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TECHNICAL APPENDICES (SEE VOLUME 3)

Acronyms and Abbreviations

AADT	Annual Average Daily Traffic
AAMP	Air Quality Monitoring Programme
AFOLU	Agriculture, Forestry and Other Land Use
CCAC	Climate Change Advisory Council
CEMP	Construction Environmental Management Plan
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CTMP	Construction Traffic Management Plan
DECC	Department of the Environment, Climate and Communications
GHG	Greenhouse Gas
Grid Connection Route (GCR)	Refers to the proposed Grid Connection Route as defined in Chapter 1 of this EIAR.
HDV	Heavy Duty Vehicles
IEMA	Institute of Environmental Management and Assessment
kWh	Kilowatt Hour
LDV	Light Duty Vehicles
Main Wind Farm Development Site	The site where the Proposed Development is located. As defined in Chapter 1 of this EIAR.
N_2O	Nitrous Oxide
NHA	National Heritage Site
NO_2	Nitrogen dioxide
NOx	Oxides of Nitrogen
PM_{10}	Particulate matter with diameter of less than 10µm
$PM_{2.5}$	Particulate matter with diameter of less than 2.5µm
Proposed Project	Refers to the Proposed Development including the GCR.
RCP	Representative Concentration Pathways
RICS	Royal Institution of Chartered Surveyors
SAC	Special Area of Conservation
SEAI	Sustainable Energy Authority of Ireland
SPA	Special Protection Area
Turbine Delivery Route (TDR)	Refers to the proposed turbine delivery route as defined in Chapter 1 of this EIAR.
WHO	World Health Organisation
WLCA	Whole Life Cycle Assessment

10.0 LANDSCAPE AND VISUAL IMPACT ASSESSMENT INTRODUCTION

10.1 This chapter describes the landscape context of the proposed Muingmore Wind Farm and assesses the likely landscape and visual impacts of the Proposed Project on the receiving environment. Although closely linked, landscape and visual impacts are assessed separately. The Proposed Development as assessed in this EIAR comprises the Proposed Development together with the GCR as described in **Chapter 2** of this EIAR.

10.2 **Chapter 1** provides a list of the defined terms used in this chapter.

10.3 **Landscape Impact Assessment (LIA**) relates to changes in the physical landscape brought about by the Proposed Project, 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 Project without causing unacceptable adverse changes to its character.

10.4 **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).

10.5 **Cumulative landscape and visual impact assessment** is concerned with additional changes to the landscape or visual amenity caused by the Proposed Project 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.

Statement of Authority

10.6 This Landscape and Visual Assessment (LVIA) chapter was prepared by Cian Doughan, Associated Director (BSLA, MILI) of Macro Works Ltd, with eight years of experience. The chapter was reviewed by Richard Barker (Masters in Landscape Architecture and MILI) of Macro Works Ltd, who has 18 years of experience in the appraisal of effects from a variety of energy, infrastructure and commercial developments.

Scope and Consultation

Scope of the Assessment

10.7 Guidelines for Landscape and Visual Impact Assessment 3 (GLVIA3)[1] is the principal guidance document for LVIA and establishes guidelines and not a specific methodology. The preface recognises that:

[1] Landscape Institute and Institute of Environmental Management and Assessment (2013) *Guidelines for Landscape and Visual Impact Assessment*. 3rd edn. London: Routledge

'This edition concentrates on principles and processes. It does not provide a detailed or formulaic 'recipe' that can be followed in every situation – it remains the responsibility of the professional to ensure that the approach and methodology adopted are appropriate to the task in hand.'

10.8 The methodology for this assessment has therefore been developed specifically for this assessment to ensure that it is appropriate and fit for purpose. The LVIA Methodology can be summarised as undertaking the following key tasks:

- Desk study and site visits in Summer 2023;
- Defining the Baseline Landscape setting and conditions;
- Identification and Evaluation of key components of the Proposed Project;
- Consideration of Mitigation Measures;
- Assessment of Landscape Effects;
- Assessment of Visual Effects
- Assessment of Cumulative effects; and
- Summary Statement of Significance.

Consultation

10.9 A consultation process was carried out with respect to this EIAR in order to inform the scope of the assessment of likely significant environmental effects. A scoping request letter and preliminary scoping report, included in **EIAR Volume 3 – Technical Appendix 3-3**, providing a description of the Proposed Project, preliminary table of contents of the EIAR and an outline of the methodology for assessment was distributed to consultees on the 18th April 2024. The key responses relating to LVIA are listed in **Table 10-1**.

Table 10-1: Key issues

Consultee	Summary of Key Issues	Where Addressed in Chapter
Mayo County Council	• Assessment of visual effects from sensitive tourism receptors such as Wild Nephin National Park and the Wild Atlantic Way • Extension of the study area to 30 km • Preparation of robust mitigation measures • Assessment of visual effects from surrounding scenic designations and sensitive coastal areas	The assessment includes a full review of landscape and visual baseline, which includes for scenic receptors, and tourism and amenity receptors. Those deemed relevant to the Proposed Project have been included as a viewpoint for assessment in the visual impact appraisal section of the report (refer to **Technical Appendix 10-1** and summary findings in **Sections 10.159 to 10.188**. The study area has been defined as per the current WEDGs as set out in **Section 10.16 and 10.17**. As a 20 km study area follows the current and draft WEDGs and best and standard practice for assessment of landscape and visual effects, it was not deemed necessary to update the study area to 30 km.

Consultee	Summary of Key Issues	Where Addressed in Chapter
		The Proposed Project encompasses an array of mitigation by avoidance measures outlined in **Sections 10.197 to 10.204** below.

Scoped into the assessment

10.10 The following elements are scoped into the LVIA for the construction, operation and decommissioning phases of the development:

- Assessment of effects for landscape and visual receptors contained within the 20 km study area in compliance with the current and draft WEDGs.
- Assessment of potential cumulative effects with other relevant wind farm developments within the 20 km study area, which follows current best practice.

Scoped out of the assessment

10.11 The following elements are scoped out of the LVIA:

- Assessment of landscape and visual receptors contained beyond the 20 km study area.
- Assessment of potential cumulative effects with other relevant development types beyond the 20 km study area.

Legislation, Guidance and Policy

10.12 The LVIA adheres to methodology as prescribed in the following guidance documents:

- Environmental Protection Agency (EPA) (2022) publication 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports (2022)
- NatureScot (2021) Guidance - Assessing the cumulative landscape and visual impact of onshore wind energy developments. [online]
- Scottish Natural Heritage Visual Representation of Wind Farms: Best Practice Guidelines (version 2.2 - 2017).
- European Union (2017) Guidance on the preparation of the EIA Report (Directive 2011/92/EU as amended by 2014/52/EU);
- Landscape Institute and the Institute of Environmental Management and Assessment (IEMA) publication entitled Guidelines for Landscape and Visual Impact Assessment (GLVIA) – Third Addition (2013).
- Department of the Environment, Heritage and Local Government Wind Energy Development Guidelines (2006).

- Department of the Environment, Heritage and Local Government Wind Energy Development Guidelines (2019 draft).[2]

10.13 Use of the Term 'Effect' vs 'Impact': The GLVIA advices that the terms 'impact and effect' should be clearly distinguished and consistently used in the preparation of an LVIA.

10.14 'Impact' is defined as the action being taken. In the case of the proposed works, the impact would include the construction of the Proposed Project.

10.15 'Effect' is defined as the change or changes resulting from those actions, e.g. a change in landscape character, or changes to the composition, character and quality of views in the receiving environment. This chapter focusses on these effects.

Approach and Methodology

Study Area

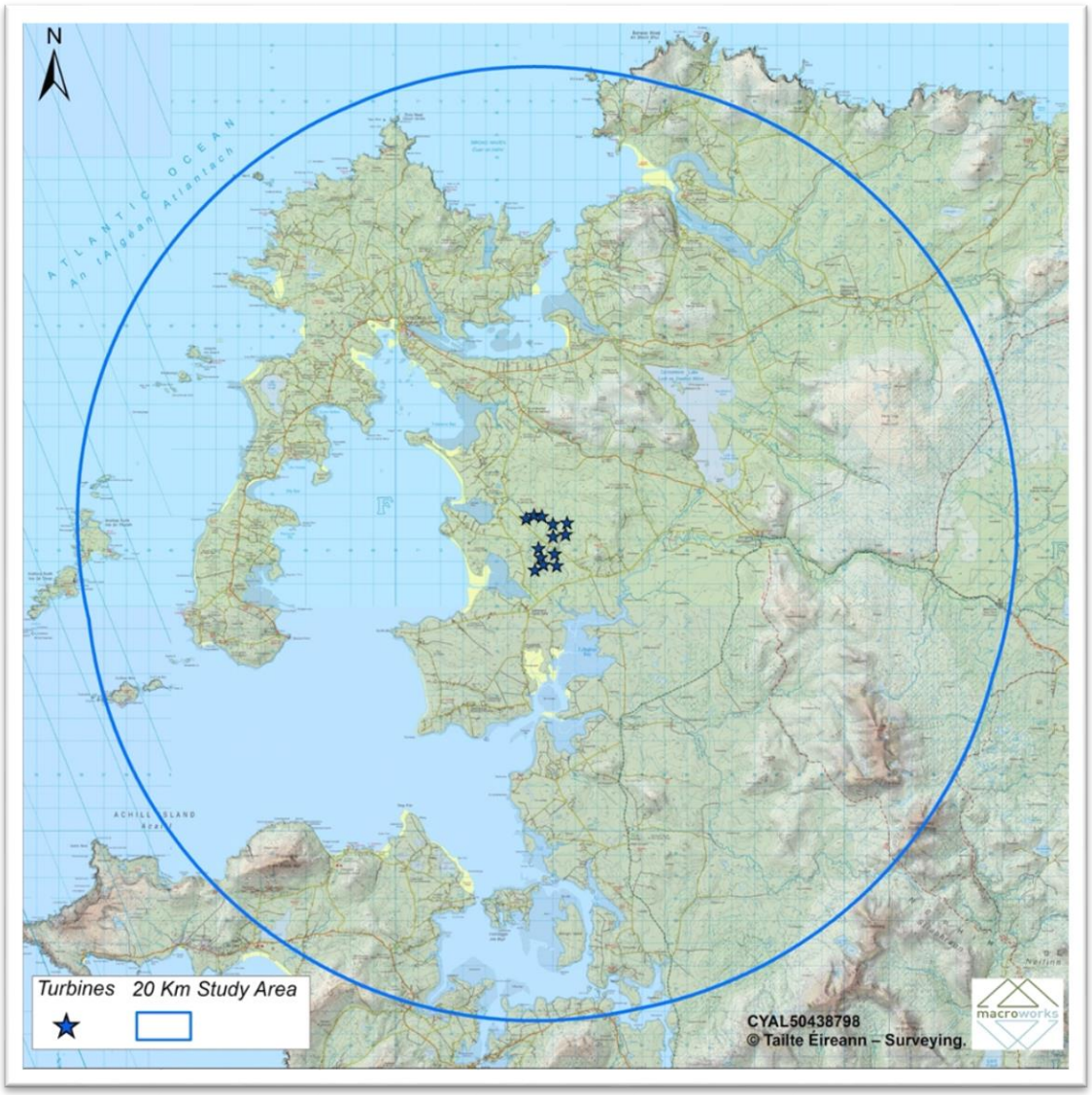
10.16 Both the 2006 Wind Energy Development Guidelines and draft revised 2019 Wind Energy Development Guidelines published by the Department of the Environment, Heritage and Local Government specify radii for examining the zone of theoretical visibility (ZTV) of proposed wind farm projects. The extent of this search area is influenced by turbine height, as follows (the guidance in the 2006 and draft revised 2019 guidance is identical in relation to defining the radii for examining the zone of theoretical visibility of proposed wind farm projects):

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

10.17 In the case of the Proposed Project, the blade tips will be between 179-180 m high and, thus, the minimum ZTV radius recommended is 20 km (refer to **Figure 10-1** below) from the outermost turbines of the scheme. With regard to LVIA, 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 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 Main Wind Farm Development Site.

[2] It is important to note that all information and guidelines relating to landscape areas and types in the current wind energy development guidelines (2006) are duplicated in the draft revised wind energy development guidelines (2019). The only additional information relating to landscape and visual in the draft revised guidelines relates to the visual amenity setbacks. Thus, the current (2006) and draft revised (2019) guidelines have been referenced and the visual amenity guidance has been applied to the Proposed Project.

Figure 10-1: Full 20 km extent of the study area



Information and Data Sources

10.18 The assessment below utilises information and data from the following sources:

- County Development Plans – Mayo County Development Plan 2022-2028.
- Online Mapping Services – Open Street Map, Open Infrastructure Map, Geo Hive, Mountain Views.
- Digital Terrain Model (Data) provided by Bluesky Ireland.

Desk Study / Field Survey

10.19 Production of this Landscape and Visual Impact Assessment involved baseline work in the form of desktop studies and fieldwork comprising professional evaluation by qualified and experienced Landscape Architects, as detailed in the preceding Statement of Authority. This entailed the following:

Desk Study

- Establishing an appropriate Study Area from which to study the landscape and visual impacts of the Proposed Project.
- Review of a ZTV map, which indicates areas from which the development is potentially visible in relation to terrain within the Study Area.
- Review of relevant County Development Plans, particularly with regard to sensitive landscape and scenic view/route designations and associated policies and objectives.
- Selection of potential Viewpoints (VPs) from key visual receptors to be investigated during fieldwork for actual visibility and sensitivity.

Field Survey

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

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 effects and the mitigation measures that could be employed to reduce such effects.
- Estimation of the significance of residual landscape effects.
- Estimation of the significance of residual visual effects aided by photomontages prepared at all the selected VP locations.
- Estimation of cumulative landscape and visual effects within the defined study area in combination with other surrounding developments that are either existing, permitted or in the planning system and pending a decision from a planning authority. Projects that are at the pre-planning stage where information is available to the public are also included in the cumulative impact assessment.

Assessment Methodology

Landscape Impact Criteria

10.20 It is important to assess how the Proposed Project will affect both the physical features and the fabric of the landscape, and to consider how these changes may influence landscape character. This assessment should draw on published descriptions of landscape character as well as an understanding of the contemporary character established through desktop and fieldwork investigations.

10.21 When assessing the potential landscape effects of the Proposed Project, the value and sensitivity of the landscape receptor is weighed against the magnitude of impact to determine the significance of the landscape effect. Criteria outlined below (refer to **Table 10-2** and **Table 10-3**) are used to guide these judgements.

Landscape Sensitivity

10.22 The sensitivity of the landscape to change is the degree to which a particular setting can accommodate changes or new elements without unacceptable detrimental effects to its essential characteristics. In accordance with GLVIA 3 (2013), the sensitivity of a landscape receptor (Landscape Character Area or feature) is derived from combining judgements in relation to its susceptibility to change and its value. The judgement reflects such factors as its quality, value, contribution to landscape character and the degree to which the particular element or characteristic can be replaced or substituted. Landscape Sensitivity is classified using the following criteria set out in **Table 10-2**.

Table 10-2: 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 a 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.

Magnitude of Change – Landscape

10.23 The magnitude of change is a product of the scale, extent or degree of change that is likely to be experienced as a result of the Proposed Project and to a lesser extent the duration and reversibility of that effect. 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 immediate setting that may have an effect on the landscape character. **Table 10-3** outlines criteria used to inform this judgement.

Table 10-3: Magnitude of Change – Landscape

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

Visual Impact Assessment Criteria

10.24 This part of the LVIA provides an assessment of how the introduction of the Proposed Project will affect views within the landscape. It therefore needs to consider:

- Direct impacts of the Proposed Project upon views through intrusion or obstruction;
- The reaction of viewers who may be affected, e.g. residents, walkers, road users; and
- The overall impact on visual amenity.

10.25 It has been deemed appropriate to structure the assessment around a series of representative viewpoint locations. All viewpoints are located within the public domain and are representative of views available from main thoroughfares and pedestrian areas within the vicinity of the Proposed Project. The selected viewpoints are considered to be comprehensive in communicating the variable nature of the visual effects.

10.26 When assessing the potential visual effects of the development, the sensitivity of the visual receptor is weighed against the magnitude of the visual impact to determine the significance of the visual effect. Criteria outlined below are used to guide these judgements.

Sensitivity of Visual Receptors

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

10.28 A list of the factors considered by the assessor in estimating the level of sensitivity for a particular visual receptor is outlined below to establish visual receptor sensitivity at each viewpoint location.

Susceptibility of Visual Receptors to Change

10.29 In accordance with GLVIA (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 focused 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".*

10.30 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 attached to Views

10.31 The value attached to a view is determined by considering the following:

- Recognised scenic value of the view (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 Developments Plans, for example, a public consultation process is required;
- Views from within highly sensitive landscape areas. These are likely to be in the form of Architectural Conservation Areas, which are incorporated within the Development Plan and therefore subject to the public consultation process. Viewers within such areas are likely to be highly attuned to the landscape around them;

- Primary views from residential receptors. Even within a dynamic city context, views from residential properties are an important consideration in respect of residential amenity;
- Intensity of use, popularity. This relates to the number of viewers likely to experience a view on a regular basis and whether this is significant at a national or regional scale;
- Provision of vast, 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. Receptors taking in a remote and tranquil scene, which is likely to be fairly static, are likely to be more receptive to changes in the view than those taking in the view of 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 distinctly manmade features;
- Presence of striking or noteworthy features. A view might be strongly valued because it contains a distinctive and memorable landscape / townscape feature such as a cathedral or castle;
- Historical, cultural and / or spiritual significance. Such attributes may be evident or sensed by receptors at certain viewing locations, which may 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 the receptor could take in similar views anywhere in the broader region or the country;
- Integrity of the landscape character. This looks at 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 considers whether there is special sense of wholeness and harmony at the viewing location;
- Sense of awe. This considers whether the view inspires an overwhelming sense of scale or the power of nature.

10.32 Those locations which are deemed to satisfy many of the above criteria are likely to be of higher sensitivity, and no relative importance is inferred by the order of listing.

10.33 It is recognised that a viewer's interpretation and experience of the landscape can have preferential and subjective components. Where relevant, judgements are made on those elements of the landscape that are considered to contribute more prominently and positively to the visual landscape resource as well as those elements that contribute negatively. Overall sensitivity may be a result of a number of these factors or, alternatively, a strong association with one or two in particular.

Magnitude of Change - Visual

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

10.35 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 project 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.

10.36 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 – Wind Farms' found that *"Compared with other types of development in the Irish landscape, wind farms 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 wind farm had a positive impact on their enjoyment of sightseeing…*". A further study by Fáilte Ireland titled 'Report on Visitor Awareness and Perceptions of the Ireland Landscape' (2018) found that in relation to views from prominent tourism sites in Ireland "there is consistent evidence of the majority of visitors not reporting the visibility of large, visually prominent developments that were close and directly in their line of sight". Some examples of this were where no visitors reported the visibility of a windfarm or nearby industrial units at Cashel and no visitor noticed the offshore windfarm at Brittas Bay. 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 wind farm might be preferable in many instances to a partial, cluttered view of turbine components that are not so noticeable within a view. On the basis of these reasons, the visual amenity aspect of assessing impact magnitude is qualitative and considers such factors as the spatial arrangement of turbines both within the scheme and in relation to surrounding terrain and land cover. It also examines whether the project contributes positively to the existing qualities of the vista or results in distracting visual effects and disharmony.

10.37 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 effect is classified in in **Table 10-4** below.

Table 10-4: Magnitude Change – Visual

Criteria	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.

Criteria	Description
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.

Significance of Effect

10.38 The significance of a landscape or visual effect is based on a balance between the sensitivity of the receptor and the magnitude of change, and is categorised as Profound, Substantial, Moderate, Slight, or Imperceptible. Intermediate judgements are also provided to enable an effect to be more accurately described where relevant. 'No Effect' may also be recorded as appropriate where the effect is so negligible it is not noteworthy.

10.39 The significance category judgement is arrived at using the Significance Matrix at **Table 10-5** as a guide. This applies the principle of significance being a function of magnitude weighed against sensitivity but employs slightly different terminology that avoids the potentially confusing use of the term 'significant' (as recommended by GLVIA3 Statement of Clarification 1/13 (Landscape institute, 10th June 2013)).

10.40 Indicative criteria descriptions used in relation to the significance of effect category are presented at **Table 10-6.**

Table 10-5: Significance Matrix

	Sensitivity of Receptor				
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

Table 10-6: Indicative significance of effect criteria descriptions

	Landscape	Visual
Profound	There are notable changes in landscape characteristics over an extensive area or a very intensive change over a more limited area.	The view is entirely altered, obscured or affected.

	Landscape	Visual
Substantial	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the landscape. There are notable changes in landscape characteristics over a substantial area or an intensive change over a more limited area.	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the visual environment. The proposal affects a large proportion of the overall visual composition, or views are so affected that they form a new element in the physical landscape.
Moderate	An effect that alters the character of the landscape in a manner that is consistent with existing and emerging baseline trends. There are minor changes over some of the area or moderate changes in a localised area.	An effect that alters the character of the visual environment in a manner that is consistent with existing and emerging trends. The proposal affects an appreciable segment of the overall visual composition, or there is an intrusion in the foreground of a view.
Slight	An effect which causes noticeable changes in the character of the landscape without affecting its sensitivities. There are minor changes over a small proportion of the area or moderate changes in a localised area or changes that are reparable over time.	An effect which causes noticeable changes in the character of the visual environment without affecting its sensitivities. The affected view forms only a small element in the overall visual composition or changes the view in a marginal manner.
Imperceptible	An effect capable of measurement but without noticeable consequences. There are no noticeable changes to landscape context, character or features.	An effect capable of measurement but without noticeable consequences. Although the development may be visible, it would be difficult to discern resulting in minimal change to views.

