the wider landscape of the Study Area, landscape impacts relate exclusively to the influence of the proposed turbines on landscape character. The 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

It is considered that the proposed wind farm Development will have a modest physical impact on the landscape within the Site as none of the proposed development features have a large 'footprint' and land disturbance will be relatively limited. 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 a Bottomless Bridge Culvert, Temporary Construction Compound, the proposed Met Mast and two Battery Storage Containers. 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. Both turbines T1 and T2 are surrounded by forestry. Therefore, to facilitate the access roads, civils works, site compounds, borrow pit and Turbine Hardstands, 2 hectares coniferous forestry will need to be clear-felled. The use of existing forestry infrastructure will be maximised to lessen disturbance from machines used for felling.

The finalised internal Access Track layout has been designed to avoid environmental constraints, and every effort has been made to minimise the length of necessary roadway by utilising and upgrading the existing site access track. Furthermore, the road layout has been designed to follow the natural contours of the land wherever possible reducing potential for areas of excessive 'cut and fill'. There will be an intensity of construction stage activity associated with the Access Tracks and Turbine Hardstands consisting of the movement of heavy machinery and materials, but this will be temporary/short term in duration and transient in location. The construction stage effects on landscape character from these activities will be minor.

There will be one 20kV on-site substation constructed to collect the generated power from the proposed Development before connecting to the national grid at the 110kV Corderry substation. The on-site substation will be located to the north of the local road that traverses south of the Site and to the south of turbine T4. The substation compound will be c. 9.98m by 5.37m with an overall height of 4.7m from ground to ridge level and will be constructed from engineered stone material using similar construction techniques as for the crane hardstands. The overall compound will be enclosed by a 2.65m high fence and will contain a single building, ancillary equipment, including the transformers, switch gear, fault protection, metering, car parking and other ancillary elements necessary for the operation of the Development. The most notable construction stage landscape impacts resulting from

the proposed on-site substation relate to the minor levelling of the Site to form a level platform.

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 transitional foothill landscape setting that is influenced by an array of working rural land uses.

A permanent meteorological (Met) mast will be erected on Site to the west of T2. It will comprise of a 50m high lattice steel mast with a shallow concrete foundation. Furthermore, two battery storage containers will also be constructed on Site and will be finished in a muted green tone to blend with the surrounding vegetation and will rises no higher than 3.05m above the existing ground levels. The most notable construction stage effects will relate to the minor amount of ground excavation required to facilitate the shallow foundations for the steel mast structure and the stripping of soil to accommodate the concrete plinths and gravel surrounding the battery storage containers.

The grid connection cabling will run from the onsite 20kV Substation across a combination of private lands and public roads generating land disturbance and associated movement of machinery and stockpiling of materials. The grid connection route will traverse seven existing bridges and water crossings along the L8280. Of the 6.3km, some 6.260km will be buried within the existing roadway with the remaining 40m consisting of overhead lines. Connection works will involve the installation of ducting, joint bays, drainage and ancillary infrastructure. This will require delivery of plant and construction materials, followed by ground excavation laying of cables and subsequent reinstatement of trenches, and will result in minor and very localised construction stage landscape effects.

Site activity will be at its greatest during the construction phase due to the operation of machinery on Site and movement of heavy vehicles to and from Site. This phase will have a more significant impact on the character of the Site and cable routes than the operational phase, but it is a 'short-term' impact that will cease as soon as the proposed development is constructed and becomes operational (approximately 14-15 months from the commencement of construction).

There will be some long term/permanent construction stage effects on the physical landscape in the form of turbine foundations and hardstands, access tracks and a substation, but only the substation is likely to remain in perpetuity as part of the national grid network. It is likely, that with the exception of 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. Thus, the construction stage landscape effects of the 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) (**Appendix 2.1**). Such effects will be temporary/short term in duration and are, therefore, not considered to be significant. Overall, construction stage landscape effects are considered to be of a **High-Medium** magnitude.

