12 LANDSCAPE AND VISUAL AMENITY

12.1 INTRODUCTION

This chapter assesses the impacts of the EIAR (**Figure 1.2**) on landscape and visual amenity. The Proposed Development refers to all elements of the application for the construction of the proposed wind farm (**Chapter 2: Development 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 Proposed Development:

- Construction of the Proposed Development
- Operation of the Proposed Development
- Decommissioning of the Proposed Development

Common acronyms used throughout this EIAR can be found in **Appendix 1.4.** This chapter of the EIAR is supported by Figures provided in Volume III, the LVIA Photomontages and by the following Appendix documents provided in Volume IV of this EIAR:

- **Appendix 12.1a Visual Receptor Sensitivity**
- **Appendix 12.1b Magnitude of Visual Impacts at Representative Viewpoint Locations**

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

Visual Impact Assessment (VIA) relates to assessing effects on specific views and 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 Proposed 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 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.

12.1.2 Description of the Proposed Development

The Proposed Development will consist of the following:

- Construction of 16 no. Vestas V117 (4.3 MW) IEC IIA – T wind turbines. This specific model with a blade tip height of 135 m, was selected as the candidate turbine and its associated parameters were used to determine the significant environmental effects associated with the Proposed Development. No flexibility in terms of turbines dimensions is sought as part of the application for Planning Permission
- Construction of permanent Turbine Hardstands and Turbine Foundations
- Change the use of a residential site and vacant dwelling to a Permanent Operations Compound consisting of an operations office, storage area and staff parking
- Construction of two Temporary Construction Compounds with associated temporary site offices, parking areas and security fencing
- Installation of 1 no. (35-year life cycle) meteorological mast with a height of up to 80 m and a 4 m lightning pole on top
- Development of 17 no. permanent onsite spoil deposition areas
- Construct 5 no. new permanent site entrances as described in the EIAR Chapter 17: Traffic and Transport and **Figure 2.1**.
- Upgrade 9 no. existing site entrances as described in the EIAR Chapter 17: Traffic and Transport and **Figure 2.1**.
- Works for new and upgraded entrances include clearing visibility splays of vegetation, widening the entrances to allow HGVs turn onto local public roads and the R314, excavation to solid formation level, installation roadside drainage features, placing

entrance sub-base with rockfill materials, placing capping level and providing surface dressing where necessary.

- Road construction works within the Wind Farm Site consisting of the construction of approximately 9.64 km of new Site Access Tracks through the Wind Farm Site. The upgrading of 1.76 km of private Access Tracks and 1.58 km of public roads within the Wind Farm Site, road verge widening, hedge trimming and all associated infrastructure and drainage works as described in **EIAR Chapter 17: Traffic and Transport and the Turbine Delivery Route Report Appendix 17.1**.
- Forestry felling of approximately 31.86 ha of coniferous forest will be required to facilitate the construction of the Proposed Development. For the purposes of this Proposed Development, the Developer commits that the location of any replanting (alternative afforestation) associated with the Proposed Development will be greater than 10 km from the Wind Farm Site and also outside any potential hydrological pathways of connectivity i.e. outside the catchment within which the Proposed Development is located. The extent of felling required to be licensed for the purpose of giving effect to the Proposed Development can only be determined once planning permission for the Proposed Development has been granted. It will be a condition of the felling licence that an equivalent area of land required to be felled shall be replanted. The felling will be subject to a separate planning application which, in practical terms, can only be made once planning permission for the Proposed Development has been granted.
- All associated site development works including berms, landscaping, and soil excavation.
- Development of an internal site drainage network and sediment control systems.
- Construction of 1 no. 110 kV electrical substation including 2 no. control buildings with welfare facilities, all associated electrical plant and equipment, security fencing and gates, all associated underground cabling, wastewater holding tank, and all ancillary structures and works (the 'Wind Farm substation').
- Installation of battery arrays located within container units (20 no. units) and associated electrical plant for grid stabilisation adjacent to the Onsite Substation building (with up to 150 MW storage capacity) with surrounding palisade fence 2.65 m in height;
- All associated underground electrical and communications cabling connecting the wind turbines to the Wind Farm substation.
- All works associated with the permanent connection of the Wind Farm to the national electricity grid comprising of a 110 kV underground cable system in permanent cable ducts from the proposed, Wind Farm substation, in the townland of Barroe to the existing Tawnaghmore substation at the Killala Business Park. A full description of the

Proposed Development is provided in **Chapter 2: Development Description** of this EIAR.

Please note that for the purposes of this chapter, where:

- the 'Proposed Development' is referred to, this relates to all elements of the Proposed Development as described **in Chapter 2: Development Description** and includes all site infrastructure, the Grid Connection Route (GCR) and all works required along Turbine Delivery Route (TDR).
- the 'Wind Farm Site' or 'the Site' is referred to, this relates to the primary study area and includes lands which fall within the redline boundary, which is the boundary line of all works to be completed but does not include the GCR or the TDR.
- the 'Grid Connection' is referred to, this related to the proposed 110 kV underground grid cable connection between the proposed Onsite Substation to the existing Tawnaghmore 110 kV substation in the townland of Tawnaghmore Upper.
- the 'Turbine Delivery Route' is referred to, this relates to the proposed TDR from Galway/Killybegs/Foynes Port to the Wind Farm Site.
- the 'Construction Haul Route' is referred to, this relates to the proposed routes from local quarries and supplies to the Wind Farm Site.

The potential zone of impact of the Proposed Development on the LVIA is limited within the Study Area as defined in **Section 12.2.3.**

12.1.3 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; (comprised of the 'Central Study Area' (within c. five km of the Wind Farm Site) and 'Wider Study Area' (5-20 km from the Wind Farm Site)
- 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

12.2 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:

12.2.1.1 Desktop Study

- Establishing an appropriate Study Area from which to study the landscape and visual impacts of the Proposed Development.
- Review of a Zone of Theoretical Visibility (ZTV) map, which indicates areas from which the Proposed Development is potentially visible in relation to terrain within the Study Area.
- Review of relevant County Development Plans, particularly 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.

12.2.1.2 Fieldwork

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

12.2.1.3 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.

12.2.2 Relevant Legislation and Guidance

This LVIA uses methodology as prescribed in the following guidance documents:

- European Union (2017) Guidance on the preparation of the EIA Report (Directive 2011/92/EU as amended by 2014/52/EU);
- Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (2022);
- Landscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape and Visual Impact Assessment – Third Addition (2013).
- NatureScot (NS) 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.
- NatureScot (NS) Visual representation of wind farms: Best Practice Guidelines (version 2.2 - 2017).

12.2.3 Definition of Study Area

The Wind Energy Development Guidelines published by the Department of the Environment, Heritage and Local Government (2006/2019 Draft) 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:

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

The layout is designed on a 135 m blade tip height turbine. With a blade tip height of 135 m, the Vestas V117-4.3 MW IEC IA turbine (the candidate turbine) and its associated parameters were used to determine the significance of environmental impacts associated with the Proposed Development. Thus, the minimum ZTV radius recommended is 20 km from the outermost turbines of the scheme. This is considered to be appropriate in this instance on the basis that significant impacts are not predicted to occur beyond 20 km. Furthermore, there are not considered to be any sites of national or international importance between 20 – 25 km and thus, the radius of the Study Area will remain at 20 km. Notwithstanding the full 20 km 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 5 km of the Wind Farm Site.

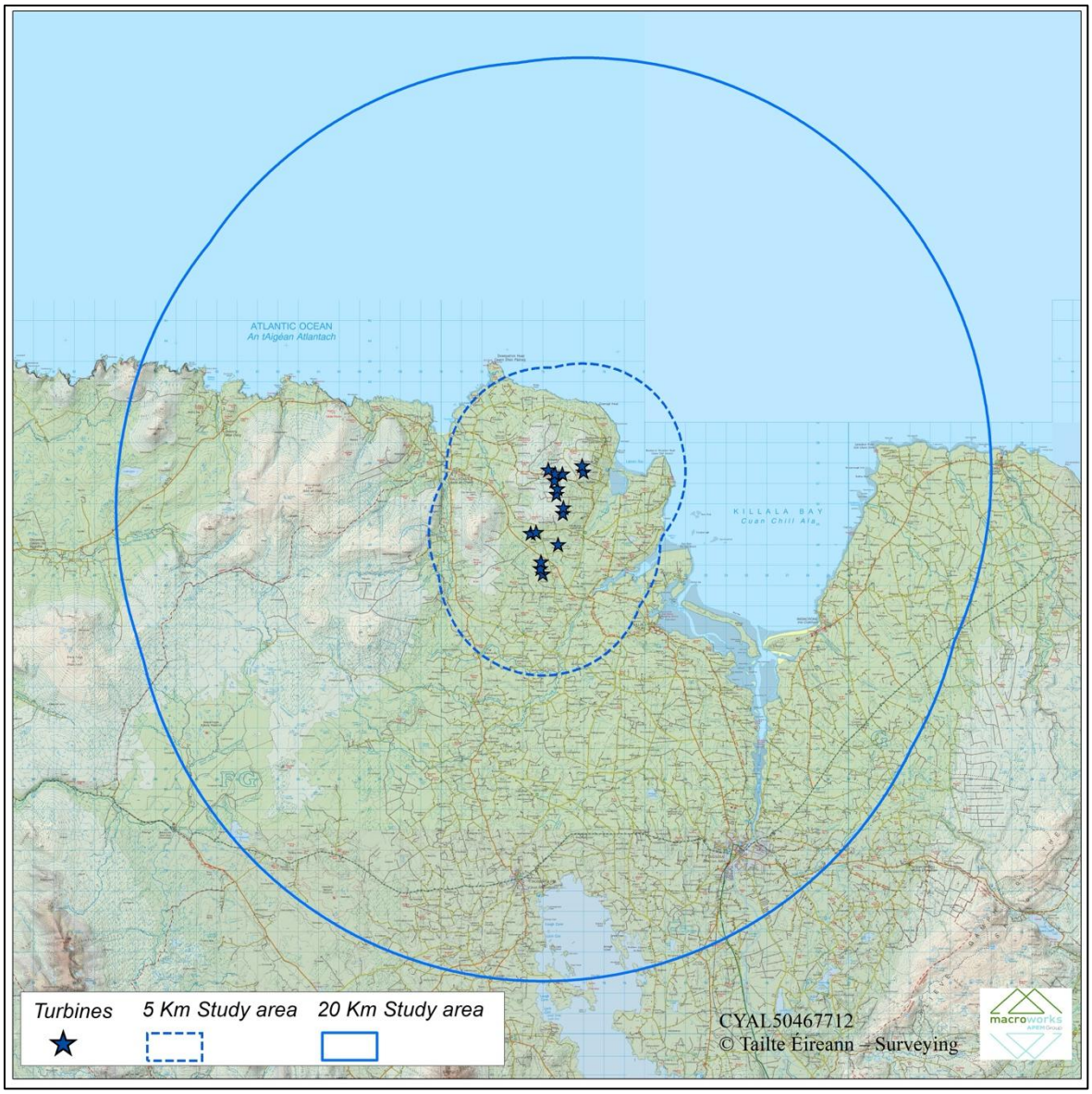

Plate 12.1: Full 20 km Extent of the Study Area

12.2.4 Computer Generated Images, Photomontages and Wireframes

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

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

12.2.5 Assessment Criteria for Landscape Effect

The classification system used by Macro Works to determine the significance of landscape and visual impacts is 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:

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 Proposed Development. The magnitude takes into account whether there is a direct physical impact resulting from the loss

of landscape components and/or a change that extends beyond the Site Boundary that may have an effect on the landscape character of the area.

Table 12.2: Magnitude of Landscape Impacts

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.
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:

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.

12.2.6 Assessment Criteria for Visual Effect

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

12.2.6.1 Visual Sensitivity

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.

12.2.6.2 Visual Impact Magnitude

The magnitude of visual effects is determined based on 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 Proposed 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:

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

12.2.6.3 Visual Impact Significance

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

12.2.6.4 Quality and 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 35-year period after which the turbines will be decommissioned. Some other elements of the Proposed Development relating to Site Access Tracks and elements of the Grid Connection will likely remain in perpetuity and will therefore have Permanent effects.

12.2.6.5 Cumulative Baseline

The NatureScot 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 NS 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 12.5** below provides criteria for assessing the magnitude of cumulative impacts.

Table 12.5: 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. - 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.

Magnitude of Impact	Description
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.

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 Wind Farm 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.

12.3.2 Landform and Drainage

The Proposed Development is located across a plateau of low rolling hills that rise towards Knockboha Summit (186 m AOD), located immediately north of the Wind Farm Site. Whilst

a collection of lower rolling hills and ridges extend out to the south of the Wind Farm Site, the terrain swiftly descends towards the coastline to the north, east and west of Knockboha Summit. Knockaghaleague Hill is another prominent elevated hilltop within the southwest periphery of the central study area, whilst both Lackan Hill (62 m AOD) and Mullaghnacross Hill (55 m AOD) rise along a coastal peninsula in the wider eastern half of the central study area. Whilst several localised streams, watercourses and drainage ditches flow through the immediate surround of the Wind Farm Site, one of the nearest notable watercourses to the development is the Heathfield River, which intersects a section of the Wind Farm Site adjacent to the R314. Other notable water courses within the central study area include the Cloonalaghan River and the Ballinglen River, which flow east and west of the Wind Farm Site. The coastline also has a large influence on the landform of the study area and comprises some notable landscape features, including steep cliffs, sea stacks, broad beaches and river estuaries.

The wider study area (refer to **Plate 12.3** below) comprises similar landscape characteristics as the central study area but on a much broader scale. Broad elevated upland areas heavily influence the wider western and southwestern parts of the study area, which encompasses the Bellacorrick Basin and its surrounding hills and ridges. To the south, the terrain comprises more typical low-rolling lands, whilst a section of Lough Conn penetrates the southernmost aspect of the wider study area. Killala Bay heavily influences the wider eastern half of the study area and contains several notable coastal features, including Bartragh Island and broad sandy beaches. The River Moy empties into Killala Bay and flows through the southeast quadrant of the wider study area, whilst the foothills of the Ox Mountains are situated along the easternmost periphery of the wider study area.