10.41 It is important that the likely effects of the proposals are transparently assessed and understood in order that the determining authority can bring a balanced, well-informed judgement to bear when making a planning decision.

10.42 As such, whilst the significance matrix and criteria provide a useful guide, the significance of an effect is ultimately determined by the landscape specialist using professional judgement, and also in the context of occasionally using hybrid judgements to account for nuance.

10.43 Effects assessed as 'Substantial' or greater (shaded cells in **Table 10-5**) are considered to be the most notable in landscape and visual terms, and may be regarded as 'Significant', albeit it is important to note that this is not a reflection on their acceptability in planning terms. It should be noted that effects deemed 'Substantial-moderate' or below, are deemed 'Not Significant' within this assessment.

Quality and Duration of Effects

10.44 In addition to assessing the significance of landscape and visual effects, the quality of the effects is also determined. Within this LVIA, effects are described as positive/beneficial, neutral, or negative/adverse, and the following criteria has been used to guide these judgements:

- Positive/beneficial - A change which improves the quality of the environment, enhancing the existing view/landscape;

- Neutral - No effects or effects that are imperceptible, within normal bounds of variation e.g. will neither detract from nor enhance the existing view/landscape;
- Negative/adverse - A change which reduces the quality of the environment, detracting from the existing view/landscape.

10.45 In the case of new energy / infrastructure developments within rural and semi-rural settings, the landscape and visual change brought about by an increased scale and intensity of built form is seldom considered to be positive / beneficial. Effects in these contexts are generally considered to be adverse in nature, or neutral, where the effect has little influence on the landscape/views.

10.46 Landscape and Visual effects are also categorised according to their 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.

Baseline Conditions

Landscape Baseline

10.47 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).

10.48 A description of the landscape context of the Main Wind Farm Development Site and wider study area is provided below under the headings of landform and drainage and vegetation and land use. Centres of population, transport routes and tourism, recreation and heritage features form part of the visual baseline and are dealt with in the Visual Baseline section below.

Figure 10-2: Aerial photograph showing the landscape context of the Main Wind Farm Development Site and its immediate surrounds.

Landform and Drainage

10.49 The Main Wind Farm Development Site is situated across an extensive area of peatland in the townlands of Muingmore and Doolough, less than 1 km from the Atlantic coastline. The Main Wind Farm Development Site itself is located on low-lying terrain, ranging from 3 m AOD at the southern end to 33 m AOD at the northeastern portion. Aside from a prominent hill in the neighbouring townland of Tristia to the east, which reaches 132 m AOD, the terrain of the central study area is largely consistent with that of the Main Wind Farm Development Site. To the west of the Main Wind Farm Development Site, the landform gently slopes towards Doolough Beach and Blacksod Bay. To the northwest lies Claggan Island, which is

connected to the mainland by a narrow causeway. The Doohoma Peninsula is situated approximately 1.8 km to the southwest of the proposed turbines.

10.50 Several localised streams, watercourses, and drainage ditches flow through the immediate vicinity of the Main Wind Farm Development Site. Two small watercourses (the An Mhoing Mhor Stream flowing into the Doolough Stream) demarcate the northern boundary of the Main Wind Farm Development Site before draining into the sea approximately 1.5 km to the west. The nearest notable watercourse to the development is the Oweninny River, which drains a large area of bogs, moorland, and mountains in the surrounding area. A small unnamed stream rises along the eastern boundary of the Main Wind Farm Development Site. The river subsequently drains into the sea at the tidal Tullaghan Bay to the southwest of the Main Wind Farm Development Site. Carrowmore Lake is located approximately 6.3 km northeast of the nearest turbine. The Munhin River connects Carrowmore Lake with the Oweninny River. Further to the south, the Owenduff River dissects the landform of the southern portion of the wider study area before also draining into Tullaghan Bay.

10.51 The wider study area is strongly influenced by the Atlantic coastline and consists of several low-lying islands and peninsulas. To the northwest and west of the study area lies the Belmullet Peninsula. The Belmullet Peninsula primarily comprises low rolling terrain albeit some more notable elevated hills occur along its northern and southern extents and include Erris Head Hill and Tower Hill to the north and Termon Hill along its southern tip. The northern extent of Achill Island is included in the southern portion of the wider study area, along with the islands of Inishbiggle and Annagh Island. Achill Island includes some distinctive elevated hills and upland areas within the southern periphery of the study area and includes both Knockletragh (452 m AOD) and Slievemore (671 m AOD). The uninhabited islands of Inishkea North and South are also located at the far western edge of the study area.

10.52 The mountains of Wild Nephin National Park rise to the south of the Owenduff River and account for some of the most elevated parts of the wider study area. Within Wild Nephin National Park there are several prominent hills and ridges including Slieve Carr (721 m AOD), Slieve Alp (329 m AOD), and Knocklettercuss (370 m AOD). The largest of these, Nephin Beg (627 m AOD) and Glennamong (628 m AOD), are situated just beyond the extent of the study area.

Vegetation and Land Use

10.53 The primary land use within both the central and wider study areas is extensive bogland, surrounded by agricultural farmland of varying shapes and sizes. This farmland is typically bordered by low hedgerow vegetation and is primarily contained along the immediate coastline or along river corridors within the central study area. Some notable portions of land within the study area are occupied by commercial coniferous forestry plantations, including large parts of the Wind Farm Site itself. The small village of Gweesalia is located approximately 1.5 km southwest of the nearest turbine and accounts for the nearest area of urban land use to the Main Wind Farm Development Site.

10.54 In the broader context of the study area, the Belmullet Peninsula and much of the low-lying coastal land are predominantly used for pastoral farming. In contrast, the wider inland areas to the east, southeast and northeast, characterised by steeper and more mountainous terrain, consist primarily of boglands interspersed with large tracts of commercial scale forestry. A sizeable area of existing wind farm development is located along the eastern boundary of the study area and is one of the more prominent single land uses in this part of the surrounding landscape. Additionally, numerous sandy beaches, coastal inlets and river estuaries are found along the length of the coastline in the wider western extent of the study area.

10.55 The south-eastern portion of the study area is dominated by Wild Nephin National Park, which spans 15,000 hectares and includes the Nephin Beg mountain range within the study area. Within this park lies the Owenduff Bog, one of the last remaining intact active blanket bog systems in Western Europe.

10.56 Regarding urban land uses, the wider study area remains sparsely populated, with the exception of Belmullet town, located approximately 9 km to the northwest of the Main Wind Farm Development Site, and the small town of Bangor Erris, situated approximately 8 km to the east. In terms of linear infrastructure, the N59 national secondary route runs through the south-eastern extent of the study area, while a network of regional roads traverses both the central and wider study areas.

Figure 10-3: Aerial photograph showing the landscape context of the wider study area

Landscape Policy and Designations

The Department of Environment, Heritage and Local Government Wind Energy Development Guidelines 2006 and draft revised 2019 Wind Energy Development Guidelines

10.57 The Wind Energy Development Guidelines (2006) provide guidance on wind farm siting and design criteria for a number of different landscape types. The Main Wind Farm Development Site is located to the east of the coastline in an area of bog land surrounding by areas of more traditional farmlands and coastal environs. The setting of the Main Wind Farm Development Site is most consistent with the 'Flat Peatland' type described in the 2006 Guidelines. However, the surrounding context does encompass characteristics from a mix of the landscape types including, 'Coastal Zone' and 'Hilly and Flat Farmland' landscape type, whilst the wider surrounding study area, most notably in the eastern extent of the study area is most associated with the 'Mountain Moorland' landscape type. Nonetheless, the most relevant of these is the 'Flat Peatland' landscape type. Siting and design recommendations for the 'Flat Peatland' landscape type is included below:

Flat Peatland Landscapes:

Location – "*Wind energy developments can be placed almost anywhere in these landscapes from an aesthetic point of view. They are probably best located away from roadsides allowing a reasonable sense of separation. However, the possibility of driving through a wind energy development closely straddling a road could prove an exciting experience."*

Spatial extent – "*The vast scale of this landscape type allows for a correspondingly large spatial extent for wind energy developments"*

Spacing - *" Regular spacing is generally preferred, especially in areas of mechanically harvested peat ridges."*

Layout - *" In open expanses, a wind energy development layout with depth, preferably comprising a grid, is more appropriate than a simple linear layout. However, where a wind energy development is located close to feature such as a river, road or escarpment, a linear or staggered linear layout would also be appropriate. "*

Height - *" Aesthetically, tall turbines would be most appropriate. In any case, in terms of viability they are likely to be necessary given the relatively low wind speeds available. An even profile would be preferred."*

Cumulative - " *The openness of vista across these landscapes will result in a clear visibility of other wind energy developments in the area. Given that the wind energy developments are likely to be extensive and high, it is important that they are not perceived to crowd and dominate the flat landscape. More than one wind energy development might be acceptable in the distant background provided it was only faintly visible under normal atmospheric conditions."*

10.58 It is considered that the Main Wind Farm Development Site's siting and design responds well and is generally consistent with the guidance note above for the 'Flat Peatland' landscape type. It should be noted that whilst the central study area is not entirely flat, it's broad, open character comprising principally areas of open coastal bog are most associated with this landscape type. The design response of the Main Wind Farm Development Site is especially

consistent with the 'Height' and 'Spatial Extent' guidance. Indeed, the height of the turbines can be well absorbed into this visual setting due to its broad open character which is backdropped by large-scale landscape features and land uses. In terms of its spatial extent, the proposed turbine array has a relatively broad extent, albeit that it responds to the existing landscape context where it presents contained within a perimeter contained by established conifer forest.

Siting in Relation to Individual Properties ('Setback')

10.59 **Section 6.18** of the Draft Revised Wind Energy Development Guidelines (December 2019) refers to appropriate setback distances for visual amenity purposes. The guidelines outline a mandatory minimum setback distance of *"500 meters"* or the distance of *"4 times the tip height"* of the proposed *turbines "between the nearest point of the curtilage of any residential property".* This is set out in Specific Planning Policy Requirements (SPPR) 2 of the draft guidelines 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 on-site usage. The planning authority or An Bord Pleanála (where relevant), shall not apply a setback distance that exceeds these requirements for visual amenity purposes.*

10.60 The nearest residential dwelling to any of the proposed turbines is 740 m which exceeds and fully complies with the setback distance outlined in both the current 2006 Guidelines (i.e. >500m) and the Draft Revised Guidelines (2019), which in this instance is 720 m (4 x 180 m tip height). It is worth noting that these Draft Revised Guidelines are not yet adopted, although new wind farm projects tend to apply their recommended setback from sensitive receptors.

10.61 It is important to note that the Proposed Project has been designed and sited to adhere to both the guidelines in the current (2006) and draft revised (2019) wind energy development guidelines to the extent that the draft updated guidelines align with current best practice.

Mayo County Development Plan 2022-2028

Mayo CDP 2022-2028 – Landscape Appraisal

10.62 The Mayo County Development Plan 2022-2028 (MCDP) 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.

10.63 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 landuse. The appearance of the landscape is relatively uniform within each Character Unit."

10.64 The Main Wind Farm Development Site is located across two landscape character units. The southern extent of the Main Wind Farm Development Site is contained within 'Area B: North

West Coastal Moorlands', whilst the northern extent of the Main Wind Farm Development Site is contained within 'Area C: North West Coastal Bog' (Refer to **Figure 10-4**).

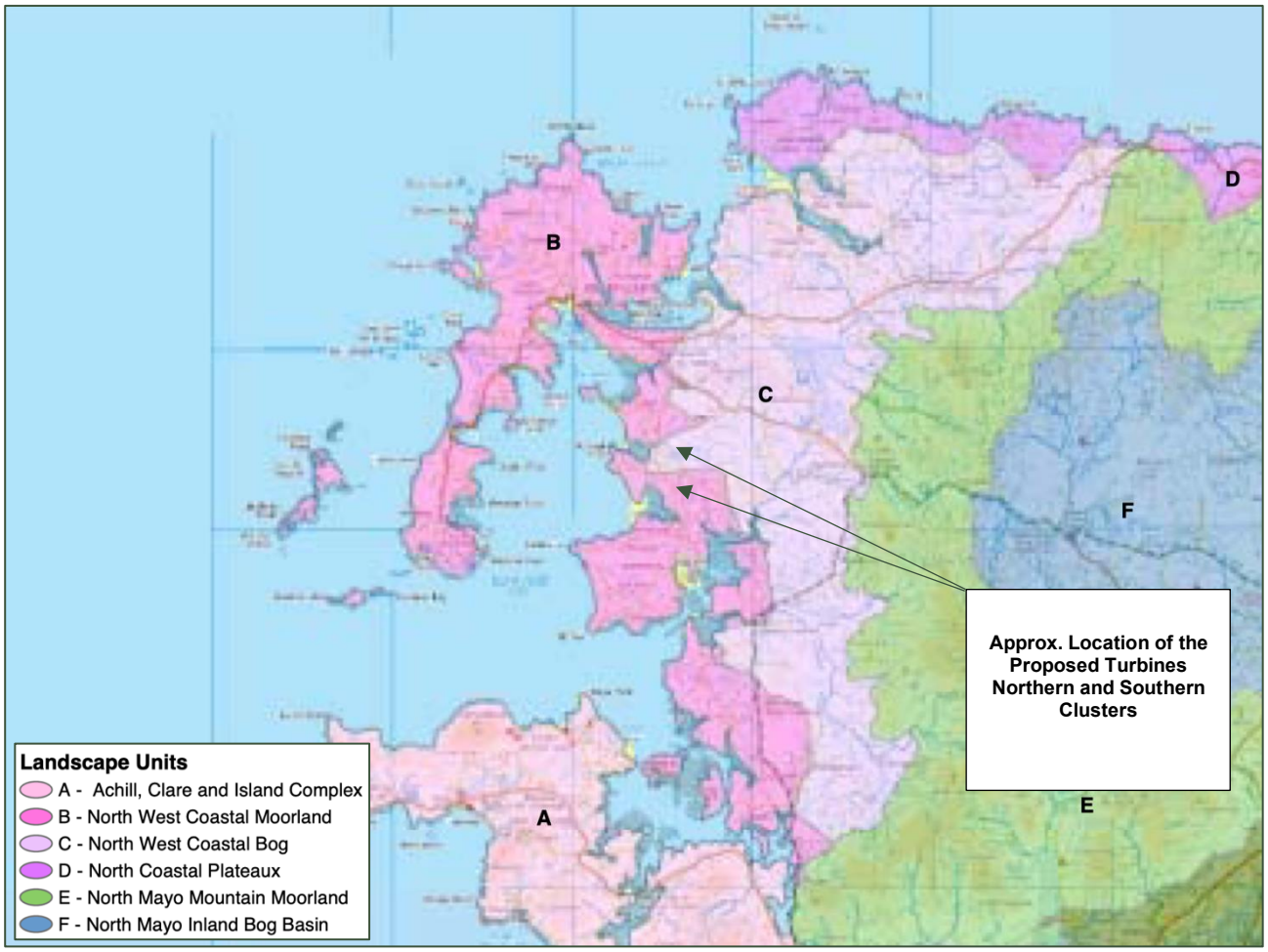
10.65 'Area B: North West Coastal Moorlands' is described as: "the north-western extremity of the County, north of Achill Island and includes the Bellmullet peninsula. It can be generally described as a complex of low lying islands and peninsulas with varying topographical and land cover characteristics but unified by its proximity to the coast. The southern and eastern extents of this unit have a uniform bog/moorland appearance, which gradually changes to more diversified land cover and topography toward the north-west. The terrain is generally smooth and bog/moor type grasses are the dominant vegetation in this exposed area. However, the Bellmullet peninsula at the very north-west of the County has significant areas of pasture with dunes along the western coast." Critical landscape factors of this character unit are identified as 'Coastal Vistas', 'Smooth Terrain', 'Low Vegetation', and 'Prominent Ridge Lines'.

10.66 'Area C: North West Coastal Bog' is described as a: "low-lying bog strip located between the western coastline and the Beg Range to the east. It has a homogenous, exposed, moorland appearance throughout. The topography is smoothly contoured with bog/moor type grasses being the predominant vegetation. Included in this area are the seaward foothills of the Beg Range. Although peat bogs cover most of the area to the north-west of the County, the land is mainly used for pasture, i.e. livestock production. Agriculture (e.g. complex cultivation patterns) and coniferous forestry are also present as land uses in the area. Natural grasslands and transitional woodland scrub patches occur throughout the major land cover types." Critical landscape factors of this character unit are identified as 'Smooth Terrain' and 'Low Vegetation'.

10.67 Whilst there are no other character units within the central study area, several other character units are contained throughout the wider study area as outlined below:

- 'Area A: Achill, Clare and Island Complex' is located to the south of the wider study area and is notable for its "steep topography", "uniform upland moor appearance", and "dramatic vistas of the coastline".
- 'Area D: North Coastal Plateaux' is found along a small portion of the northern extent of the study area and comprises "elevated vistas across an abrupt coastline".
- 'Area E: North Mayo Mountain Moorland' is along the eastern extent of the wider study area and is characterised by "elevated uplands".
- 'Area F: North Mayo Inland Bog Basin' is located in the wider eastern periphery of the study area and comprises "extensive areas of flat to low rolling bogland".

Figure 10-4: Landscape Character Units in relation to the Proposed Turbines in the MCDP



10.68 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 MCDP, which outlines the Environment, Heritage & Amenity Strategy. The below 'Landscape Protection Policy Areas' map (**Figure 10-5**) is used to assess the development impact of different development types in conjunction with the Landscape Sensitivity Matrix.

10.69 The Proposed Project Site is situated in Landscape Policy Area 2 'Lowland Coastal Zone'. Policy Area 2 is classified with a 'High' sensitivity in relation to wind farm development. Developments classified with a 'High' sensitivity area are 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."