Operational Stage Effects on Landscape Character

For most commercial wind energy developments, the greatest potential for landscape impacts to occur is 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 new defining element of that landscape character. In this instance, wind turbines are a highly characteristic features of the central and wider study area, with over 100 existing wind turbines located within the 20km extent. The most notable array of existing wind turbines occurs only a short distance (<1km) south of the Site, where several existing wind farms cloak the uplands throughout the southern half of the central and wider study area. The effect, therefore, is one of intensification and extension of an established land use in this landscape and not the introduction of a new and unfamiliar feature.

In terms of scale and function, the proposed wind farm is well assimilated within the context of the Central Study Area. This is due to the broad scale of the landform, landscape elements and 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 and ridges to the south and west of the of the proposed wind farm Site comprise a notable utilitarian character due to the presence of working rural land uses such as agriculture, commercial scale forestry and existing wind energy development. 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 working upland and rural character of the surrounding landscape.

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 grid connection route as result of the proposed Development during the operational phase, but these will be relatively minor in the context of this working rural landscape that comprises pockets of existing wind energy development and areas of commercial conifer forest. The scale of the proposed development will be well assimilated within its landscape context without undue conflicts of scale with underlying landform and land use patterns. For these reasons the magnitude of the landscape impact is deemed to be **Medium** within the Site and its immediate environs (c.1km) reducing to **Medium-low** for the remainder of the central Study Area. The quality of the landscape effects is deemed **Negative**. Beyond 5km 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.

12.4.2.3 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 judgement.

Based on a Medium-low sensitivity judgement of the central study area and a High-medium magnitude of construction stage landscape impact, the significance of impact is considered

to be **Substantial-moderate / Negative / Short-term** within and immediately around the Site during construction but reducing quickly with distance and broader context.

Based on a Medium-low sensitivity judgement and a Medium magnitude of operational stage landscape impact, the localised significance of impact is considered to be **Moderate / Negative / Long-term** within and immediately around the Site. Thereafter, significance will reduce to Moderate-Slight and Slight at increasing distances as the development becomes a progressively smaller component of the wider landscape fabric even in the context of higher sensitivity landscape units / features such as the Uplands to the east and west and the coastline in the southeast quadrant of the study area.

12.4.3 Residual 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 21 selected representative viewpoint locations has been placed into **Appendix 12.1**. This section should be read in conjunction with both **Appendix 12.1** and the associated photomontage set contained in a separate booklet accompanying the EIAR. A summary table is provided below, which collates the assessment of visual impacts (**Table 12.9** below). A discussion of the results is provided thereafter.

Table 12.9 Summary of Visual Impact Assessment at Representative Viewpoint Locations (Technical Appendix 12.1)

VP no.	Distance to nearest turbine (km)	Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of effect
VP1	14.2km (T1)	Medium	Negligible	Imperceptible / Neutral / Long Term
VP2	10.6km (T1)	High-medium	Low-negligible	Slight-imperceptible / Negative / Long Term
VP3	14.6km (T1)	High-medium	Low-negligible	Slight-imperceptible / Negative / Long Term
VP4	9.4km (T1)	Medium-low	Negligible	Imperceptible / Neutral / Long Term
VP5	4.0km (T1)	Medium-low	Low	Slight / Negative / Long Term
VP6	11.5km (T1)	Medium-low	Low-negligible	Slight-imperceptible / Negative / Long Term
VP7	2.4km (T1)	Medium-low	Low	Slight / Negative / Long Term

VP no.	Distance to nearest turbine (km)	Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of effect
VP8	11.6km (T4)	Medium	Negligible	Imperceptible / Neutral / Long Term
VP9	2.4km (T1)	Medium-low	Medium	Moderate-slight / Negative / Long Term
VP10	851m (T1)	Medium-low	Medium-low	Slight / Negative / Long Term
VP11	2.8km (T1)	Medium-low	Low	Slight / Negative / Long Term
VP12	19.6km (T2)	Medium-low	Negligible	Imperceptible / Neutral / Long Term
VP13	2.7km (T4)	Medium-low	Medium-low	Moderate-slight / Negative / Long Term
VP14	1.5km (T4)	Medium-low	Medium	Moderate / Negative / Long Term
VP15	965m (T4)	Medium-low	Medium	Moderate / Negative / Long Term
VP16	710m (T4)	Medium-low	Medium	Moderate / Negative / Long Term
VP17	11.6km (T4)	Medium	Negligible	Imperceptible / Neutral / Long Term
VP18	592m (T4)	Medium-low	High-medium	Substantial-moderate / Negative / Long Term
VP19	3.1km (T4)	Medium-low	Medium-low	Moderate-slight / Negative / Long Term
VP20	11.5km (T4)	High-medium	Low-negligible	Slight-imperceptible / Negative / Long Term
VP21	5.5km (T4)	High-medium	Low	Slight / Negative / Long Term

