13 LANDSCAPE AND VISUAL

13.1. INTRODUCTION

This chapter describes the landscape context of the proposed development and assesses the likely landscape and visual effects of the proposed development on the receiving environment. Although closely linked, landscape and visual impacts are assessed separately.

Landscape Impact Assessment (LIA) relates to assessing effects on the landscape as a resource in its own right and is concerned with how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character.

Visual Impact Assessment (VIA) relates to assessing effects on specific views and on the general visual amenity experienced by people. This deals with how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views as a result of the change or loss of existing elements of the landscape and/or introduction of new elements. Visual effects may occur from; Visual Obstruction (blocking of a view, be it full, partial or intermittent) or Visual Intrusion (interruption of a view without blocking).

Cumulative landscape and visual impact assessment is concerned with additional changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments (associated or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future.

13.1.1. Statement of Authority

This Landscape and Visual Assessment chapter was prepared by Richard Barker (MLA, PG Dip Forestry, BA Env, MILI), Principal Landscape Architect at Macro Works Ltd of Cherrywood Business Park, Loughlinstown, Dublin 18; a consultancy firm specialising in Landscape and Visual Assessment and associated maps and graphics. Relevant experience includes a vast range of infrastructural, industrial and commercial projects since 1999 including over 150 onshore wind farm proposals throughout Ireland, including five Strategic Infrastructure Development (SID) projects. The experience of the author also specifically includes the assessment of the previous permitted Derryadd Wind Farm application (ABP Ref. 303592-19) and the conversion of the Lough Ree Power Station to Biomass fuel.

13.1.2. Description of the Proposed Development

The proposed Derryadd wind farm development comprises of 22 no. turbines with a maximum blade tip height of 190 m and a maximum hub height of 107.5 m and associated ancillary development including, but not limited to, 2no. permanent meteorological masts, a substation, turbine hard stands and access tracks. A full description of the proposed development can be found at Chapter 3 (Description of the Proposed Development).

13.2. LEGISLATION, POLICY AND GUIDANCE

This landscape and visual impact assessment is based on the following guidance:

- Guidelines for Landscape & Visual Impact Assessments (3rd Ed.) (UK Landscape Institute and the Institute for Environmental Management and Assessment, 2013).

- Department of the Environment, Heritage and Local Government Wind Energy Development Guidelines (2006/2019 revision) and Preferred Draft Approach to revising the 2006 Guidance published 2017.
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022); and draft revised Guidelines on information to be contained in Environmental Impact Statements; and Advice Notes for preparing EIS (2015).
- NatureScot. Assessing the cumulative landscape and visual impact of onshore wind energy developments (2021).
- Longford County Development Plan (2021 – 2027).
- Roscommon County Development Plan (2022 – 2028).
- Westmeath County Development Plan (2021-2027).

Visualisations and mapping supporting the Landscape and Visual Impact Assessment are prepared in accordance with:

- NatureScot. Visual representation of wind farms: Guidance – Version 2.2 (2017).

13.3. ASSESSMENT METHODOLOGY

The assessment methodology involved a desk study, fieldwork, and an assessment of the effects on the landscape and on visual receptors. This approach examines an assessment of both the sensitivity of all receptors (landscape and visual) and an assessment of the magnitude of effect. The methodology for determining the sensitivity and the magnitude of effect differs slightly between landscape and visual. The significance of effect is determined through combining the sensitivity and the magnitude of effect. An assessment of cumulative effects was also considered in relation to existing and permitted wind farms within the study area. Other development types were scoped out because, from a landscape and visual perspective, only other wind farms have the potential to result in significant cumulative effects with respect to the proposed wind farm.

13.3.1. Desktop Study

A desk-based study was undertaken in order, to establish an appropriate study area (details in Section 13.4.1) of the landscape and visual effects of the proposed development, through;

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

13.3.2. Fieldwork

Site visits of the study area were undertaken on the 11th and 12th August 2022, stopping to record descriptions of the landscape elements and characteristics within the study area generally and also the view from each VRP. High-quality base photography of certain viewpoints was undertaken and used to prepare photomontages of the proposed development. This field study enabled the set of VRPs identified as part of the desktop study to be further refined.

The assessment of effects as part of this chapter sets out a description of the geographic location and landscape context of the proposed development and follows these steps as part of the assessment process;

- General landscape description concerning essential landscape character and salient features of the study area, discussed with respect to; landform and drainage; vegetation and land use; centres of population and houses; transport routes and; public amenities and facilities;
- Consideration of design guidance, the planning context and relevant landscape designations;
- Appraisal of salient landscape character;
- Appraisal of predicted landscape effects; and
- Appraisal of predicted visual effects using standard ZTV maps as well as photomontages prepared from selected VRP locations.

An appraisal of predicted cumulative effects using cumulative ZTV maps and cumulative photomontages is undertaken as part of this chapter, in addition to a discussion of mitigation measures and an assessment of residual effects.

13.3.3. Landscape Impact Assessment Criteria

When assessing the potential effects on the landscape resulting from a proposed development, the following criteria are considered:

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

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 Guidelines for Landscape & Visual Impact Assessments (2013) the Landscape Value and Sensitivity are set out prior to the assessment of effects. These are classified using the following criteria set out in Table 13-1.

Table 13-1: Landscape Value and Sensitivity (as per GLVIA 2013)

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 (e.g. World Heritage Site), 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, where the principal management objectives are likely to be considered conservation of the existing character.

Sensitivity	Description
Medium	Areas where the landscape character exhibits some capacity and scope for development. Examples of which are landscapes, which have a designation of protection at a county level or at non-designated local level where there is evidence of local value and use.
Low	Areas where the landscape character exhibits a higher capacity for change from development. Typically, this would include lower value, non-designated landscapes that may also have some elements or features of recognisable quality, where management objectives include, enhancement, repair and restoration.
Negligible	Areas of landscape character that include derelict sites and degradation 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.

The magnitude of a predicted landscape effect is a product of the scale, extent or degree of change that is likely to be experienced as a result of the proposed development. The magnitude takes into account whether there is a direct physical effect 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 13-2 refers).

Table 13-2: Magnitude of Landscape Impacts (as per GLVIA 2013)

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

The significance of a landscape effect is based on a balance between the sensitivity of the landscape receptor and the magnitude of the effect. The significance of landscape effects is arrived at using the following matrix set out in Table 13-3.

Table 13-3: Impact Significance Matrix (as per GLVIA 2013)

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

Note: The significance matrix provides an indicative framework from which the significance of effect is derived. The significance judgement is ultimately determined by the assessor using

professional judgement. Due to nuances within the constituent sensitivity and magnitude judgements, this may be up to one category higher or lower than indicated by the matrix. Judgements indicated in orange are considered to be 'significant effects' in EIA terms.

13.3.4. Visual Impact Assessment Criteria

As with the landscape impact, the visual impact of the proposed development will be assessed as a function of sensitivity versus magnitude. In this instance the sensitivity of the visual receptor, weighed against the magnitude of the visual effect.

13.3.4.1. Sensitivity of Visual Receptors

Unlike landscape sensitivity, 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 they are engaged in and whether this heightens their awareness of the surrounding landscape. 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 VRP.

Susceptibility of Receptors. In accordance with the Institute of Environmental Management and Assessment ("IEMA") Guidelines for Landscape and Visual Assessment (3rd edition 2013) visual receptors most susceptible to changes in views and visual amenity are:

- *"Residents at home;*
- *People, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focussed on the landscape and on particular views;*
- *Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience;*
- *Communities where views contribute to the landscape setting enjoyed by residents in the area;*
- *Travellers on road rail or other transport routes where such travel involves recognised scenic routes and awareness of views is likely to be heightened".*

Visual receptors that are less susceptible to changes in views and visual amenity and 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".*

Recognised scenic value of the view (County Development Plan designations, guidebooks, touring maps, postcards etc). These represent a consensus in terms of which scenic views and

routes within an area are strongly valued by the population because in the case of County 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 visual 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;

Viewer connection with the landscape. This considers whether or not receptors are likely to be highly attuned to views of the landscape i.e. commuters hurriedly driving on busy roads versus tourists focussed on the character and detail of the landscape;

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 for example a busy street scene;

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 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 a few strongly related components or an irregular one containing a variety of disparate components;

Sense of place. This considers whether there is a 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.

Those locations which are deemed to satisfy many of the above criteria are likely to be of higher sensitivity. No relative importance is inferred by the order of listing. Overall sensitivity may be

a result of a number of these factors or, alternatively, a strong association with one or two in particular.

13.3.4.2. Visual Effect Magnitude

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

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

For wind energy developments, a strong visual presence is not necessarily synonymous with adverse effect. Instead, the 2003 SEI funded survey of 'Attitudes Towards the Development of Wind Farms in Ireland' found that "wind farms are seen in a positive light compared to other utility-type structures that could be built on the landscape". Furthermore, a clear and comprehensive view of a wind farm might be preferable in many instances to a partial or cluttered view of turbine components that are not so prominent within a view. On the basis of these reasons, the visual amenity aspect of assessing effect magnitude is qualitative and considers such factors as the spatial arrangement of turbines both within the proposed development and in relation to surrounding terrain and land cover. It also examines whether the development contributes positively to the existing qualities of the vista or results in distracting visual effects and disharmony.

It should be noted that as a result of this two-sided analysis, a high order visual presence can be moderated by a low level of effect on visual amenity and vice versa. Given that wind turbines do not represent significant bulk, visual effects result almost entirely from visual 'intrusion' rather than visual 'obstruction' (the blocking of a view). The magnitude of visual effects is classified in the following table 13.4:

Table 13-4 Magnitude of Visual Impact (as per GLVIA 2013)

Criteria	Description
Very High	The proposal intrudes into a large proportion or critical part of the available vista and is without question the most noticeable element. A high degree of visual disorder or disharmony is also generated, strongly reducing the visual amenity of the scene
High	The proposal intrudes into a significant proportion or important part of the available vista and is one of the most noticeable elements. A considerable degree of visual disorder or disharmony is also likely to be generated, appreciably reducing the visual amenity of the scene
Medium	The proposal represents a moderate intrusion into the available vista, is a readily noticeable element and/or it may generate a degree of visual disorder or disharmony, thereby reducing the visual amenity of the scene. Alternatively, it may represent a balance of higher and lower order estimates in relation to visual presence and visual amenity

Low	The proposal intrudes to a minor extent into the available vista and may not be noticed by a casual observer and/or the proposal would not have a marked effect on the visual amenity of the scene
Negligible	The proposal would be barely discernible within the available vista and/or it would not detract from, and may even enhance, the visual amenity of the scene

13.3.4.3. Visual Impact Significance

As stated above, the significance of visual effects is a function of visual receptor sensitivity and visual effect magnitude. This relationship is expressed in the same significance matrix as for Landscape Impacts provided in Table 13-3 above. The receptor sensitivity, visual effect magnitude and significance of effect is detailed in Appendix 13.1.

13.3.5. Cumulative Impact Assessment Criteria

The Scottish Natural Heritage (SNH) Guidelines 'Assessing the Cumulative Effects of Onshore Wind Energy Developments' (2012) identify those cumulative effects on visual amenities relate to 'combined' or 'sequential' visibility. The same categories have also been subsequently adopted in the Landscape Institute's 2013 revision of the Landscape and Visual Impact Assessment Guidelines.

> *'Combined visibility occurs where the observer is able to see two or more developments from one viewpoint. Combined visibility may either be in combination (where several wind farms are within the observer's arc of vision at the same time) or in succession (where the observer has to turn to see the various wind farms).*
>
> *Sequential 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.)'(SNH Section 3, Page 11, Paragraph 50)*

Cumulative effects of wind farms tend to be adverse rather than positive as they relate to the addition of moving manmade structures into a landscape and viewing context that already contains such development. Based on guidance contained within the SNH Guidelines relating to the Cumulative Effects of Wind Farms (2012) and the DoEHLG Wind Energy Guidelines (2006 and 2019), 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. The term 'skylining' is used in the SNH Guidelines to describe the effect "*where an existing windfarm is already prominent on a skyline the introduction of additional structures along the horizon may result in development that is proportionally dominant. The proportion of developed to non-developed skyline is therefore an important landscape consideration*".

In terms of visual amenity, there is a range of ways in which an additional 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 wind farm that are seen stacked in perspective against the turbines of nearer or further developments tend to cause visual clutter and confusion. Such effects are exacerbated when, for example, the more distant turbines are larger than the nearer ones and the sense of distance is distorted. Table 13.5 below provides criteria for assessing the magnitude of cumulative effects.

Table 13-5: Magnitude of Cumulative Effects Criteria

Magnitude of Effect	Description
Very High	• The proposed development 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 development 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 development 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 development will be one of only a few wind farms in the surrounding area and will be viewed in isolation from most receptors or perceived as an extension to another development. • It might contribute to wind farm development becoming a familiar feature within the surrounding landscape. • The design characteristics of the proposed development accord with other schemes within the surrounding landscape and adverse visual effects are not likely to occur in relation to these.
Negligible	• The proposed development will most often be viewed in isolation or occasionally in conjunction with other distant wind energy developments. • Wind energy development will remain an uncommon landscape feature in the surrounding landscape. • No adverse visual effects will be generated by the proposed turbines in relation to other turbines.

13.3.6. Department of Environment, Heritage and Local Government (DoEHLG) 'Wind Energy Development Guidelines'

The DoEHLG guidelines (2006 and 2019) provide direction on wind farm siting and design criteria for a number of different landscape types. This proposal site is deemed to be contained within a landscape context that is consistent with the 'Flat Peatland' landscape type identified within the guidelines. The guidance with respect to cumulative effect in this landscape type is:

> *"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 or dominate the flat landscape. More than one wind energy development might be acceptable in the distant background under normal atmospheric conditions."*

General guidance in relation cumulative effects is provided in Chapter 6 of the Guidelines – 'Aesthetic Considerations in Siting and Design'. The most relevant aspect of guidance in this instance is contained in the fourth bullet point, which states:

> *"It is preferable to avoid locating turbines where they can be seen one behind another, when viewed from highly sensitive key view points (for example, viewing points along walking or scenic routes, or from designated views and prospects), as this results in visual stacking and, thus, confusion. This may not be critical, however, where the wind energy development to the rear is in the distant background."*

13.3.7. Quality and Timescale in Effects

In addition to assessing the significance of landscape effects and visual effects, the 2022 EPA Guidance for EIARs requires that the quality of the effects is also determined. This could be negative/adverse, neutral, or positive/beneficial. 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. Unless otherwise stated, it can be taken that effects described within this chapter are Negative in terms of quality.

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.

13.3.8. Assumptions and Limitations

It is assumed that the terrain data acquired for the 3D modelling is an accurate reflection of the topography within the study area. It is also assumed that the information regarding the developments included in the cumulative assessment is accurate at the time of assessment and is based on published data from the relevant planning portals.

13.4. EXISTING ENVIRONMENT

13.4.1. Definition of Study Area

The Wind Energy Development Guidelines published by the Department of the Environment, Heritage and Local Government (2006 and 2019) specify different radii for examining the ZTV

of proposed wind farm projects. The extent of this study area is influenced by turbine height as follows:

- 10 km radius for blade tips up to 100 m;
- 20 km radius for blade tips greater than 100 m; and
- 25 km in order to incorporate features of national or international renown.

In the case of this proposed development, the blade tips will be over 100 m high; thus, the minimum ZTV radius required is 20 km from the outermost turbines/footprint of the turbine array of the proposed development. County Development Plans for Counties Longford, Westmeath, Roscommon and Leitrim were reviewed to inform this LVIA in the context of the Landscape policies of those local authorities, and a ZTV analysis was undertaken. A synthesis of this information indicated there are not any features of 'national or international renown' between 20 km and 25 km of the site that have any potential to be significantly affected. However, a previous application (2016-2019 Derryadd Wind Farm) included wind turbines within this application site adopted a 30km study area; thus, the study area for the proposed development was selected to be based on a 30km radius from the proposed turbines in order to remain consistent and, if required, directly comparable to the previous LVIA assessment on this proposed wind farm site (Figure 13-1 refers). It is also necessary to refer specifically to the area immediately surrounding the proposed wind farm site which will be referred to as the central portion of the study area. This will be the area within approximately 5km from the footprint of the turbine array (Figure 13-2 refers) while the wider study area in its entirety will be referred to as the study area (30km).

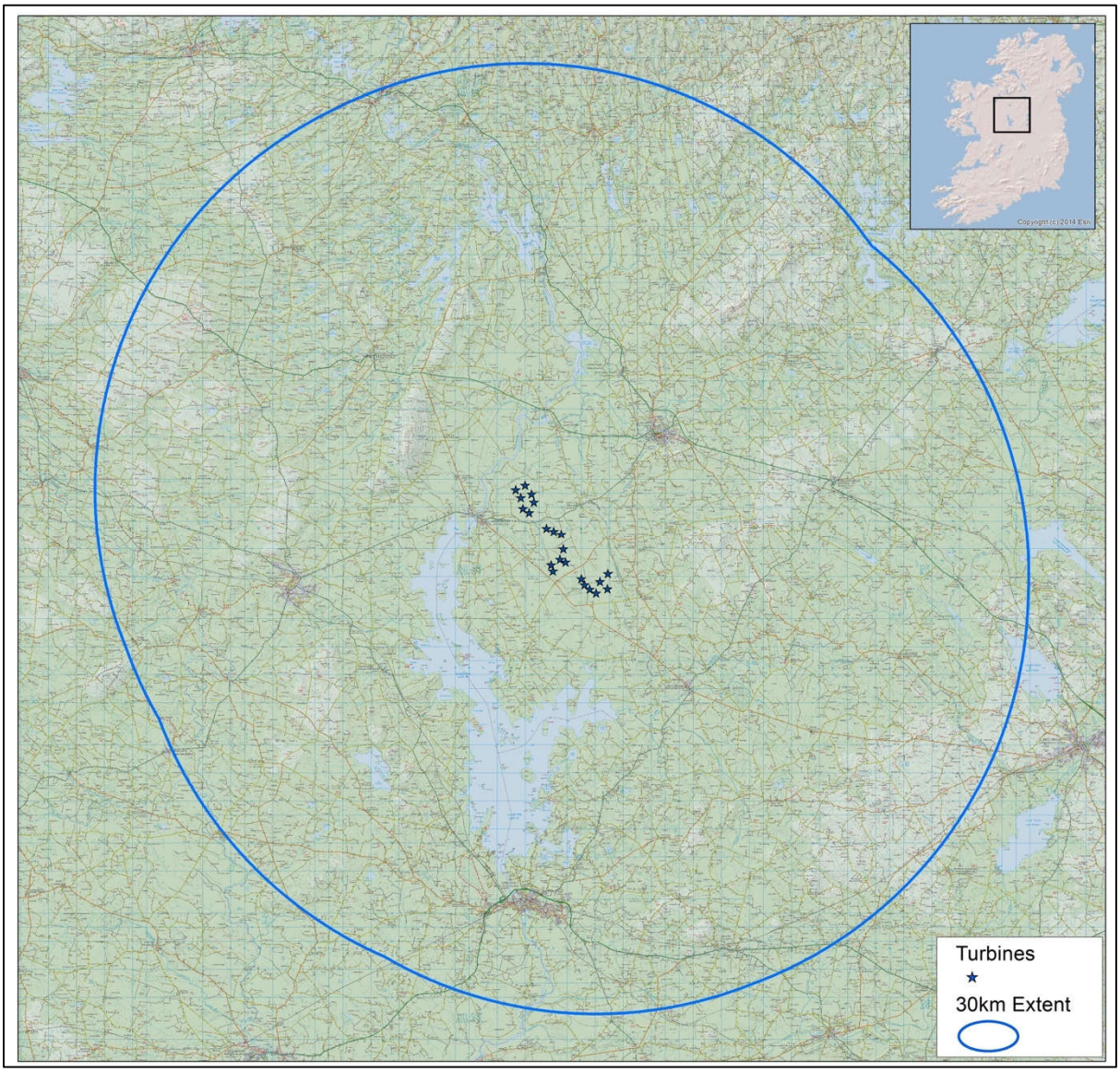

Figure 13-1 Topographical map of study area (30 km radius from turbines)