Plate 12.2: Aerial photograph showing the landscape context of the Wind Farm Site and its immediate surrounds.

12.3.3 Vegetation and Land Use

Whilst the principal land use within the central and wider study area is of agricultural farmland of various shapes and sizes bound by mixed hedgerow vegetation, extensive areas of bogland and large commercial conifer forest plantations also occupy large tracts of the surrounding landscape. Indeed, some notable areas of the Wind Farm Site and central study area, principally the more elevated lands, comprise boglands and ridged blocks of commercial conifer forestry. In the context of the entire study area, much of the landscape contained in its eastern and southern extents is dominated by pastoral lands, whilst to the west, where the broader elevated lands are located, the terrain is cloaked in extensive boglands and blocks of conifer forestry. In terms of urban land uses, the principal urban areas within the study area include Ballina and Crossmolina, both of which are

situated within the wider southern half of the study area. The wider study area also encompasses some notable wind farm developments, the largest agglomeration of which is situated in the wider southwest quadrant. In terms of linear land uses, the N26 national primary route and N59 national secondary route traverse the wider southern periphery of the study area, whilst a network of regional roads also crosses the central and wider study area.

Plate 12.3: Aerial photograph showing the landscape context of the wider Study Area

12.3.4 Landscape Policy Context and Designations

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

The Wind Energy Development Guidelines (2006/2019 Draft) provide guidance on wind farm siting and design criteria for a number of different landscape types. The proposed Wind Farm Site is considered to be located within a relatively complex landscape setting that where several contrast landscape types converge. The Wind Farm Site is considered to be most consistent with the landscape type 'Transitional Marginal Landscapes', albeit some parts of the central and wider study area are consistent with the landscape types 'Mountain and Moorland', 'Hilly and Flat Farmland' and 'Coastal Zone.

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 especially with regard to the 'spatial extent' guidance, which states "*irregular spacing and random layout is more appropriate given the relative undulation of the setting*".

In combination with the recommendations for 'Transitional Marginal Landscapes' landscape type, the siting and design recommendations for the 'Mountain Moorland', 'Hilly and Flat Farmland' and 'Coastal Zone' landscape types have also been considered when designing the turbine layout for the proposed Tirawley Wind Farm as a result of the varied nature of the landscape within the central and wider Study Area.

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 metres" 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 occupied residential dwelling to any of the proposed turbines is 554 m, which complies with the setback distance outlined in the both the current 2006 Guidelines and the Draft Revised Guidelines (2019). There is 1 no. disused vacant dwelling (H1) located c. 265 m southwest of AT12. This dwelling is under the control of the Developer and as part of the planning application, permission is sought for it to be converted and used as an operations building for the lifespan of the Proposed Development (**Section 2.6.8**). Furthermore, there is 1 no. dwelling (H2) located c. 321 m southwest from AT01. This property is under the control of the Developer and the owner is a financial beneficiary of the Proposed Development. The owner has confirmed that this property will remain unoccupied for the operational lifespan of the Proposed Development.

12.3.5 Mayo County Development Plan 2022-2028

12.3.5.1 Mayo CDP 2022-2028 – Landscape Appraisal

The Mayo County Development Plan features a Landscape Appraisal rather than a Landscape Assessment, however with regard to identifying the different landscape character areas of the county the two are functionally similar.

The landscape appraisal identifies "*Mayo has many landscapes. One of the first tasks of any analysis is to subdivide the County into its constituent parts. These are called 'Character Units'. Each of them contains an area of land, which has similar character-giving elements such as slope, vegetation and land use. The appearance of the landscape is relatively uniform within each Character Unit*."

The Wind Farm Site is located across two landscape character units. The northern extent of the Wind Farm Site is contained within 'Area D: North Coast Plateaux', whilst the southern extent of the Wind Farm Site is contained within 'Area G: North Mayo Drumlins' (refer to **Plate 12.4**).

'Area D: North Coast Plateaux' is described as *"a thin strip of often steeply sloping terrain, which has a combination of pasture and moorland on its planar seaward slopes above sea cliffs and abrupt gullies. This unit has an abrupt coastline in comparison to the other coastal units. The unit and coastline runs east-west and provides vistas of the sea to the north".* Critical landscape factors of this character unit are identified as 'Elevated Coastal Vistas', 'Smooth Terrain' and 'Low Vegetation'.

'Area G: North Mayo Drumlins' is described as an area of drumlin topography that *"contains mild low lying lakeland drumlins at the southern end merging into similar coastal topography in the northeast surrounding Killala Bay. More severe, steeper drumlins occur around the foothills of the mountains to the north-west and the Ox Mountains to the east. The flood plain of the River Moy is also incorporated within this area."* Critical landscape factors of this character unit are identified as 'Undulating topography', 'Shelter Vegetation', 'Prominent Ridge Lines' and 'Localised Lake Vistas'.

Within the study area, there are multiple other character units, outlined below:

- 'Area E: North Mayo Mountain Moorland' is located throughout the western extent of the central and wider study area and is characterised by elevated uplands
- 'Area F: North Mayo Inland Bog Basin' is located in the wider western half of the study area and comprises extensive areas of flat to low rolling bogland.
- 'Area C: North West Coastal Bog' is situated in the wider western periphery of the study area.

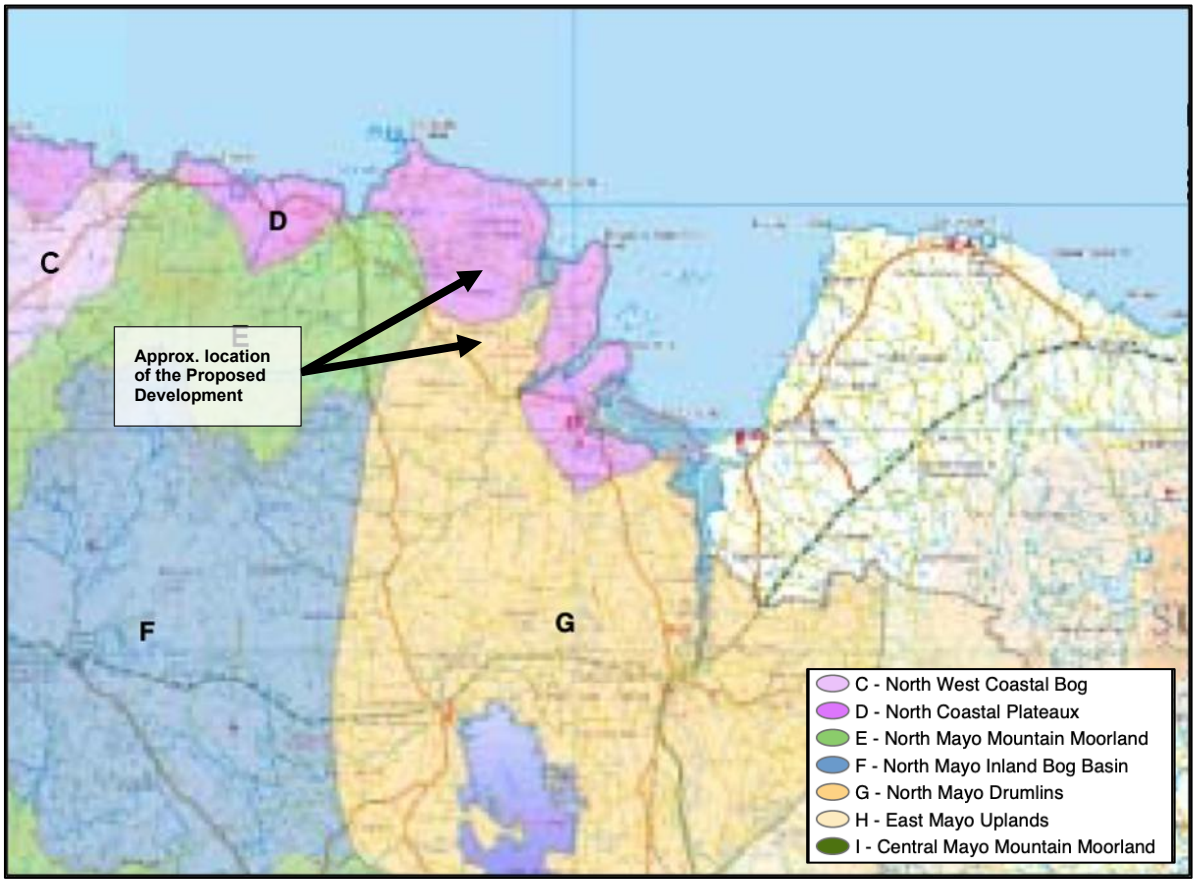

Plate 12.4: Landscape character units in relation to the Proposed Development in the current Mayo CDP (2022-2028)

The following sections of the landscape appraisal are used to define landscape protection policy areas and a sensitivity matrix. This is integral to Chapter 4 of the CDP, which outlines the Environment, Heritage & Amenity Strategy. The below 'Landscape Protection Policy Areas' map (**Plate 12.5**) is used to assess the development impact of different development types in conjunction with the Landscape Sensitivity Matrix. The proposed wind farm is situated across landscape Policy Area 1 'Mountaine Coastal Zone' and Policy Area 4 'Drumlins and Inland Lowland'. Policy Area 1 is classified with a 'High' sensitivity in relation to wind farm development, whilst Policy Area 4 is classified with a 'High/Medium' in respect of wind farm development. Developments classified with a 'High' sensitivity area described as having a *"High potential to create adverse impacts on the existing landscape character. Having regard to the intrinsic physical and visual characteristics of the landscape area, it is unlikely that such impacts can be reduced to a widely acceptable level."* 'Medium' sensitivity classifications are designated as having a "*Medium potential to create adverse impacts on the existing landscape character. Such developments are likely to be clearly discernible and distinctive, however with careful siting and good design, the significance and extent of impacts can be minimised to an acceptable level."*

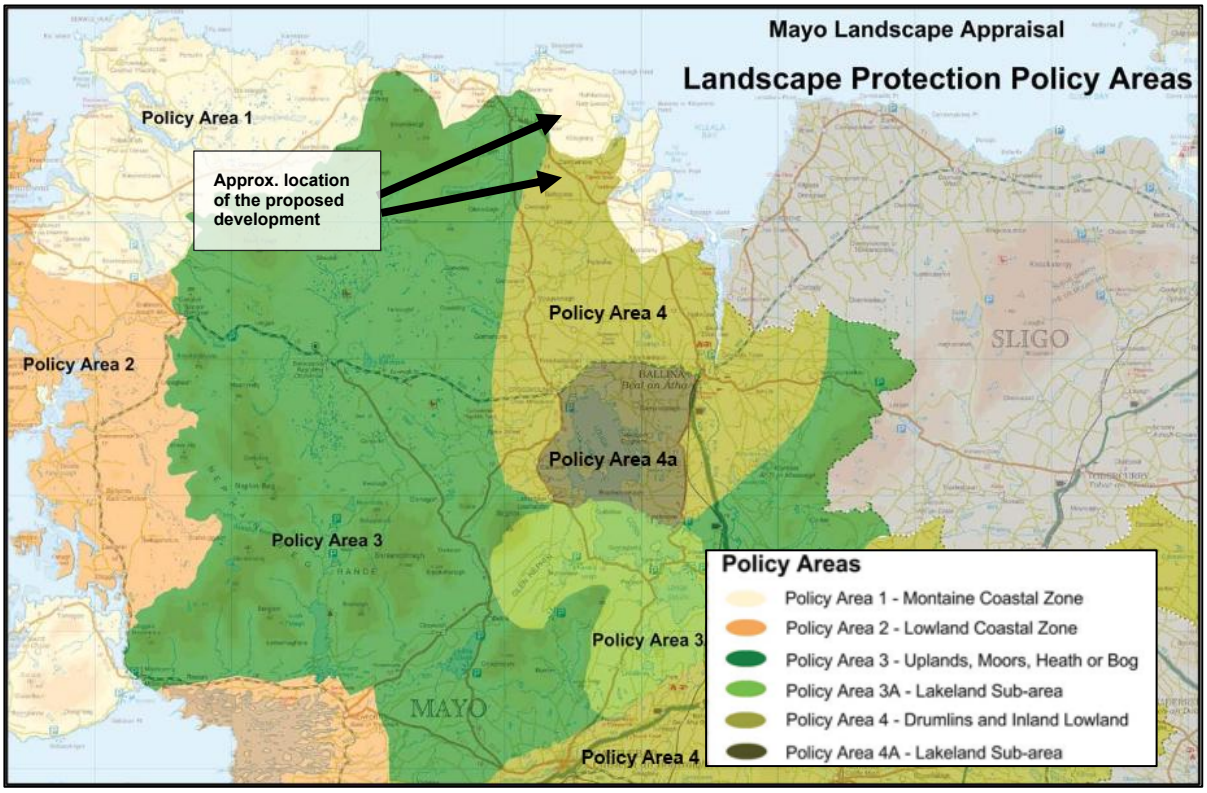

Plate 12.5: Excerpt from Map 10.1 showing landscape policy areas in relation to the Proposed Development in the current Mayo CDP (2022-2028)