Figure 10-5 Landscape Protection Policy Areas in relation to the Main Wind Farm Development Site in the MCDP

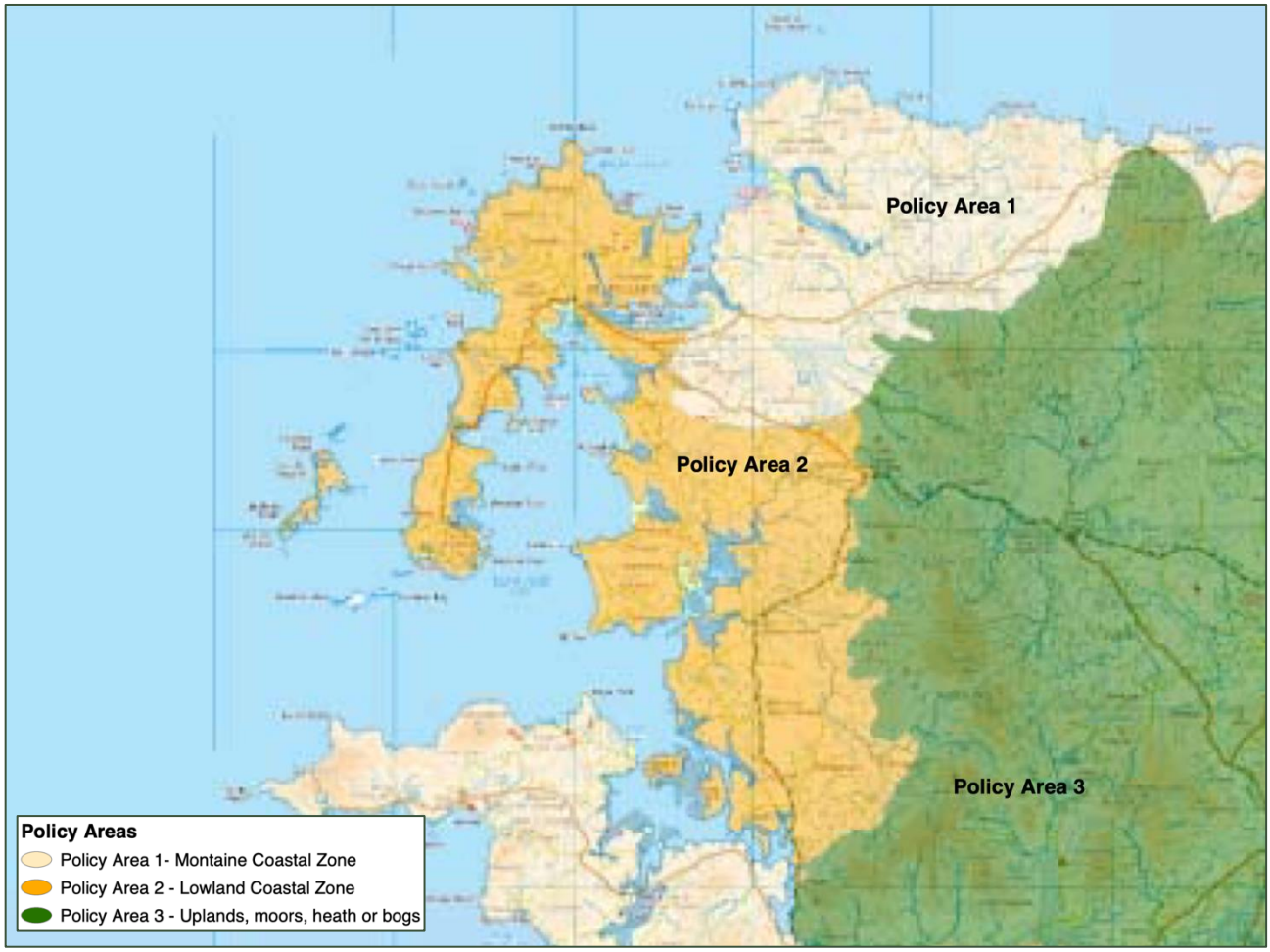
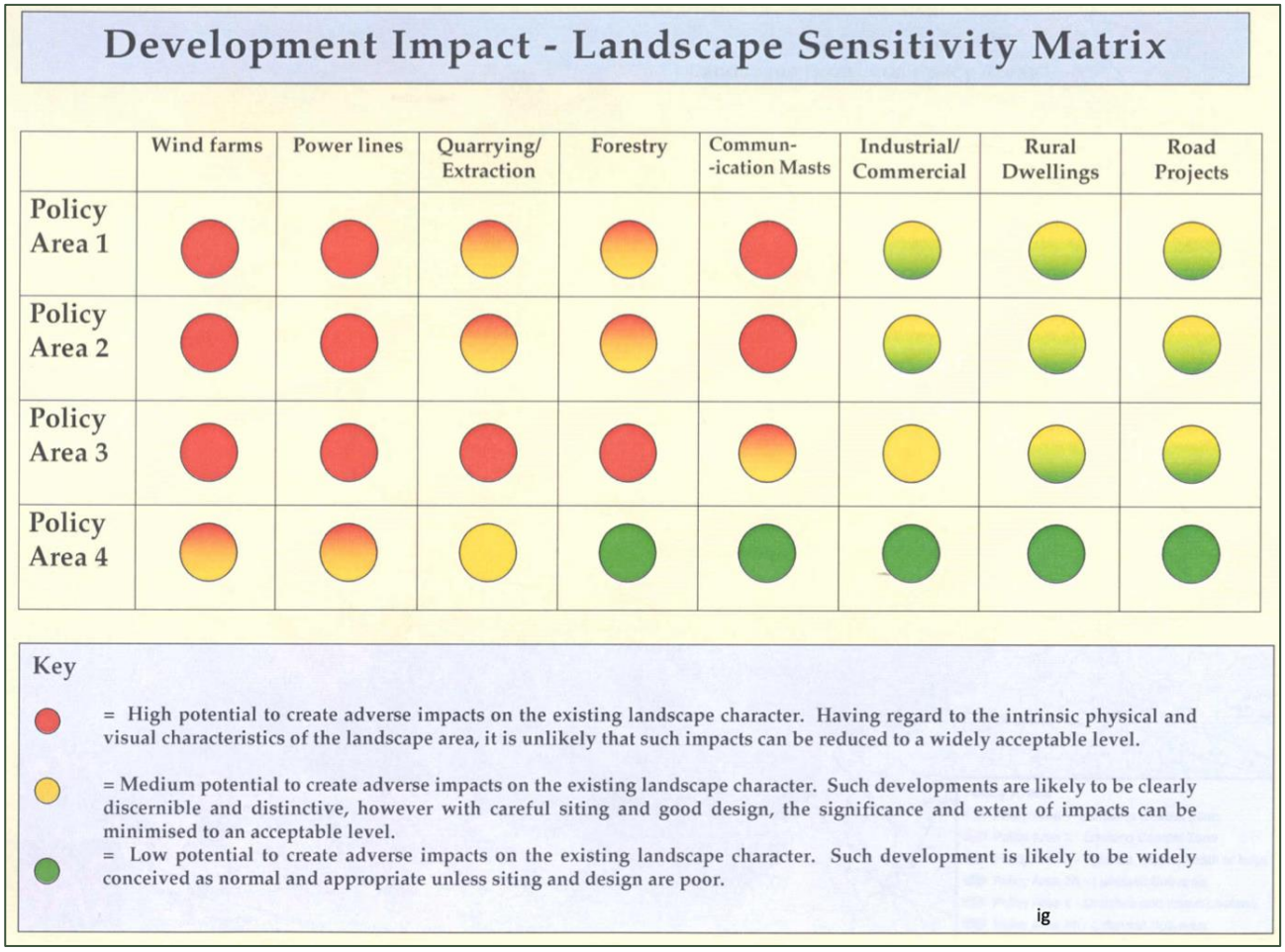


Figure 10-6: Excerpt from the MCDP showing landscape sensitivity matrix



10.70 The MCDP also includes landscape policies and objectives, some of which are relevant to the Proposed Project 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."*

Mayo CDP 2022-2028 - Renewable Energy Strategy

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

- **Priority Areas** are areas which have secured planning permission and where onshore 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.

10.72 The Main Wind Farm Development Site is located in 'Tier 1 – Preferred (Large Wind Farms)' (**Figure 10-7** below). Concerning 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 (refer to **Figure 10-9**) 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."*

Figure 10-7: Wind Energy in the current RES showing the approximate location of the Main Wind Farm Development Site with regard to wind energy classifications in the current Mayo CDP 2022-2028.

Draft Variation no. 2 of the Mayo CDP 2022-2028 – Renewable Energy Strategy

10.73 As part of the Draft Variation to the Mayo County Development Plan 2022–2028, an updated Renewable Energy Strategy is proposed. Within this, an updated wind energy classification map is proposed for the county, as the Renewable Energy Strategy states that "Mayo has already exceeded its renewable energy target of 600 MW, as set out in Objective REO 23 of the County Development Plan."

10.74 The Draft Renewable Energy Strategy includes Map 6.10, which identifies three wind energy classifications: 'Open for Consideration', 'Repowering Potential', and 'Unsuitable'. It should be noted that the site, and indeed the predominance of County Mayo, is now located within an area deemed 'Unsuitable' for wind energy development. This represents a contrast to the current Renewable Energy Strategy, which identifies several wind energy classifications, with the Proposed Project site currently located within a 'Tier 1 – Preferred (Large Wind Farms)' designation.

10.75 In terms of the rationale underpinning the proposed wind suitability mapping, the Draft RES indicates that a LARES methodology was utilised to produce the revised 'Wind

Suitability Mapping' (refer to Map 6.10 of the Draft RES). Within this methodology, several landscape and visual constraints are identified as informing the mapping exercise, including 'Atlantic Coastal Landscapes', the 'Wild Atlantic Way Route and Discovery Points', 'Scenic Routes and Designated Views', and 'Sensitive Landscape Areas (Policy Areas 1–3)'.

10.76 It is important to note, however, that the current RES for County Mayo undertook a comparable constraints-based analysis to produce the existing Renewable Energy Potential Mapping. Indeed, the current RES references many of the same landscape and visual constraints, including "designated natural heritage areas, built heritage, scenic views/routes, cycle/walking routes and populated areas and infrastructure constraints". As such, the principal landscape and visual considerations underpinning both the current and Draft RES documents are largely the same.

10.77 The contrast in mapping outcomes has not been reconciled when considering that the baseline landscape character assessment remains the same.

Ecological Designations

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

10.79 In this instance, the following ecological designations (shown on **Figure 5-3abc** and **Figure 5-4abc** accompanying **Chapter 5** of this EIAR) are located within the central study area (< 5km from the Proposed Project):

- Mullet/Blacksod Bay Complex SAC.
- Blacksod Bay/ Broadhaven SPA.
- Tristia Bog NHA.
- Tullaghan Bay and Bog NHA.
- Ederglen Bog NHA.
- Mullet/ Blacksod Bay Complex pNHA (proposed Natural Heritage Area).
- West Connacht Coast SAC.

10.80 For further assessment of designated ecological sites, please see **Chapter 5: Biodiversity** of this EIAR and the Natura Impact Statement (submitted as part of the planning application).

Visual Baseline

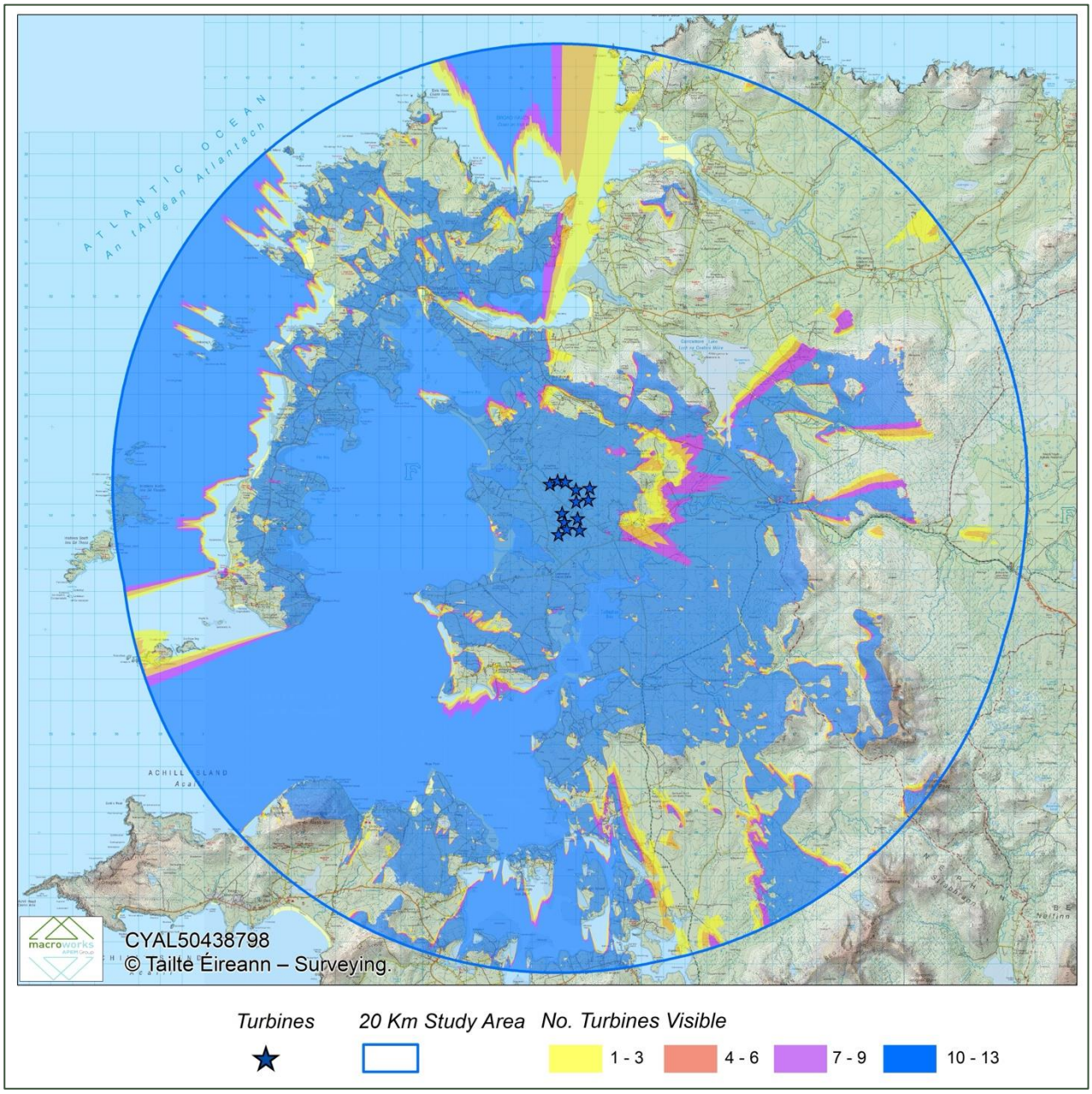
10.81 Only those parts of the study area that potentially afford views of the Proposed Project are of interest to this part of the assessment. Therefore, the first part of the visual baseline is establishing a 'Zone of Theoretical Visibility' (ZTV) and subsequently, identifying important visual receptors from which to base the visual impact assessment.

Zone of Theoretical Visibility

10.82 A computer-generated 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 Main Wind Farm Development Site will not be visible, due to terrain screening within the 20 km Study Area.

Figure 10-8: Bare-ground Zone of Theoretically Visibility (ZTV) Map based on a turbine tip height of 180 m. (See Technical Appendix 10-2 for larger scale map)



10.83 The following key points are illustrated by the 'bare-ground' ZTV map:

- The potential for turbine visibility along most of the eastern extent of the study area is limited due to mountainous terrain, in particular to the northeast.
- There is potential for comprehensive visibility (blue colour pattern) of the proposed turbines in the Main Wind Farm Development Site's immediate surroundings, with some localised areas of reduced visibility to the north and east, where locally rolling hills and ridges will screen and partially screen the proposed turbines.
- Large swathes of the Doohoma Peninsula to the southwest of the study area have the potential for comprehensive visibility. However, there are some areas along the south

of the peninsula where the turbines will not be visible due to the intervening terrain located within some of the more central parts of the peninsula.

- There is potential for comprehensive visibility along most of the eastern half of the Belmullet Peninsula. Visibility is limited along the western coastline and northern portion of the Peninsula where the terrain rises to a summit and falls again towards the coastline to the west. Comprehensive visibility is also afforded from the Inishkea Islands to the west of the Belmullet Peninsula.
- Wild Nephin National Park has some potential to afford visibility of the proposed turbines in the southeast quadrant of the study area. Much of this visibility relates to the west-facing hills and ridges in the western and northern extent of the National Park. It should be noted that extensive parts of the National Park, most notable the less elevated central parts of the park, will be considerably screened from the turbines with no potential for visibility.
- The northern extent of Achill Island has the potential to afford comprehensive visibility of the turbines in the southwest quadrant of the study area. This is also true of the smaller islands of Inishbiggle and Annagh Island to the east of Achill.
- The settlements of Gweesalia approximately 0.5km to the south and Bangor Erris approximately 8km to the east of the Main Wind Farm Development Site 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 Belmullet, the visibility pattern is more sporadic with some clear areas of no turbine visibility.

Views of Recognised Scenic Value

10.84 Views of recognised scenic value are primarily indicated within County Development Plans in the context of scenic views/routes designations, and these same views might also be indicated on touring maps, guidebooks, roadside rest stops or on post cards that represent the area.

10.85 All of the scenic routes and views in County Mayo that fall inside the ZTV pattern (see **Figure 10-9** below) were investigated during fieldwork to determine whether actual views of the Main Wind Farm Development Site might be afforded. Where visibility may occur, a viewpoint has been selected for use in the visual impact appraisal later in this chapter. In some instances, a single viewpoint is selected to represent a stretch of designated scenic route or a cluster of designated scenic views, particularly distant ones.

MCDP

10.86 The MCDP 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 (**Figure 10-9** below refers).

10.87 Only one scenic route designation occurs within the central study area and is located along Doohoma Peninsula approximately 1.8 km to the southwest of the nearest turbine. A scenic route with designated views also occurs along the Doohoma Peninsula, albeit, located outside of the central study area some 5.5 km southwest of the nearest turbine.

10.88 The R314, some 6 km north of the closest turbine, connects the Belmullet Peninsula to the mainland and comprises both scenic routes and scenic routes with designated views. A local road that traverses immediately west of Carrowmore Lake also encompasses a scenic route designation located over 6 km northeast of the nearest proposed turbine where visual amenity is most associated with the lakeside context. A scenic route and scenic route with

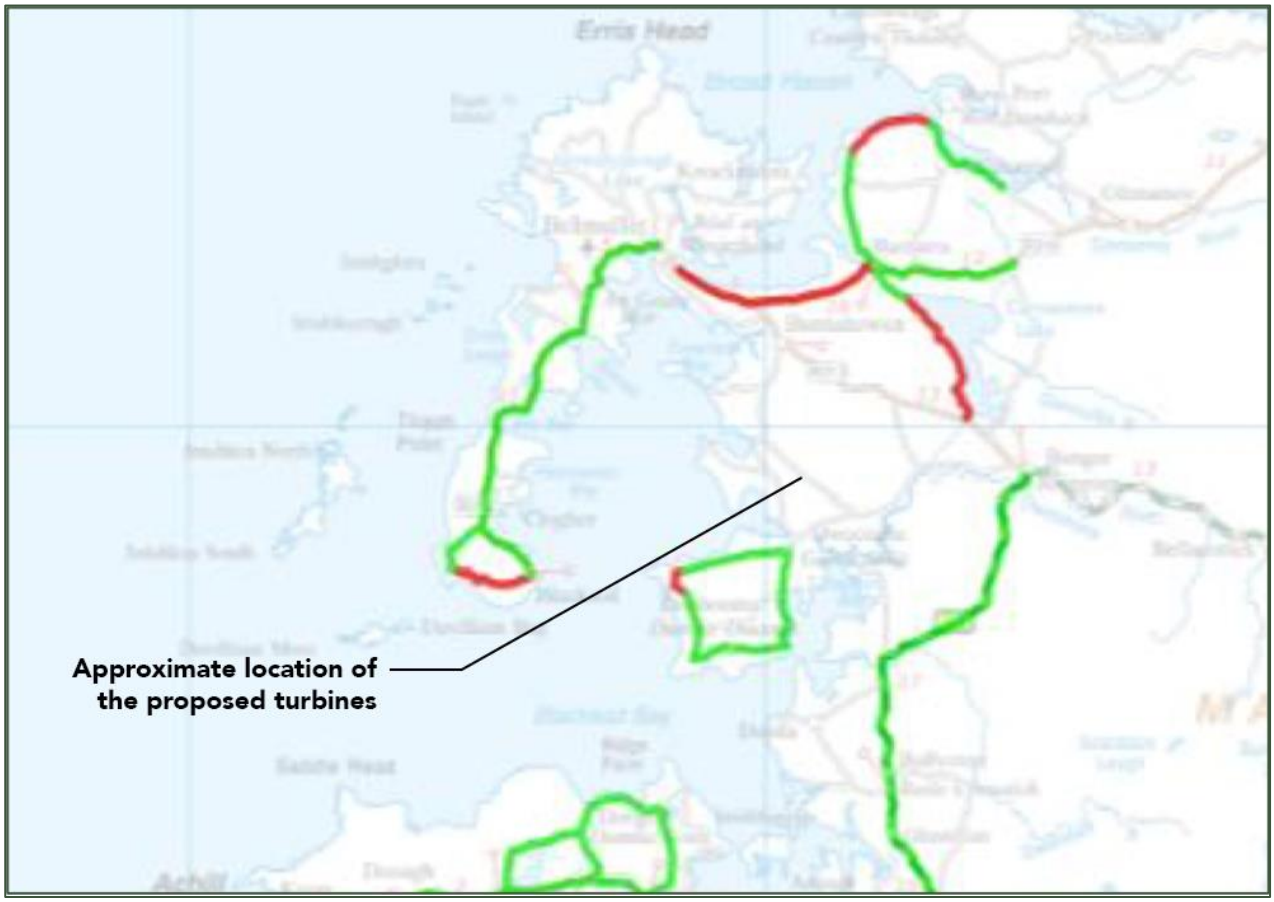
designated views also traverses north from Carrowmore Lake along the L1205 local road as it skirts around the coastline.

10.89 The Bellmullet Peninsula also encompasses a broad scenic route designation that extends the full length of the peninsula. At the southern end of the peninsula is an area of locally elevated terrain that encompasses a scenic route with designated views classification.

10.90 The southwest quadrant of the study area in the surrounds of Achill Island encompasses several scenic route designations that loop around the local roads along the coastline and within the more inland sections of the island where elevated views are afforded. These scenic designations are contained over 12 km south of the nearest turbine.

10.91 All scenic routes will be cross-referenced with the visibility mapping provided above and have been surveyed during fieldwork investigations to assess the potential for actual visibility of the Main Wind Farm Development Site. In areas where there is a potential for visibility, a representative viewpoint has been incorporated into the visual impact appraisal.

Figure 10-9: Scenic Routes and Protected Views, Mayo Landscape Appraisal



10.92 Policy relating to scenic designations in the MCDP 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 it:*

- 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
- Satisfies all other criteria, about, 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 and enhances local landscape character.
- Satisfies all other criteria, with regard to, inter alia, servicing, public safety and environmental considerations."

Centres of Population

10.93 The principal centre of population in relation to the Main Wind Farm Development Site is the small village of Gweesalia, located approximately 1.5 km southwest of the nearest turbine. This rural settlement is centred around a local road crossroads (L-5253 and L-1026). The central study area mainly comprises a dispersed rural population, consisting of isolated farmsteads and small linear clusters of residential dwellings. The population is predominantly concentrated in the western part of the study area, near pastoral lands that adjoin the coastline. Another cluster of rural dwellings is situated around Mount Jubilee, in the eastern section of the central study area at distances ranging from c. 800 m – 2 km from the nearest turbines. The nearest residential receptors to the Main Wind Farm Development Site are located to the west, near the townlands of Tristia and Mount Jubilee, and to the east and south along the L1205 and L1206 local roads, respectively.