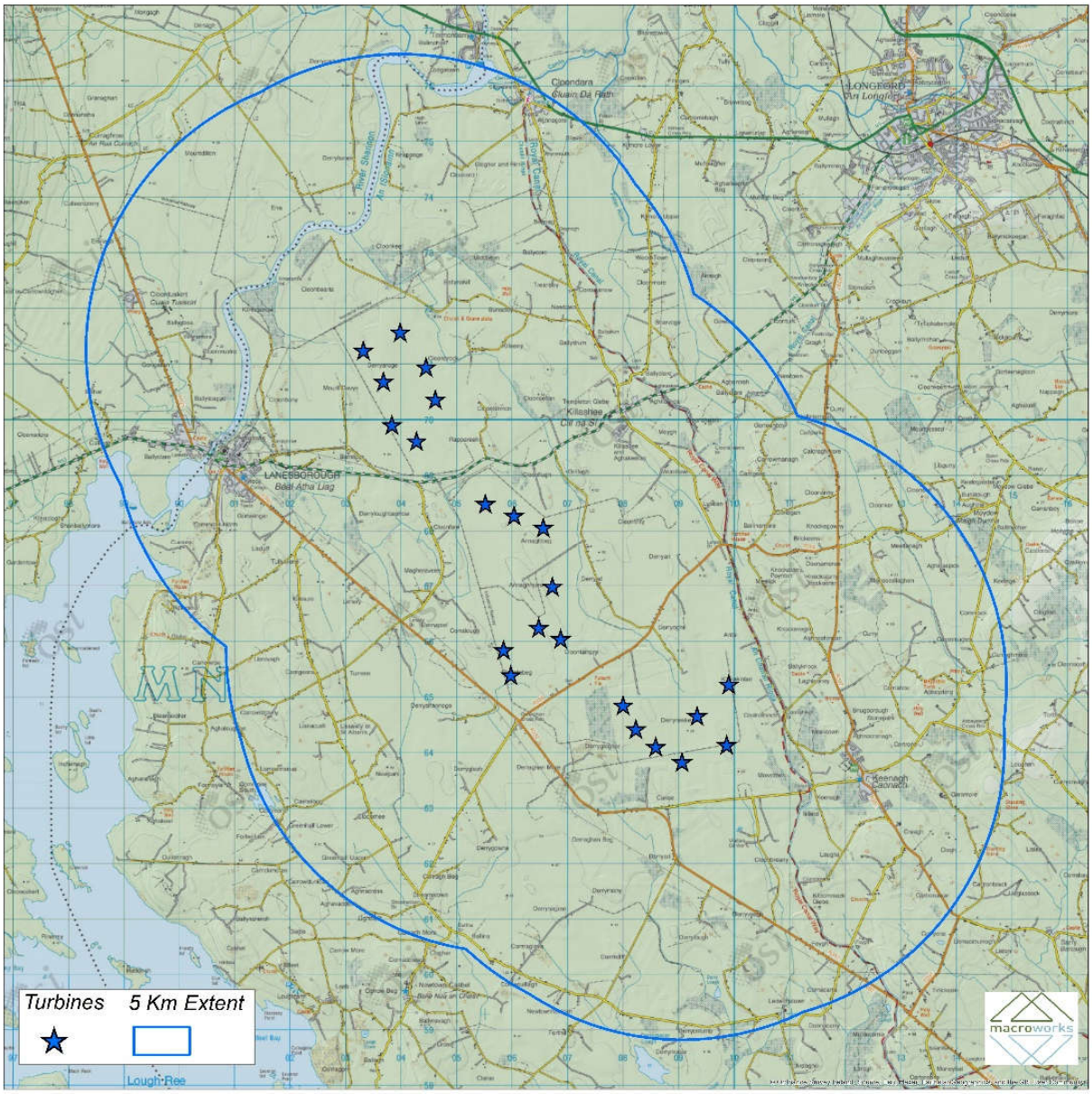

Figure 13-2 Topographical map of the central portion of the study area (5km buffer radius from turbines)

13.4.2. Landscape Baseline

The landscape baseline represents the existing landscape context and is the scenario against which any changes to the landscape brought about by the proposed development will be assessed. This also includes reference to any relevant landscape character appraisals and the current landscape policy context (both are generally contained within County Development Plans).

A description of the landscape context of the proposed development and wider study area is provided below under the headings of landform and drainage, vegetation and land use, centres of population, transport routes and public amenities and facilities as well as the immediate site context. Additional descriptions of the landscape, as viewed from each of the selected

viewpoints, are provided under the detailed assessments later using a similar structure. Although this description forms part of the landscape baseline, many of the landscape elements identified also relate to visual receptors i.e. places and transport routes from which viewers can potentially see the proposed development. The visual resource will be described in greater detail in section 13.3.4 below.

13.4.2.1. Landform and Drainage

The proposed wind farm site is contained on cutaway peatland across a series of three almost contiguous bogs within the Mountdillon bog group. These include the Derryadd, Derryaroge and Lough Bannow Bogs, which stretch around 12 km in an elongated band in a northwest – southeast orientation. Thus, the proposed wind farm site forms part of a vast flat plain. To the east of the site, the Royal Canal, which adjoins the proposed wind farm site, marks a transition into slightly more elevated undulating ground beyond that rises to form the modest Castlerea Mountain and Bawn Mountain (both approximately 6 km). The terrain also inclines gently to the west of the site to form low hills that separate the central portion of the study area from the substantial sized Lough Ree on the River Shannon, which wraps around the western and south-western aspects of the central portion of the study area. The River Shannon, which is the largest and longest watercourse in the Country, enters the northern extents of the study area and meanders its way southwards through the west-central portion of the study area before exiting to the south.

The terrain on the western side of Lough Ree is also slightly elevated and undulating and there is another upland spine that runs to the north of Lough Ree between the settlements of Lanesborough (adjoining the proposed wind farm site to the west) and Strokestown (approximately 12 km northwest of the proposed wind farm site). The terrain rises to form a broad upland spine to the northeast of the settlement of Longford (approximately 9 km northeast of the proposed wind farm site) in the outer north-eastern quarter of the study area, whilst the northern extents are generally contained in a lake rich drumlin zone.

Notwithstanding occasional spines of more elevated ground, the 30 km radius study area can be described in general terms as a relatively flat lowland landscape.

13.4.2.2. Vegetation and Land Use

The predominant land use of the site and central portion of the study area was commercial scale peat extraction for the purposes of energy generation and there was a peat-fired power station at the settlement of Lanesborough (approximately 820 m west of the north-western periphery of the proposed wind farm site.) Peatland areas occur frequently throughout the study area as well on both sides of the River Shannon, particularly to the north of the site. The peat bogs in this area are frequently interspersed with slightly elevated islands of free draining soils that are used for agriculture, whilst the transitional bog margins tend to be contained in peatland scrub or occasional commercial conifer plantations. Conifer plantations also occur in some of the more elevated areas, but in the context of the study area agricultural farming is the predominant land use forming a matrix of fields and hedgerows. Refer to Figure 13.3 below.

There are a number of substantial sized settlements throughout the study area, which serve as rural service centres. These settlements account for a very modest proportion of urban and industrial land cover in the context of the study area.

Figure 13-3: Aerial photography of central portion of the study area showing mix of peatland and farmland (ESRI, Maxar, Earthstar Geographics and the GIS User Community 2024)

13.4.3. Landscape Policy Context and Designations

13.4.3.1. Department of Environment, Heritage and Local Government Wind Energy Development Guidelines (2006)

The Wind Energy Development Guidelines (2006) provide guidance on wind farm siting and design criteria for a number of different landscape types. The proposed wind farm site is considered to be located within a landscape that is consistent with the 'Flat Peatland' landscape type. Siting and design recommendations for this landscape type includes the following:

> *'**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.'*

It is considered that the proposed wind farm site is entirely consistent with the guidance provided above for the 'Flat Peatland' landscape type.

13.4.3.2. Siting in Relation to Individual Properties ('Setback')

Section 6.18 of the Draft Revised Wind Energy Development Guidelines (December 2019) refers to appropriate setback distances for visual amenity purposes. The guidelines outline a mandatory minimum setback distance of "500 meters" or the distance of "4 times the tip height" of the proposed turbines "between the nearest point of the curtilage of any residential property". This is set out in SPPR2, which is included below:

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

In this instance the proposed turbines are 190 m tip height, and thus the minimum setback distance would be 760 m. The nearest residential dwelling to any of the proposed turbines is 780 m, and thus, the setback distance outlined in the both the current 2006 Guidelines and the Draft Revised Guidelines (2019) has been adhered to. This will help to ensure that the turbines do not appear overbearing from surrounding residential receptors.

13.4.3.3. Longford County Development Plan (2021 – 2027)

Landscape Character Assessment

A Landscape Character Assessment was prepared as part of the Longford County Development Plan 2015-2021 and is contained in Annex 11 and summarised within Chapter 14 of the current Longford County Development Plan (2021 – 2027). The County is divided into 7 no. geographically distinct Landscape Character Types (LCTs) (Figure 13-4 refers). The proposed development is contained within 'LCT Unit 6 – Peatlands'. This landscape character unit is surrounded by three other LCT Units, namely; 'LCT Unit 3 – Shannon Basin/Lough Ree', which lies to the west, 'LCT Unit 7 – Open Agriculture', which lies to the east and 'LCT Unit 4 – Central Corridor', which lies to the northeast.

In the Longford County Development Plan, LCT Unit 6 – Peatlands is described as "*dominated by extensive tracts of raised bog interspersed with mixed forestry and areas of scrubby vegetation. The topography is notably flat, with the majority of the land lying below the 50m contour line. This, when combined with the limited vegetation cover and extensive peatland cover mean that views are available across wide areas throughout the unit.*" The landscape character assessment also identifies sensitivity designations for each of the given units. Unit 6 – Peatlands has been identified as a low sensitivity landscape, however, the corridor of the Royal Canal, which passes through LCT Unit 6, has been given a 'high' sensitivity designation.

The Longford County Development Plan contains three County Policy Objective specifically related to LCT Unit 6 – Peatlands:

> *'CPO14.32-Identify appropriate areas for development;*
>
> *CPO14.33-Develop guidelines for screening and siting measures to facilitate development; and*
>
> *CPO14.34-Seek to identify opportunity to collaborate and/or partner with Bord na Mona.'*

The Longford County Development Plan also has the following general County Policy Objectives related to landscape listed in Chapter 14:

> *'CPO14.1-Support and implement objectives contained in any Regional Landscape Character Assessment.*
>
> *CPO14.2-Review in the context of a regional approach to landscape assessment, the County Landscape Character Assessment following publication of statutory guidelines for Planning Authorities on local Landscape Character Assessments, as outlined in the National Landscape Strategy 2015-2025.*
>
> *CPO14.3-Protect the landscapes and natural environments of the County by ensuring that any new developments do not detrimentally impact on the character, integrity, distinctiveness or scenic value of their area. Any development which could unduly impact upon such landscapes will not be permitted.*
>
> *CPO14.4-Ensure the preservation of the uniqueness of a landscape character type by having regard to the character, value and sensitivity of a landscape in new development proposals. Any new development should respect and reinforce the*

distinctiveness and sense of place of the landscape character types, including the retention of important features or characteristics, taking into account the various elements which contribute to their distinctiveness.

CPO14.5-Conserve and enhance the high nature conservation value of the Landscape Character Areas in order to create/protect ecologically resilient and varied landscapes.

CPO14.6-Discourage proposals necessitating the removal of an extensive number of trees, hedgerows and historic walls or other distinctive boundary treatments and consider the making of Tree Preservation Orders in respect of trees or groups of trees of particular landscape value.

CPO14.7-Require landscape and visual impact assessments prepared by suitably qualified professionals to be submitted with planning applications for development which may have significant impact on landscape character areas of medium or high sensitivity.

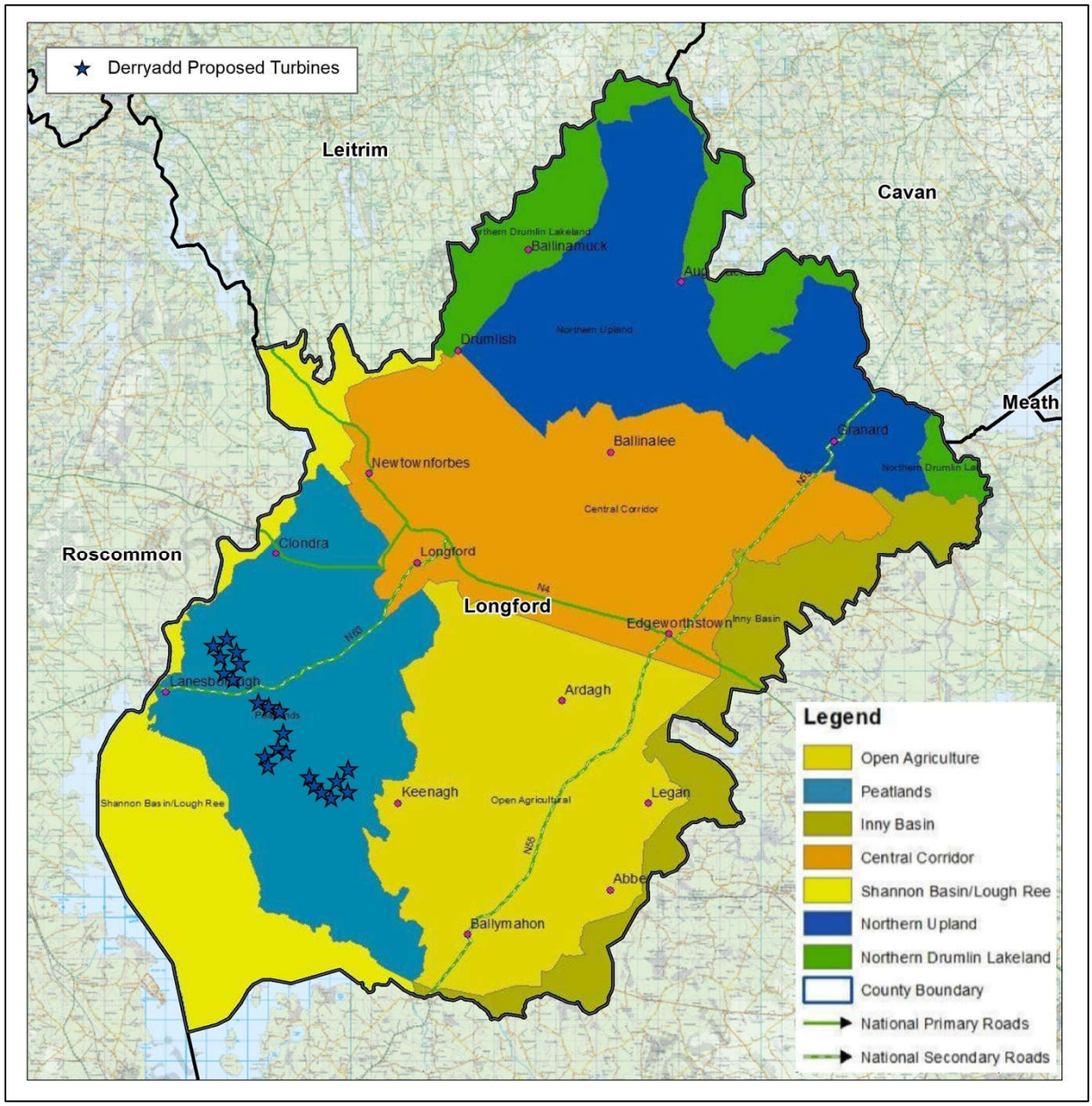

Figure 13-4 Extract of Figure 14.1 from the Longford County Development Plan illustrating Landscape Character

Wind Energy Strategy

Volume 2 Appendix 2 of the Longford County Development Plan contains a map showing Wind Energy Potential within the county (Figure 13-5 refers). There are buffer zones around the main settlements where turbines are to be avoided. Similarly, there are specific 'non-preferred locations' identified within the county. These are contrasted with specific 'preferred locations', while the majority of the county is not contained within any of these three categories, which is suggestive that proposed turbines would be open to consideration across most of the county.

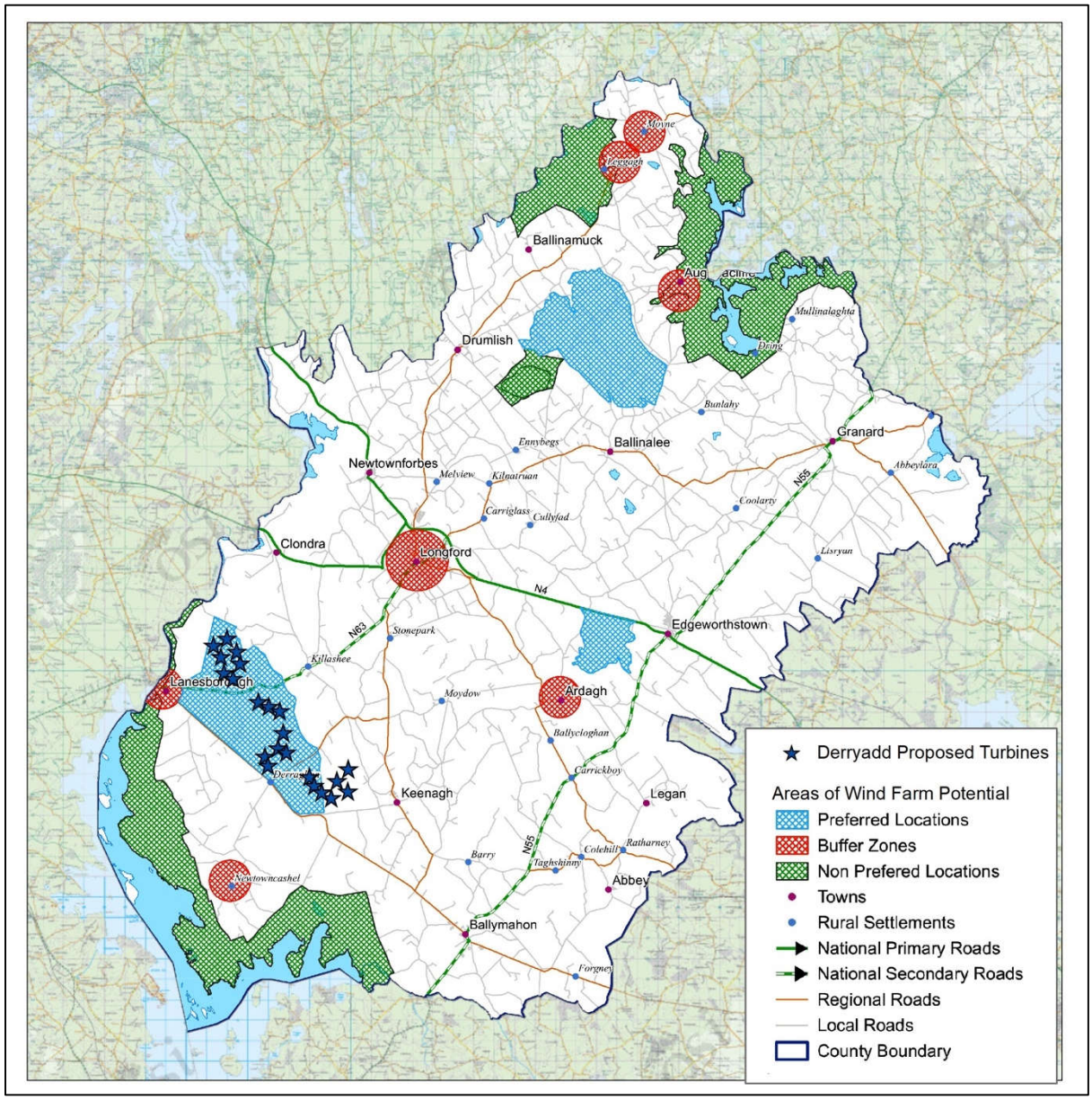

Figure 13-5 Extract of Volume 2 Appendix 2 from the Longford County Development Plan illustrate Wind Energy Potential

13.4.3.4. Roscommon County Development Plan (2022 – 2028)

Roscommon Landscape Character Assessment

Whilst the proposed development extends throughout the south-western portion of County Longford, it is also in relatively close proximity to County Roscommon and therefore has the potential to influence of the landscape character of the nearest parts of this neighbouring County. Thus, relevant designations and landscape policy for County Roscommon are also considered herein.