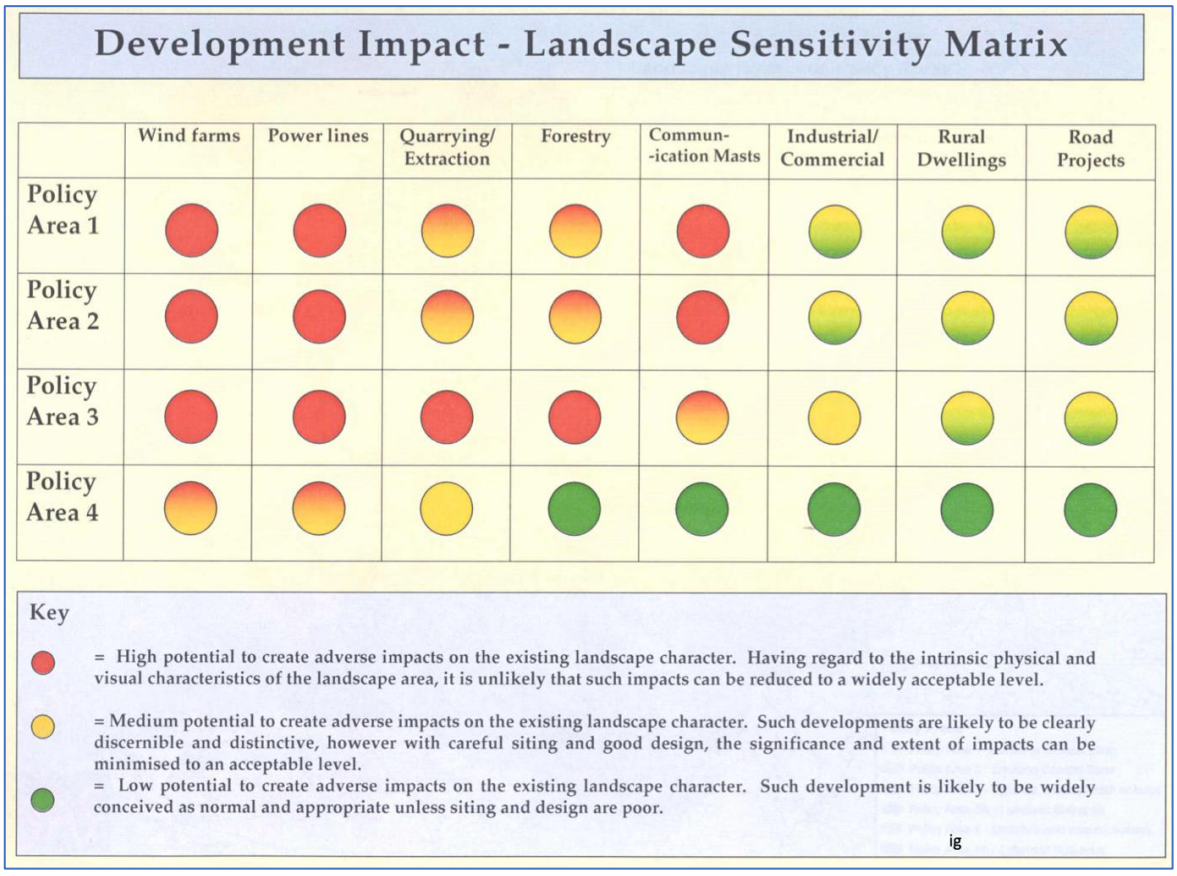

Plate 12.6: Excerpt from Figure 10.1 showing landscape sensitivity matrix within the current Mayo CDP (2022-2028)

The current Mayo CDP also includes landscape policies and objectives, some of which are relevant to the proposed development and are outlined below:

Landscape Policy

***"NEP 14** – To protect, enhance and contribute to the physical, visual and scenic character of County Mayo and to preserve its unique landscape character."*

Landscape Objectives

***NEO 27** - To ensure all development proposals are consistent with the Landscape Appraisal of County Mayo and the associated Landscape Sensitivity Matrix and future editions thereof."*

12.3.5.2 Mayo CDP 2022-2028 – Renewable Energy Strategy

A Renewable Energy Strategy (RES) for County Mayo (2011-2020) is included in the current Mayo County Development Plan 2022-2028 and identifies four wind energy classifications which include:

- ***Priority Areas** are areas which have secured planning permission and where on shore wind farms can be developed immediately.*
- ***Tier 1 - Preferred (Large Wind Farms)** are areas in which the potential for large wind farms is greatest.*
- ***Tier 1 - Preferred (Cluster of Turbines)** are areas identified as being most suitable for smaller clusters of wind turbines (clusters of up to three to five turbines depending on site conditions and visual amenity).*
- ***Tier 2 - Open for Consideration** identifies areas which may be considered for wind farms or small clusters of wind turbines but where the visual impact on sensitive or vulnerable landscapes, listed highly scenic routes, scenic routes, scenic viewing points and scenic routes will be the principal consideration. The Tier 2 classification will be reviewed by the Council following a determination by EirGrid of grid infrastructure for the County.*

The proposed Wind Farm Site is situated across both the 'Tier 1 – Preferred (Large Wind Farms' designation and the 'Tier 2 – Open for Consideration', as well as areas of undesignated lands. With regard to renewable energy developments, it states in section 6.5.14 of the current RES "*Renewable energy developments shall avoid sensitive and vulnerable landscapes, listed highly scenic views, scenic views, scenic viewing points and scenic routes where detailed visual analysis demonstrates that the development will have an adverse effect on those landscapes. Renewable energy developments shall be sited and designed to minimise the visual amenity of the surrounding area."*

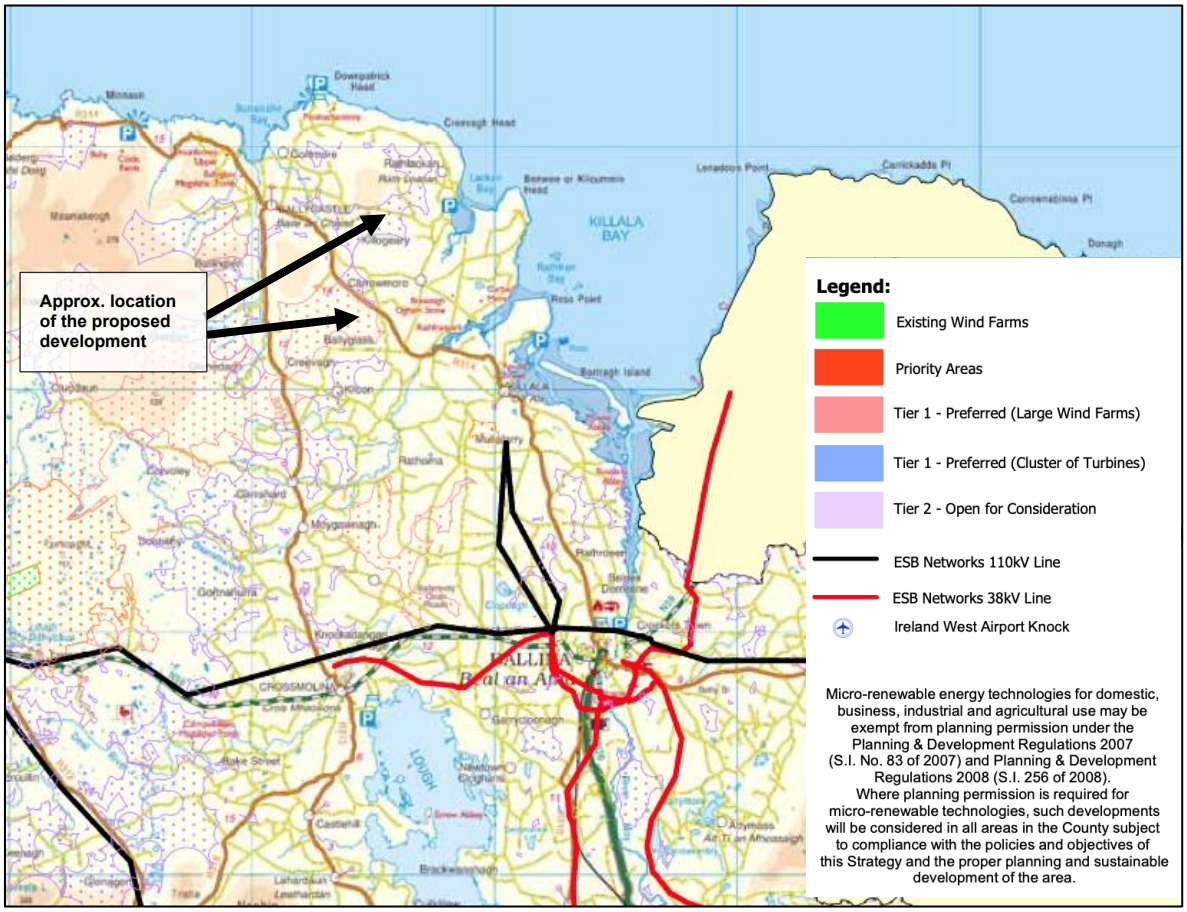

Plate 12.7: Excerpt from Map 1 – Wind Energy in the current RES showing the approximate location of the proposed development with regard to wind energy classifications in the current Mayo CDP 2022-2028.

12.3.6 Sligo County Development Plan (Extended to July 2024)

Whilst the Proposed Development is wholly contained within County Mayo, the Sligo County boundary is just less than c.10.5 km east of the Wind Farm 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 eastern half of the study area within Sligo is contained in 'Normal Rural' landscape. The most notable area of 'Sensitive Rural Landscape' occurs

along the immediate coastline in Sligo within the study area, in addition to more elevated upland areas in the wider easternmost extent of the study area.

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 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.

12.3.7.1 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. 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 not be visible, due to terrain screening within the 20 km Study Area.

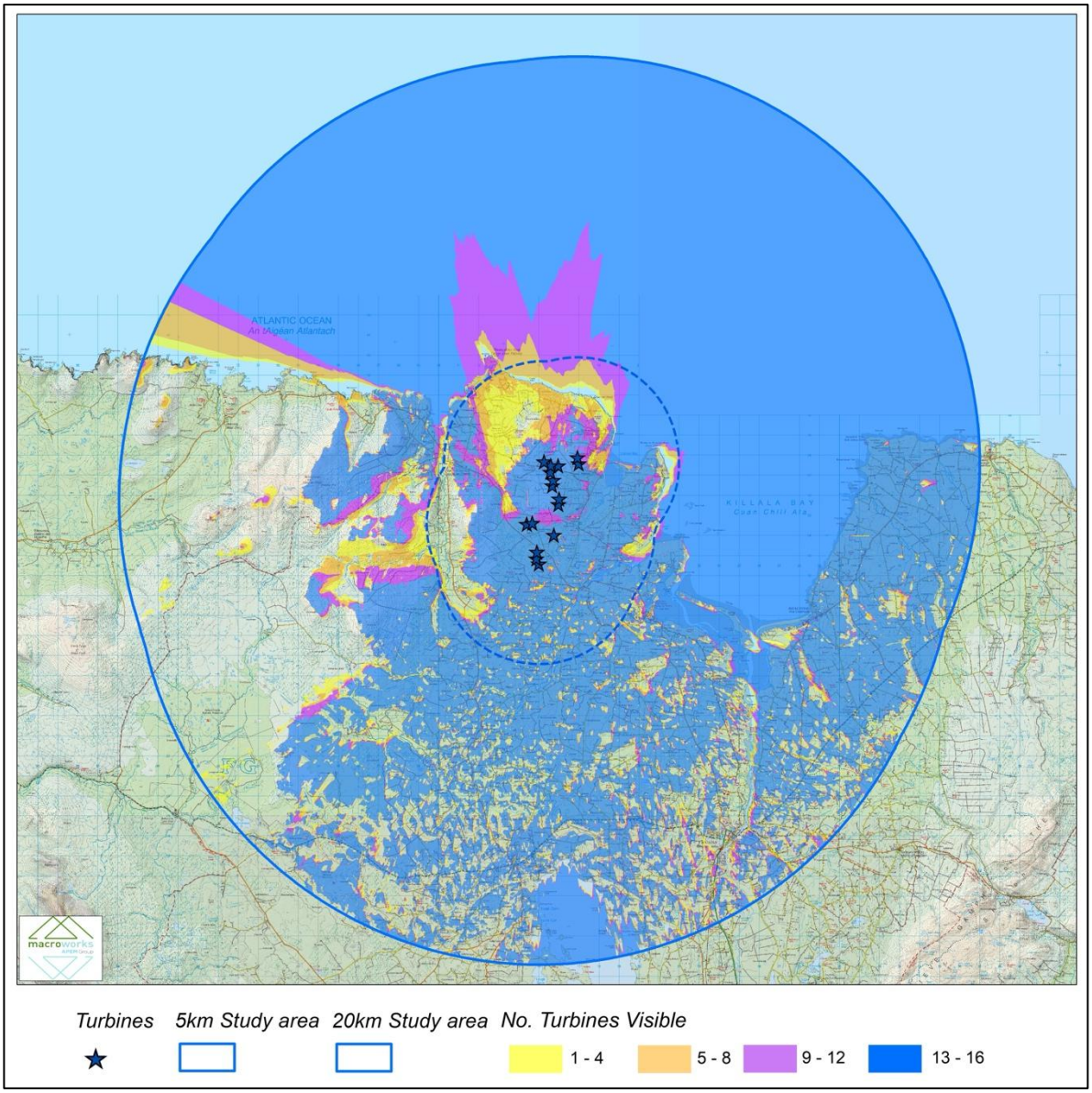

Plate 12.8: Zone of Theoretic Visibility Map (ZTV) based on bare-ground data showing the full extent of the 20km study area.

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

- Due to the elevated lands in the wider western extent of the study area, much of the potential for turbine visibility occurs in the eastern and southern half of the study area.
- There will be potential for comprehensive visibility (blue colour pattern) in the wind farm site's immediate surroundings, especially to the south and east.
- Immediately north of the northernmost turbines in the array, the potential for visibility becomes much more sporadic due to the locally elevated hill and ridges that occur to the north of the Wind Farm Site and will act as a visual screen for much of the local and coastal receptors located in the northern extent of the central study area.
- Similarly, the degree of theoretic visibility is much more sporadic to the west of the Wind Farm Site than to the east or south. This is principally due to the rolling hills and ridges that occur north and west of the Wind Farm Site. While the settlement of Ballycastle will have some potential turbine visibility, the ZTV pattern begins to dissipate further to the west as the terrain transitions to more elevated hills and ridges.
- In similar circumstances to this, the elevated terrain that encloses the Bellacorrick Basin located in the southwest quadrant of the study area, will screen much of the landscape contained within the Bellacorrick Basin and wider western and south-western periphery of the study area.
- The wider landscape to the south and east has a much clearer potential for visibility of the proposed turbines. This is principally due to the relatively flat to low rolling terrain that occurs in this aspect of the study area.
- The settlements of Killala, Enniscrone and Crossmolina have the potential to afford comprehensive visibility (blue colour pattern) of the proposed turbines. Whilst there will be some potential for visibility of the turbines at the settlement of Ballina, the visibility pattern is much more sporadic with some clear areas of no turbine visibility.

12.3.7.2 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, guide- books, roadside rest stops or on post cards that represent the area.