10.94 In the wider study area, the principal centre of population is Belmullet, situated along the eastern edge of the Belmullet Peninsula, approximately 7 km northwest of the Site. Belmullet is part of the Mayo Gaeltacht, with smaller population centres located across the western and southern extents of the peninsula. The village of Bangor Erris, a settlement of approximately 300 people, lies about 8 km east of the nearest turbine. In addition to these settlements, the wider study area includes smaller crossroads communities and a modest rural population, particularly along the coastal fringes. The eastern half of the wider study area has a sparser population density, due to the elevated and rugged terrain.

Transport Routes

10.95 The most notable major transport route in relation to the Main Wind Farm Development Site is the N59 national secondary route, which traverses the wider eastern and southern extents

of the study area. It is located approximately 7.7 km east of the Main Wind Farm Development Site at its nearest point. The nearest regional road to the Main Wind Farm Development Site is the R313, which passes about 3 km to the north of the Main Wind Farm Development Site at its nearest point, connecting Bangor Erris and Belmullet. The R313 is the only major route corridor within the central study area. The R314, located just outside the central study area, is situated approximately 6 km north of the proposed turbine array and connects the northern coastal parts of Mayo to the settlement of Belmullet. The only other regional road within the wider study area is the R319, which passes through Achill Island in the southernmost part of the 20 km study area.

10.96 The central and wider study areas also include a network of local roads, which connect many of the small village settlements. The nearest of these is a local road (L-5252) that crosses the Main Wind Farm Development Site, running in a northwest-southeast direction through the central part of the Site. Other local roads in the immediate vicinity of the Main Wind Farm Development Site include the L1205, which runs to the west of the Site within the central study area, and the L1206, which lies to the south of the Main Wind Farm Development Site in the central study area, connecting the settlements of Gweesalia and Bangor Erris.

Tourism, Recreational and Heritage Features (Figure 12-1 in Chapter 12 of this EIAR)

10.97 Due to the Main Wind Farm Development Site'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), a scenic driving route that runs along the coastal roads within the study area. The WAW is located just over 1.2 km northwest of the nearest turbine at its closest point. This 2,600 km-long tourist driving route enters the study area in its northeast quadrant along the R314 at Bunalty and follows the coast roads throughout the area. The WAW exits the study area at its southern periphery, along the N59 National Secondary Road, to the north of the coastal settlement of Mallaranny. The route identifies several key points within the study area, including Erris Head, Ballyglass Lighthouse, Doonamo Point, Annagh Head, Elly Beach, Portacarn, Fallmore, Claggan Island, and Doohoma Head. The WAW also encompasses numerous points of interest within Achill Island and its surrounding area.

10.98 The Eurovelo Atlantic Coast Route, an 11,000 km-long cycling trail, traverses the coastline of several countries along the western coast of Europe, including Ireland. The Celtic Coast section of this route follows a similar path to the Wild Atlantic Way within the study area, passing less than 1.2 km northwest of the nearest turbine.

10.99 Within the central study area, immediately west of the Main Wind Farm Development Site, is the long expanse of Doolough Beach. Claggan Island lies approximately 5.4 km northwest of the nearest turbine. The island is connected to the mainland by a narrow road through the sand dunes. Srah Beach, located along the island's causeway, is a popular kitesurfing destination. To the southwest of the Main Wind Farm Development Site is the Doohoma Peninsula, which features a scenic route along its coastline.

10.100 The Wild Nephin National Park covers a large portion of the southern part of the study area. As Ireland’s sixth national park, it spans 15,000 hectares, including the Nephin Beg mountain range. The park’s Ballycroy Visitor Centre, located 12.3 km southeast of the nearest turbine, includes the Tóchar Daithí Bán trail and boardwalk. The park also contains several other walking trails, including the 40 km Bangor Trail, which was historically the main route from Bangor to Newport. The Western Way, a National Waymarked Trail, briefly traverses the far eastern extent of the study area.

10.101 To the west of the study area lies the town of Belmullet and the Mullet Peninsula. The peninsula is home to numerous beaches along its Atlantic coastline and Blacksod Bay, as

well as several walking routes, including the Faulmore Loop at the southern tip and the Erris Head Loop at the northern tip. Off the western coast of the Mullet Peninsula are the Inishkea Islands, with the northern island falling within the study area. Though the islands have been uninhabited since the 1930s, daily boat trips and guided tours are available during the summer months.

10.102 The northeastern portion of Achill Island is located within the wider southern extent of the study area. A popular tourist destination both nationally and internationally, the island features Slievemore, its second-highest peak at 671 m, located within the study area. Several sandy beaches are also found in the northeast corner of the island.

Identification of Viewpoints as a Basis for Assessment

10.103 The results of the ZTV analysis provide a basis for the selection of Viewshed Reference Points (VRPs), which are the locations used to study the landscape and visual impact of the Main Wind Farm Development Site 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 Main Wind Farm Development Site. Instead, a variety of receptor locations was selected that provide representative views of the Main Wind Farm Development Site from different distances, different angles and different contexts.

10.104 The visual impact of a proposed project is assessed using up to six 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.
- Amenity and heritage features.

10.105 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 (KV)

10.106 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 (SR/SV)

10.107 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 (LCV)

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

Centres of Population (CP)

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

Major Routes (MR)

10.110 These include national and regional level roads and are relevant VRP locations due to the number of viewers potentially impacted by the Main Wind Farm Development Site. 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 proposal 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 (AH)

10.111 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.

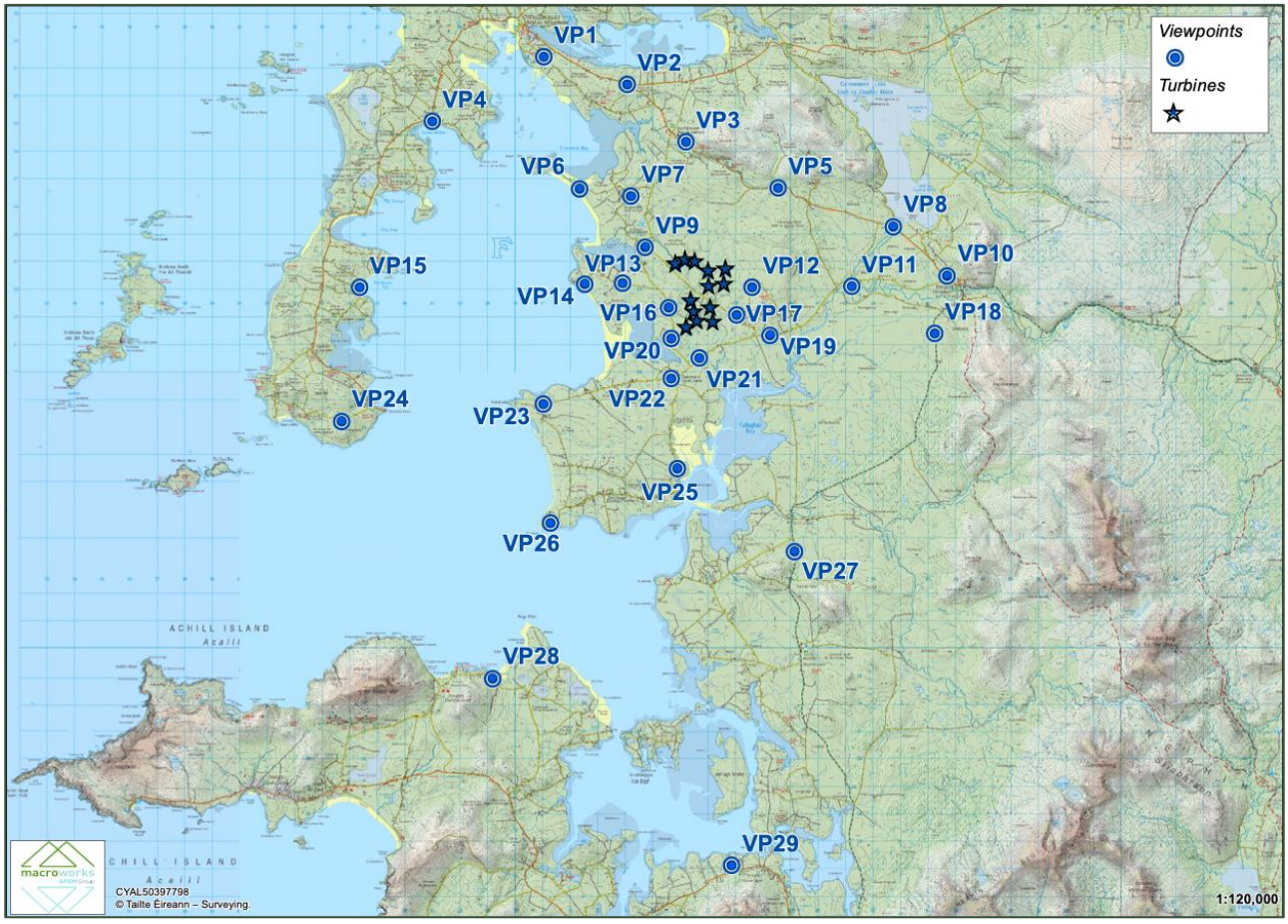
10.112 The Viewshed Reference Points selected in this instance are set out in the **Table 10-7** and **Figure 10-10** below.

Table 10-7: Outline description of selected Viewshed Reference Points (VRPs)

VRP No.	Location	Distance to nearest turbine	Representative of	Direction of view
VP1	L5285 at Belmullet	8.89 km (T1)	CP, AH, SR	SE
VP2	R314 at Atticonaun	6.69 km (T2)	CP, AH, SR, MR	SE
VP3	Glencastle Cemetery	4.28 km (T2)	AH, MR, LCV	S
VP4	Local Pier at Curraghboy	10.23 km (T1)	AH, SR, MR	SE
VP5	R313 at Muings	3.52 km (T7)	AH, MR, LCV	SW
VP6	Claggan Island Causeway	4.43 km (T1)	AH, LCV	SE
VP7	Local road at An tSraith	2.94 km (T1)	LCV	SE
VP8	R313 at Gortmore west of Munhin River	6.28 km (T7)	AH, SR, MR	SW
VP9	L1205 at Muingmore	1.25 km (T1)	AH, SR, LCV	SE
VP10	R313 at Bangor Erris	8.05 km (T7)	CP, AH, MR	W
VP11	Local Cemetery at Kilteany	4.63 km (T7)	AH, LCV	W
VP12	Local road at Tristia (1)	1.04 km (T6)	LCV	W
VP13	Local road (L12051) at Doolough	2.03 km (T1)	LCV, AH	E
VP14	Doolough Beach	3.36 km (T1)	LCV, AH	E
VP15	Mullaghroe Beach	11.49 km (T1)	AH, SR	E
VP16	L1205 at Doolough	0.83 km (T8)	AH, LCV	E
VP17	Local road at Tristia (2)	0.91 km (T12)	LCV	W
VP18	N59 at Bangor Erris Cemetery	7.87 km (T6)	AH, MR	W

VRP No.	Location	Distance to nearest turbine	Representative of	Direction of view
VP19	L1206 at Tristia	2.14 km (T12)	LCV, AH	W/NW
VP20	L1205 at Doolough	0.67 km (T10)	LCV, AH	NE
VP21	L1206 at Gweesalia	1.20 km (T10)	LCV, AH	N
VP22	Local road at Gweesalia	1.92 km (T10)	CP, AH, LCV, SR	NE
VP23	Local road at Roy	5.87 km (T10)	LCV, AH, SR	NE
VP24	Standing Stones at An Fál Mór	12.95 km (T10)	AH, SR	NE
VP25	Local road at Tullaghanduff	5.10 km (T10)	LCV, AH, SR	N
VP26	Doohama Head	8.62 km (T10)	AH, SR	NE
VP27	N59 at Knockmoyleen	8.81 km (T12)	MR, AH	NW
VP28	Golden Strand Doogort East	14.51 km (T10)	AH, SR	NE
VP29	The Great Western Greenway at Tonregee West	19.54 km (T10)	AH, SR, MR	N

Figure 10-10: Map of Viewpoint Locations



Cumulative Situation

10.113 The NatureScot Guidance relating to 'Assessing the Cumulative Landscape and Visual Impact of Onshore Wind Energy Developments (2021)' identify that cumulative effects on visual amenity consist of combined visibility and sequential effects. The same categories have also been adopted in the Landscape Institute's 2013 revision of the Landscape and Visual Impact Assessment Guidelines. The principal focus of wind energy cumulative impact assessment guidance relates to other wind farms - as opposed to other forms of development. This will also be the main focus herein, albeit with a subsequent consideration of cumulative effects with other forms of notable development (existing, permitted or pending a decision from a planning authority), particularly within the Central Study Area.

10.114 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 wind farms are within the observer's arc of vision at the same time) or in succession (where the observer has to turn to see the various wind farms).

10.115 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).

10.116 Cumulative effects of wind farms tend to be adverse as they relate to the addition of moving man-made structures into a landscape and viewing context that already contains such development, and thus, result in an intensification of development. Based on guidance contained within the NatureScot Guidelines relating to the Cumulative Effects of Wind Farms (2012) and the DoEHLG Wind Energy Guidelines (2006/2019 draft), cumulative effects can be experienced in a variety of ways. In terms of landscape character, additional wind energy developments might contribute to an increasing sense of proliferation. A new wind farm might also contribute to a sense of being surrounded by turbines with little relief from the view of them.

10.117 In terms of visual amenity, there is a range of ways in which an additional wind farm 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 project 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.

10.118 **Table 10-8** below provides Macro Works' criteria for assessing the magnitude of cumulative effects, which are based on the NatureScot Guidelines (2012).

Table 10-8: Magnitude of Cumulative Effect

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

Cumulative Impact Assessment

10.119 There are three operational wind farms and one consented wind farm contained within the study area. These are set out below:

Table 10-9: Cumulative Wind Farms within the study area (Refer to Figure 10-15 below)

Wind Farm Name	Number of turbines	Distance and Direction from proposed turbine to the nearest cumulative turbine	Status
Bunnahowen Wind Farm	3 no. WTGs	4.6 km north of site	Operational
Sheskin South Wind Farm	21 no. WTGs	15.4 km northeast of site	Consented
Oweninny Wind Farm Phase 1 & 2	60 no. WTGs	17 km east of site	Operational
Sheskin Wind Farm	8 no. WTGs	18.5 km northeast of site	Operational

10.120 The appraisal of cumulative effects with other wind energy developments is based on the cumulative ZTV maps and wireframes provided in **Technical Appendix 10-2 (Volume 3)**. The assessment of potential cumulative effects is included in **Section 10.225 to 10.230** below.

Do Nothing Scenario

10.121 The future baseline scenario relates to the likely evolution of the baseline environment in the absence of the Proposed Project. It also relates to development that is at the planning stage and has not yet been submitted to the planning authority. With regard to the potential future baseline of the Site and study area, the following items are relevant;

- Whilst some of the perimeter vegetation surrounding the site will be allowed to mature and grow out, providing a greater sense of containment within the main site, areas of commercial conifer forestry in the immediate surroundings are likely to be harvested on rotation, resulting in some degree of visual change in the surrounding landscape.
- The site and parts of the study area are contained within a 'Tier 1 – Preferred (Cluster of Turbines)' wind energy classification, and it is therefore likely that further applications for wind energy developments could arise as a result of this designation.
- Several applications for large developments, ranging from hydrogen production to electrical infrastructure and additional wind energy projects, have been consented within the wider surrounding landscape. As a result, there is likely to be an increased perceived intensity of development in the surrounding landscape.

Assessment of Effects

10.122 Based on the assessment criteria employed herein, potential significant effects are considered most likely to occur in instances where highly sensitive landscape and visual receptors coincide with high order landscape and visual effects (see descriptions in **Table 10-2, Table 10-3 and Table 10-4**). From previous extensive experience of this type of project in a rural / transitional foothill setting, it is considered that potentially significant landscape and visual effects have the potential to occur in the following ways:

Landscape Effects

a) Irreversible physical effects on sensitive landscape features.

b) Disruption of sensitive land cover and/or land use patterns.

c) Substantial and incongruous change to areas of sensitive landscape character.

Visual Effects

a) A sense of spatial dominance as seen from highly sensitive receptor locations. This is most likely to occur within 3 km of the Proposed Project.

b) Visual clutter and ambiguity as seen from highly sensitive receptor locations. This can occur at any distance but tends to occur beyond 2-3 km as turbines become stacked in perspective and a more two-dimensional layout is perceived.

c) A combination of both of the above effects.

10.123 Based on baseline studies and early-stage assessments specific to the Proposed Project, some of the most susceptible landscape receptors are considered to be the coastal environs in the western extent of the study area. Indeed, much of the immediate coastline comprises distinctive features such as broad beaches, river estuaries, and rocky shorelines. On the opposite side of the study area, to the east, the terrain rises towards the Nephin Beg Mountain Range and encompasses Wild Nephin National Park, representing the most sensitive and remote inland areas within the study area. To the south, the varied landscapes and seascapes of Achill Island are highly distinctive at local, regional, and national levels and are recognised for their notable landscape value in relation to tourism, amenity, and heritage.

10.124 In this context, the most sensitive visual receptors include local residential receptors situated along the local road network in the immediate vicinity of the Main Wind Farm Development Site, scenic view and route designations along the coastal environs, and views afforded along the WAW scenic driving route. Other tourism and amenity receptors are also considered sensitive and include several walking and hiking routes within Wild Nephin National Park, as well as a number of cycling and walking routes across Achill Island, including the Great Western Greenway.

Landscape Effects

Landscape Character, Value and Sensitivity

10.125 Effects on landscape character will be considered at both the localised scale of the Main Wind Farm Development Site and its immediately surrounding landscape as well as the broader scale of the Study Area.

10.126 Central Study Area (<c. 5 km from the nearest turbine).

10.127 The central study area is predominantly characterised by broad coastal plains comprising coastal bog, conifer forest, and localised areas of pastoral farmland. The eastern and northern extents of the study area are primarily made up of expansive areas of bogland, interspersed with forestry plantations and small, dispersed areas of rural settlement. This part of the study area often presents a strong sense of openness, occasionally interrupted by pockets of conifer woodland. It has a remote character and is not considered to be highly distinctive or exceptionally rare. There is some presence of existing industry to the north,

particularly related to mineral extraction, while evidence of historic industrial activity is also noted within the Main Wind Farm Development Site itself. In terms of landscape designations, much of these parts of the study area fall within Landscape Unit C – North West Coastal Bog, and within Policy Areas 1 and 2. Both of these policy areas are classified as having a 'High' landscape sensitivity in relation to wind farm development.

10.128 In contrast to the less distinctive aforementioned parts of the central study area, the western and southern extents of the central study area are much more distinctive, comprising a more notable agglomeration of settlement and pastoral lands that transition into a varied coastline, which presents a high degree of scenic amenity. This high degree of scenic amenity is reflected in the presence of the WAW driving route and designated scenic routes outlined in the current Mayo CDP, which follow the local roads along the Doohoma Peninsula. The coastal environs in this area possess a somewhat naturalistic character, featuring broad beaches, river estuaries, rocky shorelines, and other coastal features. These parts of the central study area are predominantly contained within Landscape Unit B – North West Coastal Moorland, while the more inland sections fall within Unit C – North West Coastal Bog. As with the eastern and northern extents of the central study area, these areas are also located within a 'High' landscape sensitivity designation with respect to wind farm development.

10.129 Overall, it is considered that the Main Wind Farm Development Site and central study area exhibit varying landscape values. However, sensitivity is heightened in comparison to more traditional rural landscapes found elsewhere in Ireland, due to the influence of the coastline and the presence of more distant elevated lands, which frequently form a backdrop to views from multiple orientations. While the more inland sections of the central study area—including the Main Wind Farm Development Site itself, as well as the northern and eastern extents—are considered more robust, owing to the presence of existing industry and other working land uses, they are nonetheless influenced by highly sensitive distant landscape features such as the coastline and distant mountain ranges. In contrast, the western and southern extents of the study area exhibit a heightened degree of sensitivity, primarily due to the presence of the coastline, which is highly susceptible to change and presents a notable level of scenic amenity, as reflected in the designated scenic routes along the Doohoma Peninsula. These areas also contain sensitive landscape values associated with tourism and amenity, further highlighted by the presence of the WAW route. Overall, the landscape sensitivity of the Main Wind Farm Development Site itself is deemed Medium, transitioning to High–Medium to the west in the vicinity of the coastline, and remaining Medium throughout the northern and eastern extents of the study area, where the influence of coastal and other more susceptible landscape features is less pronounced.

Wider Study Area (c. 5-20 km)

10.130 The wider study area comprises a much more varied mix of landscape types, features and areas. As a result of its diverse nature, it has an array of contrasting landscape sensitivities, qualities and associations.

10.131 Indeed, the coastal complex in the surrounds of Blacksod Bay, in the wider western extent of the study area, encompasses an array of coastal features and conveys a strong sense of distinctiveness. The broad beaches, river estuaries, and small islands contribute to a sense of naturalness and enhance the area's unique character. This landscape holds notable value in relation to tourism, as evidenced by the presence of numerous holiday lets, campsites, and the route of the WAW. There is also a strong cultural identity in this part of the study area, with the settlements of Gweesalia and Belmullet both recognised as Gaeltacht areas.