A landscape character assessment is included within the current Roscommon County Development Plan and this divides the County in to 7 no. Landscape Character Types (LCTs).

The '*River Corridor*' LCT is the most relevant to the proposed development as it encompasses the western banks of the River Shannon and Lough Ree, which occur immediately across the Longford – Roscommon border. The generic Landscape Character Types are then further divided into 36 no. geographically distinct Landscape Character Areas (LCAs). A number of these are contained within the '*River Corridor*' LCT within the western half of the study area. The LCAs in question include; '*LCA 5 – Slieve Bawn and Feorish Bogland Basin*; '*LCA 6 – Upper Lough Ree Bogland*'; '*LCA 7 – Mid Lough Ree Pastureland* and; '*LCA 8 – Lower Lough Ree and Athlone Environs*'. These LCAs have all been designated as landscapes of 'Very High Value' (second highest of 4 classifications).

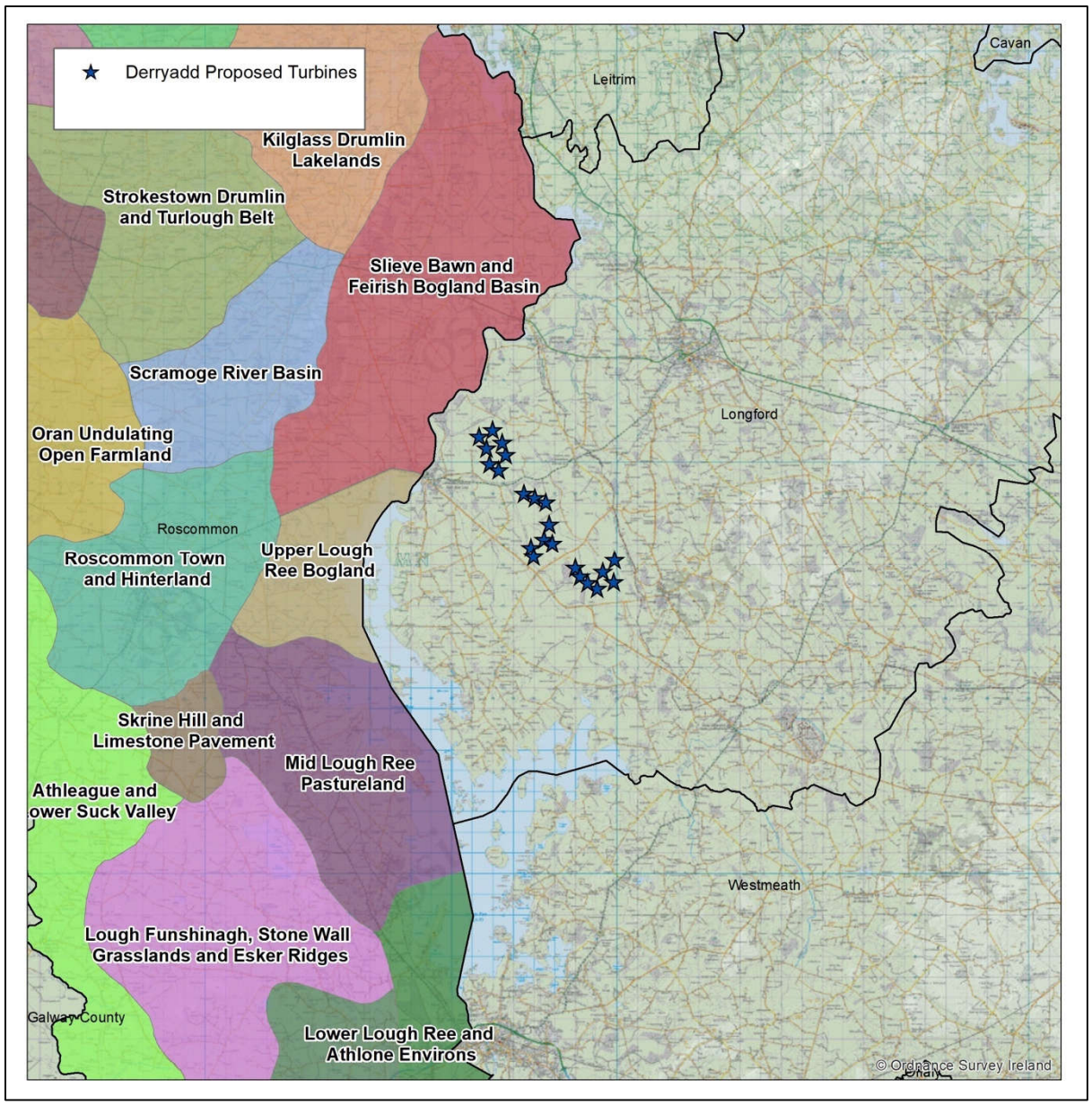

Figure 13-6 Extract of Figure 8 from the Roscommon Landscape Character Assessment – Relevant landscape character areas

The landscape contained in '*LCA 5 - Slieve Bawn and Feorish Bogland Basin*' is described as:

> *"….. one of the largest character areas in the county stretching from Lanesborough in the south to Lough Bo Derg in the north. Slieve Bawn forms the western edge from where the landform gently slopes eastward draining into low lying bogland where it meets the eastern boundary defined by the meandering Shannon."*

LCA 5 is identified as having a '*Very High*' value as it is "*one of the most varied in the entire county, comprising a major waterway, extensive bogland and forest upland.*"

The landscape contained in '*LCA 6 – Upper Lough Ree Bogland*' is described as:

> *"….. one of the flattest areas in the county with the western boundary delineated by the zone of theoretical visibility from Lough Ree. The area is predominantly covered in raised bog, fens and marginal farmland with transitional woodland scrub and coniferous plantation in places."*

LCA 6 is identified as having a '*Very High*' value "*because of its nature designations and the sense of isolation."*

The landscape contained in '*LCA 7 – Mid Lough Ree Pastureland*' is described as:

> *"…..from the Hind River in the north to just north of Hodson's Bay. Its western boundary is formed by the hills to the east of Lough Funshinagh, which drain in an easterly direction down to the shores of Lough Ree. The shoreline of Lough Ree is defined by secluded bays dotted with small marinas and harbours, as well as peninsulas, the most important of which is Warren Point on which is located the medieval site of Rhindoon."*

LCA 7 is identified as being a '*Very High*' value landscape "*due to it's nature designations, good quality farmland landscape and extensive lake views as well as built heritage including windmill, church and graveyard and the canal connecting the village of Lecarrow and Blackbrink Bay as well as the medieval site at Rhindoon."*

The landscape contained in '*LCA 8 – Lower Lough Ree and Athlone Environs'* is described as:

> *"….. stretches southwards from Hodson Bay to north of the village of Cornafulla. The western boundary is delineated by the zone of visibility from the River Shannon. This low lying area is predominantly made up of dry grassland and raised bog, most of which is reclaimed, as well smaller pockets of wet grassland and wetland."*

LCA 8 is identified as being of '*Very High*' value "*reflecting the presence of the Shannon river corridor."*

It is important to note that other LCAs occur further west of the above-mentioned character areas and are also situated within the westernmost periphery of the study area. All of these LCAs have been designated as having landscape values ranging between '*moderate*' and '*high*' (lowest and second lowest value ratings).

Roscommon Renewable Energy Strategy

Map 7 of the Roscommon Renewable Energy Strategy (Figure 13-7 below) identifies areas of wind energy development potential. The map highlights that LCAs 6, 7 and 8 are all not favoured for their wind energy potential as a result of their setting immediately adjacent to Lough Ree. However, LCA 5 – Slieve Bawn and Feorish Bogland Basin is noted as an area 'most favoured' for wind energy development.

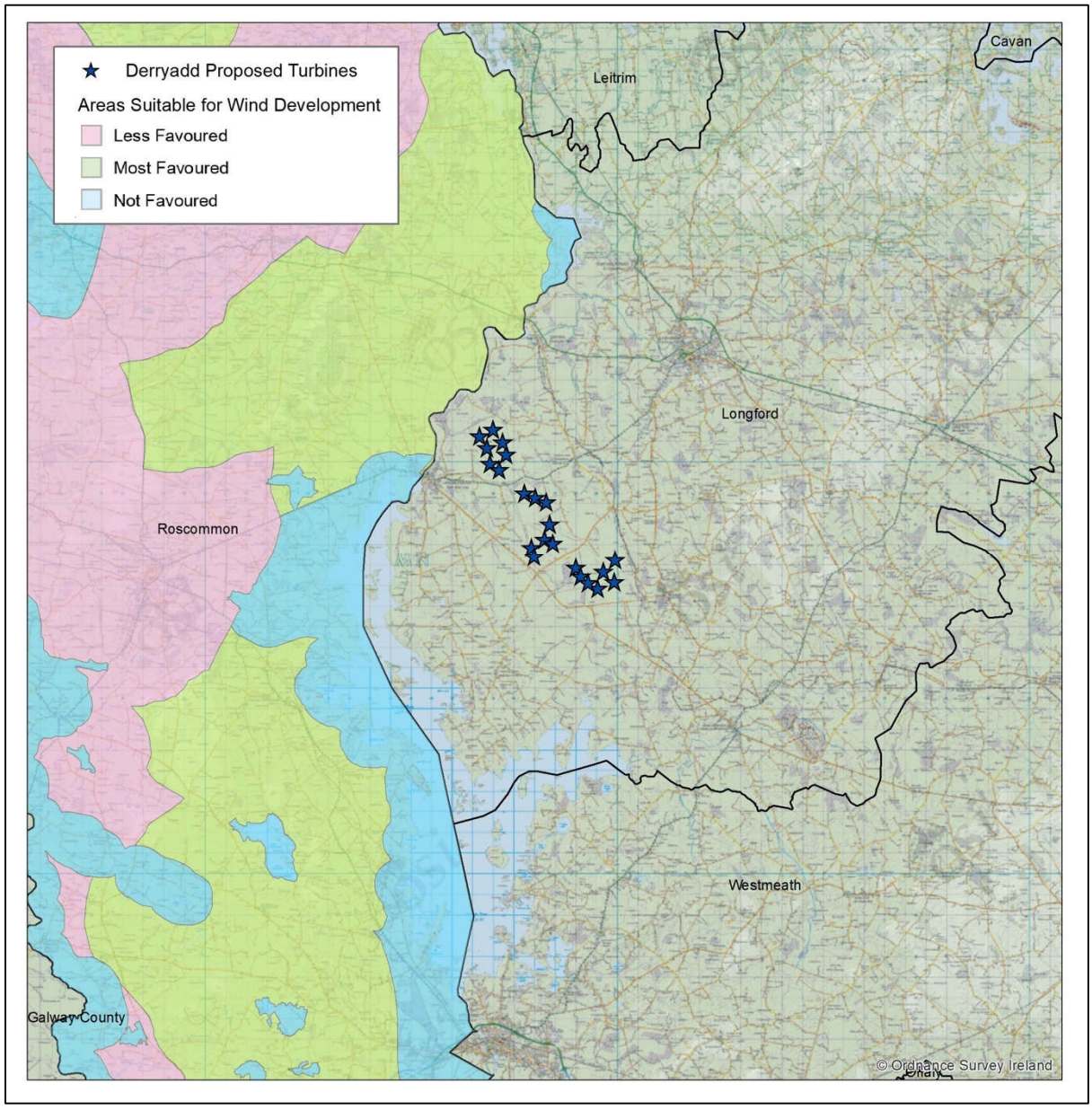

Figure 13-7 Extract of Map 7 from the Roscommon Wind Energy Strategy showing Areas of Wind Energy Development Potential

13.4.3.5. Westmeath County Development Plan (2021-2027)

A Landscape Character Assessment is contained within Chapter 13 of the current Westmeath County Development Plan. A total of 11 no. Landscape Character Areas (LCAs) are identified within the County. The two nearest and most relevant LCAs include *LCA 6 Lough Ree/Shannon* Corridor and *LCA 7 – Western Lowlands* (Figure 13-8 refers). Map 69 in the current Westmeath County Development Plan identifies LCA6 – Hill of Uisneach as having a 'none' capacity for wind energy and all other LCAs as having 'low' wind energy capacity.

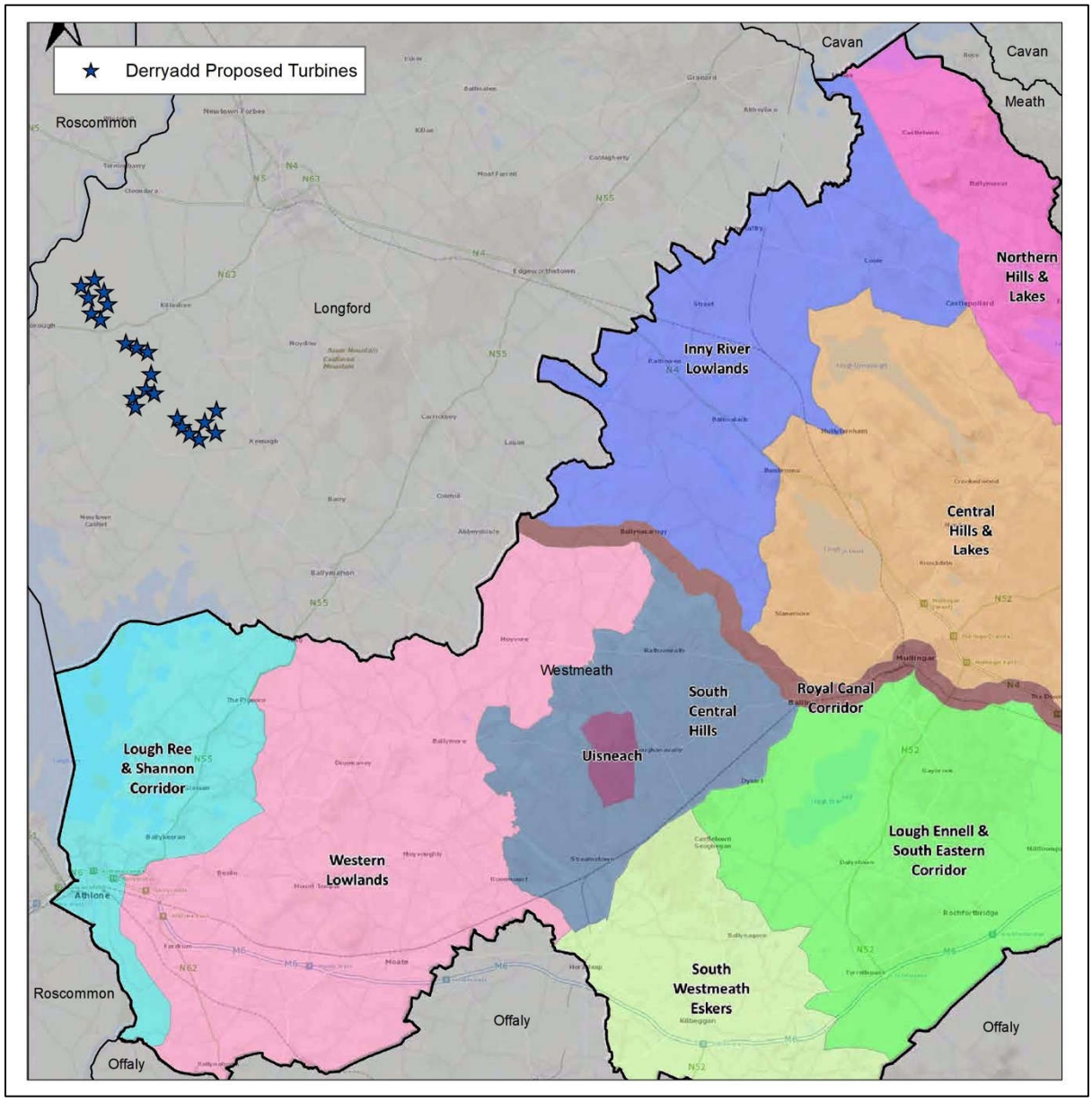

Figure 13-8 Extract of Westmeath County Development Plan 2021-2027, Map 68– Landscape Character Areas

13.4.3.6. Leitrim County Development Plan (2023-2029)

As County Leitrim is situated over 10 km from the proposed development at its nearest point, it is not thought that its landscape character will be influenced by the proposed development and therefore has not been included within this appraisal.

13.4.3.7. Conservation Interests

Although conservation designations are principally the concern of the Biodiversity and Hydrology and Hydrogeology chapters of the EIAR, they also represent landscape-based features and areas that are likely to have naturalistic characteristics that contribute to the overall landscape character of an area. For the purposes of the landscape appraisal, it is mainly those conservation designations within 5 km from the site that are most relevant. See Chapter 7 (Biodiversity) and Chapter 10 (Hydrology and Hydrogeology) for further detail.

The National Parks and Wildlife Services (NPWS) assigned areas of importance to Biodiversity that are situated within the study area, including; Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Natural Heritage Areas (NHAs), and proposed Natural Heritage Areas (pNHAs) – these are outlined below:

- Lough Ree SPA, SAC and pNHA;
- Ballykenny-Fisherstown Bog SPA;
- Lough Forbes Complex SAC and pNHA;
- Fortwilliam Turlough SAC and pNHA;
- Forthill Bog NHA;
- Mount Jessop Bog SAC and NHA;
- Lough Bannow pNHA;
- Cordara Turlough pNHA;
- Lough Bawn pNHA;
- Derry Lough pNHA;
- Royal Canal pNHA;

13.4.4. Visual Baseline

The visual baseline for this proposed development establishes both the nature of visibility within the study area and the important receptor locations from which the development might be viewed.

Only those parts of the study area that potentially afford views of the proposed development are of interest to this part of the assessment. Therefore, the first part of the visual baseline is establishing a ZTV. The ZTV map indicates from where in the landscape of the study area the proposed development will, or will not, be visible due to terrain screening only. Terrain based ZTV analysis does not account for screening by vegetation or other terrestrial features and nor does it account for the diminishing scale in relation to distance of turbines. The main use for standard ZTV mapping is to determine an initial search area for desk-based and field-based viewpoint selection, whilst excluding those parts of the study area with no potential visibility of the proposed development.