All of the scenic routes and views in both Mayo and Sligo that fall inside the ZTV pattern (see **Plate 12.8**) were investigated during fieldwork to determine whether actual views of the proposed wind farm might be afforded. Where visibility does occur, a viewpoint has been selected for use in the visual impact appraisal later in this chapter.

Mayo CDP

The current Mayo CDP 2022-2028 includes Map 10.2 'Scenic Routes and Views', which classifies scenic designations in County Mayo into two categories; Scenic Routes and Scenic Routes with Designated Views. Several 'Scenic Routes' occur within the study area, all of which are contained along the immediate coastline or adjacent to the lakelands within the southern periphery of the study area. One 'Scenic Route with Designated Views' (Regional Road R314 Ballycastle to Belderg) is located within the study area and is situated adjacent to the coastline in the northwest quadrant of the study area.

Viewpoints VP2, VP3, VP4, VP5, VP6 and VP9 were all selected to represent scenic designations in County Mayo within the study area.

Policy relating to scenic designations in the current Mayo County Development Plan is included below:

*"**NEO 25** – To consider applications for development, along Mayo's Scenic routes, that can demonstrate a clear need to locate in the area concerned, whilst ensuring that:*

- *Does not impinge in any significant way on the character, integrity and distinctiveness of the area.*
- *Meets high standards in siting and design.*
- *Contributes to and enhances local landscape character*
- *Satisfied all other criteria, with regard to, inter alia, servicing, public safety and environmental considerations.*

***NEO 26** - To consider applications for development, within Mayo's Coastal Areas and Lakeshores and within areas along scenic routes with designated scenic views, that can demonstrate a long-standing social link to the area concerned, whilst ensuring that it:*

- *Does not impinge in any significant way on the character, integrity and distinctiveness of the area.*
- *Cannot be considered at an alternative location.*
- *Meets high standards in siting and design.*
- *Contributes to an enhances local landscape character.*
- *Satisfies all other criteria, with regard to, inter alia, servicing, public safety and environmental considerations.*

Sligo CDP

The current Sligo CDP includes a landscape characterisation map which identifies scenic routes throughout County Sligo. These are also described in Appendix E of the current CDP. Two scenic routes are located within Sligo within the study area and include:

- *22 – R297 from Scurmore to Dromore West: Views of Killala Bay and Atlantic Ocean.*

- *53 – Coast road from Mayo County boundary at Rathmurphy northwards to its junction with R297 at Scurmore: Views of Killala Bay.*

Viewpoints VP20, VP29 and VP32 were all selected to represent scenic designations in County Sligo within the study area.

Policy relating to scenic designations in the current Sligo County Development Plan is included below:

***"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)."*

12.3.7.3 Centre of Population and Houses

The principal centre of population in relation to the Proposed Development is the settlement of Ballycastle (population of c. 220 people), which is the only notable population centre within the central study area situated some c. 4 km west of the proposed turbine array. Otherwise, the central study area comprises a modest but scattered rural population comprising isolated farmsteads and small linear clusters of residential dwellings. The small village settlement of Kincon is located in the wider southern half of the central study area, some c. 3 km south of the Wind Farm Site. The settlement of Killala is another notable settlement in relation to the Proposed Development and is situated some c. 5.5 km southwest of the Wind Farm Site along Killala Bay.

The wider study area encompasses the medium-sized town of Ballina, which is situated along the banks of the River Moy and is the largest and most notable settlement within the entire study area. Ballina is located in the southeast quadrant of the wider study area, some c. 14.5 km from the Wind Farm Site at its nearest point. Crossmolina is situated in the southern extent of the wider study area, just under c. 15 km from the Wind Farm Site along a section of the N59 national secondary route. The settlement of Enniscrone is located along the eastern flank of Killala Bay and is some c. 13 km east of the Wind Farm Site. Aside from the above-mentioned town and village settlements, the wider study area encompasses smaller cross-road settlements and a modest rural population in its southern and eastern extents. The western half of the wider study area comprises a much sparser population density due to the elevated and rugged nature of the terrain here.

12.3.7.4 Transport Routes

The most notable major transport route in relation to the proposed wind farm is the N59 national secondary route that skirts through the wider eastern and southern extent of the study area and is located some c. 12.9 km south of the turbine array at its nearest point. A brief section of the N26 national primary route also occurs in the southern periphery of the study area, where it extends south from the settlement of Ballina and is located some c. 16.5km southeast of the Wind Farm Site at its nearest point. The nearest major route to the Proposed Development is the R314 regional road, which is situated less than 200m from the nearest proposed turbine. The R314 links the settlements of Killala and Ballycastle and is oriented in a northwest by southeast direction through the central study area. The R315 regional road is situated some 3.8 km west of the Wind Farm Site at its nearest point and is oriented in a general north-south direction within the study area, connecting the settlements of Crossmolina and Ballycastle. Otherwise, small town and village settlements are connected via a network of interconnecting local roads, some of which traverse immediately adjacent to the Wind Farm Site.

12.3.7.5 Tourism, Recreational and Heritage Features

Due to the study area's location along the western Irish coastline, there are several notable tourism, heritage and amenity receptors within the study area. One of the most prominent of these is the Wild Atlantic Way (WAW) scenic driving route, which occurs along the coastal routes within the study area and is located just over 1.5 km northeast of the nearest turbine. The Wild Atlantic Way, a 2,500 km long tourist driving route, enters the study area in its northeast quadrant along the coast road west of Easky and follows the coast roads throughout the study area.

The Eurovelo Atlantic's Coast Route is an 11,000 km long cycling trail that traverses the coastline of several countries along the western coast of Europe, including Ireland. The Celtic Coast section of this route follows a similar route to the Wild Atlantic Way within the study area, passing less than 1.5 km northeast of the nearest turbine.

The Céide Fields encompass a network of stone-walled fields extending over hundreds of hectares and are the oldest known field patterns globally, dating back almost 6,000 years. The Wind Farm Site currently comprises an award-winning visitor centre and is set against some of the most dramatic coastal rock formations in Ireland, and is located some c. 10 km northwest of the proposed turbine array.

Downpatrick Head comprises a highly scenic coastal walk where views of the famous Dún Briste sea stack and the wider coastline are afforded. It is located along the WAW and is designated as one of the 15 Signature Discovery Points along the route. Downpatrick Head is some 6 km northwest of the nearest turbines in the proposed array.

The remnants of Rathfran Abbey, which was founded in 1274, is located along the coastline on the southwestern extent of Killala Bay and is located some 3.3 km east of the nearest turbine. Several other notable heritage features accessible to the public are also located throughout the study area, several of which are contained along Killala Bay and the River Moy Estuary and include Moyne Abbey, Rosserk Friary and Belleek Castle.

The central and wider study area also comprises several notable walking routes, many of which pass adjacent to the numerous tourism heritage and amenity assets within the study area. The principal walking route within the study area is the Western Way a National Waymarked trail, which traverses through the northern extents of the Wind Farm Site and links the settlements of Ballina and Ballycastle. Other walking trails include the Kilcummin Loop Walks, the Ballycastle Loop Walk, the Moygownagh Loop Walk and the Belleek Nature Trail.

It is also important to note that this part of Mayo and Sligo is a popular tourism destination due to its location adjacent to the coastline and comprises numerous short-term holiday homes, caravan parks and glamping sites. Several golf courses are also located in the wider eastern extent of the study area.

12.3.7.6 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);
- Designated Scenic Routes and Views;

- Local Community views;
- Centres of Population;
- Major Routes; and
- Amenity and heritage features.

Where a VRP might have been initially selected for more than one reason it will be assessed according to the primary criterion for which it was chosen. The characteristics of each receptor type vary as does 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 Development, usually within a 5km radius of the Wind Farm 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 Wind Farm 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 Wind Farm 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 (refer to **Plate 12.9** below) in the Photomontage Booklet.

Table 12.6: Outline description of selected Viewshed Reference Points (See also VRP map at Plate 12.9)

VRP No.	Location	Distance to Nearest Turbine(km)	Representative of	Direction of view
VP1	Downpatrick Head	5.9 km AT12	AH, DSR	SE
VP2	Local road intersection at Muingrevagh	4.1 km AT12	DSR, LCV, AH	SE
VP3	Local road at Doonadoba	3.0 km AT12	DSR, LCV, AH	S
VP4	Céide Fields	10.6 km AT12	AH, DSR	E
VP5	Local road at Creevagh	2.0 km AT15	DSR, LCV, AH	SW
VP6	R314 at Doonfeeny Upper	6.2 km AT12	DSR, MR	E & SE
VP7	Kilbride Graveyard	2.4 km AT12	AH, LCV	E & SE
VP8	Local road at Knockboha	1.1 km AT14	LCV, AH	E & S
VP9	Local road at Castletown	0.9 km AT15	LCV	W & SW
VP10	Carrowmore Beach Carpark	2.9 km AT16	AH, LCV	W & SW
VP11	Local road at Conaghra	0.3 km AT12	LCV, AH	N & S
VP12	R314 regional road at Carrowhibbock Lower east of Ballycastle	3.6 km AT12	MR, CP, LCV	E
VP13	Local road at Lacken Strand	1.4 km AT16	AH, DSR, LCV	W
VP14	Local road at Glebe northwest of lack Old Graveyard	0.8 km AT16	LCV, AH	NW, W & SW
VP15	Local road at Carrowmacshane	1.3 km AT12	LCV	N, E, & S
VP16	Local road at Lissadrone West	0.6 km AT08	LCV	N, W & S
VP17	Local road at Carrowtrasna	3.1 km AT16	LCV, AH	W
VP18	R314 at Aghaleague east of Heathfield River	1.9 km AT06	MR, LCV	NE & E
VP19	Local road at Carrowmore	1.3 km AT07	LCV, AH	W
VP20	R297 at Quigaboy	15.3 km AT16	MR, DSR	W
VP21	Local road at Ballynaleck	0.8 km AT07	LCV	N, W & S
VP22	Local road at Ballymurphy	0.6 km AT05	LCV	N, W & S

VRP No.	Location	Distance to Nearest Turbine(km)	Representative of	Direction of view
VP23	Local road at Ballykinlettragh	5.1 km AT06	LCV	E
VP24	Local road at Carbad More	1.4 km AT01	LCV, AH	W & N
VP25	Templemurry Graveyard	3.6 km AT01	AH, LCV	W & NW
VP26	R314 at Carn	0.7 km AT02	MR, LCV	E, N & W
VP27	Local road at Carn	0.8 km AT02	LCV	N
VP28	Local road at Ballybeg	1.9 km AT02	LCV	NE
VP29	Cliff Road, Enniscrone	13.5 km AT01	CP, AH	W
VP30	Killala Cemetery	5.9 km AT02	AH, CP, LCV	NW
VP31	Local road at Ardnagor	3.4 km AT02	CP, LCV	N
VP32	L2605 at Killanly	13.9 km AT02	AH, DSR	NW
VP33	Moygownagh New Cemetery	8.7 km AT02	CP, AH	N
VP34	St . Tiernan's Cemetery Crossmolina	15.1 km AT02	CP, AH, MR	N
VP35	Local GAA Club at Ballina	17.2 km AT02	CP, AH	NW
VP36	The Gazebo	0.3 km AT16	AH	W & S

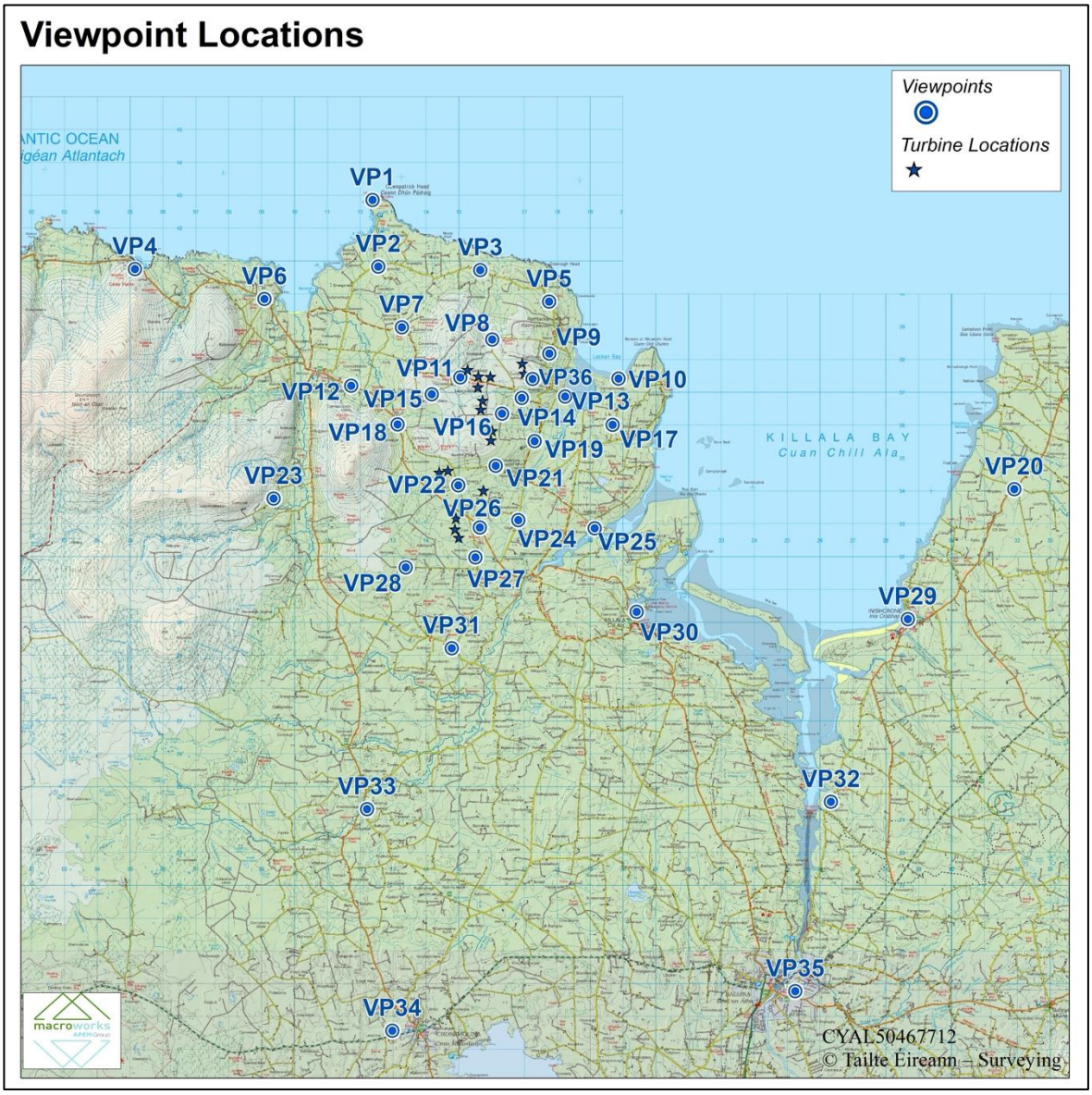

Plate 12.9: Map showing selected representative viewpoints within the study are (Refer to Volume III Figure 12.9 for larger scale version)

12.3.7.7 Cumulative Baseline

Within the 20 km Study Area there are five existing wind farms and two consented wind farm developments and two wind farms in the planning system awaiting a decision. There are also four wind farms at the pre-planning stage within the Study Area. The cumulative developments are set out below.