10.132 Other highly sensitive parts of the study area include the inland areas within the wider eastern and south-eastern quadrants, which encompass the Nephin Beg Mountain Range and Wild

Nephin National Park. These areas present a strong sense of remoteness and naturalness, primarily characterised by extensive expanses of bogland. They also hold notable tourism and amenity value, with several established walking and hiking routes throughout.

10.133 The southern periphery of the study area includes Achill Island, a highly distinctive island on the west coast of Ireland, known for its dramatic landscape features and considerable tourism and amenity value. Indeed, during the summer months, Achill Island becomes a popular tourist destination, with a large proportion of dwellings used as short-term holiday lets.

10.134 Notwithstanding the above, the study area also encompasses more typical, robust landscapes that are less susceptible to change. A broad expanse of the northeastern and eastern extents of the study area is characterised by extensive commercial conifer forestry plantations and other forms of industry, including the large-scale Corrib Gas Plant, existing wind energy developments to the northeast of Belmullet, and various other forms of built development. Despite these industrial and commercial influences, there remains a strong sense of remoteness in this part of the study area, with only localised areas of dispersed rural settlement.

10.135 In summary, the wider study area is richly varied, comprising an array of sensitive landscape areas and features. The most notable aspects of sensitivity primarily relate to the coastline, which presents a high degree of scenic amenity and contains notable landscape values associated with tourism and recreational amenity. Similarly, the elevated uplands in the wider eastern and south-eastern quadrants of the study area exhibit a strong sense of naturalness, along with high scenic and recreational amenity value. Nevertheless, the wider study area also includes parts of the landscape that are more typical and robust in nature, where landscape value tends to relate more to the subsistence and function of the surrounding rural community, rather than to any particularly susceptible qualities such as scenic amenity, recreational use, or a strong sense of naturalness.

10.136 On balance, and for the reasons outlined above, it is considered that the wider study area has an overall High–Medium landscape sensitivity. However, areas of High and Very High landscape sensitivity are also present within the study area, particularly in relation to the most elevated uplands and the coastal environs. In contrast, some localised areas of landscape with a Medium sensitivity classification are also located throughout the wider study area. These areas are typically situated at a greater distance from the more distinctive coastal features and elevated uplands and are generally more robust in character.

Magnitude of Landscape Effects

10.137 The physical landscape as well as the character of the Main Wind Farm Development Site 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, grid connection route (GCR) , works along the Turbine Delivery Route (TDR) route and the substation compound and Battery Energy Storage System (BESS). By contrast, for the wider landscape of the study area, landscape impacts relate exclusively to the influence of the proposed turbines only on landscape character. The aspects of the Proposed Project that are likely to have an impact on the physical landscape and landscape character are described in **Chapter 2** with construction processes described in the Construction and Environmental Management Plan (CEMP) in **Technical Appendix 2-1** (**Volume 3**).

Construction Stage Effects on the Landscape

10.138 It is considered that the Proposed Project will have a modest physical impact on the landscape within the Main Wind Farm Development Site as none of the Proposed Project features have a large ‘footprint’ and land disturbance/vegetation clearing will be relatively

limited to the areas surrounding the proposed turbines and their associated hardstands. The topography and land cover of the Main Wind Farm Development Site will remain largely unaltered, aside from the areas of felled forestry, with construction being limited to tracks, areas of hard standing for the turbines, the on-site substation compound, BESS, temporary site construction compound, proposed met mast, works along the TDR and GCR. 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.

10.139 The finalised internal road 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 existing access tracks. 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'. The Main Wind Farm Development Site will require approximately 8.75 kilometres of internal access tracks, of this 1.95 kilometres of old internal access tracks will be utilised and upgraded. There will be an intensity of construction stage activity associated with the access tracks and turbine hardstands consisting of the movement of heavy machinery and materials, but this will be temporary/short term in duration and transient in location. There will also be construction stage landscape effects along the surrounding road networks, which relate to the temporary modifications to surrounding local and national roads and localised removal of roadside vegetation to facilitate turbine deliveries. The construction stage effects on landscape character from these familiar and dispersed surface activities will be minor.

10.140 There will be one 110 kV on-site substation compound constructed to collect the generated power from the Proposed Development. The 110 kV on-site substation will be located to the north of the public road that runs through the Main Wind Farm Development Site. The dimensions of the proposed substation compound will be 156m long on the northwest length, 153m long on the southeast length and 99m wide either side and will comprise two no. substation control buildings and electrical components necessary to export generated power from the wind turbines to the transmission system. The most notable construction stage landscape impacts resulting from the proposed on-site substation relate to the construction of concrete foundations to facilitate the substation building. Overall, these construction stage effects are relatively minor and compare to the construction of an industrial farm shed. The Main Wind Farm Development Site also includes the construction of a BESS adjacent to the on-site substation. The BESS containers will be 2.9 m in height and will require no notable excavation works as they will be located on level concrete footings. The BESS compound will be 156m long on the northwest length, 153m long on the southeast length and 99m wide either side width and will principally comprise BESS containers, other ancillary features such as site security fencing and a 33 kV collector cable, which will route the electricity from the southern turbine cluster to the proposed on-site substation.

10.141 All internal site cabling will be underground and will be run in cable ducts up to 1.2 metres below the ground surface within the proposed internal roads and/or their verges. Indeed, the land cover of the Main Wind Farm Development Site will only be interrupted as necessary to build the structures of the Main Wind Farm Development Site and to provide access. Impacts from land disturbance and vegetation loss at the Main Wind Farm Development Site are considered to be modest in the context of this broad landscape setting which is cloaked in extensive areas of peatland and some areas of conifer forest plantations. As part of the Main Wind Farm Development Site, there will be a requirement to fell some of this forestry in the areas immediately around the footprint of the wind farm infrastructure. The total area of forestry to be felled is estimated to be between approximately 27.17 ha and 31.37 ha (depending on which of the three candidate turbines is selected), all of which would be

replaced through the compensatory afforestation of an equivalent area of alternative land. As a commercial crop, this forestry is scheduled to be felled and replanted in the future regardless of the Proposed Project being constructed or not. Whilst the removal of small areas of forestry will generate some landscape impacts, these are not considered to be significant. All forestry that is removed will be subject to forest replanting provisions. See **Technical Appendix 2-2 Forestry Report** for more information.

10.142 One permanent meteorological (Met) mast will be erected on site and will comprise a 100 m high lattice steel mast with a shallow concrete foundation. The proposed mast will be a slender, free-standing structure and will be constructed on a hardstanding area of 10 m x 10 m. The most notable construction stage effects here relate to the minor amount of ground excavation required to facilitate the shallow foundations for the steel mast structures.

10.143 During the construction stage, there will also be some areas of land and vegetation disturbance along the GCR and TDR. This will result in the loss of some localised areas of vegetation and localised areas of ground disturbance to facilitate the excavation works related to the laying of the GCR cabling and hardstanding for the Over-run Areas of the TDR. Site investigation has identified a likely requirement for 12 horizontal directional drills (HDDs) along the route as well as a number of watercourse crossings which are not considered a constraint. It is important to note that both the GCR and TDR will result in very minor and localised landscape effects. It is also important to note, with regard to both the GCR and TDR, that any areas of disturbed ground or removed vegetation will be fully reinstated post-construction completion.

10.144 Site activity will be at its greatest during the construction phase due to the operation of machinery on site and movement of heavy vehicles to and from site. This phase will have a more significant impact on the character of the Main Wind Farm Development Site than the operational phase, but it is a 'short-term' impact that will cease as soon as the Proposed Project is constructed and becomes operational (24 months from starting on-site to completion of commissioning of the turbines).

10.145 There will be some long term/permanent construction stage effects on the physical landscape in the form of turbine foundations and hardstands, access tracks and a substation, and the on-site substation and grid connection will remain in perpetuity as part of the national grid network. With the exception of some residually useful access tracks, it is proposed that all other development features, aside from the turbine foundations and cables, which would be left in situ, will be removed from the project site, and it will be reinstated to peatland and forestry use upon decommissioning. Thus, the construction stage landscape effects of the Proposed Project are largely reversible.

10.146 Overall, the magnitude of construction stage landscape effects within the Main Wind Farm Development Site and its immediately surrounding context is deemed to be **High-medium** and of a **Negative** quality, but of a **Short-term** duration. Beyond 5 km from the Main Wind Farm Development Site, the magnitude of landscape impact is deemed to reduce to **Low** and **Negligible** at increasing distances as the construction activities relating to the Proposed Project becomes a proportionately smaller component of the overall landscape fabric. It is important to note that this impact assessment applies across all turbine ranges highlighted in the turbine range assessment in **Section 10.205 to 10.209** below.

Operational Stage Effects on the Landscape

10.147 For most commercial wind energy developments, the greatest potential for landscape impacts to occur is as a result of the change in character of the immediate area due to the introduction of tall structures with moving components. Thus, wind turbines that may not have been a characteristic feature of the area become a new defining element of that landscape

character. In this instance, wind turbines are a relatively unfamiliar feature within the central study area, albeit wind energy development is a characteristic feature of the wider study area and wider landscape. Thus, whilst the Proposed Project represents a new form of development within the central study area, on a broader scale, it represents the continuation of an established land use in County Mayo. It should be noted that the proposed turbine array is entirely contained within the wind energy classification 'Tier 1 – Preferred (Large Wind Farms)' of the RES for County Mayo which is described as "*areas in which the potential for large wind farms is greatest*".

10.148 In terms of scale and function, the Proposed Project is well assimilated with the context of the Main Wind Farm Development Site, central study area and wider study area. Indeed, at the Main Wind Farm Development Site scale, there is some presence of existing development, with regard to commercial conifer forestry and an industrial development (disused) in the central part of the Main Wind Farm Development Site, although outside the Main Wind Farm Development Site Boundary. In this regard, whilst this is a low intensity landscape there is some existing well-established development at the Main Wind Farm Development Site scale. Indeed, it is not an untouched naturalistic landscape context. Beyond the immediate context of the Main Wind Farm Development Site within the central study area, the broad scale of the landform and the extensive underlying peatlands land uses also prevent the proposed turbines from appearing over scaled. Furthermore, the proposed turbines will often be viewed in the same visual context with the broad sweeping uplands in the distance to the east, which further aids in assimilating the scale and extent of the Proposed Project into this landscape context. Whilst there is some localised sense of naturalistic landscape character along the surrounding coastline and along the more elevated uplands within the wider landscape to the east, the Main Wind Farm Development Site and central study area are influenced by existing development and other working land uses such as commercial scale forestry and areas of surrounding pastoral land uses. Although the Proposed Project represents a stronger human presence and an increased level of built development than currently exists on the Main Wind Farm Development Site, it will not detract significantly from this low-intensity working coastal setting. It should also be noted that some of the ancillary-built features will be located well offset from the more settled parts of the surrounding landscape within the boundary of conifer woodland that contained much of the Main Wind Farm Development Site. Indeed, these built features will be heavily, and in many cases fully screened, from even the nearest surrounding receptors, which strongly diminishes their potential to alter the surrounding landscape character.

10.149 It is important to note that in terms of duration, this Proposed Project represents a long term, but not permanent impact on the landscape and is reversible. The lifespan of the Proposed Project is 35 years, after which time it will be substantially 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 Main Wind Farm Development Site, albeit the proposed on-site substation and underground grid connection will remain in perpetuity as part of the national grid infrastructure, in addition to residually useful access tracks.

10.150 In summary, there will be physical impacts on the land cover of the Main Wind Farm Development Site as a result of the Proposed Project during the operational phase, but these will be minor in the context of this transitional working landscape that comprises extensive areas of commercial conifer forestry and existing productive agricultural lands. Whilst the Proposed Project will result in a distinct increase in the intensity of development in this landscape context, the scale of the Proposed Project 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 effect is deemed to be **High-medium** within the Central Study Area. Beyond 5 km from the Main Wind Farm Development Site, the magnitude of landscape impact is deemed to reduce to **Low** and **Negligible** at

increasing distances as the Proposed Project becomes a proportionately smaller component of the overall landscape fabric. It is important to note that this impact assessment applies across all turbine ranges highlighted in the turbine range assessment in **Section 10.205 to 10.209** below.

Decommissioning and Restoration Stage Effects on the Landscape

10.151 The decommissioning phase will have similar temporary/short term impacts as the construction phase with the movement of large turbine and BESS components away from the Main Wind Farm Development Site. There may be a minor loss of roadside and trackside vegetation that has grown during the operation phase of the Proposed Project, but this would be reinstated upon completion of decommissioning.

10.152 Works in this phase will primarily involve disassembling the turbines and removing them off-site. The proposed site roads, turbine foundations or the GCR infrastructure will not be removed. The Main Wind Farm Development Site roads will remain for forestry/agricultural access while the hardstand material and turbine foundations will be covered in topsoil and left to revegetate naturally. The substation and GCR infrastructure will form part of the permanent national grid network. A decommissioning plan will be prepared prior to the decommissioning of the Proposed Project.

10.153 Overall, the magnitude of decommissioning stage landscape effects within the Main Wind Farm Development Site and its immediately surrounding context is deemed to be **High-medium** and of a **Negative** quality, but of a **Short-term** duration. Beyond 5 km from the Main Wind Farm Development Site, the magnitude of landscape impact is deemed to reduce to **Low** and **Negligible** at increasing distances as the decommissioning related activities become a proportionately smaller component of the overall landscape fabric. It is important to note that this impact assessment applies across all turbine ranges highlighted in the turbine range assessment in **Section 10.205 to 10.209** below.

Significance of Potential Landscape Effects (Construction, Operation and Decommissioning Phase)

10.154 The significance of landscape effects is a function of landscape sensitivity weighed against the magnitude of landscape impact. This is derived from the significance matrix (**Table 10-5**) used in combination with professional judgement.

10.155 Based on a Medium sensitivity judgement for the landscape of the Main Wind Farm Development Site and the High-medium/ Medium landscape sensitivity judgement for the central study area, combined with a High-medium magnitude of construction and decommissioning stage landscape impact, the significance of effect is considered to be **Substantial-moderate / Negative / Short-term** (**Not Significant** in the context of the EIA Regulations) within and immediately around the Site during construction and decommissioning, but reducing quickly with distance and broader context.

10.156 Based on a Medium sensitivity judgement for the landscape of the Site and the High-medium/ Medium landscape sensitivity judgement for the central study area, combined with a High-Medium magnitude of operational stage landscape impact, the significance of effect is considered to be **Substantial-moderate / Negative / Long-term** (**Not Significant** in the context of the EIA Regulations) at the Main Wind Farm Development Site reducing to **Moderate / Negative / Long-term** (**Not Significant** in the context of the EIA Regulations) within the immediate surrounds of the Main Wind Farm Development Site and parts of the central study area. Thereafter, significance will reduce to **Slight and Imperceptible** (**Not Significant** in the context of the EIA Regulations) at increasing distances as the Proposed Project becomes a progressively smaller component of the wider landscape fabric even in

the context of higher sensitivity landscape units / features. It is important to note that the residual significance of visual effects apply across all turbine ranges highlighted in the turbine range assessment in **Section 10.205 to 10.209** below.

Visual Effects

Construction Stage Visual Effects

10.157 During construction, the main visual impacts will arise from frequent heavy vehicle movements and worker vehicles travelling to and from the Main Wind Farm Development Site and using the Main Wind Farm Development Site entrances. There will be construction machinery on site, which may rise above intervening vegetation and buildings. Some of the most notable construction stage visual impacts will result from the erection of the proposed turbines using tower cranes. There will also be stockpiles of stripped topsoil as well as construction materials awaiting use. However, a large part of this short-term activity within the Main Wind Farm Development Site will remain screened from view by the border of mature conifer woodland that largely contains the proposed turbine array. Indeed, this mature vegetation, will result in a strong reduction in the potential for visual impacts during the construction stage of the Proposed Project, especially development of the lower built features such as the substation, BESS developments, access tracks and turbine foundations and hardstandings. There will also be some highly localised visual effects generated from construction stage activities along the GCR and TDR. Furthermore, construction-related activity is short-term in nature and will cease once the Proposed Project becomes fully operational.

10.158 For these reasons, the magnitude of visual impact at the construction stage is deemed to be no greater than **High-medium/Medium** at the nearest surrounding receptors, however, this reduces swiftly at greater distances from the Main Wind Farm Development Site, especially within the wider study area, where the magnitude of visual impact is considered to be no greater than **Low/Low-negligible.** Combined with a High-medium/Medium sensitivity for receptors within the immediate study area (<1 km from the Site), the significance of visual effect will be not greater than **Substantial-moderate/Moderate** and of a **Negative** quality (**Not Significant** in the context of the EIA Regulations). Thereafter, the significance of effect will reduce to **Moderate/Moderate-Slight** throughout the central study area and **Slight and Imperceptible** (**Not Significant** in the context of the EIA Regulations) at increasing distances within the wider study area as the Proposed Project becomes a progressively smaller component in the afforded view. Thus, it is not considered that the Proposed Project will generate significant visual effects at the construction stage

Operational Stage Visual Effects

10.159 **Table 10-10** below summarises the full textual assessment of visual effects for each Viewshed Reference Point (VRP) contained in **Technical Appendix 10-1** and **Volume 4 (Photomontages)**. Whilst the 'receptor sensitivity analysis table' and full textual assessment for each VRP is normally contained within the landscape and visual chapter, in this instance, given the considerable number of VRPs, it is considered more prudent to place this material in a separate appendix and focus herein on the significance of the findings. The left hand side of the table incorporates statistical data associated with the view of turbines, whilst the right hand side contains professional judgements in respect of the view. It is important to note that the professional judgements are based on the effects experienced in relation to the view and are not directly influenced by the statistical data (i.e. the distance to the nearest turbine). These aspects are only combined within **Table 10-10** in order to identify patterns of effect to better inform the conclusions of this assessment.

Table 10-10: Summary of Operational Stage Visual Effects at Viewshed Reference Points (VRP's)

VRP No.	Distance to nearest turbine km	Visual receptor Sensitivity (see Technical Appendix 10-1)	Visual Impact Magnitude (see Technical Appendix 10-1 for full assessment)	Significance of Visual effect
VP1: L5285 at Belmullet	8.89 km (T1)	High-medium	Low	**Moderate-slight / Negative / Long-term (Not Significant)**
VP2: R314 at Atticonaun	6.69 km (T2)	High-medium	Medium-low	**Moderate-slight / Negative / Long-term (Not Significant)**
VP3: Glencastle Cemetery	4.28 km (T2)	Medium	Low	**Slight / Negative / Long-term (Not Significant)**
VP4: Local Pier at Curraghboy	10.23 km (T1)	High	Low	**Moderate-slight / Negative / Long-term (Not Significant)**
VP5: R313 at Muings	3.52 km (T7)	Medium	Medium-Low	**Moderate-Slight / Negative / Long-term (Not Significant)**
VP6: Claggan Island Causeway	4.43 km (T1)	High-medium	Medium	**Moderate / Negative / Long-term (Not Significant)**
VP7: Local road at An tSraith	2.94 km (T1)	High-medium	Medium	**Moderate / Negative / Long-term (Not Significant)**
VP8: R313 at Gortmore west of Munhin River	6.28 km (T7)	Medium	Low	**Slight / Negative / Long-term (Not Significant)**
VP9: L1205 at Muingmore	1.25 km (T1)	Medium	High-medium	**Substantial-moderate / Negative / Long-term (Not Significant)**
VP10: R313 at Bangor Erris	8.05 km (T7)	Medium	Low	**Slight / Negative / Long-term (Not Significant)**
VP11: Local Cemetery at Kilteany	4.63 km (T7)	High-medium	Medium-low	**Moderate-slight / Negative / Long-term (Not Significant)**

VRP No.	Distance to nearest turbine km	Visual receptor Sensitivity (see Technical Appendix 10-1)	Visual Impact Magnitude (see Technical Appendix 10-1 for full assessment)	Significance of Visual effect
VP12: Local road at Tristia (1)	1.04 km (T6)	Medium	High	**Substantial-moderate / Negative / Long-term (Not Significant)**
VP13:Local road (L12051) at Doolough	2.03 km (T1)	Medium	Medium	**Moderate / Negative / Long-term (Not Significant)**
VP14: Doolough Beach	3.36 km (T1)	High-medium	Medium	**Moderate / Negative / Long-term (Not Significant)**
VP15: Mullaghroe Beach	11.49 km (T1)	High	Low	**Moderate-slight / Negative / Long-term (Not Significant)**
VP16: L1205 at Doolough	0.83 km (T8)	Medium	High-medium	**Substantial-moderate / Negative / Long-term (Not Significant)**
VP17: Local road at Tristia (2)	0.91 km (T12)	Medium	High	**Substantial-moderate / Negative / Long-term (Not Significant)**
VP18: N59 at Bangor Erris Cemetery	7.87 km (T6)	Medium	Medium-low	**Moderate-slight / Negative / Long-term (Not Significant)**
VP19: L1206 at Tristia	2.14 km (T12)	Medium	Medium	**Moderate / Negative / Long-term (Not Significant)**
VP20: L1205 at Doolough	0.67 km (T10)	Medium	High	**Substantial-moderate / Negative / Long-term (Not Significant)**
VP21: L1206 at Gweesalia	1.20 km (T10)	Medium	High-medium	**Substantial-moderate / Negative / Long-term (Not Significant)**
VP22: Local road at Gweesalia	1.92 km (T10)	Medium	High-Medium	**Moderate / Negative / Long-term (Not Significant)**
VP23: Local road at Roy	5.87 km (T10)	High-medium	Medium-low	**Moderate-slight / Negative / Long-term (Not Significant)**

VRP No.	Distance to nearest turbine km	Visual receptor Sensitivity (see Technical Appendix 10-1)	Visual Impact Magnitude (see Technical Appendix 10-1 for full assessment)	Significance of Visual effect
VP24: Standing Stones at An Fál Mór	12.95 km (T10)	High	Low	**Moderate-slight / Negative / Long-term (Not Significant)**
VP25: Local road at Tullaghanduff	5.10 km (10)	High-medium	Medium-low	**Moderate-slight / Negative / Long-term (Not Significant)**
VP26: Doohama Head	8.62 km (T10)	High-medium	Low-negligible	**Slight / Negative / Long-term (Not Significant)**
VP27: N59 at Knockmoyleen	8.81 km (T12)	High-medium	Medium-low	**Moderate-slight / Negative / Long-term (Not Significant)**
VP28: Golden Strand Doogort East	14.51 km (T10)	High	Low-negligible	**Slight / Negative / Long-term (Not Significant)**
VP29: The Great Western Greenway at Tonregee West	19.54 km (T10)	High-medium	Low-negligible	**Slight-imperceptible / Negative / Long-term (Not Significant)**

Note: *It is important to note that the residual significance of visual effects apply across all turbine ranges highlighted in in the turbine range assessment* in **Section 10.205 to 10.209** below.