Given the limitations of standard ZTV mapping in terms of understanding the actual nature of visibility within lowland landscapes a second form of visibility analysis has been employed in this instance, and this is termed Route Screening Analysis (RSA). RSA, as its name suggests, considers actual visibility of the proposed development from surrounding roads using current imagery captured in the field then subsequently reviewed in the context of a digital model of the development. Route Screening Analysis bridges the gap for the assessor between the computer-generated, theoretical visibility modelling (expressed on the ZTV map) and the actual nature of visibility in the central portion of the study area. The findings from both the ZTV and RSA analysis are set out below.

13.4.4.1. Zone of Theoretical Visibility (ZTV)

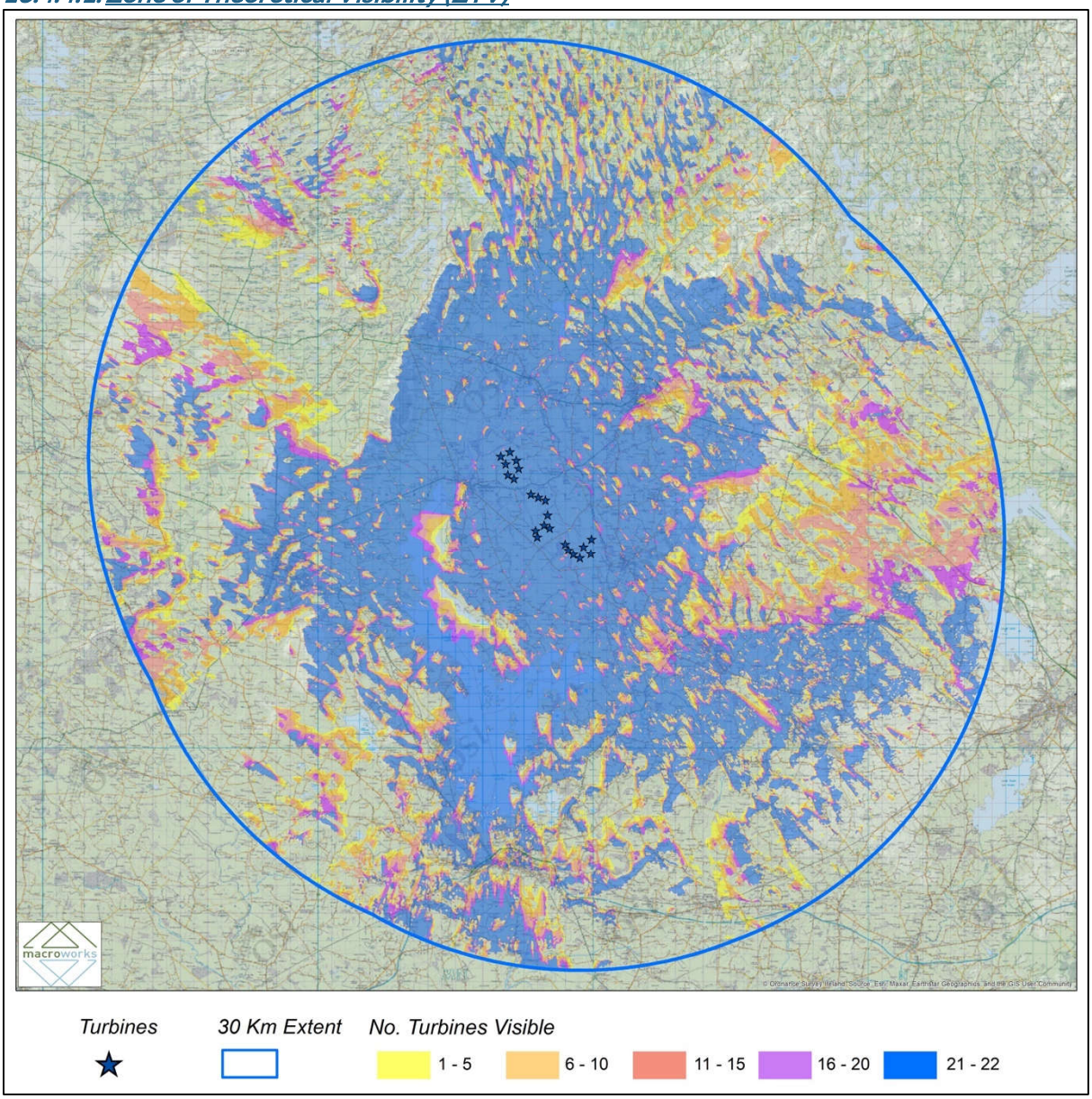

Figure 13-9 'Tip-height' Zone of Theoretical Visibility (ZTV) Map showing from where in the study area a view of at least the blade tips of the proposed turbines is potentially afforded (bare-earth scenario only) (See Appendix 13.2 for larger scale map)

The following key points should be noted from the ZTV map:

- Consistent full visibility of the turbines is afforded within the central portion of the study area out to a distance of around 4-5 km in every direction and this trend continues out to 8-10 km from the site to the north and south. This zone incorporates the settlements of Lanesborough, Killashee and Keenagh as well as the N63 national secondary road and the R392 and R393 regional roads.
- Theoretical visibility of the proposed development is interrupted to the west and southwest of the site at distances of around 4 km by low hills that define the eastern side of Lough Ree. Thus, the eastern shores of Lough Ree are generally not afforded views of

the development. Visibility returns from about the centreline of the Lough and encompasses the western shores. However, the 'concentric' nature of the ZTV pattern at the western side of the Lough indicates the gradual emergence of turbine blade tips above the intervening ridgeline, rather than an abrupt return to open visibility. Theoretical visibility is shown to be sporadic beyond approximately 10 km throughout the western quarters and is substantially gone at distances of 20-30 km, except for partial visibility from elevated hilltops and ridges.

- A subtle band of higher ground to the east of the site begins to limit views of the proposed turbines from beyond about 5 km. Potential visibility is substantially gone beyond 10 km with only elongated, northwest-southeast running ridges afforded partial visibility. These ridges tend not to coincide with visual receptors such as roads and residential dwellings. A higher degree of theoretical visibility, albeit sporadic, is afforded to the south-eastern quarter of the study area, which coincides with a band of slightly elevated ground to the west of the settlement of Mullingar.
- A band of theoretical visibility extends to the southern perimeter of the study area along the corridor of the River Shannon and the elongated Lough Ree incorporating parts of Athlone. This is due to the low-lying nature of the intervening landscape (few screening features) and particularly across the Lough. Otherwise, there is very little potential for visibility from the outer south-western and south-eastern portions of the study area.
- Due to the screening effect of the elongated ridge of Slieve Bawn approximately 5 km to the northwest of the site, there is very little opportunity for views of the development from the north-western quarter of the study area.
- The outer northern and north-eastern quarters of the study area display a distinctive 'sand ripple' ZTV pattern, which is typical of drumlin hill landscapes. In such landscapes of short steep slopes, visual receptors such as dwellings and roads tend to hug lower ground and will not be afforded potential views of the proposed development.

13.4.4.2. Route Screening Analysis (RSA)

In a flat landscape, such as that of the central portion of the study area which incorporates a network of hedgerows, scrubby bog fringe woodlands and forest plantations, a standard ZTV map is of little value in understanding actual visibility. That is, it grossly overestimates visibility compared to an open peatland or mountain moorland landscape, for example. In order to get a clearer understanding of visibility within the central portion of the study area, Route Screening Analysis (RSA) was undertaken for every road and section of canal within a 5 km radius of proposed turbines (See Appendix 13.3 for detailed RSA methodology and see Figure 13-10 to Figure 13-13).

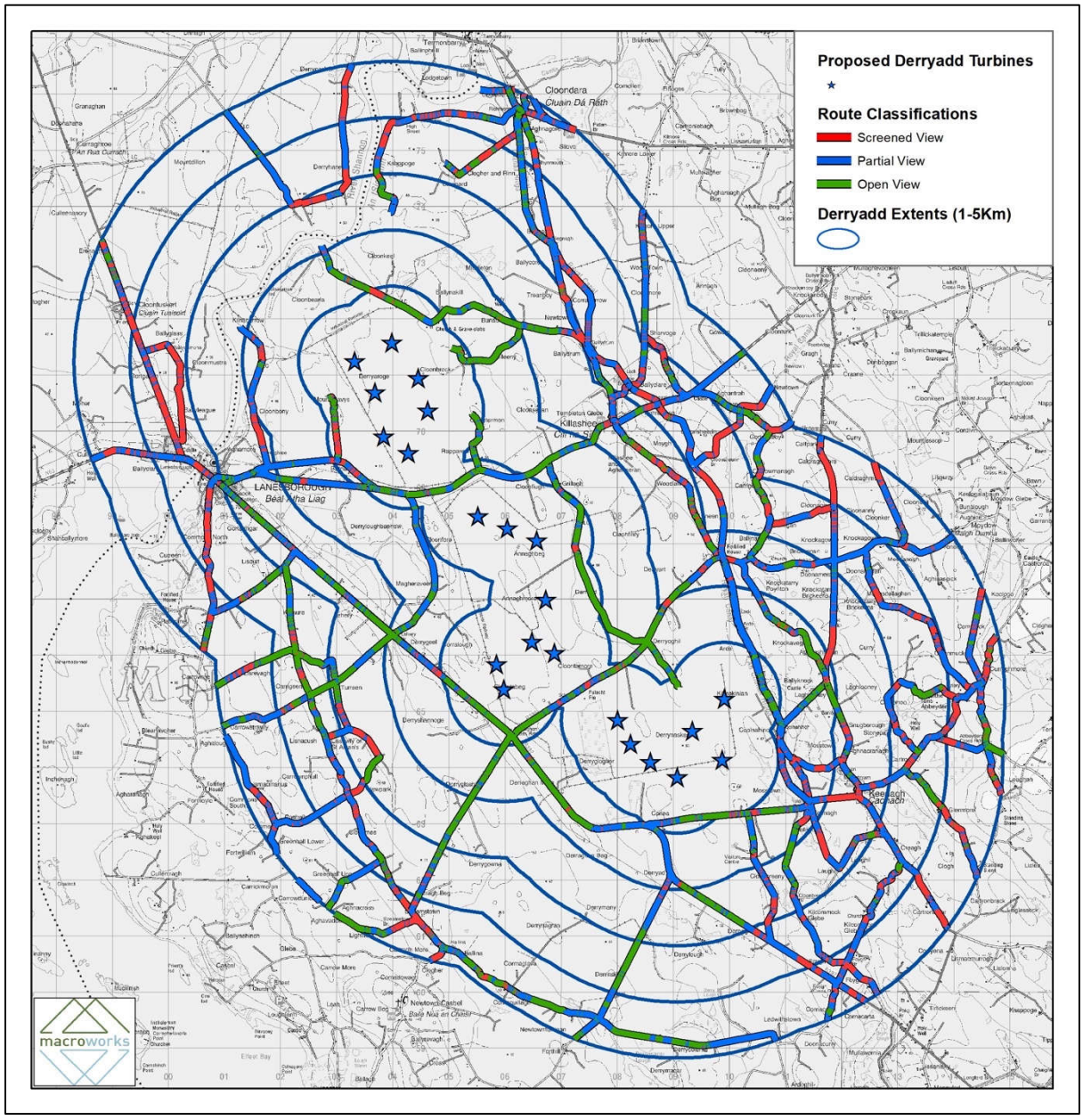

Figure 13-10 Map of Route Screening Analysis for roads within 5 km of turbines (See Appendix 13.4 for larger scale map)

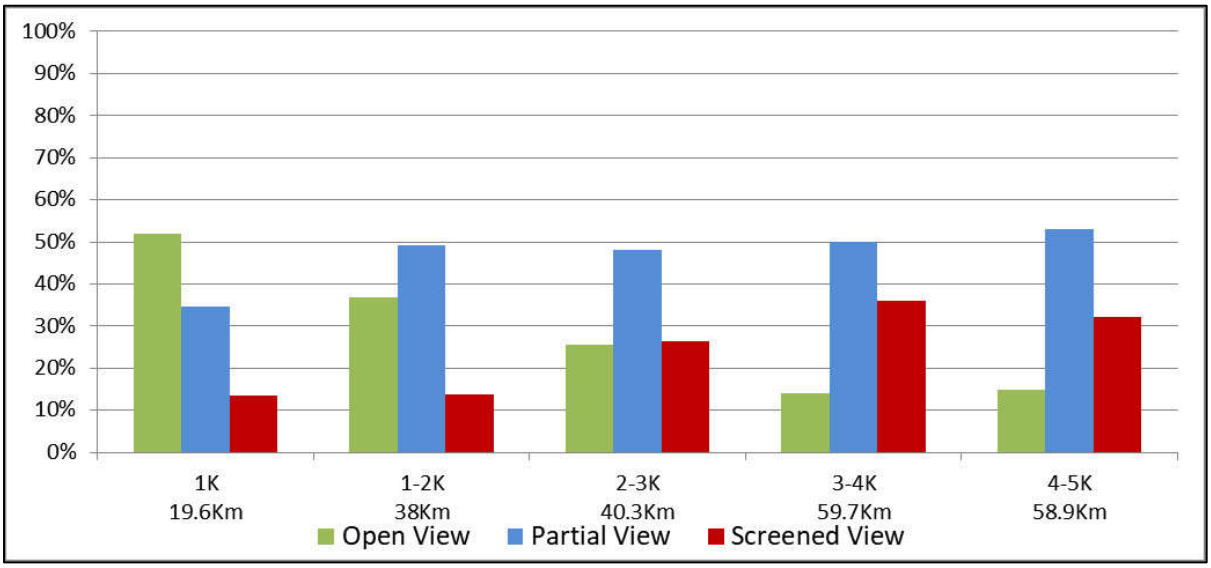

Figure 13-11 Graph of Route Screening Analysis Results from roads

Only within the 19.6 km of routes analysed within first distance band (0-1 km) is 'open visibility' (52%) markedly higher than both 'partial visibility' (34%) and 'fully screened' (11%). This is almost certainly due to the prevalence of open cutaway peatland in this nearest zone, coupled with the scale in relation to distance of the nearest turbines, which sees them rise well above intervening vegetation. In the 1-2 km distance band 'open visibility' is less than partial visibility due to a reduction in the former and increase in the latter. The proportion of 'fully screened' views remain unchanged. The same trend continues into the 2-3 km distance band with 'partial visibility' passing open visibility as the most common visibility scenario. The proportion of 'fully screened' sections of road continue to increase from the nearer bands. At around the 3 km mark, it would appear that a threshold is crossed, beyond which, it is more common that the proposed turbines are fully screened from view than fully visible. Throughout all of the distance bands, from 0-5 km, the proportion of 'partial visibility' has a downward trend, while the relative proportions of 'open visibility' and full screening broadly have an inverse relationship (one increases while the other reduces).

The general inverse linear relationship over distance between 'open visibility' and the 'fully screened' categories and the fact that these graphs meet at around 3 km is an important factor in terms of understanding the visual absorptive capacity of this area. It indicates that at about 3 km from the site, the relative scale in relation to distance of the turbines becomes similar to the height of closer intervening vegetation, mainly in the form of hedgerows and treelines. Within the nearer distance bands the turbines are comparatively taller than such intervening vegetation and tend to rise above it. Whereas, beyond 3 km the reverse scenario tends to be true and open views of turbines are only likely to occur from elevated ground or when the fore-to-middle ground of a view is particularly open. It is also reasonable to extrapolate from these findings that there will rarely be a clear view of more than 5-10 turbines from dwellings in the lowland central portion of the study area, given the spatial distribution of the turbines and the fact that very few dwellings are contained within the open peatland area. This theory was tested with further analysis of just the 'open visibility' class and the results are represented in a map (Figure 13-12 refers) and associated graph (Figure 13-13 refers).

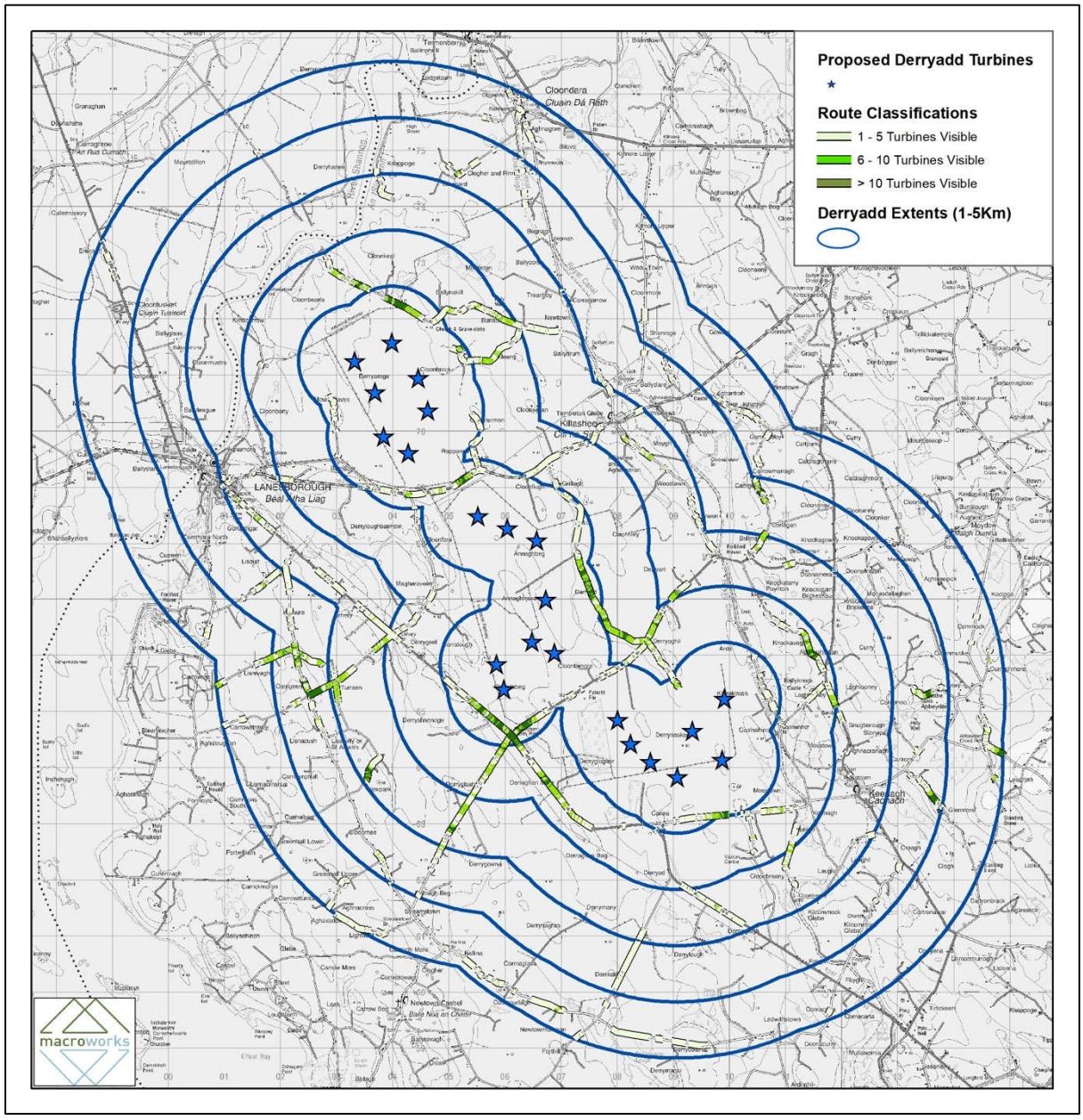

Figure 13-12 Map showing results of additional analysis of RSA 'Open View' category to determine number of turbines visible (see Appendix 13.4 for larger scale version)