Table 12.7: Cumulative Windfarms within the Study Area

No.	Name	Planning Ref.	No. WTG	Direction from the Development	Approx Distance to the Development (km)	Planning Status
1	Killala Community Wind Farm (Phase 1)	17169	5	Southeast	6.0	Operational
2	Killala Community Wind Farm (Phase 2)	19260	1	Southeast	5.2	Operational
3	Lackan Wind Farm	22401	3	East	13.6	Operational
4	Oweninny (Phase 1)	ABP Ref. 16.PA0029	29	Southwest	13.9	Operational
5	Oweninny (Phase 2)	ABP Ref. 16.PA0029	31	South-west	19.6	Operational
6	Oweninny (Phase 3)	ABP-309375-21	18	Southwest	14.3	Consented
7	Dooleeg	20467	1	Southwest	19	Consented
8	Bellacorrick	901077	21	Southwest	16.8	Decommissioning*
9	Sheskin	Reg. Ref. 15/825, 19/457	8	Southwest	18.0	Operational
10	Sheskin South	ABP-310529-21	18	Southwest	19.9	Consented
11	Glenora	ABP-310528-21	22	West	6.9	Awaiting Decision
12	Knockboha (Domestic)	06343	1	North	1.1	Operational
13	Leadymore (Domestic)	1769	1	Southeast	4.1	Operational
14	Gortnahurra	N/A	16	Southwest	11.7	Preplanning
15	Keerglen Wind Farm	2460537	8	Southwest	6.5	Awaiting Decision
16	Keenagh, Owenboy & Trista Windfarm	N/A	20	Southwest	22.3	Preplanning

* = Decommissioning of the Bellacorrick Windfarm will take place alongside the construction of the proposed Oweninny Phase (3)

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 of pastoral farmland and/ or forestry or left as semi-naturalistic moorland. Applications for Wind energy

development would likely still occur throughout the study area due to the positive wind energy policy areas located throughout, whilst the construction of existing wind farm permissions would likely take place.

12.4.2 Landscape Impacts

Landscape impacts are assessed on the basis landscape sensitivity weighed against the magnitude of physical landscape effects within the Wind Farm 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 (5-20 km).

12.4.2.1 Landscape Character, Value and Sensitivity

Central Study Area (<5 km)

Landscape value and sensitivity are considered in relation to a number of factors highlighted in the Guidelines for Landscape and Visual Impact Assessment 2013, which are set out below and discussed relative to the proposed Wind Farm Site and wider Study Area.

The Central Study Area is a relatively complex landscape and comprises areas of contrasting values and sensitivities. Much of the Wind Farm Site is contained along rolling transitional terrain cloaked in a mix of commercial conifer forestry, areas of pastoral farmland and peat bog. Indeed, much of the Wind Farm Site and its immediate context are influenced by typical rural land uses and comprise little notable sense of distinctiveness or rarity. The coastal parts of the central study area are some of its most highly susceptible landscape areas and possess a high degree of scenic and recreational amenity and some notable tourism values. These areas are most sensitive to change and have limited capacity to accommodate development, highlighted by the scenic route designations, linear amenity features (WAW and Eurovelo Route) and the numerous distinctive coastal features.

In terms of settlement patterns, the most prominent centres of population are Killala and Ballycastle, which are located on opposite sides of the central study area. Aside from these two towns, there is a modest but dispersed rural population within the central study area, with the Wind Farm Site's immediate context comprising the lowest population densities within the central study area. Whilst small clusters of residential development are located inland from the Wind Farm Site, the primary settlement pattern occurs along the coastal parts of the study area, where residential receptors benefit from locally elevated views afforded across the coastline and out to sea. The central study area is also principally

accessed via a network of interconnecting local roads, albeit two regional roads occur in the southern and western half of the central study area.

The sensitive nature of the coastal parts of the central study area is further reflected in the current Mayo County Development Plan, which is contained in the landscape area D – North Coast Plateaux, where the critical landscape factors are outlined as 'Elevated Coastal Vistas', 'Smooth Terrain' and 'Low Vegetation'. It is these elevated coastal vistas combined with the smooth terrain and low vegetation that generate a high degree of distinctiveness and sense of place in this part of County Mayo. Indeed, the sensitive nature of this part of the study area is highlighted in the current CDP, which classifies this area by Policy Area 1, which is typically designated with a High / High-medium potential development impact with regard to larger scale built developments such as Wind Farms, Power Lines and Communication Masts. Notwithstanding this, the more robust and less susceptible inland parts of the central study area are contained by Policy Area 4, which has a much stronger ability to accommodate development and is classified with potential development impacts ranging between high-medium to low with respect of Wind Farms, Power Lines and Communication Masts.

The robust nature of much of the central study area is also further reflected in the current Renewable Energy Strategy for Mayo, as the Wind Farm Site is predominantly contained across 'Tier 1 – Preferred 'Large Wind Farms' designation and the 'Tier 2 – Open for Consideration' designation. These classifications reinforce the fact that this robust landscape context can well accommodate wind energy developments with careful siting and design considerations. Further analysis of the Mayo CDP policies, in particular landscape appraisal of the county, can be found in **Chapter 4 Planning Policy, Section 4.5.3**.

On balance of the reasons outlined above, the landscape sensitivity of the central Study Area is deemed to be Medium, albeit the parts of the central study area located along the immediate coastline are considered to be of a High and even Very High landscape sensitivity.

Wider Study Area (c. 5 - 20 km)

The wider study area comprises similar contrasting landscape values, character and sensitivity to the central study area, albeit over a much broader area. The coastal parts of the study area remain some of the most susceptible and distinctive parts of the wider study area, encompassing receptors and landscape features such as Downpatrick Head, the Céide Fields and Killala Bay. The settlement of Enniscrone is a popular summer tourism

destination and comprises numerous holiday lets, glamping areas and holiday parks, whilst two designated scenic routes extend north and south from Enniscrone, highlighting the high degree of visual amenity afforded from here. The wider western aspects of the study area contain similarly distinctive coastlines, however, there is a much stronger sense of remoteness and the naturalistic here due to the very limited population densities and extensive areas of moorland rand rolling upland terrain.

The inland parts of the wider study area provide a stark contrast to the more susceptible coastal areas. Whilst there is still some notable sense of scenic amenity such as in the surrounds of Lough Conn and the elevated lands in the surrounds of the Bellacorrick Basin, there is a much stronger influence from anthropogenic land uses and landscape features. Although a strong sense of remoteness and containment is afforded in the Bellacorrick Basin, the wider southwest quadrant of the study area, this part of the study area has one of the country's highest concentrations of wind turbines. There is also a strong historical association with energy generation in this part of the study area, as the Bellacorrick Basin was once home to one of ESB's peat-fired electricity generating plants, which comprised a 300ft high cooling tower. The population densities begin to increase further east of the Bellacorrick Basin in the wider study areas, where Crossmolina and Ballina account for the most notable urban settlements. The landscape in the surroundings of these settlements is much less distinctive than the coastal parts of the study area and the surroundings of the Bellacorrick Basin and is principally influenced by more typical rural land uses such as pastoral farmland. There is also a notable presence of commercial and industrial land uses in the wider southern half of the study area, especially on the outskirts of the larger settlements.

On balance, for the reasons outlined above, it is considered that the wider Study Area comprises an array of contrasting landscape areas, all of which have varying levels of landscape value and sensitivity. Nonetheless, it is considered that the coastal parts of the study area are some of its most susceptible and are considered to be of a High and sometimes Very High landscape sensitivity, especially in the surrounds of sensitive amenity and heritage features. In contrast, the more inland parts of the study area, such as those within its southern half, comprise more traditional rural land uses and encompass less sense of rarity and distinctiveness. The landscape sensitivity here is considered to range between Medium to Medium-low, albeit with some localized areas of higher sensitivity.

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 (<5 km) is affected by the proposed wind turbines as well as ancillary development such as access and circulation roads, areas of hard standing for the turbines, borrow pits, grid connection and the substation compounds. By contrast, for the wider landscape of the Study Area, landscape impacts relate exclusively to the influence of the proposed turbines on landscape character. 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: Development Description** with construction processes management 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 Wind Farm Site as none of the Proposed Development features have a large 'footprint' and land disturbance/vegetation clearing will be relatively limited. The topography and land cover of the Wind Farm Site will remain largely unaltered with construction being limited to Site Access Tracks, Turbine Hardstands, the Onsite Substation and Control Building compound, BESS, Temporary Construction Compounds and proposed Met Mast. Excavations will tie into existing ground levels and will be the minimum required for efficient working. Any temporary excavations or stockpiles of material will be re-graded to marry into existing site levels and reseeded appropriately in conjunction with advice from the project ecologist.

The finalised internal Site 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 Site 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 110 kV Onsite GIS Substation constructed to collect the generated power from the Proposed Development before connecting to the national grid at the 110 kV Tawnaghmore substation. The Onsite Substation will be located to the south of the wind

turbine AT01 in the townland of Barroe and will be contained in an existing small pastoral field that is enclosed by existing low scrubby hedgerow vegetation. The building will measure approximately 15 m high with a footprint of approximately 741.24 m^2 and will be secured by a 2.65 m high palisade fence. It is proposed to plant a locally sourced native hedgerow in the surrounds of the substation to screen it from surrounding local receptors. It is also proposed to include a BESS compound to the east of the substation compound, both of which are accessed via an entrance from the local road to their south. The BESS compound area will be approximately 6,360 m^2 (60.7 m x 104.8 m) and will comprise battery energy storage units and other ancillary features and will be enclosed by a 2.60 m steel palisade fence. The most notable construction stage landscape impacts resulting from the proposed onsite substation and BESS 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 Wind Farm 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 Wind Farm Site are considered to be modest in the context of this transitional landscape setting that is influenced by an array of working rural land uses.

One permanent meteorological (Met) mast will be in the southwest of the Wind Farm Site. It will comprise of a 80 m high lattice steel mast with a shallow concrete foundation. 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. The Proposed Development also includes the construction of several new site entrances along the surrounding local road network.

The Grid Connection cabling will run from the Onsite 110 kV GIS Substation across a combination of private lands and public roads generating land disturbance and associated movement of machinery and stockpiling of materials. The proposed GCR will include for directional drilling at up to 3 no. locations. No overhead lines are required for the connection. 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 onsite 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 14-21 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 Turbine Hardstands, Site Access Tracks and an Onsite Substation, but only the Onsite 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 Proposed Development are largely reversible.

There will be some construction stage effects on landscape character generated by the intensity of construction activities (workers and heavy machinery) as well as areas of bare-ground and stockpiling of materials as identified in the Construction and Environmental Management Plan (**CEMP** - **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 not a characteristic feature of the immediate site context, but an existing wind farm development is located south of the settlement of Killala just over c. 5.5 km southeast of the site at its nearest point. Furthermore, wind energy development is a characteristic feature of the wider southwest quadrant of the study are in the surrounds of the Bellacorrick basin, where a considerable number of existing and permitted wind farm developments are located. A modest sized existing wind farm development is also located along the opposite side of Killala Bay in the wider eastern half of the study area. Thus, whilst wind energy development is not a wholly familiar feature of the immediate landscape context, it forms part of the landscape character of the wider study area, which also influences parts of the central study area as existing

wind turbines can be viewed throughout some of the more elevated parts of the central study area. Thus, the effect is one of intensification of an established land use in this landscape context 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 plateau of hills and ridges in the immediate surrounds of the wind farm site comprise a notable utilitarian character due to the presence of working rural land uses such as agriculture and commercial scale forestry. Although the Proposed Development represents a stronger human presence and level of built development than currently exists on the site, it will not detract significantly from the production rural character of this foothill landscape. It is important to note that there are more scenic coastal parts of the central and wider study area that are characterised by some distinct landscape areas and features that present with a degree of the naturalistic. Whilst the Proposed Development will slightly detract from some of these susceptible coastal areas, it is considered that the proposed turbines are well offset from some of the most sensitive and susceptible landscape features, which diminish the development's potential to notable alter the scenic character of the coastline.

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 Proposed Development is 35 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 Wind Farm Site.

The decommissioning phase will have similar temporary impacts as the construction phase with the movement of large turbine components away from the Wind Farm Site. There may be a minor loss of roadside and trackside vegetation that has grown during the operational phase of the Proposed Development, but this can be reinstated upon completion of decommissioning. Areas of hard standing that are of no further use will be allowed to revegetate naturally over 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 Wind Farm Site and cable route as result of the Proposed Development during the operational phase, but these

will be relatively minor in the context of this working 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 land form and land use patterns. For these reasons the magnitude of the landscape impact is deemed to be High-medium within the Wind Farm Site and its immediate environs (c.1 km) reducing to Medium for the remainder of the central Study Area. The quality of the landscape effects is deemed Negative. Beyond 5 km from the site, the magnitude of landscape impact is deemed to reduce to Low and Negligible at increasing distances as the wind farm becomes a proportionately smaller and integrated component of the overall landscape fabric.

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 sensitivity judgement 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 Wind Farm Site during construction, but reducing quickly to Slight and Imperceptible with distance and broader context.