Effects on Designated Views

10.160 Due to the diverse nature of the study area—which includes mountainous regions such as the Nephin Range, its surrounding hills, and elevated lands within Achill Island—alongside a broad mix of coastal features, there is a notable degree of designated scenic amenity within both the central and wider study area. It should be noted that much of this scenic amenity is principally associated with the coastline, with the majority of designated scenic amenity located within the coastal parts of the study area. As a result, 13 out of the 29 assessed viewshed reference points (VP1, VP2, VP4, VP8, VP9, VP15, VP22, VP23, VP24, VP25, VP26, VP28, and VP29) were selected to represent scenic views and routes within the study area. It is also important to highlight that numerous viewpoints have been selected to represent a range of receptor types, including local community views, major routes, centres of population, and amenity features.

10.161 The nearest scenic route designation (refer to **Figure 10-9**) to the Main Wind Farm Development Site relates to a looped local road that traverses the Doohoma Peninsula, which is the only scenic route located within the central study area. It should be noted that only a portion of this route lies within the central study area, with much of it situated beyond 5 km from the nearest turbine. This scenic route designation is principally recognised for its coastal context, where views are afforded across the surrounding coastline—north and west towards the Belmullet Peninsula and Blacksod Bay, and south towards the uplands of Achill Island.

Additional scenic views are afforded across the wider Oweninny Estuary to the east, particularly from the eastern sections of the route. Distant views of the Nephin Range are also afforded, primarily from the eastern extent of this looped scenic designation. Viewpoints VP22, VP23, VP25, and VP26 were all selected to represent views of this sensitive visual receptor. VP22 is the closest to the Main Wind Farm Development Site (refer to **Figure 10-11**) and is also representative of the centre of population at Gweesalia. It should be noted that this section of the scenic route is more anthropogenic in nature, influenced by the built surrounds of the settlement and broad working land uses such as the extensive forestry to the northeast. There is limited influence from the coast here; however, pleasant inland views are afforded towards the distant mountains, elevated hills, and ridges. Viewpoint VP22 provides a clear view of the Main Wind Farm Development Site from just under 2 km, where the proposed turbines are seen at a prominent scale rising beyond the settlement. Although the nearest turbine is approximately 1.9 km from this viewpoint, the perceived offset between the settlement and the turbines is slightly diminished, as surrounding built development tends to truncate views of the intervening landscape, thereby reducing the apparent distance between the Main Wind Farm Development Site and this receptor. Nonetheless, the turbines are clearly seen rising from the coniferous forest plantation, which is visually distinct and contextually separate from the settlement. Overall, the proposed turbines will result in a notable degree of visual change at this location. However, they are viewed within the more robust aspect of this part of the surrounding landscape. Thus, the significance of visual effect for VP22 is deemed to be Moderate (**Not Significant in the context of the EIA Regulations**).

Figure 10-11: View (VP22) afforded from the nearest section of the Doohoma peninsula scenic route at the settlement of Gweesalia

10.162 Viewpoints VP23, VP25, and VP26 all have a stronger influence from the surrounding coastline and associated coastal elements. Viewpoint VP23, located at the north-westernmost point of the Doohoma Peninsula, affords pleasant scenic views across the immediate coastal context, while the proposed turbines are viewed inland to the east. Although they will be a notable built feature, they do not considerably detract from the coastal character and are not located within the main aspects of scenic amenity; therefore, the residual significance of visual effect at this location is deemed **Moderate–Slight** (**Not Significant** in the context of the EIA Regulations). Viewpoint VP25, situated at the eastern extent of the scenic route, offers views across the Oweninny River Estuary and towards distant elevated mountains to the east. The Main Wind Farm Development Site will be visible to the north and is generally viewed well offset from the more visually susceptible coastal areas. While the turbines may draw the eye and will increase the perceived intensity of built

development, they are not considered to notably detract from the most scenic elements of the view, and the residual significance of visual effect is again considered **Moderate–Slight** (**Not Significant** in the context of the EIA Regulations). Viewpoint VP26, the most distant of the representative viewpoints, is located approximately 8.6 km southwest of the Main Wind Farm Development Site. Here, the Main Wind Farm Development Site is well screened from the coastal context by low rolling terrain in the central portion of the Doohoma Peninsula. Although partial and potentially ambiguous views of blade tips or blade sets may be afforded from this location, they are directed away from the main aspect of scenic amenity, which lies to the south and west across the coastal landscape. As such, the residual significance of visual effect is considered **Slight** (**Not Significant** in the context of the EIA Regulations).

10.163 Another cluster of scenic routes within the study area relates to those to the north that extend from the inland parts of the study area to the west across the Belmullet Peninsula, whilst one scenic route is also located to the west of Carrowmore Lough.

10.164 The view to the west of Carrowmore Lough lies primarily outside the ZTV pattern and, as such, the majority of this scenic route will have no visibility of the proposed turbines. A very brief section of the route, located near its intersection with the R313, has the potential to afford views of the Main Wind Farm Development Site and is represented by Viewpoint VP8. From this viewpoint, only a partial view of the turbines is afforded to the southwest, in the opposite direction to Carrowmore Lough, which represents the principal aspect of scenic amenity along this route. Although the partial visibility of turbines from this road intersection will result in a localised increase in the perceived scale and intensity of built development within an otherwise fairly low-intensity view, the turbines do not appear incongruous in terms of their scale or function. Consequently, the residual significance of visual effect is classified as **Slight** (**Not Significant** in the context of the EIA Regulations).

10.165 In contrast to the previously discussed scenic route, a broad scenic route designation extends along the R313, traversing from the mainland through the settlement of Belmullet and across the entirety of the Belmullet Peninsula. This route affords comprehensive potential visibility of the proposed turbines from almost all sections, as indicated by the ZTV. Viewpoints VP1, VP2, VP4, VP15, and VP24 were selected to represent this scenic route receptor, alongside other amenity and centre-of-population receptor types within the surrounding context. This scenic route presents a notable degree of scenic amenity, with the most visually appealing sections located along the peninsula, where expansive views from small bays and broad beaches are afforded. The scenic nature of the route is reflected in the visual receptor sensitivity, which ranged between High–Medium and High—with those at the higher end of the scale representing views less influenced by utilitarian elements or surrounding built development. Although the distance from the Main Wind Farm Development Site varies along this route, the significance of visual effect is classified as **Moderate–Slight** (**Not Significant** in the context of the EIA Regulations) at all representative viewpoints. While the weighting of receptor sensitivity versus magnitude of effect remains relatively balanced at the closer viewpoints, the significance of visual effect at the more distant locations is largely influenced by the high sensitivity of the receptor as opposed to any considerable degree of visual change. Nevertheless, in all cases, the turbines are relatively clearly visible, albeit with varying perceived scale and intensity. However, it is not considered that the turbines will significantly detract from the scenic amenity afforded by these views, as they are generally well visually accommodated within the broad landscape context and remain well offset from the coastal environs, which are typically the most visually susceptible to change.

10.166 A series of scenic routes are also located in the distant landscape to the south, within the surrounds of Achill Island, an area highly susceptible to visual change. Accordingly, two viewpoints—VP28 and VP29—were selected to represent these scenic designations, alongside other amenity receptors within this part of the study area. Both viewpoints afford

views of the proposed turbines at considerable distances, with VP28 located over 14 km away (refer to below) and VP29 over 19 km. In this context, while the turbines remain visible, they will be perceived as distant background features with a minimal visual presence. Although there will be some visual clutter resulting from stacked views of turbines from this landscape setting, these negative aesthetic effects are substantially offset by the considerable viewing distances involved. Indeed, where visible, the turbines are likely to be perceived as an alternative form of development situated along the coastal plains in the far distance and will have little appreciable effect on the visual amenity experienced from this part of the landscape. Overall, the Main Wind Farm Development Site will have little noticeable impact on the coastal character and scenic amenity afforded from these scenic routes. Indeed, VP28 was classified with a residual **Slight** (**Not Significant** in the context of the EIA Regulations) visual effect, whilst VP29 was classified with a residual **Slight-imperceptible** (**Not Significant** in the context of the EIA Regulations) residual visual effect.

Figure 10-12: Example of distant turbine visibility afforded from scenic routes within Achill Island

10.167 Most often, the turbines are well offset from these designations or viewed in the less visually susceptible aspects of their views. While there may be a marginal reduction in scenic amenity in certain locations, the turbines do not significantly impact the character of the surrounding coastal environs, which represent one of the most visually sensitive parts of this landscape context. Even where they are clearly visible, the turbines typically present with a high degree of visual permeability due to their slender structures and loose spacing, and do not obstruct or block views to or from visually sensitive areas or features. Therefore, it is not considered that the Proposed Development will result in significant visual effects at scenic routes within the study area.

Effects on Local Community Views

10.168 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 Main Wind Farm Development 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, have a greater potential to view turbines in various directions, or to have turbines as a familiar feature of their daily views.

10.169 17representative viewpoints (VP3, VP5, VP6, VP7, VP9, VP11, VP12, VP13, VP14, VP16, VP17, VP19, VP20, VP21, VP22, VP23, and VP25) were selected to represent local community receptors in the vicinity of the Main Wind Farm Development Site. These receptors are predominantly located to the west of the Main Wind Farm Development Site,

in the surroundings of the coastline, and to the east, in the local environs of Mount Jubilee. While other local community receptors are situated in all directions from the proposed turbine array, these parts of the study area are characterised by a more sparsely distributed rural settlement pattern. In terms of receptor sensitivity, local community receptors within the study area were assessed as ranging from Medium to High-medium sensitivity. Receptors of higher sensitivity were often influenced either by proximity to the surrounding coastline or by broader, locally elevated views across the wider landscape. The residual significance of effect on surrounding local community receptors was assessed as ranging from **Substantial-moderate to Slight** (**Not Significant** in the context of the EIA Regulations).

10.170 Six viewpoints (VP9, VP12, VP16, VP17, VP20, and VP21) were classified as having a residual significance of effect of **Substantial-moderate,** representing borderline significant effects (**Not Significant** in the context of the EIA Regulations). All were assessed as having a visual receptor sensitivity of Medium, most often attributed to the fact that the aspect in which the Main Wind Farm Development Site is viewed is opposite or offset from the main aspect of visual amenity of that location. It should be noted that all six of these representative viewpoints are located along the nearest surrounding local roads to the Main Wind Farm Development Site and lie within approximately 1.5 km of the proposed turbine array, with many situated less than 1 km from the nearest turbines. As such, the turbines will often be viewed at a prominent scale and will have a dominant visual presence. VP20 represents one of the nearest views of the proposed turbines from the peripheral local roads surrounding the Main Wind Farm Development Site. Although much closer views of the Main Wind Farm Development Site can be afforded from the local road that traverses through the Main Wind Farm Development Site, this road is not representative of any surrounding local residential receptors. At Viewpoint VP20, turbine T10 presents at a considerable scale—notably larger than the perceived scale of other visible turbines within the proposed array. The turbines will be the defining built feature along this section of the local road, resulting in a marked increase in the scale and extent of development in this area. Although the Main Wind Farm Development Site will alter the low-intensity character of this landscape context, the turbines will be viewed in the more robust aspect of the landscape and are set within a perimeter of existing conifer woodland, which provides a strong sense of separation from the surrounding receptors.

10.171 Similarly, viewpoints VP9, VP16, and VP21 are all afforded a strong sense of separation from the Main Wind Farm Development Site, with views framed by the boundary of conifer woodland, which serves to anchor the proposed turbines within this landscape context. While the broad extent of the surrounding conifer woodland and the expansive nature of the coastal bog allow the large-scale turbines to be visually assimilated to some degree, they will nonetheless be perceived as the principal built features in the area and will slightly detract from its otherwise typical rural character. However, in all of these instances, the turbines are viewed inland to the north and east—in the opposite direction of the coastline and its surrounding, highly scenic coastal features.

10.172 Viewpoints VP12 and VP17 are both representative of local community receptors in the townlands of Tristia and Mount Jubilee. Both of these viewpoints have the potential to afford clear, prominent views of the proposed turbines, where the Main Wind Farm Development Site is seen beyond a foreground of coastal bogland and across extensive areas of conifer forestry. From this relatively close distance, the proposed turbine array presents with a broad lateral extent and will have a dominant visual presence. Nonetheless, the turbines are generally viewed in a relatively loose arrangement, which does not generate a strong sense of enclosure here. Indeed, this loose spacing allows for a clear sense of visual permeability through the Main Wind Farm Development Site and towards the surrounding landscape. It should also be noted that elevated views of the proposed turbines will be available from higher ground in the vicinity of Mount Jubilee, where they will also appear as a visually

prominent feature in westward views. Notwithstanding, the turbines will be seen within a context of broad, underlying land uses, and the visual extent of the proposed array does not appear excessive within this landscape setting—although it will result in a marked increase in the overall intensity of development.

10.173 Viewpoints VP6, VP7, VP13, VP14, VP19, and VP22 were all classified with a residual significance of visual effect of **Moderate** (**Not Significant** in the context of the EIA Regulations), based on their slightly more offset locations from the turbines compared to the nearest local community receptors outlined above. However, these viewpoints would still afford prominent views of the Main Wind Farm Development Site, with the turbines presenting at a notable scale. These receptors are located between approximately 1.9 km and 4.4 km from the proposed turbines and provide clear views of the full extent of the Main Wind Farm Development Site, except for VP19, which affords a partially screened view with visibility limited to the southernmost turbines in the array.

10.174 Viewpoints VP6, VP7, VP13, and VP14 provide clear views of the turbines from coastal areas in the central part of the study area, to the west of the proposed array. Due to their coastal character, typically more visually susceptible than inland locations, these representative viewpoints were assigned a visual receptor sensitivity of High-medium. Of these, the turbines are most visually prominent from VP7 and VP13, both of which are less influenced by immediate coastal features and are characterised by a surrounding patchwork of pastoral fields transitioning to coastal bog to the east, and to more typical coastal features to the west. From these viewpoints, the turbines are viewed inland to the east, well offset from the coastline, and appear to rise from an extensive conifer plantation. Although the turbines are the most prominent and largest built feature within this aspect of the view, they do not appear over-scaled and are well assimilated into the broad landscape context in terms of both scale and function. Viewpoints VP6 and VP14, by contrast, are heavily influenced by their immediate coastal settings and are located adjacent to the coastline. While the visual prominence of the turbines from these locations is slightly less than at VP7 and VP13, the movement of the rotating turbine components will still draw the eye, and the turbines will be visible at a notable but not overbearing scale. Nevertheless, as they are viewed well offset from the coastline, and often in the opposite direction to the main aspect of visual amenity, the turbines are considered to marginally, but not significantly, detract from the visual amenity of this coastal landscape setting. Viewpoint VP22 offers the nearest view of the turbines among this group and is discussed further in the section above in relation to scenic designations.

10.175 All other viewpoints, other than those discussed above, that were selected to represent local community receptors— VP3, VP5, VP11, VP23 and VP25 —were classified as having a residual significance of visual effect of **Moderate-slight or Slight** (**Not Significant** in the context of the EIA Regulations). In these instances, while the turbines will be visible and may draw the eye, their perceived scale is notably less than from the viewpoints discussed above. Indeed, although the turbines have the potential to influence the surrounding local landscape character, they will not significantly detract from the working coastal landscape values.

10.176 On balance, and based on the reasons outlined above and within the Assessment of Visual Receptors table, it is not considered that the Proposed Project will generate significant visual effects at local community receptors. The turbines are sufficiently offset from the nearest residential receptors and comply with the visual amenity offset guidance set out in the draft revised 2019 Wind Energy Development Guidelines (WEDGs). While the turbines will result in some notable effects, close to significant (i.e. Substantial-moderate), and will markedly increase the intensity and scale of development within the local landscape context, they do not give rise to any sense of overbearing and will be visually legible features in this context. Indeed, the proposed turbines are well integrated into the landscape, most often viewed as

rising from a broad area of conifer plantation, which serves to anchor them effectively within the setting.

Effects on Centres of Population

10.177 Four viewpoints (VP1, VP2, VP10 and VP22) were selected to represent centres of population within the study area, which reinforces the sparsely populated nature of the study area and its wider surroundings, most notably the eastern extent. Centres of population are generally considered to have a medium to low level of visual receptor sensitivity, as they tend to be busy, built environments where visual change is relatively commonplace. However, in this instance, some of the centres of population are located near the coastline, offer much broader views across the surrounding open coastal bogland and encompass a sense of remoteness. As such, the receptor sensitivity for centres of population within the study area ranges from High–Medium to Medium. It should be noted that only one of these centres of population is located within the central study area. The settlement of Gweesalia is located approximately 1.5 km southwest of the nearest turbine and is represented by VP22. This viewpoint has been summarised in relation to scenic route receptors above, as it is also representative of a scenic designation and the surrounding local community receptors. This representative view was classified as having a Moderate residual significance of effect.

10.178 Viewpoints VP1 and VP2 are both representative of the settlement of Belmullet, which is located to the northwest of the Main Wind Farm Development Site, adjacent to the coastline. Viewpoint VP1 represents the wider surroundings of the settlement, while VP2 is representative of the arterial routes that approach the settlement from the mainland. Both viewpoints have been classified as having a visual receptor sensitivity of High–Medium due to their proximity to the coastline, which has a notable visual influence on this local context. Indeed, the heightened scenic amenity in the local surroundings of the settlement is reinforced by the presence of a designated scenic route, which follows the R313 as it passes through the settlement. The visual presence of the Main Wind Farm Development Site is most apparent at viewpoint VP2, where the rotating turbine components are visible at a distance of approximately 6.7 km. Although the proposed turbines will be a noticeable feature and will increase the intensity of development in the distance, they are well offset from the settlement and do not appear out of place within the inland aspect of this view. A similar view of the turbines is afforded from VP1, although the perceived scale of the turbines is slightly reduced, situated over 8.8 km from this viewing context. Again, while the turbines will increase the extent of built development within the view, they do not significantly detract from the visual setting of the settlement, the surroundings of which are already influenced by other industrial land uses and a small-scale wind farm development. Thus, both representative viewpoints were classified as having a residual significance of effect of **Moderate–Slight** (**Not Significant** in the context of the EIA Regulations), which is largely influenced by the sensitivity of the receptor rather than the magnitude of visual effect.

10.179 Bangor Erris is the only other settlement within the study area, located approximately 8 km east of the Main Wind Farm Development Site in the more inland parts of the study area. The settlement lies at the foot of the Nephin Beg Mountain Range and affords locally elevated views across extensive areas of coastal bog interspersed with conifer forest plantations to the west. Viewpoint VP10 was selected to represent this centre of population and provides a broad view to the east from the outskirts of the settlement along the R313 regional road. The receptor sensitivity was classified as Medium from this viewing context. The proposed turbines will be visible rising beyond a saddle ridge between two locally rolling hills in the distance, where they appear at a modest scale, backed by the sky with a low degree of visual contrast. In the context of this expansive view, which is characterised by working land uses such as conifer forest plantations, the Proposed Development is not considered to appear

incongruous in terms of its scale or function. Overall, the residual significance of effect was deemed to be **Slight** (**Not Significant** in the context of the EIA Regulations).

10.180 On balance, and for the reasons outlined above, it is not considered that the Proposed Project will give rise to significant visual effects at centres of population within the study area.

Effects on Tourism, Heritage and Amenity Features

10.181 26 representative views (VP1, VP2, VP3, VP4, VP5, VP6, VP8, VP9, VP10, VP11, VP13, VP14, VP15, VP16, VP18, VP19, VP20, VP21, VP22, VP23, VP24, VP25, VP26, VP27, VP28, and VP29) within the visual impact appraisal were selected to represent tourism, amenity, and heritage receptors. This considerable number of viewpoints clearly reflects the high degree of tourism and amenity value associated with the study area. The majority of these views represent the WAW scenic driving route, which traverses much of the coastal area and follows the major inland route corridors and the coastal plains. Several local heritage receptors are also located throughout the study area and are represented by these views, while numerous local amenities, such Wild Nephin National Park, various beaches and coastal walks, are also captured in this broad array of representative viewpoints. The sensitivity of these visual receptors tends to vary between Medium and High, with the majority of those representing the immediate, varied coastline ranging between High–Medium and High, as they relate to some of the most visually susceptible parts of the study area.