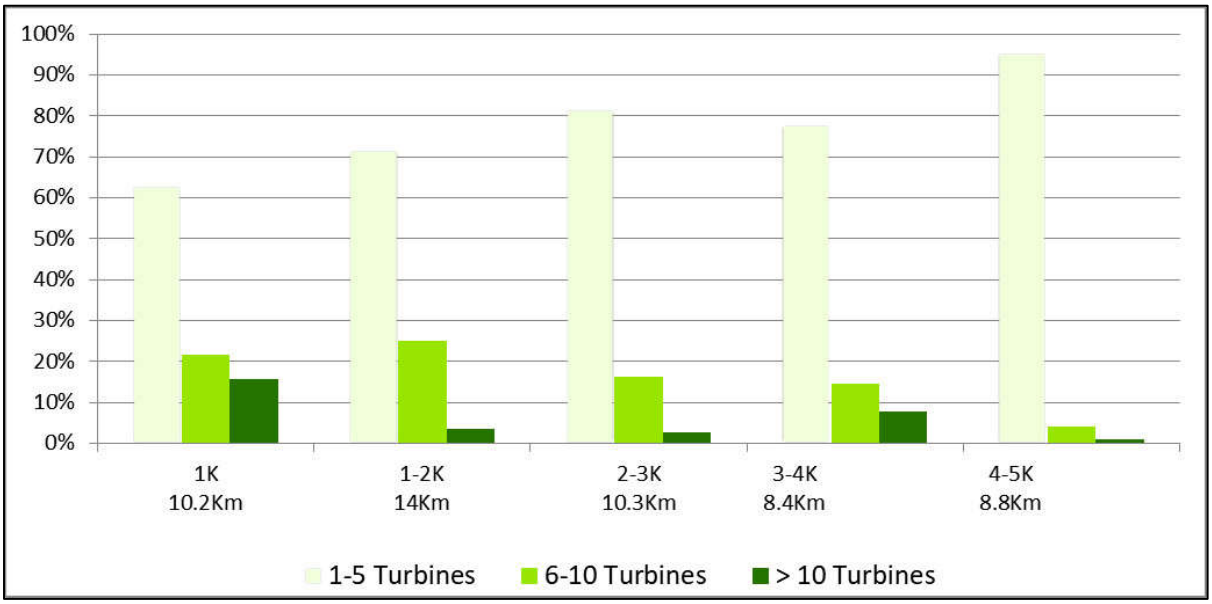

Figure 13-13 Graph showing results of additional analysis of RSA 'Open View' category to determine number of turbines visible

The graph at Figure 13-13 indicates that, by far, the most common scenario is that less than five turbines will be fully visible (blade rotation) from any section of the surveyed road network within 5 km of the turbines. This is consistently the case across all of the distance bands with results ranging between 62% and 95%. A considerably lower proportion of the road network affords views of between 6 and 10 turbines. This only ranges between 5% and 25% across all of the distance bands. The least common scenario is views of more than 10 no. turbines and this ranges from 2% to 15% across the distance bands, but without an obvious trend. The map at Figure 13-12 reveals that views of more than 10 turbines occur on short and sporadic sections of road throughout the nearest 2 km of the site often coinciding with views across peatland. Beyond this distance threshold, views of more than 10 turbines tend to occur from slightly elevated ground to the west and southwest of the site.

13.4.4.3. Visual Receptors

Centres of Population and Houses

The most notable settlement in relation to the proposed development, on the basis of its size and proximity to the proposed wind farm site, is Lanesborough, which is approximately 820 m to the west of the northernmost portion of the proposed wind farm site. The smaller villages of Keenagh and Killashee are situated approximately 2-3 km east of the proposed wind farm site and Cloondara is approximately 4 km to the northeast. Together these settlements are the main centres of population within the central portion of the study area.

The most substantial sized settlements within the study area include Longford Town, situated approximately 7 km northeast of the site, Roscommon approximately 17 km west, Athlone approximately 21 km south and Carrick on Shannon approximately 28 km north of the site. Other notable settlements include Ballymahon approximately 8 km southeast and Ardagh village situated approximately 10 km east of the site.

There are also a number of crossroad settlements and housing clusters lining the local roads throughout the study area and to a lesser degree within the farmed fringes of the peatland site. None of these dwellings are within 780 m of proposed turbines.

Transport Routes

The principal transport route contained within the study area is the M6 motorway between Dublin and Galway. This passes through the southern perimeter of the study area and according to the ZTV map at Figure 13-9 above, will have very limited potential visibility of the proposed turbines at the closest distance of around 21 km.

The next highest order roads within the study area include the N4 and N5 national primary routes. The N4 is situated approximately 10 km northeast of the proposed wind farm site at its nearest point and is oriented in a northwest by southeast direction. Oriented in more of an east-west direction, the N5 diverges from the N4 at Longford Town and is approximately 5 km northeast of the site at its nearest point. The N63, which is oriented in an east-west direction, passes directly through the proposed site to the east of Lanesborough. Located approximately 8 km southeast of the site at its nearest point, the N55 is oriented in northeast - southwest direction. N60 and N61 national secondary routes also pass through the western portion of the study area.

Other notable roads in the immediate vicinity of the site include the R392 regional road, which runs almost parallel to the west/southwest boundary of the proposed wind farm site at varying distances of less than 2 km away to the south of Lanesborough. To the north of Lanesborough is the R371. Oriented in a north-south direction, the R397 regional road is situated just over 2 km east of the proposed wind farm site at its nearest point. The R398 links between the R394 and the R397 passing through the southern section of the proposed wind farm site. Several local roads are also situated in the immediate vicinity of the proposed wind farm site. A dense network of regional and local roads also occurs within the outer extents of the study area.

The Dublin – Sligo national railway line passes through Longford approximately 9 km northwest of the proposed wind farm site, whilst the Dublin to Galway national railway route passes through the settlement of Athlone, approximately 21 km south of the proposed wind farm site.

Tourism, Recreation and Heritage Features

The most notable tourist and heritage feature within the central portion of the study area is the Corlea Trackway. This is an ancient trackway of oak planks that allowed passage for Iron Age inhabitants of this area through the bog. A significant visitor centre has been erected around the exposed trackway by the Office of Public Works and hosts a variety of exhibits and audio-visual displays relating to the way of life at the time in which the trackway was constructed (148 BC). The Corlea Trackway visitor centre is approximately 700 to the south of the proposed wind farm site.

Lough Ree is the second of three major lakes on the River Shannon, which also include Lough Allen to the north and Lough Derg to the south. Lough Ree and the River Shannon are popular for fishing and boating and there are local walks around parts of the shoreline. The northern end of Lough Ree is approximately 5 km from the northwestern portion of the proposed wind farm site and the eastern shores of the Lough remain between about 5 – 8 km of the site as it wraps around it to the south. The River Shannon runs approximately 1.20 km to the northwest of the

site before it passes through Lanesborough having meandered into the study area from the north.

The Hill of Uisneach is an ancient ceremonial hilltop in County Westmeath and was considered to be the centre of Ireland in Irish mythology. There are a number of archaeological remains on the hilltop, which is associated with the festival of Bealtaine. This springtime festival involves the lighting of ceremonial fires on the hilltop. The Hill of Uisneach is approximately 27 km to the southeast of the proposed wind farm site. The hilltop is in private ownership, but visitors can seek access permission from the landowner.

Other notable heritage features include Abbeyderg Monastery near the settlement of Keenagh, which is approximately 3.5 km east of the site.

Inchcleraun or Quaker Island, as it is otherwise known, is an island in the middle of Lough Ree that is home to the ruins of St Diarmaid's Monastery (a National Monument). Inchcleraun is approximately 9 km to the southwest of the site and the ZTV map indicates only partial blade tip visibility is likely to be afforded from the island. There are also the ruins of an Augustinian Monastery on Saints Island in Lough Ree, which lies approximately 8 km to the south of the site (VRP DR16 refers).

Center Parcs Longford Forest site is to the south of Ballymahon and is a family holiday facility (VRP LC6 refers). The site is contained within a forested area some 12 km to the southeast of the proposed wind farm site.

Views of Recognised Scenic Value

Views of recognised scenic value are primarily indicated within County Development Plans in the context of scenic views/routes designations, but they might also be indicated on touring maps, guidebooks, roadside rest stops or on postcards that represent the area.

All of the scenic routes and views that fall inside the zone of theoretical visibility (ZTV) pattern (Figure 13-9 refers) were investigated during fieldwork to determine whether actual views of the proposed wind farm might be afforded. Where inter-visibility could occur, a viewpoint has been selected for use in the visual effect appraisal later in this chapter, otherwise it is omitted with explanation. 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.

Longford County Development Plan (2021-2027)

Volume 2 Appendix 9 of the Longford County Development Plan includes a map with a range of 'Views, Prospects and Scenic Routes'. These views are broken down into two groups; full views and intermittent views and are described in Table 14.2 (full scenic routes) and 14.3 (intermittent scenic routes) of the development plan. Table 13.6 below provides a rationale for selection of relevant designated scenic views from the Longford County Development Plan.

Table 13-6: Rationale for selecting relevant scenic designations from Longford County Development Plan

Longford CDP ref.	Relevance to visual impact appraisal?	VP reference no. herein
FULL VIEWS		
FS.1-5	**Yes Relevant** – ZTV map indicates potential for visibility at intermittent points on all routes. (One illustrative viewpoint has been chosen from this area to represent multiple designated views)	DR4
FS.6-7	**Not Relevant** – Viewpoints located outside of ZTV	-
FS.8-9	**Yes Relevant** – ZTV map indicates potential for visibility at intermittent points on both routes. (One illustrative viewpoint has been chosen from this area to represent multiple designated views)	DR4
FS.10-11	**Not Relevant** – Views are situated outside of the 30km study area extents	-
FS.12	**Yes Relevant** – ZTV map indicates potential for visibility at intermittent points along route. (One illustrative viewpoint has been chosen from this area to represent multiple designated views)	DR4
FS.13-14	**Yes Relevant** – ZTV map indicates potential for visibility at intermittent points on both routes. (One illustrative viewpoint has been chosen from this area to represent multiple designated views)	DR5
FS.15	**Not Relevant** – View situated outside of the 30km study area extent	-
FS.16	**Yes Relevant** – ZTV map indicates potential for visibility at intermittent points along route. (One illustrative viewpoint has been chosen from this area to represent multiple designated views)	DR5
FS.17	**Yes Relevant** – views afforded towards the proposed wind farm site	DR9 & DR10
FS.18	**Yes Relevant** – views afforded towards the proposed wind farm site	DR11
FS.19	**Yes Relevant** – views afforded towards the proposed wind farm site	DR12
FS.20	**Yes Relevant** – views afforded towards the proposed wind farm site	DR13
FS.21	**Yes Relevant** – views afforded towards the proposed wind farm site	DR15
FS.22	**Yes Relevant** – views afforded towards the proposed wind farm site	DR16
INTERMITTENT VIEWS		
IS.1	**Yes Relevant** – ZTV map indicates potential for visibility at intermittent points along route. (One illustrative viewpoint has been chosen from this area to represent multiple designated views)	DR4

IS.2	**Not Relevant** – View situated outside of the 30km study area extent	-
IS.3	**Yes Relevant** – ZTV map indicates potential for visibility at intermittent points along route. (One illustrative viewpoint has been chosen from this area to represent multiple designated views)	DR4
IS.4	**Not Relevant** – View situated outside of the 30km study area extent	-
IS5-6	**Yes Relevant** – ZTV map indicates potential for visibility at intermittent points along route. (One illustrative viewpoint has been chosen from this area to represent multiple designated views)	DR4
IS.7	**Not Relevant** – Viewpoint located outside of ZTV	-
IS.8-11	**Yes Relevant** – ZTV map indicates potential for visibility at intermittent points along route. (One illustrative viewpoint has been chosen from this area to represent multiple designated views)	DR4
IS.12	**Yes Relevant** – views afforded towards the proposed wind farm site	DR7
IS.13	**Yes Relevant** – views afforded towards the proposed wind farm site (One illustrative view has been chosen to represent both FS.17 and IS.13)	DR9
IS.14	**Yes Relevant** – views afforded towards the proposed wind farm site (One illustrative view has been chosen to represent both FS.20, IS.14 and IS.17)	DR13
IS.15-16	**Yes Relevant** – views afforded towards the proposed wind farm site (One illustrative view has been chosen to represent both FS.21, IS.15 and IS.16)	DR15
IS.17	**Yes Relevant** – views afforded towards the proposed wind farm site (One illustrative view has been chosen to represent both FS.20, IS.14 and IS.17)	DR13
IS.18	**Not Relevant** – road heavily enclosed by forest, woodland and hedgerows. Views of turbines unlikely	-

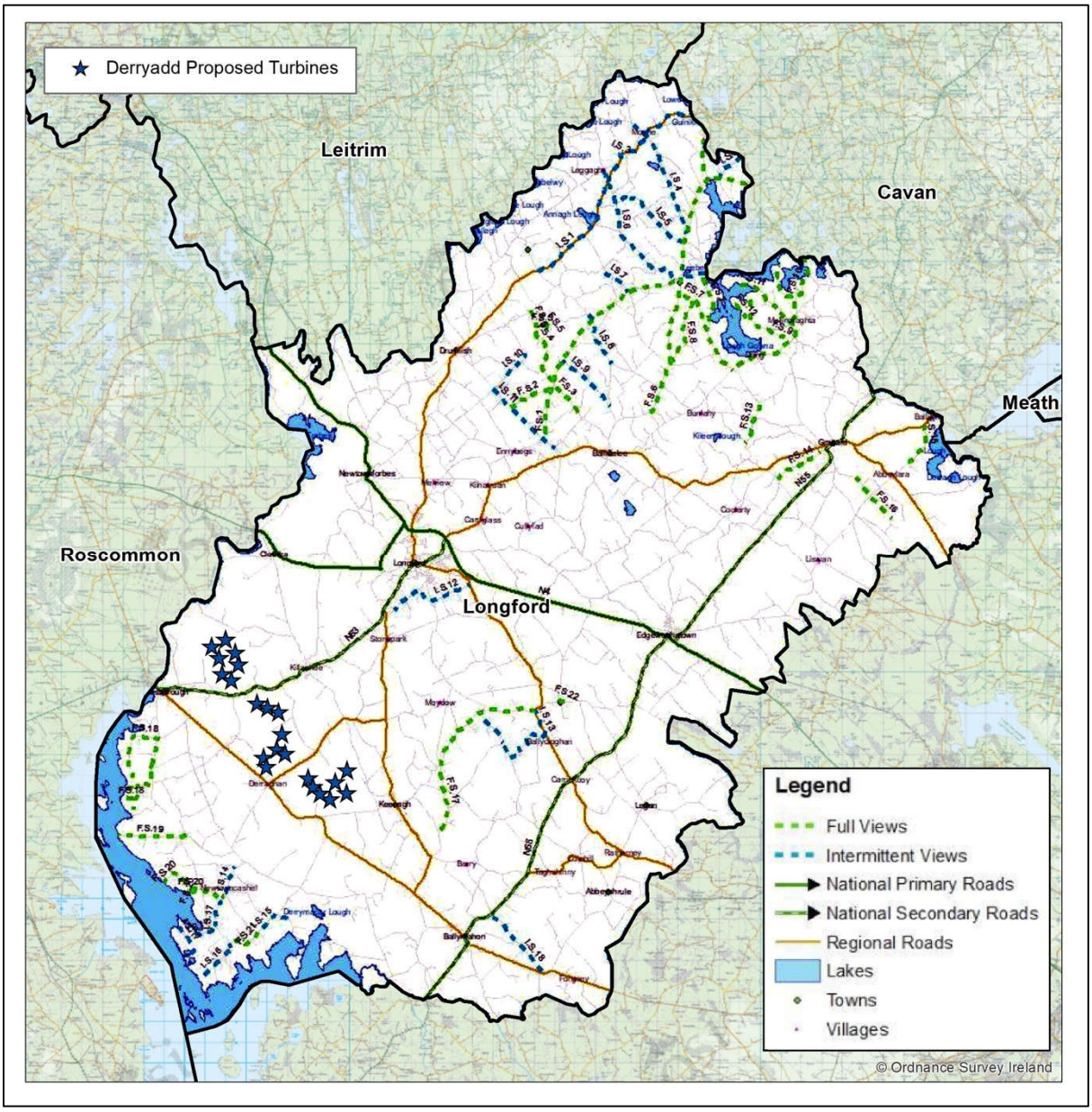

Figure 13-14 Volume 2 Appendix 9 of the Longford County Development Plan showing full and intermittent views in relation to the proposed turbines.

Policy in relation to scenic designations includes the following;

> *'CPO14.8-Preserve views and prospects as illustrated on the accompanying map as part of Appendix 9: Landscape Character and as listed in Tables 14.2 and 14.3.'*
>
> *'CPO14.37-Preserve the views and prospects listed in Table 14.2 and 14.3 and detailed in Appendix 9: Landscape Character with accompanying maps and to protect these views from development which would interfere unduly with the character and visual amenity of the landscape.'*

Roscommon County Development Plan (2022 – 2028)

Appendix 1 Figure 10 of the Roscommon landscape character assessment includes outlining designated scenic views and routes in County Roscommon (Figure 13-15 refers). Table 13-7 below provides a rationale for selection of relevant designated scenic views and routes from the Roscommon landscape character assessment.