Based on a Medium sensitivity judgement and a High-medium / Medium magnitude of operational stage landscape impact, the localised significance of impact is considered to be Substantial-moderate / Negative / Long-term within and immediately around the Wind Farm Site. Thereafter, significance will reduce to Moderate 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.

12.4.2.4 Residual Visual Effect

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 36 selected representative viewpoint locations has been placed into Technical **Appendix 12.1**. This section should be read in conjunction with both Technical **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. Some

viewpoints comprise an A, B and C to include the full extent of the view into the 53.5-degree view extent.

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

Visual Impact				
VP No.	**Distance to nearest turbine**	**Visual Receptor Sensitivity**	**Magnitude of Visual Impact**	**Visual Impact Significance**
VP1	5.9 km AT12	High	Low-negligible	**Slight / Negative / Long Term**
VP2	4.1 km AT12	High-medium	Low-negligible	**Slight-imperceptible / Negative / Long Term**
VP3	3.0 km AT12	High-medium	Low	**Slight / Negative / Long Term**
VP4	10.6 km AT12	Very High	Low-negligible	**Slight / Negative / Long Term**
VP5	2.0 km AT15	High-medium	Medium-low	**Moderate-Slight / Negative / Long Term**
VP6	6.2 km AT12	High-medium	Low	**Slight / Negative / Long Term**
VP7	2.4 km AT12	Medium	Low-negligible	**Slight-imperceptible / Negative / Long Term**
VP8a&b	1.1 km AT14	Medium	High-medium	**Substantial-moderate / Negative / Long Term**
VP9	0.9 km AT15	High-medium	Medium	**Moderate / Negative / Long Term**
VP10	2.9 km AT16	High-medium	Medium-low	**Moderate-slight / Negative / Long Term**
VP11a, b & c	0.3 km AT12	High-medium	High-medium	**Substantial-moderate / Negative / Long Term**
VP12a,& b	3.6 km AT12	Medium	Medium-low	**Moderate-slight / Negative / Long Term**
VP13 a & b	1.4 km AT16	High-medium	Medium-low	**Moderate-slight / Negative / Long Term**
VP14 a, b & c	0.8 km AT16	Medium	Medium	**Moderate / Negative / Long Term**
VP15 a, b & c	1.3 km AT12	Medium	Medium	**Moderate / Negative / Long Term**
VP16 a, b, c & d	0.6 km AT08	Medium	High-medium	**Substantial-moderate / Negative / Long Term**

Visual Impact				
VP No.	**Distance to nearest turbine**	**Visual Receptor Sensitivity**	**Magnitude of Visual Impact**	**Visual Impact Significance**
VP17 a & b	3.1 km AT16	Medium	Medium-low	**Moderate-slight / Negative / Long Term**
VP18 a & b	1.9 km AT06	Medium-low	Medium-low	**Moderate-slight / Negative / Long Term**
VP19 a, b & c	1.3 km AT07	Medium	Medium	**Moderate / Negative / Long Term**
VP20	15.3 km AT16	High-medium	Low-negligible	**Slight / Negative / Long Term**
VP21 a, b & c	0.8 km AT07	Medium	High	**Substantial-moderate / Negative / Long Term**
VP22 a, b & c	0.6 km AT05	Medium-low	High-medium	**Moderate / Negative / Long Term**
VP23	5.1 km AT06	Medium	Low-negligible	**Slight-imperceptible / Negative / Long Term**
VP24 a & b	1.4 km AT01	Medium-low	Medium	**Moderate / Negative / Long Term**
VP25	3.6 km AT01	High-medium	Medium-low	**Moderate-slight / Negative / Long Term**
VP26 a, b & c	0.7 km AT02	Medium-low	High-medium	**Moderate / Negative / Long Term**
VP27 a & b	0.8 km AT02	Medium-low	High-medium	**Moderate / Negative / Long Term**
VP28 a & b	1.9 km AT02	Medium-low	Medium	**Moderate-slight / Negative / Long Term**
VP29	13.5 km AT01	High-medium	Low	**Slight / Negative / Long Term**
VP30	5.9 km AT02	Medium	Medium-low	**Moderate-slight / Negative / Long Term**
VP31	3.4 km AT02	Medium-low	Medium	**Moderate-slight / Negative / Long Term**
VP32	13.9 km AT02	High-medium	Low-negligible	**Slight / Negative / Long Term**
VP33	8.7 km AT02	Medium	Low-negligible	**Slight-imperceptible / Negative / Long Term**
VP34	15.1 km AT02	Medium-low	Low-negligible	**Slight-imperceptible / Negative / Long Term**
VP35	17.2 km AT02	Medium-low	Negligible	**Imperceptible / Neutral / Long Term**

Visual Impact				
VP No.	**Distance to nearest turbine**	**Visual Receptor Sensitivity**	**Magnitude of Visual Impact**	**Visual Impact Significance**
VP36	0.3km AT16	High-medium	High-medium	**Substantial-moderate / Negative / Long Term**

12.4.2.5 Visual Impacts on Local Community Views

Local Community views are considered to be those experienced by people who live, work and move around the area within approximately 5 km of the Wind Farm Site. These are generally the people that are most likely to have their visual amenity affected by a wind energy proposal due to proximity to the turbines, a greater potential to view turbines in various directions, or having turbines as a familiar feature of their daily views.

Due to the broad and dispersed nature of the proposed wind farm, up to 26 viewpoints (VP2, VP3, VP5, VP7, VP8, VP9, VP10, VP11, VP12, VP13, VP14, VP15, VP16, VP17, VP18, VP19, VP21, VP22, VP23, VP24, VP25, VP26, VP27, VP28, VP30 and VP31) were selected to represent local community receptors within the study area. It is important to note that many views selected to represent local community receptors in the vicinity of the coastline were also selected to represent scenic designations and amenity and heritage features such as the Wild Atlantic Way tourist driving route. The sensitivity of these views' ranges between Medium-low to High-medium, with the higher ranging sensitivities associated with the coastal context and its array of sensitive landscape receptors and broad elevated views afforded across the wider landscape. Those receptors identified with a 'medium' to 'medium-low' sensitivity are more typical views influenced by the surrounding working landscape, such as broad areas of pastoral farmland and extensive blocks of commercial conifer forestry.

The significance of visual effects ranged between 'Substantial-moderate' to 'Slight-imperceptible', with the highest ranging impacts related to those receptors located nearest to the Proposed Development that have the potential to afford views of the turbines in multiple directions. Four viewpoints were classified with a 'Substantial-moderate' significance of visual effect and include viewpoints VP8, VP11, VP16 and VP21.

Viewpoint VP8 is situated in the northern extent of the Wind Farm Site and will afford views of the northernmost turbines in several directions, with the nearest turbines presenting at a prominent scale. Whilst there is some sense of containment highlighted in the depicted VP8,

clear views of turbines from a near distance have the potential to be afforded from several nearby dwellings and local access roads.

Viewpoint VP11 provides a much broader view across the wider landscape, where almost the full extent of the proposed wind farm development will be visible, albeit to varying degrees. The proposed turbines will become one of the defining features in this local landscape context although the irregular and dispersed layout of the proposed turbines results in a strong degree of visual permeability through the scheme so as not to generate any strong sense of enclosure or heavily obstruct views of the distant landscape and wider distinctive landscape features.

Viewpoint VP16 is located adjacent to the more central clusters of turbines, where the Proposed Development presents with a considerable visual envelope of nearly 150 degrees. Whilst the main aspect of visual amenity relates to views in the opposite direction of the proposed turbines, the nearest of the proposed turbines are viewed at a distance of a little under c. 600 m. Nonetheless, despite their notable perceived scale, the turbines present in a highly legible manner with clear spacing characteristics and with a strong sense of perspective, highlighting the depth of the proposed wind farm development along this elevated broad crest of hills and ridges.

Viewpoint VP21 affords a similar view of the Proposed Development as VP11, albeit VP21 encompass much of the southern half of the Proposed Development. The proposed turbines will be prominently visible from this local landscape context both to the north and south, with the nearest turbines situated to the north viewed uphill, presenting with a dominant visual presence. To the south, the visible turbines in the array present in several small clusters with wind turbine AT01 viewed slightly in isolation adjacent to the proposed substation and BESS, both of which are also visible here, with the main built structures associated with both the substation and BESS development finished in a muted green tone to visually assimilate them into this vegetated rural context. Whilst the proposed wind farm will markedly increase the intensity of built development at surrounding local community receptors, it benefits from loose spacing characteristics, which diminishes its overall perceived scale.

Eight viewpoints representing the local community were classified with a residual significance of effect of 'Moderate' and include viewpoints VP9, VP14, VP15, VP19, VP22, VP24, VP26 and VP27. Much of the impact relates to the distance between the proposed turbines and these receptors, where, in some instances, only two or three turbines are fully

visible. VP9 affords a relatively limited view of the wider wind farm; however, two turbines are visible at a notable scale at a distance of approximately 900 m.

In contrast, other local community receptors afford clearer views of the full extent of the development, with all turbines visible to varying degrees, ranging from near-distance views to partial glimpses of blade tips rotating along the vegetated skyline. Viewpoints VP15 and VP19 both provide broad views of large sections of the proposed wind farm, where the irregular spacing of turbines is apparent. Although the turbines form one of the principal built features in these views, the proposed project does not appear out of place within this broad landscape, which is characterised by large-scale land uses such as extensive conifer forestry, peatlands, and pastoral farmland.

Overall, whilst the turbines will present at a considerable scale and with an extensive visual envelope at some of the nearest local community receptors, the turbines do not generate any notable sense of over-bearing, nor do they appear out of place in this robust setting influenced by an array of working land uses. Whilst there is some notable sense of scenic amenity afforded throughout the local landscape, the turbines will typically be viewed away from the main aspects of scenic amenity, or are loosely arranged allowing for a strong sense of visual permeability through the scheme so as not to block any sensitive viewing aspects. This loose and dispersed arrangement of the turbine area also notably diminishes the overall perceived scale of the full extent of the development from the nearest local receptors, eliminating the potential for local community receptors to perceive that they are contained within the wind farm development. Thus, affects at local community receptors are assessed as Not Significant.

12.4.2.6 Visual Impacts on Designated Views

Nine representative views (VP1, VP2, VP3, VP4, VP5, VP6, VP13, VP20 and VP32) were selected to represent scenic designations within the study area throughout Mayo and Sligo. The majority of the designated scenic amenity within the study area relates to the coastline, and therefore, many of the above-mentioned representative views are also representative of the many heritage and amenity assets located along the coastal routes. The sensitivity of visual receptors at these representative views ranged from Very High to High-medium, highlighting the coastline's highly susceptible nature within the study area. The residual significance of effect at these receptors ranged between Moderate-slight to Slight-imperceptible and is discussed further below. Those receptors that principally represent heritage assets will be discussed further in their relevant **Section 12.4.2.7** below.

Viewpoints VP2, VP3, VP5 and VP13 are all representative of a scenic route designation outlined in the Mayo County Development Plan, which curves along the coastline on a local road to the northeast and west of the Wind Farm Site. It is important to note that the principal aspect of amenity along this route is typically directed away from the site, across the rugged coastal landscape and out to sea. Viewpoint VP2 affords a heavily screened view of the proposed project, where only partial views of turbine blade tips are visible, rotating along a distant elevated ridgeline. Whilst visual exposure increases at Viewpoint VP3, the turbines remain well offset from the viewer and present a sub-dominant presence within the context of expansive coastal views afforded in the opposite direction to the north. In contrast, the proposed turbines are more pronounced at Viewpoint VP5, where they are visible rising above a distant block of conifer forestry at a distance of just under 2 km to the southwest of this section of the local road. Whilst the rotating turbines may draw the eye along this section, it is considered a more robust part of the route, with a degree of containment from the coastline provided by locally rolling terrain to the east. This section of the route is also influenced by an adjacent quarrying facility.

Viewpoint VP13 affords one of the nearer views of the proposed project from this route and is situated immediately adjacent to the coastline at Lacken Strand. The proposed turbines will be intermittently visible on rising ground from this coastal context and will present in a clear and unambiguous manner, with several turbines partially screened by a combination of landform and intervening vegetation. Overall, the residual significance of visual effect was assessed as Moderate–slight at VP5 and VP13, and Slight–imperceptible and Slight at VP2 and VP3, respectively. It is not considered that the proposed project will significantly affect the character of the coastal landscape to the north, east and west of the Wind Farm Site.

Viewpoints VP4 and VP6 are representative of a 'scenic route with designated views' located along the R314 regional road in the north-western part of the study area. Viewpoint VP6 affords the clearest potential view of the turbines from this route, where they will be partially and intermittently visible along the distant skyline at a distance of approximately 6 km. At this range, the turbines will appear as relatively modest-scale features and will not detract from the scenic amenity of the view, which is principally associated with the coastal landscape. Thus, the significance of visual effect is assessed as Slight from this section of the scenic route.

Viewpoints VP20 and VP32 represent two scenic route designations in County Sligo, located within the wider eastern half of the study area. VP20 is situated along the R297 to

the northeast of Enniscrone, where broad views are afforded across the coastal plains and out to sea. The proposed turbines will be visible as small-scale, distant background features to the west, across Killala Bay, and will have a minimal visual presence in the context of the expansive coastal views afforded from this location. As a result, the residual significance of visual effect is assessed as Slight. Viewpoint VP32 is representative of a scenic route designation located along a local road to the east of the River Moy corridor. A pleasant view is afforded across the wider River Moy corridor, where several heritage assets are visible along the riverbanks. The proposed turbines will be visible in the distant landscape at a similar scale to those seen from VP20. Whilst the turbines present a broad lateral extent, they are primarily viewed against the sky, resulting in a low degree of visual contrast. Some of the more southerly turbines will be seen against distant rolling terrain, giving rise to a slightly higher degree of contrast. Overall, the proposed turbines will have little influence on the scenic amenity of this route, which is already influenced by the existing Killala turbines visible at a more noticeable scale. Therefore, the residual significance of visual effect is assessed as Slight.

On balance of the reasons outlined above, it is considered that some aspects of the study area, most notably its coastal locations, present with a high degree of scenic amenity. Nonetheless, much of this relates to views across the rugged coastline and out to sea, which are typically in the opposite direction to the proposed turbines. Thus, impacts at scenic designations within the Study Area are assessed as Not Significant.