10.182 Due to the extensive nature of the WAW within the study area, it crosses various landscape types and a mix of landscape features and is represented by over 22 representative viewpoints (VP1, VP2, VP3, VP4, VP6, VP7, VP9, VP10, VP11, VP16, VP18, VP19, VP20, VP21, VP22, VP23, VP24, VP25, VP26, VP27, VP28, VP29). Indeed, its most scenic sections are those that pass along the immediate coastal environs, affording expansive views across the surrounding coastal context. These highly scenic areas are typically identified by the presence of scenic designations and have been summarised under the heading *'Effects on Designated Views (refer to 10.161-10.168 above)'*. In similar circumstances, the nearest sections of the WAW to the proposed turbine array are also representative of local community receptors and have been discussed under the relevant heading above. Overall, residual visual effects along the WAW vary considerably and are largely influenced by proximity to the Main Wind Farm Development Site. Some of the closest sections of the route, which also overlap with local community receptors, have been classified as having a residual significance of visual effect ranging from **Substantial–Moderate to Moderate** (**Not Significant** in the context of the EIA Regulations), where the proposed turbines will appear as dominant features in the landscape. However, they principally appear in the opposite direction to the primary aspect of visual amenity—towards the coastline—which is the basis for the WAW's designation. While the turbines will result in a marked increase in the scale and intensity of built development in these local contexts, they do not significantly detract from the coastal character or the degree of scenic amenity afforded in these areas. Overall, the significance of visual effect across sections of the WAW within the study area ranges from **Substantial–Moderate to Slight–Imperceptible** (**Not Significant** in the context of the EIA Regulations).

10.183 Wild Nephin National Park is situated within the southeast quadrant of the wider study area and encompasses remote upland terrain and a broad expanse of bogland. The National Park lies principally to the southeast of the N59 National Secondary Route and includes several walking and hiking routes, such as the Bangor Trail and the Western Way. While ZTV mapping identifies some potential visibility of the proposed turbines from this remote landscape context, large expanses of the National Park will be fully screened by surrounding intervening terrain. In fact, much of the potential for visibility relates to elevated hills and ridges in the western extent of the National Park, where the proposed turbines would be

viewed in the context of the wider landscape to the west—an area already influenced by surrounding dispersed coastal settlements and other forms of built development. Viewpoints VP18 and VP27 were selected as representative viewpoints from the wider surrounding context of the National Park and also represent sections of the WAW. From both of these viewpoints, the proposed turbines are visible as distant features at a distance of up to approximately 8 km. Although they will be noticeable built elements and result in some degree of visual change, the turbines are viewed within the context of the broad coastal plains, which are already influenced by various other built features. While the turbines will be the tallest structures visible from these locations, they appear as distant features and do not obstruct any sensitive viewing aspects. Accordingly, the significance of visual effect was deemed to be Moderate–Slight at both representative viewpoint locations. It should also be noted that any views of the turbines potentially afforded from more central areas of the National Park—further set back from the N59—would have a more limited visual presence. Indeed, most of this potential visibility relates to elevated ridgelines and mountaintop summits, where the Main Wind Farm Development Site would be seen in the context of expansive panoramas. From these elevated views, the turbines will appear as modest-scale, distant features in the background and will not significantly detract from the sense of remoteness or the degree of visual amenity afforded from these locations.

10.184 The study area also encompasses some local heritage features, such as local churches and historic graveyards. Viewpoints VP3 and VP11 are both representative of such features. While these local heritage receptors are not typically considered highly sensitive to change, they do present a sense of remoteness and are generally valued by the local community. Viewpoint VP3 is located to the north of the Main Wind Farm Development Site and benefits from a notable degree of screening due to intervening terrain to the south, which encloses this local landscape setting. As a result, the proposed turbines will have a very limited visual presence here, with only partial visibility of the rotating blade tips. Thus, the residual magnitude of visual effect is deemed to be Slight. Viewpoint VP11 also benefits from screening provided by intervening terrain in the direction of the Main Wind Farm Development Site, resulting in only partial views of the turbines. Although several turbine blade sets and hubs are visible from this location, the turbines are not highly prominent features and are viewed against the sky with a low degree of visual contrast. Overall, the residual significance of visual effect at VP11 was classified as **Moderate–Slight** (**Not Significant** in the context of the EIA Regulations).

10.185 For the reasons outlined above, it is not considered that the Proposed Project will generate significant visual effects at tourism, amenity, or heritage receptors within the study area. Although the turbines will give rise to some borderline significant effects along certain sections of the WAW, these parts of the route tend to be less susceptible to change than the more remote and distinctive views afforded from the immediate coastal environs. Indeed, even where the turbines are visible from the immediate coastline, they are often viewed in the opposite direction to the main aspect of visual amenity or appear as distant background features that are visually offset from the more sensitive coastal elements.

Effects on Major Routes

10.186 The only major routes within the study area include the N59 National Secondary Route, which skirts the southern and eastern extents of the study area, and the R313 and R314 regional roads, both of which traverse the northern extent. The R313 also continues across the Belmullet Peninsula in the western extent of the study area. The R319 is located along the southern periphery of the study area at Achill Island, situated over 17 km southwest of the Main Wind Farm Development Site at its nearest point.

10.187 Viewpoints VP2, VP3, VP4, VP5, VP8, VP10, VP18, and VP27 were all included in the visual impact appraisal as representative viewpoints from surrounding major route receptors. While major route receptors are not generally considered highly susceptible to visual change, many of these routes overlap with scenic designations and tourism and amenity receptors and offer views across the wider landscape and surrounding coastal context. As such, visual receptor sensitivity ranged between Medium and High at major route receptors within the study area, with the higher sensitivities associated with distinctive coastal locations within the study area that offer a high degree of scenic amenity. All of the viewpoints listed above, which are representative of major route receptors, are also representative of at least one other receptor type, and have therefore been discussed and summarised in the above sections.

10.188 Overall, the significance of visual effect at these receptors ranged between **Moderate–Slight and Slight** (**Not Significant** in the context of the EIA Regulations). Therefore, it is not considered that the Proposed Project will give rise to significant visual effects at major route receptors within the study area.

Assessment of Aviation Lighting and Effects on Mayo Dark Sky Park

10.189 As noted in **Chapter 15,** if the Proposed Project was consented, the details of aviation lighting required for the proposed turbines will be agreed with the Irish Aviation Authority (IAA) in line with its requirements and any planning conditions. The specific type of aviation lighting that will be installed at the Main Wind Farm Development Site is uncertain at this stage, as is the number and layout of turbines which would be required to be lit. **Chapter 15** provides information on several mitigation options for aviation lighting, the most suitable of which the Applicant would commit to installing (e.g. Cardinal or Perimeter Lighting, Reduced Lighting Aircraft Detection System or Reduced Intensity Shielding and Directional Intensity Obstacle Zone Agreement). These would avoid or mitigate any potential impacts that may arise on visual receptors or residential visual amenity within the LVIA Study Area.

10.190 It is important to note the visual amenity is at its lowest during dark periods, as views across the landscape are inhibited by the low levels of visibility. Thus, the proposed aviation warning lighting will have a minimal effect on the visual amenity afforded in this landscape context, as the lighting will only ever be visible during periods of darkness. It is also important to note that the proposed lighting is located on top of the proposed turbine nacelle, as its principal use is to identify obstacles in the sky for aviation-based receptors. Thus, the lighting included will not cast light down towards the ground, which diminishes the potential for any notable effects to occur at ground-based receptors.

10.191 With specific regard to the Mayo Dark Sky Park, which relates to lands within Wild Nephin National Park within the wider eastern extent of the study area, the Main Wind Farm Development Site is considered to be well separated from this designation. The Main Wind Farm Development Site is not located within the Mayo Dark Sky Park and is situated at a distance of approximately 8 km to the east of the nearest boundary of the Dark Sky Park. In addition, several more prominent light-emitting receptors are located in closer proximity to the Dark Sky Park than the Main Wind Farm Development Site (refer to **Figure 10-13**).

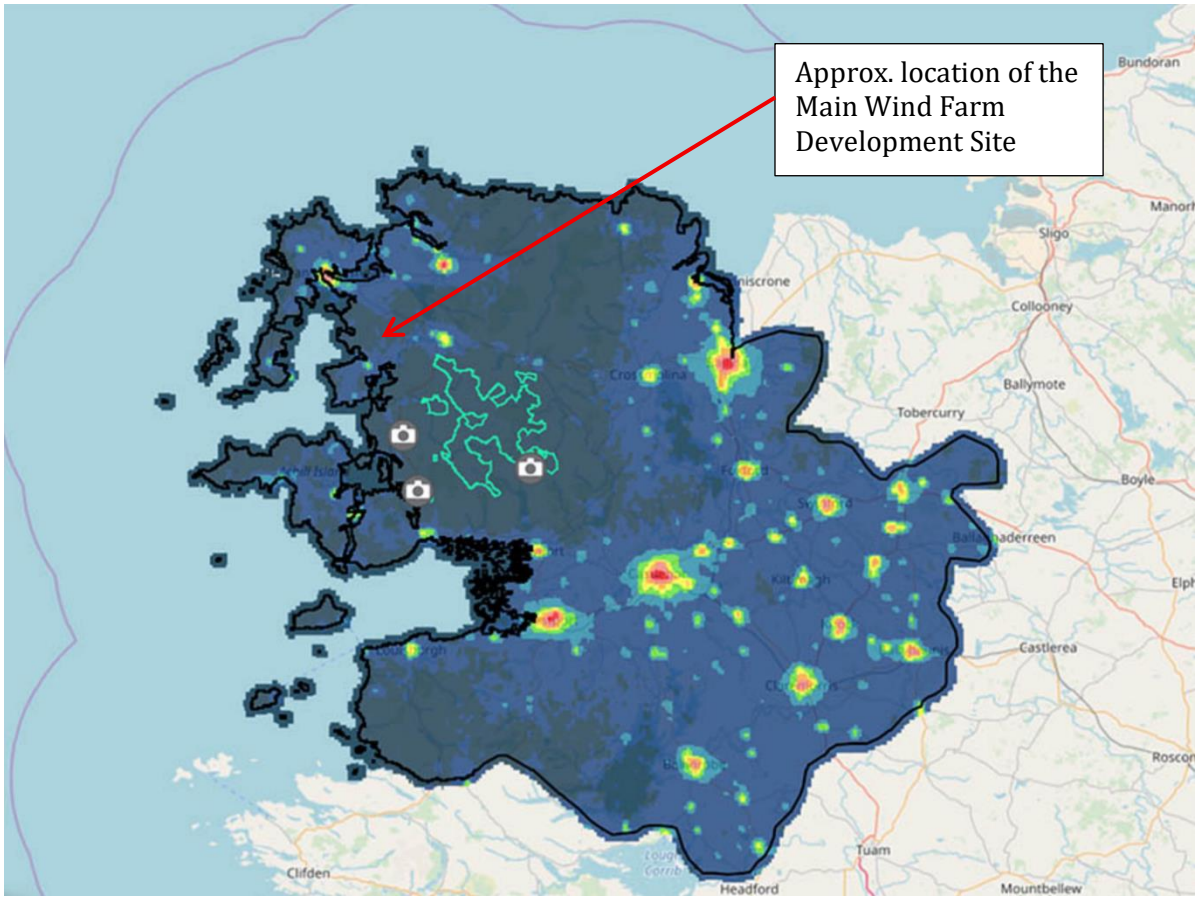
10.192 While the proposed aviation lighting associated with the proposed turbines has the potential to be visible from parts of the Dark Sky Park, any such visibility would occur at a considerable distance and would be experienced within the context of existing sources of light within the surrounding landscape. These sources primarily relate to established settlements and associated infrastructure in the wider area. In particular, the settlement of Bangor Erris is located between the Dark Sky Park and the Main Wind Farm Development Site and represents one of the more notable contributors to existing light emissions within the locality. As illustrated in **Figure 10-13**, the presence of this intervening settlement means that any potential visibility of turbine aviation lighting from within the Dark Sky Park would be

experienced in the context of existing and more prominent light sources already present within the night-time landscape.

10.193 Furthermore, the Mayo Dark Sky Park identifies a number of designated viewing locations within its environs. Of these, two viewpoints are oriented in directions that would afford views away from, or substantially offset from, the proposed turbines. The remaining viewpoint is located well beyond the defined study area at a distance of over approximately 25 km from the Main Wind Farm Development Site. At such distances, any aviation lighting associated with the turbines would be expected to appear as small and distant points of light within the wider night-time landscape. Indeed, the intervening landforms between the Main Wind Farm Development Site and these viewpoints also has the potential to fully screen them. It should also be noted that there are numerous existing precedents of wind farm developments located at a similar distance to the Dark Sky Park. Indeed, the Bellacorick Basin located to the northeast if Wild Nephin Park, contains a considerable number of operational turbines of a similar and larger scale than the proposed.

10.194 The most suitable of these types of mitigation will be applied when the lighting scheme is agreed with the IAA to reduce/eliminate the night-time visual effects due to aviation lighting that might arise in relation to residential visual amenity, or visual impacts on other visual receptors. The measures listed above would reduce the requirement for lighting and therefore reduce potential for landscape and visual effects, or visual effects on other visual receptors, and would mitigate the likelihood of significant effects. Furthermore, taking account of the separation distance between the Main Wind Farm Development Site and the Mayo Dark Sky Park, the presence of intervening settlements and existing light sources, and the orientation and distance of designated viewpoints within the Dark Sky Park, the magnitude of change arising from aviation lighting associated with the Proposed Project is considered likely to be very limited. Thus, the overall effect on the night-time environment and viewing experience within the Mayo Dark Sky Park is assessed as **Not Significant.** The various mitigation measures outlined in **Chapter 15** demonstrate that Significant effects would not arise in relation to residential visual amenity and other visual receptors, from any night-time aviation lighting required.

Figure 10-13: Excerpt from the Mayo Dark Sky Park website showing areas of artificial light pollution with respect of the Mayo Dark Sky Park boundary (available at https://www.mayodarkskypark.ie/learn/light-pollution-map/)



Decommissioning Stage Visual Effects

10.195 Visual impacts at the decommissioning stage will be very similar to the construction stage and will arise from frequent heavy vehicle movements and worker vehicles travelling to and from the Site and using the Site entrance. As with the construction stage, there will be Heavy Goods Vehicles (HGVs) travelling to and from the Main Wind Farm Development Site, removing built features that formed part of the Proposed Development. Whilst the most notable visual impacts will still arise from the erection of large tower cranes to remove the turbine structures, there will be a slightly less intensity in construction related activities as the substation will not be removed at the end of the useful life of the Proposed Project as it will form part of the national electricity network. Therefore, the substation will be retained as a permanent structure and will not be decommissioned. There will also be no requirement for large excavation works as the turbine foundations and hardstands will be let revegetate naturally and site tracks will be retained for forestry/agricultural access. Indeed, as with the construction stage works, a large part of this short-term activity within the Main Wind Farm Development Site will remain screened from view by border of mature conifer woodland that contains the entire Main Wind Farm Development Site boundary, which will have further established throughout the operational lifespan of the Proposed Project. Indeed, this mature vegetation, will result in a strong reduction in the potential for visual impacts during the decommissioning stage of the Proposed Project.

10.196 For these reasons, the magnitude of visual impact at the decommissioning stage is deemed to be no greater than High/High-medium at the nearest surrounding receptors, however, this reduces swiftly at greater distances from the Main Wind Farm Development Site, especially within the wider study area, where the magnitude of visual impact is considered to be no greater than Low/Low-negligible**.** Combined with a High-medium/Medium sensitivity for receptors within the immediate study area (<1-2 km from the Main Wind Farm Development Site), the significance of visual effect will be not greater than **Substantial-moderate/Moderate** and of a **Negative** quality. Thereafter, the significance of effect will reduce to **Moderate/Moderate-Slight** (**Not Significant** in the context of the EIA Regulations) throughout the central study area and **Slight and Imperceptible** at increasing distances within the wider study area as the development becomes a progressively smaller component in the afforded view. Thus, it is not considered that the Proposed Project will generate significant visual effects at the decommissioning stage.

Mitigation

Construction

10.197 Aside from construction-stage mitigation measures aimed at minimising land and vegetation disturbance, as well as reducing dust emissions (which may otherwise negatively impact visual amenity), no additional specific mitigation measures are proposed at this stage. These measures, however, will be carefully implemented to reduce any potential visual effects that may arise during construction. The appropriate management of excavations and their timely reinstatement will ensure that any adverse effects, such as those potentially occurring at site entrances or access track/road upgrade locations, are minimised in so far as possible. This process will involve restoring affected areas as soon as is feasible, with the aim of reducing the visibility of temporary disturbances. Furthermore, the protection of existing mature vegetation within and surrounding the Main Wind Farm Development Site will play a crucial role in mitigating short-term construction stage visual impacts on the local landscape. Many of the measures outlined above are described in further detail in the Construction and Environmental Management Plan (CEMP) in **Technical Appendix 2-1 (Volume 3)**.

Operation

10.198 Given the highly visible nature of commercial wind energy developments, it is not generally feasible to screen them from view using on-site measures as would be the primary form of mitigation for many other types of development. Instead, landscape and visual mitigation for wind farms must be incorporated into the early-stage site selection and design phases.

10.199 In this instance, the two main forms of landscape and visual mitigation employed were:

- Mitigation by avoidance and design.
- Buffering of Residential Receptors.

Mitigation by Avoidance and Design

10.200 Macro Works have been involved in the Proposed Project since early 2023 when early-stage constraints and feasibility studies took place to assess the potential impacts of the full scale and extent of the Proposed Project. Early stage constraints assessments identified key sensitive receptors in the surrounding landscape and their susceptibility to visual change. Most notable are the coastal and scenic route receptors located to the west of the site, albeit it was noted that much of the visual amenity in these parts of the study area related to views in the opposite direction of the Main Wind Farm Development Site. Further sensitive visual

receptors include local residential receptors and views afforded from the local community, most notably, those located within the immediate surrounds of the Main Wind Farm Development Site and those in the surrounds of the settlement of Gweesalia. In terms of landscape effects it was noted that there some degree of robustness associated with the site as it was currently characterised by localised area of industrial development, whilst the wind energy classification for the site outlined in the current Mayo CDP was relatively positive in terms of wind energy development and was classified as a 'Tier 1 – Preferred (Large Wind Farms)' and described as "areas in which the potential for wind farms is greatest".

10.201 In addition to early-stage constraints assessments, an initial turbine layout analysis was undertaken from some of the nearest surrounding visual receptors in addition to some of the more visually susceptible visual receptors such as scenic routes and coastal tourism and amenity receptors. The summary comments from the initial turbine layout analysis is included below;

- 180 m represented the upper limit in turbine height in this local context. Whilst the landscape and visual context can accommodate larger turbines due to the perceived assimilation from surrounding large scale land uses and landscape features, turbines larger than 180 m would present as highly dominant features in the local surrounding landscape and have the potential to appear over-scaled.
- Some turbines in the initial proposed array where viewed rising from outside of the boundary of existing conifer forestry that encircles much of the site and had the potential to present as outliers to the rest of the development. It was recommended that all turbines were to be contained within the boundary of established forestry to further anchor the site to the existing landscape context and allow for screening and buffering from the nearest surrounding local receptors.
- Some of the turbines did not appear to be complying with the draft WEDGs visually amenity offsets. Thus, it was recommended that the turbine array be reconfigured to fully comply with the visual amenity guidance set out in the draft WEDGs
- Relocation / removal of certain turbines, most notably the southernmost turbine and the north-westernmost turbine, was recommended as these turbines present with some degree of overbearing at the nearest surrounding local community receptors.

10.202 Following the iterative design process and further localised design refinements, a final layout comprising 13 turbines up to a height of between 179-180 m was generated, all of which are contained within the block of forestry that contains the site. Refer to **Chapter 3** (Site Selection and Alternatives, EIA Scoping, Consultation and Key Issues).