12.4.3.1 Visual Impacts on Designated Views

Due to the varied and complex nature of the landscape within the study area, which comprises numerous notable landscape features, there are many scenic routes and scenic views within the 20km study extent. The most relevant scenic routes to the proposed Development are those located nearest to it, and which have the most potential to afford near and clear views of the proposed turbines.

VP2, VP3, VP8, VP20 and VP21 represent scenic designations within the study area. Whilst there are a considerable number of scenic designations, many of these are either located outside of the ZTV pattern or are oriented in the opposite direction to the proposed

development. None of the aforementioned viewpoints representing scenic designations are located within the central study area, although VP21 is just over 5km south of the Site. VP5 represents the nearest scenic designation to the Site where the proposed turbines will be visible. Nonetheless, this scenic designation crosses an upland ridge southwest of the Site and is currently heavily influenced by existing wind energy development, much of which is viewed nearer than the proposed turbines. Despite this, the proposed turbines will present at a slightly larger scale than all other existing turbines within the view, albeit they will not increase the vertical extent of wind energy development in this view, as they are located at a lower elevation than the nearer existing turbines. Due to the considerable number of existing turbines already visible from this scenic route, the proposed turbines will have a limited visual impact on this receptor. Overall, the significance of visual impact along this elevated scenic route was deemed Slight, which is the highest visual impact significance of all scenic designations within the study area. All other viewpoints representing scenic designations were deemed to have a visual impact significance of Slight-imperceptible or less on the basis that the proposed turbines will be viewed as distant background features and will have little notable influence on the most scenic aspects of these views.

Thus, impacts at scenic designations within the study area are **not considered to be significant**.

12.4.3.2 Visual Impacts on Local Community Views

Local Community views are considered to be those experienced by those people who live, work and move around the area within approximately 5km of the Site. These are generally the people 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.

Up to 11 views were chosen to represent the local community, including VP5, VP7, VP9, VP10, VP11, VP13, VP14, VP15, VP16, VP18 and VP19. The sensitivity of all of these views was deemed Medium-low, which reflects the generally robust nature of the central study area. That is, a transitional upland landscape currently characterised by working land uses such as pastoral farmland, forestry and existing wind energy development. Whilst there is also some scenic amenity within these lands, as noted in the Viewpoint Assessment (refer to **Appendix 12.1**), many of the views depicted are typically oriented away from the principal aspects of scenic amenity, which is typically in the opposite direction to the proposed development towards surrounding lake lands and more distant uplands. Of the 11 views, the highest significance of visual impact is 'Substantial-moderate' (VP18), which

relates to the nearest potential views of the proposed development. All other views were deemed to have an impact significance of Moderate or lower.

VP18 affords the nearest and one of the clearest views of the proposed development and is located with the elevated transitional landscape immediately south of the Site. An uphill view of the proposed turbines is afforded at VP18, which slightly accentuates the perceived scale of the proposed turbines. Nonetheless, the turbines present here at a considerable scale and in a highly dominant, albeit with no notable sense of overbearing. The proposed turbines will generate an increased sense of enclosure in the local landscape where views are already afforded of existing turbines to the west and south. Overall, the proposed turbines will generate a notable increase in the intensity of wind energy development in this landscape context, however, the turbines will not appear out of place or overscale, especially in the context of the broad landscape features and land uses that surround the Site and wider landscape.