Table 13-7: Rationale for selecting relevant scenic designations from Roscommon County Development Plan

Roscommon CDP ref.	Relevance to visual impact appraisal?	VP ref no. herein
SCENIC ROUTES		
R5	**Not Relevant** – Views are oriented away from the proposed wind farm site	-
R7	**Yes Relevant** – views afforded towards the proposed wind farm site	DR08
R8	**Not Relevant** – Viewpoint located outside of ZTV	-
SCENIC VIEWS		
V9	**Not Relevant** – Relates to immediate landscape context not distant views (20+ km)	-
V10	**Not Relevant** – Viewpoint located outside of ZTV	-
V12	**Not Relevant** – Views are oriented away from the proposed wind farm site	-
V13	**Yes Relevant** – views afforded towards the proposed wind farm site	DR02
V16	**Yes Relevant** – views afforded towards the proposed wind farm site	DR03
V17-18	**Not Relevant** – Viewpoint located outside of ZTV	-
V19	**Yes Relevant** – views afforded towards the proposed wind farm site	DR17
V20	**Yes Relevant** – views afforded towards the proposed wind farm site	DR18
V21	**Yes Relevant** – views afforded towards the proposed wind farm site	DR06
V22	**Not Relevant** – Views are oriented away from the proposed wind farm site	-

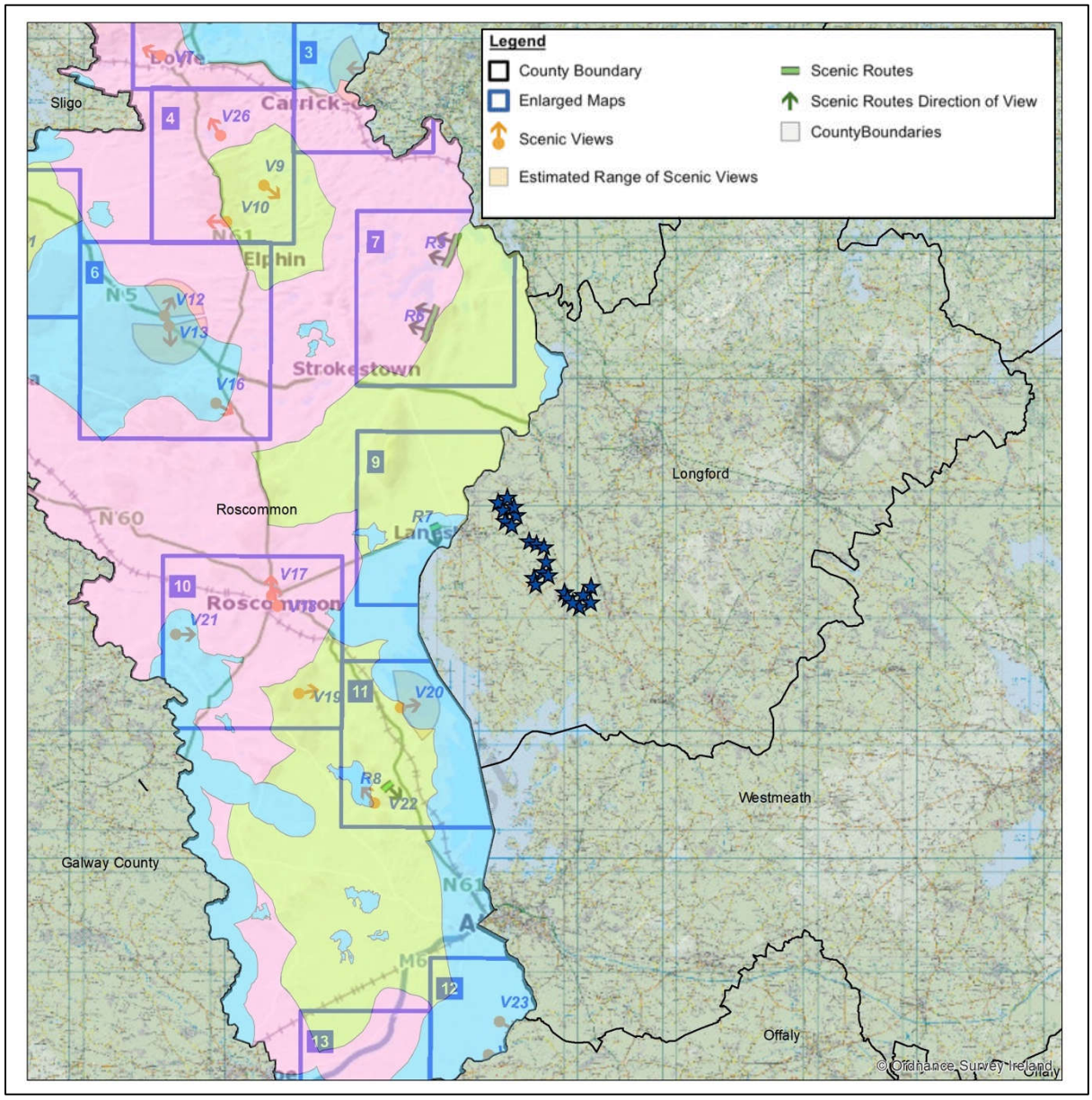

Figure 13-15: Appendix 1 Figure 10 of the Roscommon Landscape Character Assessment showing designated scenic views and routes in relation to the proposed development.

Policy in relation to designated scenic views and prospects includes the following:

> *'NH10.26- Protect important views and prospects in the rural landscape and visual linkage between established landmarks, landscape features and views in urban areas.'*

Westmeath County Development Plan (2021-2027)

Chapter 13 of the Westmeath County Development Plan lists a number of different and distinctive types of scenic routes categorised as both roads based and off road have been identified as follows:

- Lough Ree Driving Route;
- Mullingar Cycling Hub;
- The Táin Trail;
- Old Rail Trail/ Greenway;
- Royal Canal Way;
- Fore Walking Routes; and
- Westmeath Way.

Protected views are listed in Appendix 5 of the Westmeath County Development Plan and are outlined in Table 13-8 below. The locations of these are indicated in Volume 2, Map-67 shown in Figure 13-16 below.

Table 13-8: Rationale for selecting relevant scenic designations from Westmeath County Development Plan

Westmeath CDP ref.	Relevance to visual impact appraisal?	VP ref no. herein
1-3	**Not Relevant** – Views are oriented away from the proposed wind farm site and/or situated outside of ZTV	-
4	**Yes Relevant** - Views afforded towards the proposed wind farm site from Lough Ree	DR26
5-6	**Not Relevant** – Views are oriented away from the proposed wind farm site and/or situated outside of ZTV	-
7	**Yes Relevant** – views afforded towards the proposed wind farm site	DR19
8-9	**Not Relevant** – Views are oriented away from the proposed wind farm site and/or situated outside of ZTV	-
10	**Yes Relevant** – views afforded towards proposed wind farm site	DR20
11-13	**Not Relevant** – Views are oriented away from the proposed wind farm site and/or situated outside of ZTV	-
14	**Yes Relevant** – views afforded towards the proposed wind farm site	DR24
15	**Not Relevant** – View oriented away from the proposed wind farm site and/or situated outside of ZTV	-
18	**Yes Relevant** – views afforded towards the proposed wind farm site	DR24
24	**Yes Relevant** – views afforded towards the proposed wind farm site	DR23
26	**Yes Relevant** – views afforded towards the proposed wind farm site	DR22
27	**Yes Relevant** – views afforded towards the proposed wind farm site	DR21
34	**Not Relevant** – View are oriented away from the proposed wind farm site and/or situated outside of ZTV	-
35	**Yes Relevant** – View oriented slightly oblique to the proposed wind farm site.	DR21

36	**Not Relevant** – Viewpoint situated outside of ZTV	-
37	**Yes Relevant** – views afforded towards the proposed wind farm site	DR21
38	**Not Relevant** – Viewpoint situated outside of ZTV	-

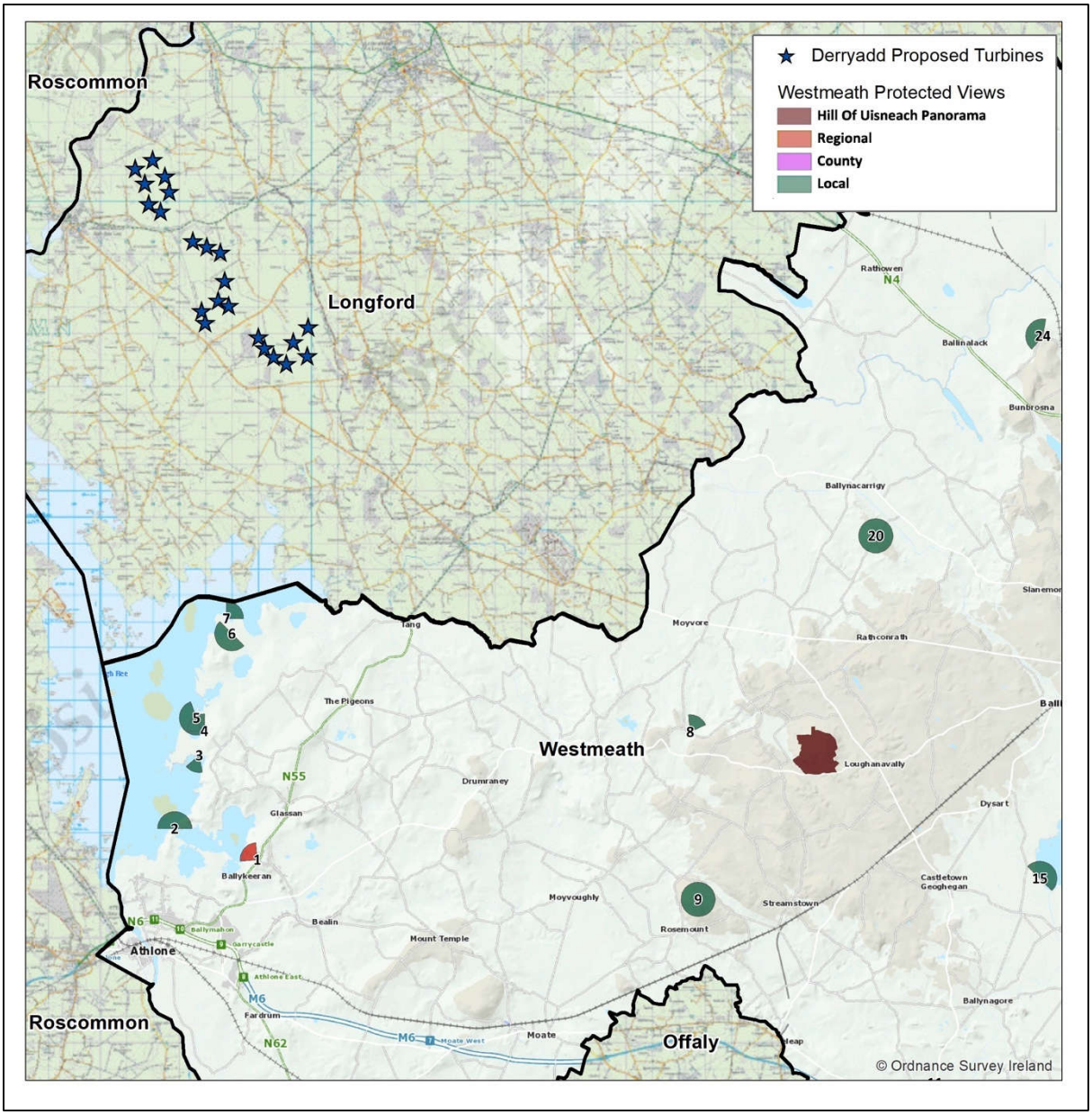

Figure 13-16 Volume 2, Map-67 of the Westmeath County Development Plan showing protected views.

Westmeath protected views policy objectives include the following:

'CPO 13.81- Protect and sustain the established appearance and character of views listed in Appendix 5 of this plan that contribute to the distinctive quality of the landscape from inappropriate development.

CPO 13.82- Provide and maintain facilities, including safe pedestrian access and/or car parking, and where appropriate, associated seats and signs in the immediate vicinity of views that are identified in this plan.

CPO 13.83- Support the restoration of derelict sites and removal of derelict structures adjacent to scenic and tourist routes, using mechanisms such as the Derelict Sites Act 1990.'

Leitrim County Development Plan (2023-2029)

Chapter 11 and Appendix 14 of the Leitrim County Development Plan contains a list of protected views and prospects and the locations of these are indicated in Figure 5.1 in Appendix 14. An excerpt from this map is included in Figure 13-17 below:

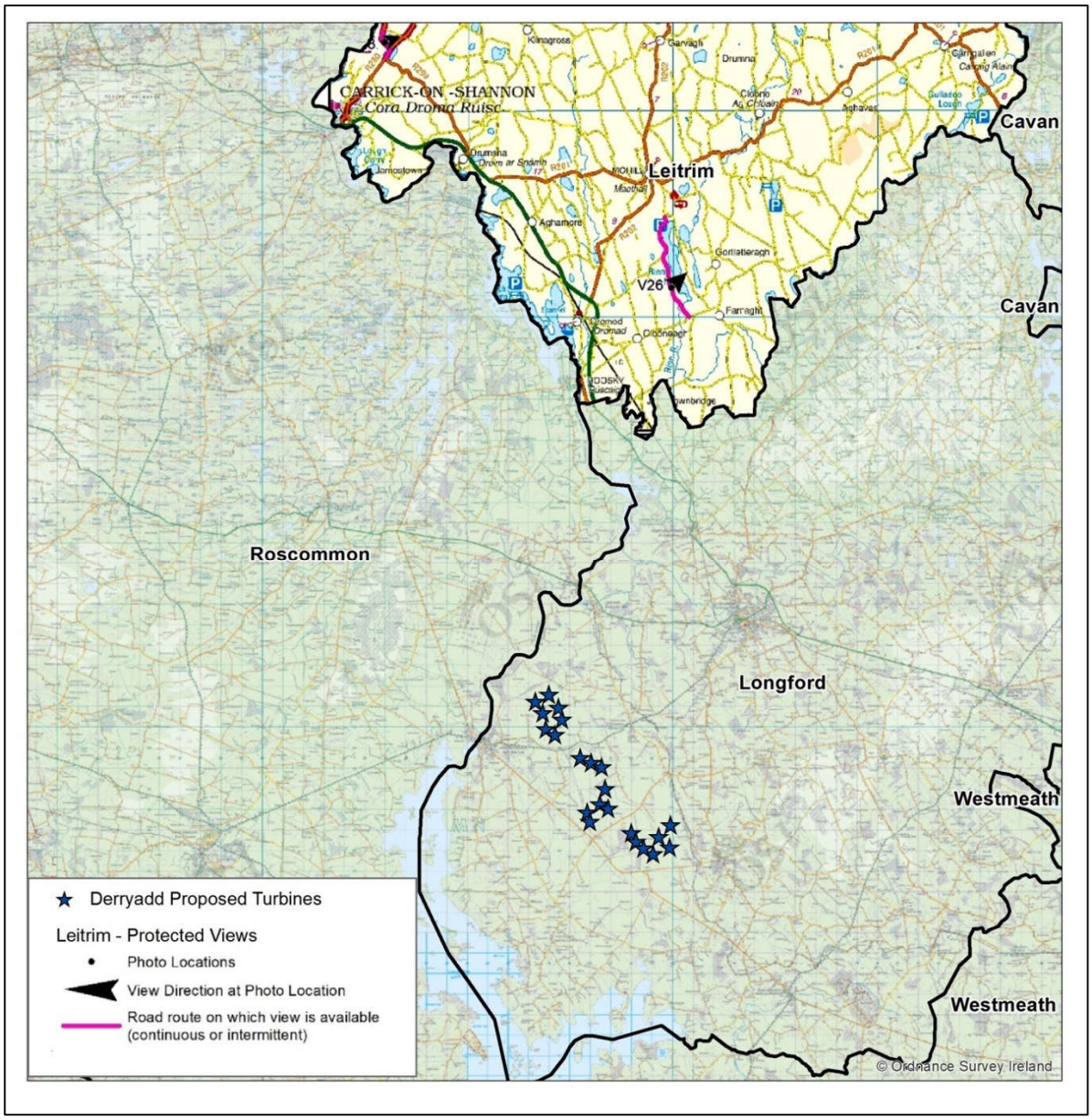

Figure 13-17 Appendix 14 Figure 5.1 of the Leitrim County Development Plan shows protected views and prospects.

Policy in relation to designated scenic views and prospects includes the following:

> *'LD POL 1- To safeguard the protected views and prospects contained in Table 11.8 and identified on Map No. 12 (Volume III - Book of Maps) from intrusive development which would interfere unduly with the character and visual amenity of the landscape.*
>
> *LD POL 2- To protect Areas of Outstanding Beauty and Areas of High Visual Amenity from inappropriate development and reinforce their character, distinctiveness and sense of place.*

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

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

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

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

LD POL 7- To permit development in an Area of Outstanding Natural Beauty where the applicant can satisfy the Planning Authority that it is not practicable to develop in a less sensitive location and where it is demonstrated that the development will not impinge in any significant way on the character, integrity or uniformity of the landscape.'

Objectives in relation to designated scenic views and prospects include the following:

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

LD OBJ 2- To provide and maintain facilities, including viewing areas, lay-bys, safe pedestrian access and/or car parking, and where appropriate, associated seats and signs in the immediate vicinity of views that are identified in this Plan and as funds allow.

LD OBJ 3- To undertake and adopt a landscape capacity assessment of the county for commercial afforestation.

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

13.4.4.4. Identification of Viewshed Reference Points (VRPs) as a basis for Assessment

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 effects of the proposed development 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 effects arising from the proposed development. Instead, the assessors endeavoured to select a variety of receptor locations that would provide views of the proposed development from different distances, different angles and different contexts. These are listed in Table 13.8 and mapped in Appendix 13.5.

The visual effect of a proposed development 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; and
- Amenity and heritage features.

VRPs might be relevant to more than one category and this makes them even more valid for inclusion in the assessment. In such cases, the VRP will be identified in terms of the primary reason for which it was chosen, but all attributes of the receptor location will be considered in the assessment of its sensitivity.

Key Views

These VRPs are at features or locations that are significant at the national or even international level, typically in terms of heritage, recreation or tourism. They are locations that attract a significant number of viewers who are likely to be in a reflective or recreational frame of mind, possibly increasing their appreciation of the landscape around them. The location of this receptor type is usually quite specific.

Designated Scenic Routes and Views

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

Local Community Views

This type of VRP represents those people who live and/or work in the locality of the wind farm, 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

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

Major Routes

These include national and regional level roads and rail lines and are relevant VRP locations due to the number of viewers potentially impacted by the proposed development. The precise location of this category of VRP is not critical and might be chosen anywhere along the route

that provides clear views towards the proposed wind farm site, but with a preference towards close and/or elevated views. Major routes typically provide views experienced whilst in motion and these may be fleeting and intermittent depending on screening by intervening vegetation or buildings.

Public Amenity and Heritage Features

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

Table 13-9: Outline Description of Selected Viewshed Reference Points (VRPs)

VRP No.	Location	Direction of view
DR1	N4 at Fearnaght	S
DR2	Rathcroghan heritage area on the N5	SE
DR3	Local road at Carns	SE
DR4	Local road at Corn Hill	SW
DR5	Graveyard at Granard	SW
DR6	R366 at Castlecoote	E
DR7	Graveyard on local road at the outskirts of Longford	SW
DR8	N63 west of Lanesborough	E
DR9	Local road at Castlerea Mountain	W
DR10	Local road south of Abberyderg	W
DR11	Local road south of Lanesborough	E
DR12	Local road at Carrickmoran	NE
DR13	Local road at Elfeet	NE
DR14	Local road at Newtown Cashel	N
DR15	Local road at Corrool	N

VRP No.	Location	Direction of view
DR16	Local road causeway to Saints Island	N
DR17	Local road at Moydow, south of Roscommon	NE
DR18	Local road west of Lough Ree	NE
DR19	Local road at Glebe east of Lough Ree	N
DR20	Local road at Littletown	N
DR21	Local road west of Lough Owel	NW
DR22	Local road south east of Ballynacarrigy	NW
DR23	R392 west of Mullingar	NW
DR24	Hill of Uisneach	NW
DR25	Lough Ree (north)	NE
DR26	Lough Ree (south)	E
DR27	Sliabh Bawn Multi-Use Forest Trail, Doughil	SE
LC1	Local road north of site	S
LC2	Local road southeast of Lanesborough	E
LC3	Canal crossing west of Keenagh	NW
LC4	Local road at Derryadd	W
LC5	R398 at Cloontaghmore	NW
CP1	Cloondara north of site	S
CP2	Lanesborough Bridge	E
CP3	Lanesborough east (N63)	E
CP4	Killashee	W
CP5	Keenagh (R397)	NW
CP6	Roscommon Town	E
CP7	Ballymahon	NW
MR1	R371 south of Curraghroe	SE
MR2	N5 east of Cloondara	S
MR3	N5 west of Longford	SW
MR4	R371 northwest of Lanesborough	SE
MR5	N63 at Rappareehill	NW/SE

VRP No.	Location	Direction of view
MR6	R398 at Derrygeel	NE
MR7	R398 at Cloontabeg	N/SE
MR8	R392 southwest of site	NE
MR9	R392 northwest of Ballymahon	NW
MR10	N63 northeast of Roscommon Town	E
AH1	Royal Canal Way southeast of Killashee	W
AH2	Royal Canal Way northwest of Keenagh	W
AH3	Corlea Trackway visitors centre (adjacent)	NW
AH3a	Corlea Trackway visitors centre (adjoining)	NW
AH4	River Shannon - North of Site	S
AH5	Local road near Center Parcs, Clooncallow	NW

13.5. SENSITIVITY OF RECEPTORS

13.5.1. Landscape

13.5.1.1. Landscape Character Value and Sensitivity

Effects on landscape character will be considered at both the localised scale of the site and its immediately surrounding landscape in the central portion of the study area (<5 km), as well as the broader scale of the wider study area (5-30 km).