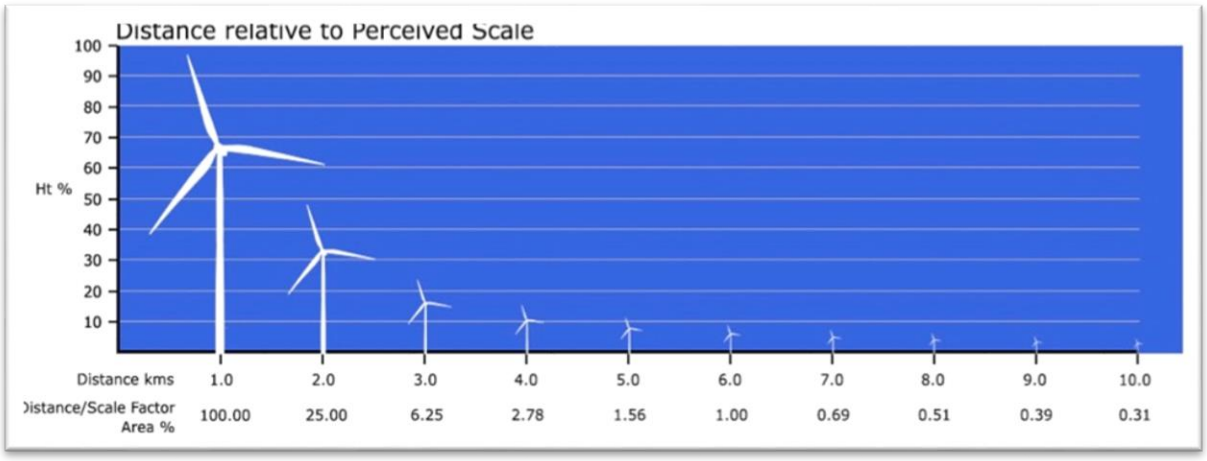
Buffering of Residential Receptors

10.203 For the Proposed Development, the minimum distance of any turbine from the nearest residential receptor is >740 m, which is in excess of the draft revised Wind Energy Development Guidelines (2019) minimum set back of 500 m and greater than the setback distance of four times the tip height of the proposed turbines. In this instance and based on the Draft revised WEGS 2019, the setback distance for visual amenity purposes is 720 m from residential receptors on the basis of the 180 m high turbines (this represents the greatest potential setback distance with regard to all potential turbines ranges).

10.204 Variation in residential buffer distances within the nearest kilometre has a much more noticeable effect on perceived turbine scale than when it occurs in the context of more distant views. This is due to the law of perspective – that doubling the distance to an object halves its perceived height. The reduction factor is even more pronounced when considered in the

context of the 'swept area' of turbine blades and not just their tip height. This exponential 'scale in relation to distance scenario is illustrated in **Figure 10-14** below.

Figure 10-14: Turbine 'scale in relation to distance' relationship



Turbine Range Assessment

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

10.206 Macro Works has taken the approach of using the highest possible tip height and highest hub height combination. This is on the basis that a viewer who can see a hub rising above a skyline ridge is likely to feel they are seeing more of the turbine than when the hub is screened from view (i.e. in the case of a lower hub / longer blade combination). That premise is based on the hub being perceived as the key and central component of a turbine in a figurative sense. In this instance, the photomontages were prepared using a turbine envelope of 150 m rotor diameter, 105 m hub height and 180 m tip height which represents the most potential for visibility of the hub and tip height combination.

10.207 An alternative range of turbine dimensions is also being proposed by the Applicant. However, it is important to note that all the potential turbines will have a tip height of between 179-180 m. The comparative scenarios and range of turbine types considered which covers the entire range are included below:

- Base-case Scenario (Option 1): Vestas V150 – 105 m Hub Height, 150 m Rotor Diameter, 180 m Tip Height (used and assessed in the LVIA).
- Option 2: Nordex N163 – 98.5 m Hub Height, 163 m Rotor Diameter, 180 m Tip Height.
- Option 3: Nordex N149 – 104.5 m Hub Height, 149 m Rotor Diameter, 179 m Tip Height.

10.208 As can be seen from the comparative photomontages (included in **Volume 4**) there is a relatively subtle difference in the perceived scale of the proposed turbines in all three scenarios which will be difficult to discern from even the nearest visual receptors. Indeed, the visual presence of the turbines in all instances will be the same due to subtle variations in the turbine dimensions, and it is not considered that any of the turbine combinations proposed in the entire range will result in any contrasting landscape or visual effects than those already

stated in the assessment above. Furthermore, the subtle variations in the turbine dimensions will be indiscernible beyond c. 2-3 km from the Main Wind Farm Development Site.

10.209 Regardless of whether the difference between the alternative turbine dimensions can be discerned or not, there will be no material difference in the level of visual impact between them, and certainly not a higher impact than the base-case outlined in the visual impact appraisal highlighted above. Furthermore, the alternative turbine dimensions will result in no material difference to the residual Landscape Effects outlined in the sections above. Thus, this LVIA is deemed to comfortably cover the range of potential turbine dimension options proposed and it is not considered necessary to prepare separate photomontages / assessments at all viewpoints for all possible turbine dimensions highlighted above.

Residual Significant Effects

Summary of Construction Stage Landscape Effects

10.210 The magnitude of construction stage landscape effects within the Main Wind Farm Development Site and its immediately surrounding context is deemed to be High-medium and of a Negative quality, but of a Short-term duration. Beyond 5 km from the Main Wind Farm Development Site, the magnitude of landscape impact is deemed to reduce to Low and Negligible at increasing distances as the construction activities relating to the Proposed Project becomes a proportionately smaller component of the overall landscape fabric. As a result and in accordance with EIA Regulations, construction stage residual landscape effects are deemed **Not Significant**.

Summary of Construction Stage Visual Effects

10.211 The magnitude of visual effect at the construction stage is deemed to be no greater than High-medium/Medium at the nearest surrounding receptors, however, this reduces swiftly at greater distances from the Main Wind Farm Development Site, especially within the wider study area, where the magnitude of visual impact is considered to be no greater than Low/Low-negligible. Combined with a High-medium/Medium sensitivity for receptors within the immediate study area (<1 km from the Site), the significance of visual effect will be not greater than Substantial-moderate/Moderate and of a Negative quality. As a result and in accordance with EIA Regulations, construction stage residual visual effects are deemed **Not Significant**.

Summary of Operational Stage Landscape Effects

10.212 The magnitude of the landscape effect is deemed to be High-medium within the Central Study Area. Beyond 5 km from the Main Wind Farm Development Site, the magnitude of landscape impact is deemed to reduce to Low and Negligible at increasing distances as the Proposed Project becomes a proportionately smaller component of the overall landscape fabric. As a result and in accordance with EIA Regulations, operational stage residual landscape effects are deemed **Not Significant**.

Summary of Operational Stage Visual Effects

10.213 A summary of the operational stage visual effects is provided in **Table 10-10** above, with the magnitude of effect ranging from High to Negligible. Indeed, the most notable visual effects will occur within the immediate (<1 km) and central study area (<5 km) where receptors tend to be less susceptible to change as they represent more typical landscape settings that are not highly distinctive or susceptible to change, aside from some localised coastal areas to the west. Overall, combined with a High-medium/Medium sensitivity for receptors within the

immediate and central study area, the significance of visual effect will be not greater than Substantial-moderate/Moderate and of a Negative quality. As a result and in accordance with EIA Regulations, operational stage residual visual effects are deemed **Not Significant**.

Decommissioning Effects

10.214 The magnitude of decommissioning stage landscape effects within the Main Wind Farm Development Site and its immediately surrounding context is deemed to be High-medium and of a Negative quality, but of a Short-term duration. Beyond 5 km from the Main Wind Farm Development Site, the magnitude of decommissioning stage landscape effect is deemed to reduce to Low and Negligible at increasing distances as the decommissioning related activities become a proportionately smaller component of the overall landscape fabric.

10.215 With regard to decommissioning stage visual effects, as per the construction stage, the magnitude of visual effect is deemed to be no greater than **High-**medium/Medium at the nearest surrounding receptors, however, this reduces swiftly at greater distances from the Main Wind Farm Development Site, especially within the wider study area. Combined with a High-medium/Medium sensitivity for receptors within the immediate study area (<1 km from the Site), the significance of visual effect will be not greater than **Substantial-moderate/Moderate** and of a **Negative** quality.

10.216 As a result and in accordance with EIA Regulations, decommissioning stage residual landscape and visual effects are deemed **Not Significant.**

Further Survey Requirements and Monitoring

10.217 With regard to LVIA, there are no further survey requirements or monitoring required for the Proposed Project.

Summary of Predicted Effects

Proposed Project

10.218 From the reasons outlined in the above assessment, it is considered that the Proposed Project will result in a marked degree of change within its immediate surrounding context with regard to both landscape and visual receptors. However, a key consideration in this instance is the wind energy classification for the Main Wind Farm Development Site, which is designated as in the County Mayo RES as 'Tier 1 – Preferred (Large Wind Farms)' and are described as *"areas in which the potential for large wind farms is greatest".*

10.219 With regard to landscape effects, the Proposed Project will result in a considerable increase in the intensity of built development within both the local and wider landscape context, becoming one of the most prominent forms of built development in the local surrounding landscape context. Nevertheless, the Main Wind Farm Development Site is located in a transitional part of the landscape, as reflected by its position across two contrasting landscape units (Units B and C), and is principally characterised by more robust land uses. While the Proposed Project will have some notable impact on the character of this landscape context, it is well offset from the most sensitive coastal areas and is influenced by more robust and complementary land uses, such as conifer forest and broad coastal bog. Despite this, due to the scale and nature of the Proposed Project, it will still have some effect on the character of the more sensitive coastal parts of the study area.

10.220 Overall, the significance of operational landscape effects during the operational phase is considered to be **Substantial-Moderate / Negative / Long-term** within and immediately around (c. <1 km) the Main Wind Farm Development Site (**Not Significant** in the context of

the EIA Regulations). Thereafter, the significance will reduce to **Moderate**, **Slight**, and **Imperceptible** 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 and features (**Not Significant** in the context of the EIA Regulations). It should also be noted that construction and decommissioning stage residual landscape effects are also assessed as **Not Significant** in the context of the EIA Regulations.

10.221 In terms of residual visual effects, the proposed turbines will be a dominant built feature for the nearest surrounding visual receptors, which principally include local community receptors, as well as tourism, amenity, and heritage receptors (the WAW). The turbines will be a defining built feature from the nearest local road (the L5252 that runs through the Main Wind Farm Development Site) and will contribute to a marked increase in the intensity and scale of development in this area.

10.222 Nevertheless, while the central and wider study area includes some High–Medium and High visual receptors, the proposed turbines are generally viewed in the opposite direction to the main aspect of visual amenity from these receptors or, where visible, will appear in a legible manner without blocking or heavily obstructing views of any highly sensitive landscape features or areas.

10.223 It should also be noted that the design of the proposed turbine array responds well to the relevant landscape type as defined in the current WEDGs (2006), which supports the Proposed Project's assimilation into a varied landscape context. Furthermore, the Proposed Project is fully consistent with the visual amenity offsets outlined in the WEDGs (2019 draft revised).

10.224 Overall, the residual significance of visual effect during the operational phase at receptors assessed within the study area is considered to range between **Substantial-Moderate** to **Slight-imperceptible**, whilst the quality of effect is deemed **Negative**. It should also be noted that considerable parts of the study area will have no visibility of the proposed turbines as set out in the ZTV maps provided above. Indeed, these areas include extensive parts of the western coastline along the Belmullet and in the northern extent of the study area. Similarly broad expanses of the wider eastern and south-eastern aspects of the study area in the surrounds of Wild Nephin National Park will afford no visibility of the Proposed Project. These parts of the study area where no visibility of the proposed turbines can be afforded will experience **Imperceptible** visual effects. It should also be noted that construction and decommissioning stage residual visual effects are also assessed as **Not Significant** in the context of the EIA Regulations.

Cumulative Effects Assessment

10.225 The appraisal of cumulative effects with other wind energy developments is based on the cumulative ZTV maps **Technical Appendix 10-2 LVIA Mapping** and wireframes provided in the photomontage booklet **(Volume 4**).

10.226 A further discussion on potential cumulative effects is included in the subsequent section and discusses the potential cumulative effects of relevant developments set out in **Table 10-9** above.

10.227 The nature of cumulative visibility within the Study Area is analysed below using the cumulative wireframe views contained in the photomontage booklet (refer to **Volume 4**) and the cumulative ZTVs (refer to **Technical Appendix 10-2 Volume 3**).

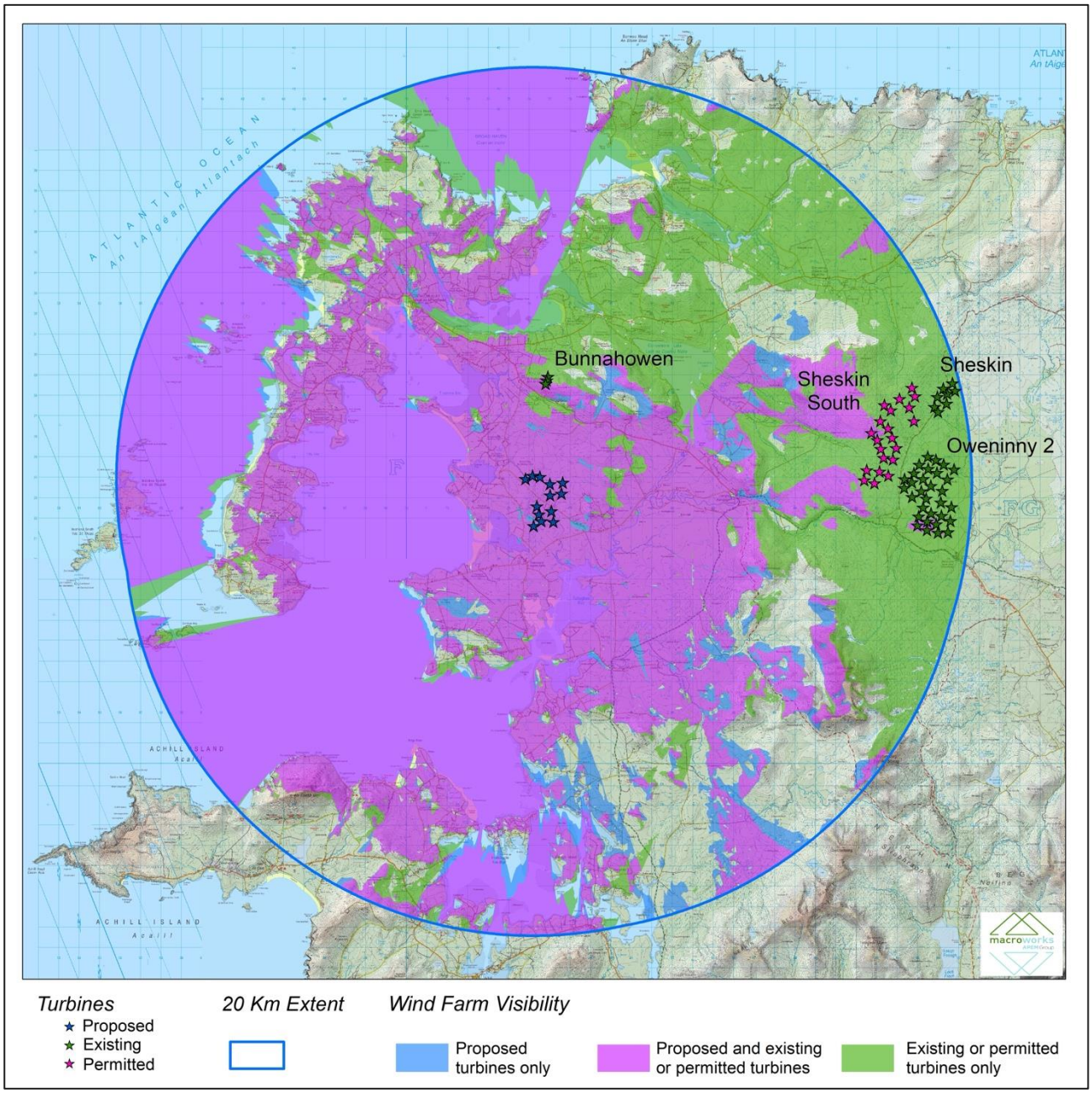
10.228 Although the photomontages (refer to **Volume 4**) and cumulative ZTV map in **Technical Appendix 10-2** relates principally to cumulative visual effects (i.e. utilising the selected VP set), it also informs the closely related assessment of cumulative landscape effects,

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.

10.229 In terms of cumulative construction and decommissioning phase effects, based on available construction timelines and operational lifetimes of the relevant aforementioned wind energy projects, it is unlikely that the construction or decommissioning of two or more wind farm developments within the Study Area will occur in tandem. Should the construction or decommissioning of the Proposed Project and another consented development (Sheskin South Wind Farm) occur at the same time, there is the potential for an increase in the intensity of construction/decommissioning activity within the Study Area. This includes the movement of HGVs along the surrounding road networks, storage of working vehicles and machinery, and the erection of tower cranes to construct/remove the turbine components. It is highly unlikely that the decommissioning of all wind farms within the study area would occur in tandem as each development is currently at a different stage (i.e. operational, consented, pre planning). However, should this occur, there would be an increase in HGVs on the surrounding road network. However, effects are deemed Not Significant due to the notable offsets between each individual development.

10.230 Overall, as the only consented and existing developments are well offset from the Proposed Project, it is not considered that these will generate any notable cumulative effects. Overall, the cumulative construction or decommissioning effects with other wind farm developments is deemed **Not Significant.**

Figure 10-15: Current cumulative ZTV Map (Tip Height (180 m) – represents a worst case scenario in terms of potential turbine visibility with regard to the variation in turbine dimensions) for Muingmore Wind Farm identifying the potential intervisibility of the proposed wind farm and all other existing and consented wind farms within the Study Area (See Technical Appendix 10-2 for larger version)



10.231 The current cumulative ZTV map shows the potential for cumulative visibility between the turbines and all other existing and consented wind farm developments within the 20 km Study Area.

10.232 At present, there are three operational wind farms and one consented wind farm development within the 20 km Study Area. Of most relevance to the Proposed Project is the existing Bunnahowen wind farm situated just under 4.6 km north of the site. This 3-turbine array is contained along low terrain east of the Bellmullet and Trawmore Bay. It is located in a similar

visual context to the Proposed Development albeit at a more elevated position along a locally rolling hill.

10.233 The cumulative ZTV map (based on a bare-ground scenario – see **Figure 10-15** and **Technical Appendix 10-2**) identifies that the Proposed Project will be visible in isolation across only 3.9% of the Study Area. These areas are primarily located in the southern extent of the Study Area, with some localised locations in the northern extent. It is also important to note that over 17.8% of the Study Area will have no visibility of any existing, consented, or proposed turbines. Furthermore, this assessment is based on a bare-ground scenario, which does not account for intervening screening such as existing vegetation or built development, both of which would further reduce actual visibility. The majority of these areas are situated within the wider Study Area, where elevated landforms provide a high degree of screening from surrounding wind energy developments.

10.234 Some 78.3% of the study area has the potential to afford views of either the Proposed Project and other existing or consented developments, or other existing and consented developments. Whilst this presents as a notable portion of the study area, it should be noted that much of the cumulative visibility of the Proposed Project and other existing and consented development relates solely to the Bunnahowen 3 turbine development as the remaining development in the wider eastern extent of the study area will be well screened by the elevated upland terrain that encircles the Bellacorick basin.

10.235 Indeed, the offsets between the Proposed Project and the existing Bunnahowen turbines, combined with the relatively modest scale of the Bunnahowen development, heavily diminishes the potential for any notable cumulative landscape or visual effects to be generated in combination with the proposed turbines. Whilst there will be an increase in the perceived intensity of development, the proposed and existing developments will clearly be perceived as two separate developments.

10.236 In terms of sequential effects, the proposed turbines and the consented and existing developments have the potential to be viewed from several major route receptors and linear amenity features within the Study Area. Again, much of the combined visibility relates to views of the Proposed Project and the Bunnahowen turbines. However, there will be some sequential visual effects generated along the N59, where views of all existing, consented and proposed turbines have the potential to be afforded. Nonetheless, the turbines will be viewed in distinctly separate visual contexts, with the proposed turbines and Bunnahowen turbines viewed in the context of the broad areas of coastal bog, whilst the turbines within the Bellacorick Basin will be well contained by the surrounding elevated uplands.

10.237 With regard to the scenic route designations within the central Study Area, the potential for cumulative turbine visibility principally relates to the Proposed Project and existing Bunnahowen turbines. Whilst visible from notable sections of these scenic routes, both developments are located inland, offset from the coastline and are often viewed in the opposite direction to the main aspect of visual amenity, which is typically across the coastline and out to sea.

10.238 On balance, for the reasons outlined above, it is considered that the Proposed Project will contribute to a cumulative landscape and visual effect in the order of Medium-low in respect of the cumulative scenario, as the proposed turbines are well offset from all other existing and consented wind farm developments, and will principally only be viewed in combination with the modest 3 turbine Bunnahowen development. Thus, the cumulative effects generated by the Proposed Project are deemed **Not Significant.**

10.239 There are also several other notable scale developments within the study area as set out in **Chapter 2.** These are principally contained within the surrounds of the Oweninny bog complex and will generate a further increase in the intensity and scale of built development

within the 20 km study area and wider surrounding landscape. However, all these developments tend to be well offset from the Proposed Project and will have a very limited potential for an intervisibility with the Proposed Project. Thus, these developments will have very limited potential to generate any notable cumulative landscape and visual effects with respect of the Proposed Project.

Statement of Significance

10.240 Whilst the Proposed Project will generate some residual high ranging landscape and visual effects, principally at the nearest surrounding receptors, these have all been assessed as **Not Significant** in the context of the EIA Regulations.

References

'Photography and Photomontage in Landscape and Visual Impact Assessment', Landscape Institute Technical Guidance Note 06/2019.

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Technical Appendices

Technical Appendix 10.1 Viewpoint Assessment

Technical Appendix 10.2 LVIA Mapping

(Refer to EIAR Volume 3 for Technical Appendices)