Viewpoints VP14, VP15 and VP16 were deemed to have a visual impact significance of Moderate, principally due to their near distance to the proposed turbines, all of which are located within 1.5km of the nearest turbine. Due to the intricate landforms of the central study area, combined with the notable degree of intervening hedgerow vegetation, the furthest of these views from the turbines, VP14, will afford the clearest view of the development overall. VP14 affords a clear and highly legible view of all four turbines, whereas the turbines tend to become obscured and screened the closer the viewer is to the Site. This is most apparent in the southeast quadrant of the central study area, where there is a notable degree of mature vegetation on the sloping hillsides immediately south and east of the proposed turbine array. VP15 and especially VP16 afford a partially screened view of the proposed development, however, the visible turbines present at a prominent scale and will generate a clear increase in the intensity of wind farm development within the local landscape.

All other viewpoints representing the local community were classified with a residual visual impact significance of Moderate-slight or lower. This is principally a result of their distance from the proposed development and/or intervening screening.

Overall, the proposed turbines generally present in a clear and legible manner within the central study area, albeit they are often partially and heavily screened by a combination of the rolling terrain and intervening vegetation. Nonetheless, some clear and highly prominent views will be afforded from some localised remote areas to the south of the Site. However,

the turbines will never appear over-scaled or out of place in this working landscape context, which is heavily influenced by existing wind farm development and other working upland land uses. Thus, it is **not considered that the proposed development will generate significant visual impacts at local community receptors**.

12.4.3.3 Visual Impacts on Centres of Population

Seven viewpoints were chosen to represent centres of population within the central and wider study area (VP1, VP4, VP6, VP8, VP12, VP13 and VP17). Centres of population are generally considered to be in the mid to low range of visual receptor sensitivity because they tend to be busy, built environments where visual change is relatively commonplace. However, it is worth noting that only one centre of population is located within the central study area.

Drumkeeran is the only notable centre of population within the central study area and is represented by VP13. A relatively clear view of the turbines Is afforded from VP13, which is located immediately north of the settlement's main street along the R280 regional road. An uphill view of the proposed turbines is afforded from this section of the regional road, where a ridgetop conifer forest heavily screens turbine T1. The remaining three turbines present in a highly legible manner, viewed against the sky and are evenly spaced across the ridge. Whilst the proposed turbines will increase the intensity of wind farm development at the settlement of Drumkeeran, they are not considered to be an inappropriate addition to this landscape context which is heavily influenced by other working land uses and existing wind energy development. As a result, the visual impact significance at VP13 was deemed Moderate-slight.

All other centres of population within the study area were deemed to have a visual impact significance of Slight-imperceptible or less. This is principally a consequence of their distance from the Site combined with the high degree of existing wind farm developments that influence the character of the surrounding landscape. As a result of the reasons outlined above, it is **not considered that the proposed Development will result in significant visual impacts at Centers of Population within the study area**.

12.4.3.4 Visual Impacts on Major Routes

Major routes within the study area are represented by up to VP1, VP3, VP5, VP6, VP9, VP12, VP13 and VP20. Many of these major route receptors also represent local community views, centres of population, scenic routes and amenity and heritage features.

Viewpoints VP5, VP9 and VP13 represent the nearest major route receptors to the proposed development. VP9 and VP13 are representative views of some of the nearest sections of the R280 regional road to the proposed development. Both of these views afford highly legible views of the proposed development, where the turbines do not appear out of place in terms of their scale or function. In both views, the turbines present with a notable sense of rhythm due to the uniform spacing characteristics and are deemed to have a Moderate-slight visual impact significance. Viewpoint VP5 represents the R289 regional road, located some 4km north of the proposed turbines at its nearest point. Whilst all four turbines will be visible from VP5, they are seen to varying degrees ranging from fully revealed turbines to partial views of blade tips. Nonetheless, in similar circumstances to VP9 and VP13, the proposed turbines do not appear incongruous along the broad underlying ridge, where other existing turbines are visible further to the west. Overall, the significance of visual impact at VP5 was deemed Slight.