12.4.2.7 Visual Impacts on Amenity and Heritage Features

As a result of the Proposed Developments location in the vicinity of the coastline, which encompasses numerous tourism, amenity and heritage features up to 20 views (VP1, VP2, VP3, VP4, VP5, VP7, VP8, VP10, VP11, VP13, VP14, VP17, VP19, VP24, VP25, VP29, VP30, VP32, VP34, VP35 and VP36) were selected to represent amenity and heritage assets within the study area. Some of the principal linear amenity features include the Wild Atlantic Way tourist driving route and the Eurovelo cycling routes. Both of these also follow the scenic route designations identified above, and therefore, the assessment of these scenic routes also relates to these linear amenity features. Other notable linear amenity features include the Western Way National Waymarked walking trail, which traverses directly through the central parts of the Wind Farm Site and will afford clear views of the turbines from a near distance. Nonetheless, whilst the turbines present in a highly prominent manner from the nearest sections of the linear route to the proposed project, the turbines do not block or obstruct the distant views across the wider landscape. In respect of a planning application for a consented wind farm in the Boggeragh Mountains in County Cork,

which is situated immediately adjacent to a national waymarked walking trail, the inspector noted (in relation to the Blackwater Way walking trail);

"The proposed development will involve the introduction of large structures into the landscape at a relatively near distance along part of the route. However, in the context of the assessment in relation to visual amenity and landscape above, I do not consider that the impact of the proposed development would significantly affect the recreational value of the walking route. I have no objection to the proposed development in this respect."

It is important to note that the inspector acknowledged that the proposed wind farm would not "*significantly affect the recreation value of the walking route*" which passed less than c.500 m south of the nearest turbines. Indeed, these consented turbines are situated a similar distance to the Blackwater Way as the proposed Tirawley turbines are to the Western Way.

One of the most sensitive heritage receptors within the Study Area is the nationally and internationally renowned Céide Fields complex, which is situated some c.10 km west of the Wind Farm Site along elevated lands immediately adjacent to the coastline. It is classified with a 'very high' receptor sensitivity due to its remote location along the coastline and affords broad sweeping views out to sea and across the rugged coastal context. A brief view of the Proposed Development will be afforded in the distance to the east, where two turbine nacelles and partial views of the blade sets of up to four further turbines will be visible, rotating along the skyline ridge. Nonetheless, the turbines are viewed as small-scale background features and are well offset from the more susceptible coastal context viewed further to the north. As a result, the residual significance of effect was deemed Slight, which is principally influenced by the sensitivity of the visual receptor as opposed to any notable magnitude of visual effect.

Downpatrick Head is another notable amenity and heritage receptor situated just under 6 km north of the Wind Farm Site. This is a highly popular tourism receptor and one of the Signature Discovery Points along the Wild Atlantic Way trail. Several proposed turbines will be visible along the distant broad ridge viewed inland away from the coastline. Whilst the rotating turbine components have the potential to draw they eye, the turbines are viewed at a modest scale and will have no notable effect on this susceptible coastal context. Indeed, in the context of the sweeping 180-degree panorama afforded of the coastline, which encompasses the distinctive Dun Briste seastack, the proposed turbines will have a minimal visual presence. As a result, the significance of visual effect was deemed Slight.

Several other notable and local heritage and amenity assets are also located throughout the central and wider study area. To the east of the Wind Farm Site is Carrowmore Beach, backed by Lacken Strand. Viewpoint V10 is representative of views afforded from above Carrowmore Beach, which also forms part of a local looped walking trail known as the Kilcummin Loop Walks. The proposed turbines will be clearly visible from this locally elevated location and present with a broad visual envelope across the distant ridge. Whilst the turbines will be a noticeable feature of this coastal view, they are well offset from the immediate coastline and are viewed as being well contained in the working landscape context influenced by a mix of pastoral lands and extensive areas of forestry. Although some brief stacked views of turbines are afforded here, the Proposed Development generally presents in a highly legible manner with loose spacing characteristics. Thus, the magnitude of visual impact is deemed Moderate-slight.

The Gazebo at Lacken is represented by Viewpoint VP36. This local heritage receptor is located on locally elevated land in close proximity to the northern part of the turbine array. Broad panoramic views are afforded from this stone structure across the coastline to the north and east. As a result of the expansive nature of these views, the receptor sensitivity is classified as High–medium. The northern turbines will appear most prominent here, located at a distance of approximately 300 m from the receptor. Whilst the turbines, viewed to the west (in the opposite direction to the principal aspect of visual amenity), will present in a prominent manner, they will generate little sense of being overbearing. The southern and central parts of the turbine array will also be visible; however, some of the more central turbines will be partially screened by vegetation located directly to the west of the structure. Overall, the turbines will result in a marked increase in the intensity of built development in this view. However, this occurs within the less visually sensitive aspect of the view, which is influenced by typical rural land uses such as farmland and forestry. Whilst there will be some localised detractor effect on the visual setting of this feature, the principal viewing aspects to the north and east remain unaffected. Thus, the residual significance of effect is classified as Substantial–moderate.

Overall, the study area comprises a variety of sensitive and visually susceptible tourism, heritage and amenity assets that have the potential to afford views of the proposed wind farm. Nonetheless, in similar circumstances to the scenic designations, the proposed turbines are typically viewed in the opposite direction to the main aspect of visual amenity from these visual receptors. As a result of the reasons outlined above, visual effects at amenity, tourism and heritage receptors are assessed as Not Signficant.

12.4.2.8 Visual Impacts on Centres of Population

Viewpoints VP12, VP29, VP30, VP31, VP33, VP34, and VP35 were all selected to represent centres of population within the study area. Whilst a modest rural population exists within the central study area, the only centres of population include the settlement of Ballycastle, located some c. 2.5 km west of the Wind Farm Site, the small village of Kilfian, located some 3 km south of the Wind Farm Site and the coastal settlement of Killala situated just under 5.2 km southeast of the Wind Farm Site.

Viewpoint VP12 is representative of the settlement of Ballycastle and is located along the R314 to the east of the centre of the settlement. Whilst the wireframe view identifies the potential for clear visibility of several turbines, the actual visibility scenario is that of a partially screened view of the Proposed Development. One turbine (AT12) will be visible in isolation, rotating along the ridge to the northeast, whilst the turbines to the southeast will be partially screened by a mature tree line. It is also important to note that the visible and partially visible turbines are viewed inland in the context of the more robust working landscape context. The small rural settlement of Kilfian is located inland from the coastline and is just over 3 km south of the Wind Farm Site.

Viewpoint VP31 was included as a representative view of this parish and is afforded a relatively clear view of the proposed wind farm development. Although the turbines present in a relatively condensed cluster from this local landscape context, a strong sense of perspective is generated by the variation in the perceived scale of the turbines from south to north in this view, highlighting the depth and dispersion of the Proposed Development across this working rural context.

Viewpoint VP30 is representative of the settlement of Killala and is situated at a local cemetery along a small coastal inlet north of the village centre. The proposed turbines will be visible at a distance of just under 5 km, albeit much of the southern extent of the development is screened by an area of low rolling terrain located a short distance directly west of the view. Nonetheless, the central and northern turbines in the array will present at a modest scale in the distance. Although these rotating turbine components have the potential to draw the eye in this view, they are well offset from the coastal context and are well accommodated along the distant landscape in terms of their scale and function. Overall, the residual significance of visual effect at all three representative viewpoints is deemed Moderate-slight.

Several other centres of population are located in the wider surrounds of the study area and have the potential to afford views of the proposed turbines. Viewpoint VP29 is representative of the settlement of Enniscrone and affords a view of the turbines at a distance of c. 12 km. Whilst the full extent of the Proposed Development will be visible from this coastal context, the turbines are viewed as small-scale background features and will contribute to a residual 'Slight' significance of visual impact.

Crossmolina (VP34) and Ballina (VP35) are two other notable settlements situated in the wider southern half of the study area. The proposed turbines will be entirely screened from the central parts of the settlement of Ballina, whilst the turbines present as distant background features from the outskirts of Crossmolina. Thus, the residual significance of visual impact is deemed 'Imperceptible' at Ballina and 'Slight-imperceptible' at the settlement of Crossmolina.

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

12.4.2.9 Visual Impacts on Major Routes

Major route receptors are represented by up to six viewpoints, including VP6, VP12, VP18, VP20, VP26 and VP34. The receptor sensitivity of these views ranged between High-medium to medium-low, with those of a higher sensitivity situated along the coastline and/or designated a scenic route in either the Mayo or Sligo CDP. Only two major route receptors are located within the central study area, the nearest of which is the R314. A section of this regional road passes directly adjacent to the southern clusters of turbines and is represented by viewpoint VP26. Whilst the turbines will be considerably screened in the depicted view, which is also representative of a neighbouring residential dwelling, there is potential for clearer views to be afforded of the proposed turbines along sections of this regional road. Nonetheless, the turbines will be viewed in the context of broad areas of pastoral farmland and extensive conifer forest plantations, which line the regional road and will also heavily screen the turbine along intermittent sections of this route. Overall, the significance of visual impact was deemed Moderate as the turbines have the potential to present in a prominent manner, albeit, intermittently due to the degree of roadside screening.

The most notable major routes include the N59 and N26, both of which are situated in the wider southern and eastern periphery of the study area. Whilst there is potential for

intermitted views of the Proposed Development from both major route receptors, the turbines will be viewed at a considerable distance and will have no notable influenced on the visual amenity afforded from this busy route corridors, which are principally influenced by typical rural land uses.

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.

12.4.2.10 Summary of Visual Impacts

Based on the visual impact assessments outlined in **Sections 12.4.2.6** to **12.4.2.7** above and in, the most notable visual impacts occur at local community receptors, which account for all four of the 'Substantial-moderate' visual impact significance classifications and principally relate to their close proximity to the Proposed Development. It is important to note that two of these views are also representative of amenity receptors, the Western Way (VP11) and a local walking trail (VP8). Nonetheless, in all instances where the proposed turbines are viewed at a close distance, they do not present with any strong sense of overbearing, nor do they appear over-scaled or incongruous in this robust crest of hills that comprises extensive areas of moorland and commercial conifer forests.

With regard to some of the most susceptible parts of the study area, such as the coastal landscape to the north, east and west of the Proposed Development, whilst the turbines will be visible in some instances, they do not present in a highly prominent manner and are typically views in the opposite direction to the main aspect of visual amenity. Furthermore, there is a strong sense of contextual separation from the coastline, with the turbine viewed well offset from the coastline along elevated terrain influenced by typical transitional land uses such as pastoral farmland and conifer forestry.

Even in the context of local community receptors where the turbines will present with a dominant visual presence in some instances, the irregular spacings and dispersed layout of the proposed wind farm allows for a strong sense of visual permeability through the Proposed Development and does not notably obstruct the more distant inland views that are afforded from some of the locally elevated parts of the central study area. Furthermore, the dispersed nature of the layout also diminishes the overall scale and extent of the development in this landscape context, where intervening terrain and mature screening often partially and in some cases, fully screen some parts of the proposed turbine array.

With regard to the proposed substation and BESS development, these built features are located in a relatively contained part of the study area, with visibility of these features limited to the immediate surroundings. Indeed, where visible, they will result in some degree of

change and a notable intensity of built development; however, they will be finished in a muted green tone to visually assimilate them with the surrounding layers of existing intervening vegetation.

On balance of the reasons outlined above, it is assessed that residual visual effects generated by the proposed Tirawley Wind Farm are Not Significant. Indeed, whilst there will be some high-ranging impacts at local community receptors, the turbines are typically viewed in the context of a working rural landscape context that comprises broad underlying land uses and is well accommodated in terms of its scale and function. Whilst there will be some sense for local receptors of being contained within a broad area of wind energy development, the dispersed nature of the array within this rolling landscape setting prevents a sense of being contained within the middle of a wind farm.

12.5 CUMULATIVE EFFECTS

The nature of cumulative visibility within the study area is analysed below using the cumulative wireframe views contained in the photomontage booklet and the cumulative ZTVs (refer to **Plate 12.10**).

Although the photomontages and Cumulative ZTV map (**Plate 12.10**) relates principally to cumulative visual effects (i.e. utilising the selected VP set), it also informs the closely related assessment of cumulative landscape effects, particularly those relating to cumulative effects on the overall landscape character of the study area. The assessment below, therefore, relates to both cumulative visual effects and cumulative landscape effects.

In this instance, the Study Area comprises existing wind farms, consented wind farms, proposed (in planning) wind farms and wind farm developments at the pre-planning stage. As a result, the cumulative assessment of wind farm developments within the study area will be broken into two categories: the current cumulative scenario and the potential future cumulative scenario. The current cumulative scenario will assess the cumulative effect of the proposed Tirawley Wind Farm in respect of existing wind farm developments and consented wind farm developments. The potential future cumulative scenario will assess the proposed Tirawley Wind Farm in respect of existing wind farms, consented wind farms, proposed (in planning) wind farms and wind farm developments at the pre-planning stage (only where information is publicly accessible).

12.5.1 Cumulative Impacts – Current Cumulative Scenario

The cumulative map below (refer to **Plate 12.10**) shows the potential for cumulative visibility between the Proposed Development and all other existing and consented development within the study area. A discussion in relation to the current cumulative scenario effects follows below.