13.5.1.2. Central portion of the study area (<5 km)

The site and its immediate surrounds comprise of a fairly even mix of cutaway peatland and pastoral farmland and have a productive and utilitarian character. There is a strong connection between the primary industries of this area and the settlement of Lanesborough, which is a rural service centre and contains a substantial former peat-fired power station. The central portion of the study area is typical of many parts of the midlands landscape and whilst it could be described as representative of a midlands landscape, it is not particularly rare or distinctive in character.

In the transitional zones between sections of cutaway peatland and productive farmland there are transitional areas of untouched bog and scrubland as well as marginal farmland. Though not aesthetically distinctive these apparently fallow areas are often the subject of conservation based designations. Indeed, there are 11 no. areas identified by NPWS as having one of more associated designations in the study area. These mainly relate to bogs and wetland features.

Notwithstanding the general utilitarian character of the central portion of the study area, there are some distinctive elements and important landscape associations. The River Shannon, which is the largest and longest river in the Country, passes around 2 km to the northwest of the nearest turbine and aside from being the principal divide between the east and west of Ireland,

has been an important waterway for millennia. The north-western extent of the Royal Canal, an important historic transport corridor and now recreational feature, passes a short distance to the east of the site. It connects from the River Shannon to the north of the site, through the midlands, to Dublin. The other important landscape and heritage association for the central portion of the study area is the 'Corlea Trackway'. This is a section of an ancient oak plank track that would have provided access to or through the bog for the area's inhabitants in the Iron age. It is one of the oldest such features to be found in Europe and has a dedicated visitor centre located 1km southwest of the southernmost portion of the proposed development site.

Overall, it is considered the value of the landscape of the central portion of the study area is considered to relate more to rural productivity and the subsistence of rural communities than to scenic or picturesque values. Whilst there is some conservation value evident in the number of ecological designations within the central portion of the study area, such features tend to be within subtle transitional zones between the key productive land uses and only provide a modest contribution to the overall landscape character. On the basis of these reasons, the landscape sensitivity of the site and central portion of the study area is deemed to be Medium-low.

13.5.1.3. Wider Study Area

The landscape character of the wider study area is predominantly rural consisting of lowland farming, cutaway peatland and occasional forest plantations within upland areas. In this respect, the character is not dissimilar to the central portion of the study area, but the proportion of peatland areas is much lower. Wind energy development is present but is not a defining landscape element.

Within the wider study area there are some sensitive landscape features and the most notable of these is the substantial sized Lough Ree on the River Shannon corridor. This has a number of heritage associations, especially relating to its islands and has been an important water body within this region since antiquity. Lough Ree is also valued for recreational and scenic amenity reasons. The River Shannon itself traverses the wider study area from north to south and is a significant landscape feature in the context of both the immediate environs of the site and the wider study area.

There is a lake rich drumlin zone within the northernmost quarters of the study area (greater than 10 km north of the proposed wind farm site). This is an area of relatively distinctive character, where recreational and scenic value is attached to the lakes. However, vast drumlin areas occur between County Mayo and County Cavan and this is not a particularly rare or susceptible landscape type.

There are a series of upland plateaus, ridges and hilltops within the outskirts of the study area and the most prominent of these is the elongated ridge of Slieve Bawn, which lies some 8 km to the northwest of the site. There is a subtle area of elevated ground on the eastern side of Lough Ree that runs between approximately 5 km and 8 km to the west of the site and acts as something of a physical and contextual barrier between the lake and the proposed wind farm site environs. In heritage terms, the most renowned hilltop within the study area is the Hill of Uisneach some 27 km to the southeast of the site. This site is steeped in Irish mythology has a number of archaeological remains and is the home of the pagan festival of Bealtaine. Nonetheless, this hilltop is contained in private ownership and is not as well known to the general public as the likes of the Hill of Tara.

Although the wider study area contains some notable landscape features it is not considered that it has a particularly rare or distinctive 'landscape image' or iconic associations. Like the central portion of the study area, the principal landscape values appear to relate to rural subsistence and productivity and these values are not particularly susceptible to new forms of rural development. Overall, it is considered that the landscape sensitivity of the wider study area is Medium-low with some singular features of medium or high landscape sensitivity.

13.5.2. Visual

Visual sensitivity is determined for each of the selected viewpoints in Appendix 13.1.

13.6. POTENTIAL EFFECTS

13.6.1. Do-nothing Scenario

As outlined in the Guidelines on the information to be contained in Environmental Impact Assessment Reports (Environmental Protection Agency (EPA), 2022) the description of Do-Nothing effects relates to 'the environment as it would be in the future should the proposed development not be carried out'.

In the Do-Nothing Scenario, the existing lands will continue to be utilised for its current land use purposes. Peat extraction ceased at the proposed wind farm site in 2019. In this scenario the site would continue to naturally revegetate as is evidenced by those areas which ceased peat production many years prior to 2019. The site would continue to operate in compliance with its IPC licence requirements (ref. no P0504-01). This would involve the continuation of ongoing decommissioning activities associated with the removal of peat stockpiles and all peat extraction machinery, rail infrastructure, structures and materials from the site. Following the successful decommissioning of the site it is intended that the site would be rehabilitated in line with condition 10 of the IPC licence.

In the context of this proposed development, the lands within the proposed wind farm site would remain as they are presently. The site is likely to remain as cutaway peatland and fringe scrubland, whilst slowly reverting to a more naturalistic state in response to current and future Bord na Móna restoration measures as commercial peat extraction has ceased. Overall, it is not considered that there will be any significant landscape or visual effects in a do-nothing scenario as the most likely outcome is that there will not be any noticeable change to the baseline context.

13.6.2. Construction Phase – Landscape Effects

13.6.2.1. Physical Effects on Landscape Elements

The physical landscape as well as the character of the site and its immediate surroundings is affected by the proposed turbines as well as ancillary development such as access and wind farm roads, areas of hard standing for the turbines, substation, battery storage facility and control buildings. By contrast, for the wider landscape of the study area, landscape effects relate almost exclusively to the influence of the proposed turbines on landscape character, as ground-based structures and activity will not be apparent at greater distances.

It is considered that the proposed development will have a relatively minor physical effect on the landscape within the site as the proposed development features have a modest construction

'footprint' in the context of the overall site. Furthermore, the site consists of highly modified cutaway peatland. The current topography and land cover of the site will remain largely unaltered with construction being limited to tracks, areas of hard standing for the 22 no. turbines, 2 no. peat deposition areas, 1no. substation, 1no. battery storage EBOP compound, 3 no. amenity carparks, an underground 110kV grid connection, 2 no. permanent meteorological masts as well as one substation and 4 no. temporary site construction compounds. A dispersed network of 4 no. on-site borrow pits will be utilised for the winning of building aggregates. Excavations will tie into existing ground levels and will be the minimum required for efficient working. Any temporary excavations or temporary stockpiles of material will be re-graded to marry into existing site levels and reseeded or left to regenerate appropriately in conjunction with advice from the project ecologist.

The land cover of the proposed wind farm site will only be interrupted as necessary to build the structures of the development and to provide access. There may be some minor felling of existing vegetation to facilitate access and construction both within the site and at pinch-points along the proposed haul route. However, much of the vegetation within the proposed wind farm site consists of bare and recolonised cutover bog, with scattered scrub and immature woodland, rather than high occurrence of mature treelines or hedgerows. Any bare earth above the underground cables will be allowed to naturally regenerate. Any vegetation removed along the haul route will be replaced with new advanced nursery stock where permanent clearance is not required.

The proposed substation will be contained within the site adjacent to the north of the N63 national secondary road in the townland of Rappareehill. The proposed 110 kV substation will be connected to the national electricity grid via a loop-in connection to the nearby Lanesborough-Richmond 110kV Overhead Line (OHL) Network, located approximately 250 m south of the proposed substation. The loop-in connection will comprise of high voltage underground cables connecting the substation to the Lanesborough-Richmond 110kV OHL. The proposed grid connection requires approximately 460 m of 110 kV underground cable (UGC) installation from the 110 kV onsite substation to the existing OHL to the south. The substation and associated cable routes will not involve the excavation of virgin ground or the removal of any substantial vegetation structures (hedgerows / woodlands). The overall footprint of the above ground elements of the proposed development (excluding the haul route) will be approximately 78 ha.

13.6.2.2. Effects on Landscape Character

Site activity will be at its greatest during the construction phase due to the operation of machinery at the site and movement of heavy vehicles to and from site. It will reach its peak when the turbines have been constructed and are not yet commissioned and are facing in different directions with construction phase features and activity still present. This phase will have a more notable effect on the character of the site than the operational phase, but it is a short-term effect that will cease as soon as the proposed development is constructed and commissioned.

Whilst there may be some temporary site lighting required during those portions of the construction period spanning winter months, there will be no significant light-spill from the site during the construction phase.

In summary, there will be physical impacts on the land cover of the site as a result of the proposed wind farm, but these will be relatively minor in the context of this the extracted peatland landscape. There will also be impacts on the landscape character of the site and the surrounding study area as a result of construction related activities and features as the proposed turbines are constructed. For the reasons outlined above, the magnitude of the landscape effect during the construction phase is deemed to be 'Medium' within the site and in the central portion of the study area (< c. 5 km) reducing to 'Low' and 'Negligible' at increasing distances beyond this threshold.

13.6.2.3. Significance of Construction Phase Landscape Effect

As outlined in section 13.3.3 above, the significance of landscape effects is a function of landscape sensitivity weighed against the magnitude of the landscape effect. This is established on the basis of the significance matrix (Table 13-3) in conjunction with professional judgement. For the proposed wind farm site and central portion of the study area (<1-2km), the significance of Construction Phase landscape effect is judged to be Moderate on the basis of 'Medium-low' landscape sensitivity coupled with a 'Medium' magnitude of landscape effect.

Within the wider study area, beyond approximately 5 km, it is not considered that the magnitude of effect on the character of the landscape will be greater than 'Low'. This will further reduce as the proposed development becomes a proportionately smaller component of the overall landscape fabric. Thus, the significance of landscape effect is deemed to reduce from 'Slight' to 'Imperceptible' with increasing distance for the wider study area.

13.6.3. Construction Phase – Visual Effects

During construction, the main visual impacts will arise from frequent heavy vehicle movements and worker vehicles travelling to and from the site and using the site entrance. There will be construction machinery on site, which may rise above intervening vegetation and buildings. Some of the most notable construction phase visual effects will result from the erection of the proposed turbines using tower cranes including the presence of the full complement of pre-commissioned turbines towards the end of the construction phase. There will also be stockpiles of stripped topsoil/peat as well as construction materials awaiting use. However, a large part of this activity within the proposed wind farm site will remain screened from view by the peatland fringe scrubland as well as hedgerows and treelines that surround the proposed wind farm site in the agricultural lands that abut the peatland context of the site. Furthermore, construction-related activity is short-term in duration and will cease once the proposed development becomes fully operational.

For these reasons, the magnitude of visual impact at the construction phase is deemed to be no greater than High-Medium at the nearest surrounding receptors, however, this reduces swiftly at greater distances from the site, especially within the wider study area, where the magnitude of visual impact is considered to be no greater than Low/Low-negligible.

13.6.3.1. Significance of Construction Phase Visual Effects

For receptors within the immediate study area (<1-2 km from the site), the highest significance of visual effect will be Substantial-moderate at AH3 and AH3a, which represent Corlea Trackway as this receptor is deemed to be of High visual receptor sensitivity (see Appendix 13.1). More typically, for less distinctive rural receptors within the immediate context of the site that are assigned Medium to Medium-low sensitivity, the significance of effect will be

'Moderate'. Thereafter, the significance of effect will reduce to Moderate-slight 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 wind farm site will generate significant visual effects during the Construction Phase.

13.6.4. Operation Phase – Landscape Effects

For most commercial wind energy developments, the greatest potential for landscape effects to occur is as a result of the change in character of the area within and immediately surrounding a proposed wind farm development due to the introduction of tall structures with moving components. Thus, wind turbines that may not have been a characteristic feature of the area become a new defining element of that landscape character. In this instance, wind turbines are not a familiar feature of the immediate area, but they are present within the wider landscape (Sliabh Bawn and Skrine Wind Farms) and also within similar peatland landscape types within midland counties (Mount Lucas – Offaly, Monaincha – Tipperary, Lisheen Mines and Bruckana – Tipperary/Kilkenny/Laois).

In terms of scale and function, the proposed wind farm is well assimilated within the context of the central portion of the study area, which consists of large cutaway peatlands and adjoining farmland that generally comprises a broad-grained field pattern. These productive land uses also impart a utilitarian landscape character within which the proposed wind farm will not be incongruous.

Although the proposed wind farm represents a stronger human presence and intensity of built development than currently exists on the site, it will not materially alter the salient rural landscape character. This is on the basis that wind farms are already present on flat peatland sites throughout the midlands without a sense that such areas have become industrialised. In part, this is because the nature of wind farm developments comprises dispersed (ca. 500 m apart), point-based vertical features that do not significantly interrupt the underlying terrain and land cover patterns. Furthermore, in Ireland, they are synonymous with rural, upland and peatland landscapes rather than urban or industrial landscapes.

It is important to note that in terms of duration, this proposed wind farm proposal represents a long term, but not permanent impact on the landscape and is reversible. The lifespan of the proposed development is 30 years, after which time the wind turbines may be replaced with a new set of machines, subject to planning permission being obtained, or the site may be decommissioned fully, with the exception of the electricity substation, underground grid connection and amenity access tracks. if the proposed wind farm is decommissioned, within 2-3 years of decommissioning there will be little evidence that a wind farm ever existed on the 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 amenity access tracks.

It is considered that this scale of development can be comfortably assimilated into this productive rural / cutover peatland landscape context without undue conflicts of scale with underlying landform and land use patterns. There is a legacy of energy production on this site and in the surrounding area and this proposed wind farm represents a more sustainable alternative means of energy production. Although there is singular landscape features of higher

sensitivity contained within the central portion of the study area, such as the River Shannon and the Royal Canal, it is not considered that the proposed wind farm will alter any salient aspects of their character, which relates much more to their immediate corridors. This is a separate consideration to the visual effects that may occur from these features when they are considered as 'visual receptors' (places from which people can view the proposed wind farm), which is addressed in the visual effect section 13.6.35 below.

13.6.4.1. Significance of Operation Phase Landscape Effects

For the proposed site and central portion of the study area (<1-2km), the significance of Operational Phase landscape effect is judged to be Moderate on the basis of 'Medium-low' landscape sensitivity coupled with a 'Medium' magnitude of landscape effect. Within the wider study area, beyond approximately 5 km, it is not considered that the magnitude of effect on the character of the landscape will be greater than 'Low'. This will further reduce as the proposed development becomes a proportionately smaller component of the overall landscape fabric. These levels of effect are similar to the construction phase landscape effects due to the main influence being the presence of the proposed turbines in both phases.

13.6.5. Operation Phase - Visual

Table 13.10 below summarises the full textual assessment of visual effects for each Viewshed Reference Point (VRP) contained in Appendix 13.1 and Volume IV (Photomontage Booklet). 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 13.10 in order to identify patterns of effect to better inform the conclusions of this assessment.

Table 13-10: Summary of Visual Impacts at Viewshed Reference Points (VRPs)

VRP No.	Distance to nearest visible turbine (km)	No. of turbine nacelles visible (Montage)	Visual receptor sensitivity	Visual effect magnitude	Significance of visual effect
DR1	21.2	22	Medium	Low	**Slight**
DR2	31.7	0	High	Negligible	**Imperceptible**
DR3	26	12	High medium	Low negligible	**Slight-imperceptible**
DR4	19.6	22	High medium	Low negligible	**Slight-imperceptible**
DR5	26.5	15	High	Low negligible	**Slight**
DR6	N/A	0	High medium	Negligible	**Imperceptible**
DR7	7.4	22	High medium	Medium low	**Moderate-slight**

VRP No.	Distance to nearest visible turbine (km)	No. of turbine nacelles visible (Montage)	Visual receptor sensitivity	Visual effect magnitude	Significance of visual effect
DR8	5	19	High-medium	Medium	**Moderate**
DR9	6.1	7	High medium	Low	**Moderate-slight**
DR10	4.7	13	Medium	Low	**Slight**
DR11	5.1	18	Medium	Medium low	**Moderate-slight**
DR12	6.2	6	Medium	Medium low	**Moderate-slight**
DR13	6.8	21	High medium	Medium low	**Moderate-slight**
DR14	5.8	10	High medium	Low	**Slight**
DR15	7.6	15	Medium	Low	**Slight**
DR16	7.1	3	High	Low	**Moderate-slight**
DR17	18.5	22	High medium	Medium low	**Moderate-slight**
DR18	13.1	20	High medium	Medium low	**Moderate-slight**
DR19	13.8	22	High medium	Low	**Slight**
DR20	12.2	10	High medium	Low	**Slight**
DR21	28.6	6	High medium	Negligible	**Slight-imperceptible**
DR22	22.7	17	High medium	Negligible	**Slight-imperceptible**
DR23	23.9	21	High medium	Low negligible	**Slight-imperceptible**
DR24	25	21	Very high	Negligible	**Slight-imperceptible**
DR25	10	0	High	Negligible	**Imperceptible**
DR26	13.2	13	High	Low-negligible	**Slight-imperceptible**
DR27	7.7	22	High-medium	Medium-low	**Moderate-slight**
LC1	0.9	10	Medium	High	**Substantial-moderate**
LC2	1.2	4	Medium low	High medium	**Moderate**
LC3	1.7	1	Medium	Medium low	**Moderate-slight**
LC4	0.8	21	Medium low	High medium	**Moderate**
LC5	0.9	6	Medium-low	Low	**Slight**
CP1	4.7	2	Medium low	Medium low	**Moderate-slight**
CP2	3.3	0	Medium	Negligible	**Imperceptible**
CP3	2.6	2	Medium low	Medium	**Moderate**

VRP No.	Distance to nearest visible turbine (km)	No. of turbine nacelles visible (Montage)	Visual receptor sensitivity	Visual effect magnitude	Significance of visual effect
CP4	2.4	6	Medium	Medium Low	**Moderate-slight**
CP5	2.3	2	Medium low	Medium low	**Moderate-slight**
CP6	N/A	0	Low	Negligible	**Imperceptible**
CP7	7.8	0	Low	Low-negligible	**Imperceptible**
MR1	5.6	17	Low	Medium low	**Slight**
MR2	N/A	0	Low	Negligible	**Imperceptible**
MR3	5.2	15	Low	Low	**Slight-imperceptible**
MR4	8	5	Medium low	Medium low	**Moderate-slight**
MR5	3.6	9	Medium-low	High-medium	**Moderate-slight**
MR6	0.7	14	Medium low	Medium low	**Moderate-slight**
MR7	1.9	22	Medium low	Medium low	**Moderate slight**
MR8	0.7	18	Medium low	Medium low	**Moderate-slight**
MR9	1.6	2	Medium low	Low	**Slight**
MR10	4.3	15	Medium low	Low	**Slight**
AH1	N/A	0	High medium	Negligible	**Imperceptible**
AH2	1.1	6	High medium	Medium low	**Moderate**
AH3	1.6	16	High	Medium	**Substantial-moderate**
AH3A	1.6	21	High	Medium	**Substantial-moderate**
AH4	2	7	High	Medium-low	**Moderate-slight**
AH5	N/A	0	Medium-low	Negligible	**Imperceptible**

13.6.5.1. Effects on Designated Views

There are 26 no. designated scenic views that are considered relevant to this visual impact assessment and some of these might represent a cluster of similar views, particularly within outlying parts of the study area. Whilst this may seem to be a substantial number of scenic designations, it is important to remember that this is a 30 km radius study area incorporating designations from four different County Development Plans. Most of the designated scenic routes or views are associated with long distance hilltop views across the lowland landscape of the study area. The nearest of the designated views are almost 5 km from the proposed wind farm site and the majority (15 no.) are more than 10 km away. The remainder tend to be contained within the low crest of hills that define the eastern side of Lough Ree (DR11 – DR16)

or the elevated ground associated with Castlerea Mountain to the east of the site (DR9 and DR10). The more isolated DR7 is from an elevated section of road to the west of Longford Town and DR8 is adjacent to the northern end of Lough Ree near Lanesborough.