All other viewpoints representing major route receptor in the wider study area were deemed to have a visual impact significance of Slight-imperceptible or less. As a result of the reasons outlined above, **it is not considered that any significant visual impacts will occur in respect of major route receptors.**

12.4.3.5 Visual Impacts on Amenity and Heritage Features

Due to the intensity of walking trails and cycling routes within the study area, nine viewpoints were chosen to represent heritage and amenity features within the study area, including VP1, VP2, VP3, VP4, VP8, VP13, VP17, VP20 and VP21. As many of these route's pass across the most scenic parts of the study area, these viewpoints often also represent designated scenic view or route receptors, many of which have been described in section 12.4.3.1 above.

The most notable agglomeration of walking routes occurs in the southern half of the study area, where the Miner's Way & Historical Trail traverses the Corry Mountain and its surrounding sloping lands to the east, south and west. Whilst clear views of the proposed development will be afforded from numerous sections of this extensive walking trail, especially along some of the most elevated sections of terrain at Corry Mountain, the proposed turbines will be viewed in combination with the numerous existing wind farm developments located along the broad ridgeline that extends in a north-south direction. Thus, the main visual effects at this linear receptor relate to the intensification of wind farm development (refer to VP21). The nearest views of the proposed development from this

walking trail will likely be afforded from the settlement of Drumkeeran (VP13 refers), which was designated with a visual impact significance no greater than Moderate-slight.

Other notable aspects of amenity within the study area relate to the numerous lakes which VP2, VP3 and VP20 represent. Despite the highly scenic nature of many of these lakes, the proposed turbines will have little notable influence and the visual amenity afforded from these susceptible locations due to their distance from the proposed development. Furthermore, even when viewed from the lakeside edge of these extensive water bodies, the proposed turbines will often present as distant background features and will result in a minor degree of visual change. Overall, the visual impact significance at these three viewpoints was deemed Slight-imperceptible in all instances. As a result of the reasons outlined above, it is **not considered that the proposed development will result in significant visual impacts in respect of heritage and amenity features** within the study area.

12.4.3.6 Summary of Visual Impacts

Based on the visual impact assessments outlined in Se**ctions 12.4.3.1** to **12.4.3.5** above and in **Table 12.9** above, the residual visual impacts range between Substantial-moderate and Imperceptible, and in the majority of cases, the significance of visual impact was deemed Moderate or below. Only one view was deemed to have a visual impact significance of Substantial-moderate and this relates to one of the nearest potential views of the proposed development. Overall, the proposed wind farm is considered a relatively modest four-turbine development that does not appear out of place in terms of its scale or function in this transitional upland landscape context. It will almost always be viewed in combination with other existing wind farm developments and therefore represents the intensification of an established land use instead of a new and unfamiliar one. Furthermore, it is considered an appropriately sited development and is not at odds with the working upland character of the surrounding landscape.

Overall, it is not considered that the proposed wind farm development will result in significant visual impacts at any surrounding receptors.

12.4.3.7 Cumulative Impacts – Existing Baseline

As described in **Table 12.8,** there are 15 operational wind farms, 2 consented wind farms, and 1 recently refused, and 2 pre-planning stage wind farms within the Study Area. As identified on **Figure 12.8**, the most notable agglomeration of existing turbines is located along the elongated upland ridges throughout the southern half of the central and wider

study area. The nearest of these turbines are situated less than 1km southwest of the Site. In this respect, the entire assessment is essentially a cumulative assessment, as the proposed turbines will almost always be viewed in combination with the existing turbines to the west and south of the Site. This is further reflected by the extremely limited potential for the proposed turbines to be viewed in isolation. The cumulative ZTV identifies that only 0.1% of the study area has the potential to afford views of the proposed turbines in isolation. As a result, much of the visual impact assessment relates to how the proposed development will increase the intensity and visual presence of wind energy development within the study area and along the uplands to the south and west of the Site. The visual relationship between both the existing and proposed turbines is also assessed as the proposed turbines are notably larger than the surrounding existing turbines and, in some instances, will generate a degree of scale conflict. Whilst it is unquestionable that the proposed larger turbines will intensify wind energy development within the central study area, this is limited by the fact that the proposed development comprises just four turbines, whilst there are more than 90 existing wind turbines along the elevated ridges to the south and west of the proposed development. In this respect, the proposed development represents a relatively modest addition to the number of turbines within this upland area. Whilst the existing wind turbines to the south and west of the Site represent the most notable cluster of wind farm developments within the study area, the wider northern half of the study area also comprises several clusters of existing wind farm development, principally located along elevated terrain.