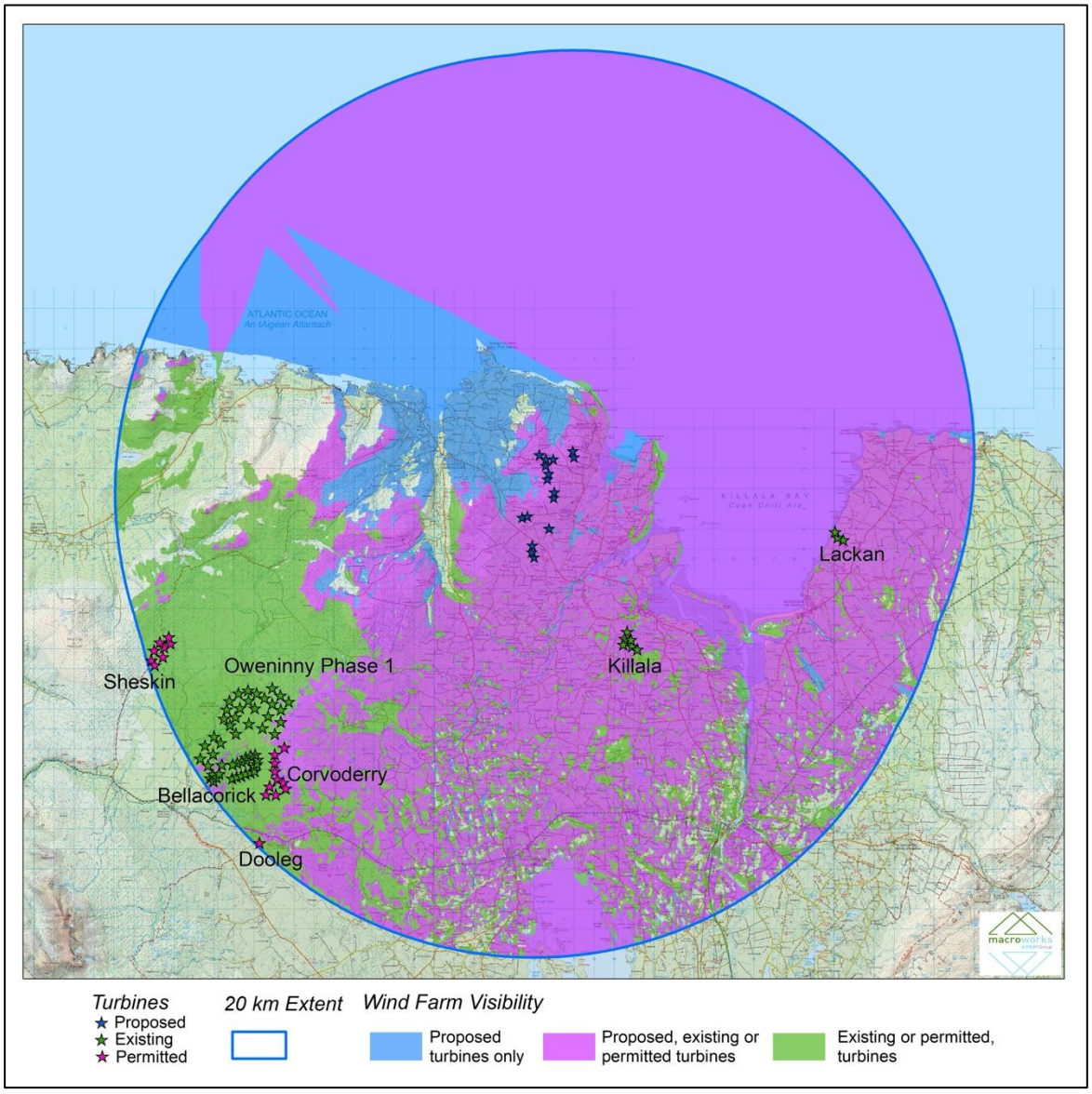

Plate 12.10: Cumulative ZTV Map (Tip Height -135m) for Tirawley Wind Farm identifying the potential intervisibility of the proposed Wind Farm and all other existing and consented wind farms within the study area (See Volume III Figure 12.10 for larger version).

The cumulative ZTV map shows the potential for cumulative visibility between the proposed turbines and all other existing and consented wind farm developments within the 20 km study area. At present, there are three operational wind farms and three consented wind farm developments within the 20 km study area. It is important to note that there are no

existing or consented wind farm developments within the central study area. The nearest existing cumulative wind farm development is Killala Community Wind Farm, which is situated some 6 km southeast of the Wind Farm Site. Lacken Wind Farm, which comprises three turbines, is located on the opposite side of Killala Bay, some 13.5 km east of the Proposed Development. The only other existing development within the study area is Oweninny Wind Farm (Phase 1 & 2), which comprises 60 turbines. However, Oweninny Wind Farm is some 13.9 km southwest of the Wind Farm Site and is located along the opposite side of an elevated area of upland terrain situated throughout the southwest quadrant of the study area. All other consented developments within the study area are situated in the same visual context as Oweninny Wind Farm, which is situated in the contained Bellacorrick Basin. Therefore, much of the potential cumulative visibility within the study area relates to the Proposed Development and both Killala Wind Farm and Lacken Wind Farm.

As per the cumulative ZTV, the Proposed Development will be theoretically visible in combination with other existing and consented developments for 68.9% of the study area. The most notable part of the study area where the Proposed Development will be viewed in isolation is its northwest quadrant. Some 8.7% of the study area has the potential to afford views of the proposed turbines in isolation, which principally relates to areas to the northwest of the site in the surroundings of Ballycastle. The wider northwest quadrant of the study area also accounts for the most notable part of the 20 km study extent, where there will be no visibility of proposed, existing or consented developments.

As highlighted in the visual impact appraisal, whilst numerous instances of intervisibility between the Proposed Development and the existing Killala and Lacken turbine will occur throughout the study area, all three proposed and existing developments are well offset from each other and are viewed as distinctly separate developments, which limits the potential for any notable negative cumulative visual effects to occur. Furthermore, in terms of the scale of the proposed turbines, they will not appear out of place in this landscape context and in the context of the nearest surrounding Killala turbines, which rise to a similar tip height of 126 m. It is also important to note that the proposed turbines are by no means the largest turbines within the study area, with some wind turbines within the Bellacorrick Basin rising to a height of 176 m. Overall, it is considered that the proposed turbines respond well to the scale of their surrounding landscape context.

In terms of sequential cumulative visual impacts, there are a number of notable linear receptors within the study area, including scenic routes, several linear amenity routes and

some major route receptors. The most notable of these are the scenic routes and linear amenity routes that traverse the coastal parts of the study area. All of these routes have the potential to afford views of the Proposed Development and the existing Killala and Lacken turbines, as all three proposed and existing developments are situated in the near vicinity of the coastline.

With regard to the cluster of existing and consented developments in the southwest quadrant of the study area, these will have no influence on the coastal routes that traverse through the study area. Nevertheless, the N59 national secondary route has the potential to afford views of the proposed, existing and consented developments within the current cumulative scenario. However, visibility of the Proposed Development will be limited along this route due to its considerable distance from the Proposed Development.

Overall, the Proposed Development will result in an increase in the intensity of wind farm development along linear receptors within the study area, however, it is not considered that the Proposed Development will generate any notable negative aesthetic visual impacts in combination with other existing and consented developments as it is located over 5 km from the nearest existing wind farm.

In respect of cumulative impacts with other forms of development, there are no other notable large scale developments within the vicinity of the Proposed Development.

As a result of the reasons outlined above, the magnitude of cumulative effect in relation to existing and consented wind farms within the 20 km Study Area is deemed Low. This is principally due to the fact that no other existing or consented developments are located within the central study area.

12.5.2 Cumulative Impacts – Potential Future Cumulative Scenario

The cumulative map below (refer to **Plate 12.11**) shows the potential for cumulative visibility between the Proposed Development and all other existing, consented, proposed (in-planning) and pre-planning developments within the study area. A discussion in relation to the potential future cumulative scenario effects follows below.

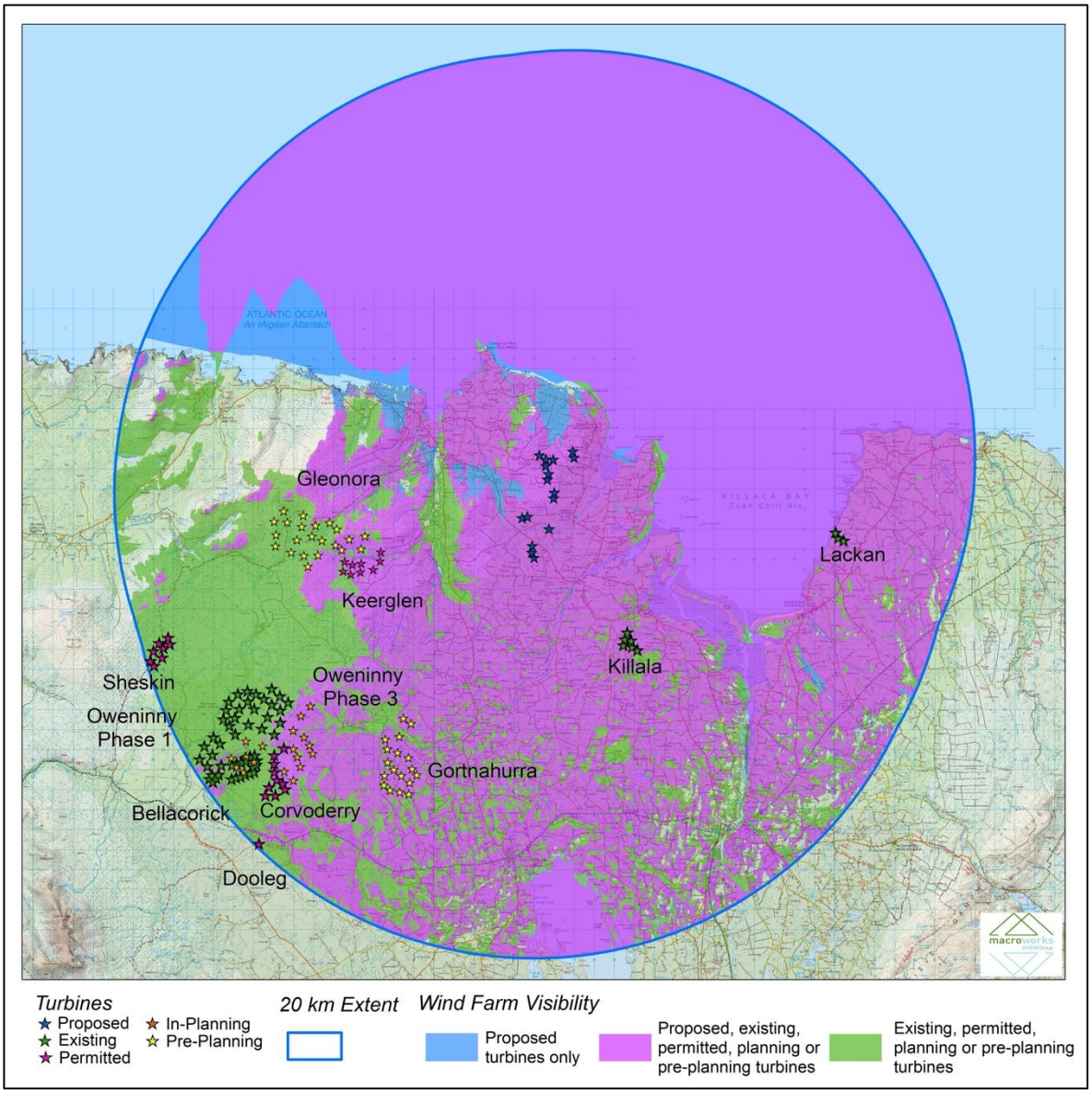

Plate 12.11: Cumulative ZTV Map (Tip Height-135m) for Tirawley Wind Farm identifying the potential intervisibility of the proposed Wind Farm and all other existing, consented, proposed (in-planning) and pre-planning wind farms within the study area (See Volume III Figure 12.11 for larger version).

Whilst still at the planning or pre-planning stage, it is important to consider the several proposed developments located throughout the study area. The most notable potential for cumulative effects in the potential future cumulative scenario relates to both the proposed (pre-planning) Glenora and Keerglen wind farms, which have the potential to encompass up to 30 additional turbines along the elevated uplands in the wider western half of the study area. The proposed Gortnahurra Wind Farm (pre-planning), which is located slightly further away to the southwest of the Wind Farm Site, is proposed to comprise of approximately 18 no. wind turbines. Thus, in the potential future cumulative scenario, there is potential for an additional 48 no. turbines to be constructed across the wider western and southwestern

extent of the study area resulting in a considerable increase in the intensity of wind farm development. Nonetheless, the Proposed Development will be contextually separated from all three of these developments as it is located on a relatively defined crest of hills and ridges some 7.6 km from the nearest of these proposed wind farms.

In the potential future cumulative scenario, 74.6% of the study area will have the potential to afford views of the proposed Tirawley Wind Farm, existing development, consented development and all other proposed (planning and pre-planning) developments. It is also important to note that wind energy development is a well-established land use within the Bellacorrick Basin in the southwest quadrant of the study area. Thus, whilst there will be a considerable increase in the intensity of development here, it will not appear out of place or uncharacteristic of the area.

In terms of sequential impacts, as noted in the current cumulative scenario the most notable linear receptors are contained along the coastline in the northern extents of the study area. Whilst there is some potential for the proposed (in-planning and pre-planning) turbines to be viewed from these coastal receptors, these developments are well offset inland from the coast, which limits their potential to notably impact on these sensitive receptors.

Overall, it is considered that there will be a much more prevalent presence of wind energy development within the study area in the potential future cumulative scenario. Wind farm development will become an established and characteristic land use throughout the study area. However, it is contained away from the immediate coastline and some of the most sensitive visual receptors. The overall cumulative effect of the potential future cumulative scenario is also slightly diminished by the fact that no other developments are located within the central study area.

As a result of the reasons outlined above, the magnitude of cumulative effect of the potential future cumulative scenario in relation existing, consented and proposed (in-planning and pre-planning) wind farms within the 20 km Study Area is deemed High-medium**.**

12.6 MITIGATION MEASURES AND RESIDUAL EFFECTS

Outside of those landscape and visual mitigation measures that formed part of the iterative design process of this Proposed 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 Wind Farm Site and to and from the Wind Farm 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 Tirawley 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 Tirawley Wind farm.

12.9 REFERENCES

1. Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be contained in Environmental Impact Reports' (2022)
2. Department of Environment Heritage and Local Government (DoEHLG) Wind Energy Planning Guidelines (2006/2019 revision) and Preferred Draft Approach to revising the 2006 Guidance published 2017.
3. Landscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape and Visual Impact Assessment (2013).
4. NatureScot (NS) Guidance Note: 'Assessing the cumulative impact of onshore wind energy developments' (2012).
5. NatureScot (NS) Siting and Designing Wind Farms in the Landscape Version 3 (2017).