The National Waymarked Trails, cycling routes and the N4 and N16 within the study area all have the potential to afford 'sequential' cumulative views of the proposed wind farm and other wind farms along different sections of each route in a journey scenario. However, with regard to waymarked walking trails and cycling routes, many of these pass along elevated lands where a considerable number of existing turbines are already a prominent feature. Therefore, the potential for the proposed four turbines to generate additional sequential impacts is limited. Furthermore, the ZTV identified that the N4 and N16 will have limited potential to afford visibility of the proposed development. Thus, the limited potential for visibility combined with the considerable viewing distance from both of these major route receptors diminishes the potential for the proposed development to generate any notable sequential impacts.

As a result of the above reasons, much of the cumulative impact assessment in this instance forms part of the VP assessment in **Appendix 12.1**, as in almost all instances, the proposed development will be visible in combination with the considerable number of existing wind

turbines to the south and west of the Site. Furthermore, whilst the proposed development will generate some increase in the intensity of wind farm development within the study area, most notably in the local landscape in the immediate surrounds of the proposed development, it represents a relatively minor increase in the overall number of turbines within the study area. Consequently, the magnitude of cumulative impact in relation to existing and permitted wind farms in the wider study area is deemed to be **Low.**

12.5 TURBINE ENVELOPE CONSIDERATION

For the landscape and visual assessment, the pertinent aspect of the design envelope relates to the turbine dimensions used to prepare the photomontages, upon which the visual impact assessment is based.

Macro Works have taken the approach of using the highest possible tip height and hub height combination. This is on the basis that a viewer who can see a hub rising above a skyline ridge is likely to feel they are seeing more of the turbine than when the hub is screened from view (i.e., in the case of a lower hub / longer blade combination). That premise is based on the hub being perceived as the key and central component of a turbine in a figurative sense. Nevertheless, in this instance, the photomontages were prepared using a turbine envelope of 117m rotor diameter, 91.5m hub height and 150m tip height which represents a worst-case scenario in terms of the maximum potential turbine envelope for the proposed project.

One alternative turbine dimension is also being considered by the developer, which comprises a turbine envelope of 115.7m rotor diameter, 92m hub height and 149.85m tip height.

A set of comparative montages has been included to show the subtle variation in the base-case and alternative turbine dimensions. In all three comparative views, the variation in the turbine's dimensions is almost indiscernible to the naked eye.

Regardless of whether the difference between the alternative turbine dimensions can be discerned or not, due to the very subtle variations in dimensions, there will be no material difference in the level of visual impact between them, and certainly not a higher impact than the base-case outlined in the visual impact appraisal highlighted above. Thus, the submitted LVIA is deemed to comfortably cover the range of potential turbine dimension options proposed, and it is not considered necessary to prepare separate

photomontages/assessments at all viewpoints for all possible turbine dimensions highlighted above.

12.6 MITIGATION MEASURES

Outside of those landscape and visual mitigation measures that formed part of the iterative design process of this Development over a number of years, and which are embedded in the assessed project, other specific landscape and visual mitigation measures are not considered necessary / likely to be effective. Thus, the impacts assessed in **Section 12.4** are the equivalent of residual impacts in this instance.

12.6.1 Decommissioning Phase

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 decreasing in scale as turbines are removed from view and the landscape is substantially reinstated to former uses. As with construction stage impacts, decommissioning stage effects are not considered to be significant.

12.7 SUMMARY OF SIGNIFICANT EFFECTS

It is not considered that there will be any significant effects on landscape and visual amenity arising from the proposed Letter 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 Letter Wind farm.