The significance of visual effects in respect of the more outlying (>10 km) scenic designations is not considered to be higher than 'Moderate-slight' in any instance (DR17 and DR18) and is generally 'Slight' or 'Slight-imperceptible'. It is important to reiterate that these results account for the higher order sensitivity of the designated views in question. However, the sensitivity tends to relate almost wholly to the vastness of the view on offer as opposed to any sense of the naturalistic or striking landscape features within views across rural lowlands and bogs. Two exceptions are DR17 and DR18, which overlook Lough Ree and this partly accounts for the comparatively higher significance levels for these two viewing locations. There are also two views from within Lough Ree (DR25 and DR26) with the first of these having no discernible view of turbines and the second having restricted and distant views of only a modest proportion of the development – resulting in a 'Slight-imperceptible' significance of effect.

The highest level of sensitivity attributed to any of the designated viewpoints is 'Very High' in respect of DR24 from the top of the Hill of Uisneach. This relates mainly to its mythological associations as the centre of Ireland and the ceremony of Bealtaine. Nonetheless, the very distant view of the proposed development some 25 km to the northwest results in a 'Slight-imperceptible' significance of visual effect at this location. Although not formally designated, DR27 is included here due to the notable recreational resource at this location. Similar to DR24, DR27 is a hilltop view but is located closer to the proposed wind farm site resulting in an increased scale of the turbines, consequently producing to a 'Moderate-slight' significance of visual effect.

Viewshed reference points DR11 to DR16 lie between 5 km and 8 km to the west and southwest of the site, however, the rationale for their designation would appear to principally relate to views across Lough Ree in the opposite direction to the proposed development. Nonetheless, several of these (DR11, DR13 and DR14) also afford elevated views to the east. Again, the highest significance of effect is deemed to be no greater than 'Moderate-slight' for any of these views. Although the proposed wind farm site has a considerable lateral extent in some of these views, the turbines are presented with a relatively generous spacing (low intensity and clutter) and with a modest degree of contrast above the flat skyline. They are a background feature of a broad, flat lowland landscape. Similarly benign views of the proposed development are afforded from the slightly elevated DR9 and DR10 on the opposite side of the development. Indeed, DR9 offers one of the more contextual views of the wind turbines trailing across the productive rural landscape setting of the central portion of the study area.

Viewpoint DR7 at the outskirts of Longford Town is afforded a partial view of the northern end of the proposed wind farm site and the turbines are presented in an unambiguous manner, resulting in a 'Slight' significance of visual effect. There is a higher degree of contextual ambiguity associated with viewpoint DR8 from the eastern approach to Lanesborough. In this scenario the turbines are seen to rise above the settlement and the Lanesborough Power Station with little sense of the reality of their peatland landscape setting well beyond these features. The turbines at the southern end of the development are presented with a slightly better understanding of relative distance and context as a backdrop to views of the northern end of Lough Ree. The principal view of the Lough winding its way southwards is unaffected by

the turbines and on balance the significance of visual effect is determined to be 'Moderate' in this instance – the highest significance of the large scenic designation viewpoint set.

13.6.5.2. Effects on Local Community Views

In this instance, there were five viewpoints selected principally on the basis of representing typical views for local residents within approximately 5 km of the proposed wind farm site. However, many more of the major route (MR) centre of population (CP) and Amenity and Heritage (AH) views are also representative of the Local Community (LC) receptor set.

The visual effect issues most likely to occur in respect of local community views for peatland-based wind farms such as this are prominent (close) turbines appearing within rural residential scenes where there may be little sense of the vast cutaway peatland context that exists just beyond the nearest hedgerow (out-of-context views). This type of situation occurs with respect to LC1 and, to a lesser extent, LC5 resulting in a 'Substantial-moderate' and a 'Slight' significance of effect respectively. In the case of LC1, the viewpoint is located at a local graveyard and turbines will be seen to rise at various scales (due to relative proximity) above and between sections of vegetation that enclose the setting. The nearest turbine also generates a degree of scale conflict in relation to a foreground farmhouse that is seen on the same alignment. Two prominent turbines are partially visible beyond a foreground dwelling to the northeast and several smaller scale cohorts located further away but visible to the north also emerge above nearby vegetation at LC2 resulting in a 'Moderate' significance of effect for a series of dwellings that flank the western side of the peatland.

LC3 is not so much a residential view, but a notable view on the local road network along the Royal Canal from a local road overpass near Keenagh. In this case a single turbine will occur on direct alignment with the Canal corridor, but in a clear and unambiguous manner that is deemed to result in a 'Moderate-slight' visual effect significance.

LC4 represents a clear contextual view of the proposed wind farm site within its underlying landscape context of cutaway peatland from an area of peatland fringe farmland just to the east of the site. Though the proposed development is substantially visible from LC4 throughout all of the western quarters, the turbines have a fairly relaxed arrangement and the variation in perceived scale between the nearest and furthest units generates a strong sense of perspective and sense of depth and distance to the layout. On balance the significance of effect is deemed to be 'Moderate'.

13.6.5.3. Effects on Centres of Population

As with local community views, the greatest potential for significant visual effects to occur from settlement-based viewpoints is 'out-of-context' turbines appearing within a street scene without a sense of distance or contextual separation. Such effects tend to be exacerbated when turbines are also present at a prominent scale. This happens to some degree in respect of viewpoint CP3 at Lanesborough where the view of one prominent turbine can be seen directly above the road alignment of the N63 heading east resulting in a 'Moderate-slight' significant of effect. Ameliorating circumstances for this scene include the fact that the viewer is nearing the outskirts of the settlement, and the open rural landscape can be seen further to the south (also containing proposed turbines). This provides a sense of distance and rural hinterland context for the proposed development within this scene. Viewpoint CP2, which is also from Lanesborough (iconic view from the centre of the bridge over the Shannon) reveals no turbines due to

intervening screening from vegetation and the Lanesborough Power Station. The close proximity of screening elements such as buildings and vegetation within the urban setting of Lanesborough will preclude visibility of the proposed turbines from most of the core area of the settlement. Whereas, viewpoint DR8 from a short distance to the west of the centre of Lanesborough, illustrates that when the same screening elements are further from the viewer they provide a lesser degree of screening of the comparatively taller turbines beyond.

From CP1 at Cloondara and to a lesser degree from CP5 at Keenagh the turbines are perceived to be located within the rural hinterland of the settlements with a sense of distance and contextual separation. The significance of visual effect is deemed to be 'Moderate-slight' in both instances.

Viewpoint CP4 is located adjacent to a housing estate at the edge of Kilashee village and takes in a rural context of pastoral farmland in the foreground and cutaway peatland in the middle distance to the southwest. Seven of the proposed turbines will be fully revealed from this location in a clear and legible arrangement within a rural context that is discrete to the immediate rural /residential setting. In this instance, the significance of visual effect is deemed to be 'Moderate slight'.

CP6 and CP7 are 'illustrative' views that represent the very low degree of visual exposure of the proposed development from Roscommon Town and Ballymahon respectively.

13.6.5.4. Effects on Major Routes

The elongated wind farm site is flanked closely by the R392 regional road and dissected by the N63 national secondary road and the R398 regional road. Consequently, visual effects from these particular roads have been a primary focus for the appraisal of major routes with five out of the nine 'major route' (MR) viewpoints selected from them.

As major route receptors, susceptibility and overall sensitivity to visual change tend to be limited, because viewers are travelling on busy roads with foreground views dominated by the road corridor itself. In this instance, the sensitivity of the major route viewpoints ranges between Medium-low and Low depending on the nature and extent of the view on offer.

The highest visual effect significance is 'Moderate-slight' and this occurs in relation to MR4, MR5, MR6, MR7, MR8 and MR9, which are all within 2 km of nearest turbines and more often within 1 km. In respect of MR5 from the N63 and MR7 from the R398, which both pass through the site, there is a clear close view of turbines on both sides of the road. However, these are also the most contextual views of the proposed development contained within its vast cutaway peatland landscape. The turbines trail way from the viewer with a strong sense of perspective due to the scale differential between the nearest and furthest units and this tends to emphasise the scale of the bog and distances between turbines. The 'highly dominant' visual presence of the proposed development in these instances is balanced by the highly legible nature of the turbines within a suitably broad and robust landscape context that already relates to energy production.

For viewpoints MR6 and MR8 from the R392 that runs parallel to the site between Ballymahon and Lanesborough, a surprisingly high level of screening exists in the intervening rural / peatland fringe landscape. Although the blade sets of the nearest turbines tend to rise above the treetops, the more distant units tend to be substantially screened.

13.6.5.5. Effects on Tourism, Amenity and Heritage Features

There are three key features; tourism, amenity and heritage within the central portion of the study area and they satisfy each of these criteria. These include the Royal Canal and its associated towpath, which forms the Royal Canal Way (part of the national way-marked trails network), Center Parcs and the Corlea trackway visitors centre.

Viewpoints AH1 and AH2 are both located on the Royal Canal Way with the former located close to the settlement of Kilashee and the latter near Keenagh. Both are considered to be of 'High-medium' sensitivity due to the sense of tranquillity and recreational amenity of the canal-side settings. The proposed development is almost entirely screened by canal-side vegetation from AH1, which according to the Route Screening Analysis (RSA) from the canal is a fairly typical scenario (section 13.4.4.2 refers). Thus, the significance of visual effect at AH1 is deemed to be 'Imperceptible'. From AH2 there will be a clear view of three turbines rising in silhouette above foreground farm buildings with several smaller scale turbines less noticeable in the distance. Although the proposed development will be a distinctive feature of this canal view, it is not considered to be a significant detraction from visual amenity as this is a scene of rural productivity, a key element of which, is the Royal Canal that was originally constructed in the spirit of rural industry. The significance of effect at AH2 is deemed to be Moderate.

Center Parcs (AH5) is a tourist destination which is heavily enclosed by conifer woodland thus long-distance views are generally not afforded. VRP AH5 was selected where a rare glimpse view is afforded in the direction of the proposed development from a local road adjacent to the main entrance however, no view is afforded of the proposed turbines due to intervening screening.

AH3 and the adjacent AH3A, at the Corlea Trackway visitor's complex, have been classified as being of High sensitivity. This is principally on the basis that visitors will be strongly attuned to the landscape around them, not only in its present form, but also attempting to gain a sense of what it was like at the time of the track way construction. This location (outside of the visitor centre building) affords one of the clearest, closest and most comprehensive views of the proposed development and it is acknowledged that the development represents marked visual change, but is not without aesthetic merit.

The most important consideration in this instance is the Trackway visitor's experience and whether the turbines are a significant detraction or not. In this respect, it is important to recognise that this will not be a visitor's first view of the turbines as they will need to drive immediately to the south of the proposed wind farm site to access the visitor centre. The visitor centre itself is an introspective building, which provides interpretive displays, and there are few opportunities to see the outside landscape and turbines to the north. The exposed section of trackway is also enclosed, but at the end of the presentation shutters rise to reveal the surrounding landscape and the turbines will be visible as a distinctive background feature in this context. This will generate a juxtaposition of the ancient and the modern, which is unlikely to be lost on visitors, but for which opinion may vary widely. On balance of these factors, a Medium magnitude of visual effect is attributed to these Viewshed Reference Points, but when coupled with the High sensitivity of these receptors, the significance of effect is deemed to 'Substantial-moderate' in both instances.

13.6.6. Decommissioning Phase – Landscape and Visual

The decommissioning phase will have similar temporary effects as the construction phase with the movement of large turbine components away from the site. There may be a minor loss of roadside and trackside vegetation that has grown during the operation phase of the development, but this can be reinstated upon completion of decommissioning. It is expected that the decommissioning phase would be completed within a period of approximately 6 months.

13.7. MITIGATION MEASURES

No specific mitigation measures proposed in relation to landscape or visual effects.

13.8. RESIDUAL EFFECTS

As there are not additional mitigation measures proposed in relation to landscape and visual effects, the predicted landscape and visual effects are equivalent to 'residual' effects in the case of this appraisal.

13.9. CUMULATIVE EFFECTS

There are 2 no. contracted turbines located approximately 14 km west of the proposed development at Derrane (Roscommon Co. Co. Registered Reference 11/126). There are two existing wind energy developments within the 30 km radius wider study area:

- Sliabh Bawn – 20 no. turbines, approximately 8 km northwest of the proposed development (Roscommon Co. Co. Registered Reference 10/507 [Appeal Ref. 20.239743]); and
- Skrine – 2 no. turbines, approximately 20 km southwest of the proposed development (Roscommon Co. Co. Registered Reference 04/103 [Appeal Ref. 20.208733]).

Full details of these existing and permitted developments are outlined in Chapter 5 (Policy, Planning and Development Context).

There are some instances when viewed from the southeast where the Sliabh Bawn turbines will be seen on the same alignment as the proposed development turbines. In such instances, the Sliabh Bawn turbines are seen as much smaller, distant, background features in comparison to the nearer, and thus apparently larger, proposed turbines. They are also contained within a separate landscape context (forested ridge). Within the views of the proposed development, views of Skrine or Derrane are generally not afforded. For these reasons, it is considered that the siting and design of the proposed wind farm are consistent with the Wind Energy Development Guidelines in respect of cumulative effects.

13.9.1. Cumulative Zone of Theoretical Visibility

A cumulative Zone of Theoretical Visibility (ZTV) map has been prepared for the existing and permitted wind energy developments contained within the wider study area and a small-scale version of this is included in Figure 13-18 below. A larger scale version is provided at Appendix 13.5.

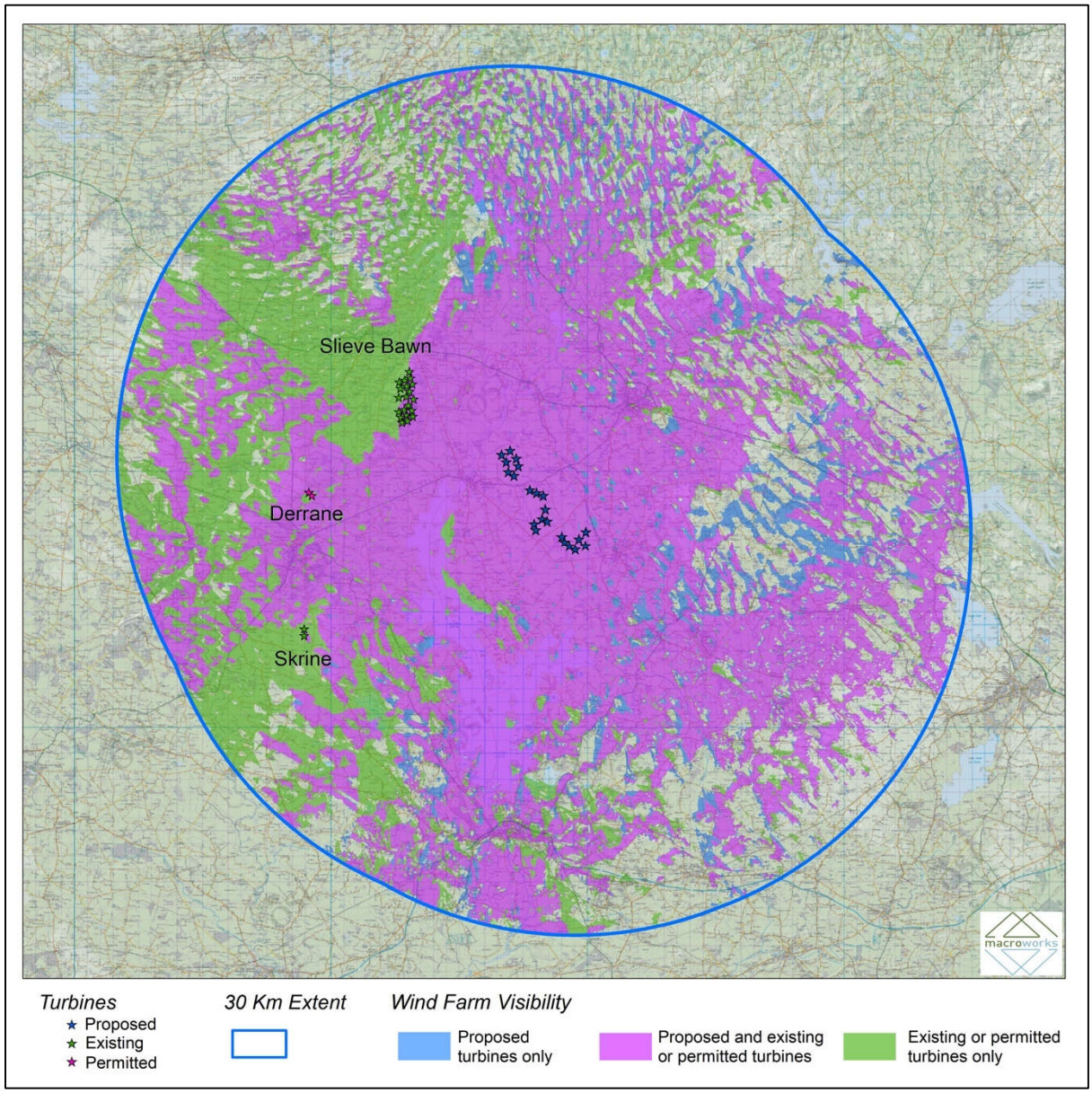

Figure 13-18 Cumulative Zone of Theoretical Visibility Map (see Appendix 13.5 for larger scale annotated version) – Green = Existing only visible; Blue = Proposed only visible; Purple = Combined visibility.

The cumulative ZTV map indicates the following key points:

- The central portions of the 30 km radius study area extending ca. 8 – 15 km in all directions shows relatively comprehensive cumulative visibility (purple pattern).
- The outer eastern half of the study area has the least theoretical visibility of any wind energy developments and where this does occur it tends to be combined visibility.
- The outer western half of the study area has the most visibility of cumulative wind farms (Sliabh Bawn, Derrane and Skrine) that does not include the proposed development (green pattern). This is unsurprising because the three cumulative developments (Sliabh Bawn, Derrane and Skrine) all occur in this half of the study area.
- Of the areas that have theoretical visibility of at least some wind energy development only a very small proportion (3.3%) is exclusive to the proposed wind farm site. That is,

the proposed wind farm site introduces small areas of the landscape to views of wind turbines that do not already have potential visibility of turbines.

As with the standard ZTV map, it is important to note that actual visibility of turbines is much less than indicated in this bare-ground scenario once vegetation screening is accounted for.

13.9.2. Nature of Cumulative Visibility

The nature of cumulative visibility within the study area is analysed in Table 13-11 below using the same viewpoints that were used for the main visual impact assessment. This information is then used to make an assessment of the cumulative effects arising from the proposed wind farm.

Table 13-11: Assessment of Cumulative Visibility

VP Ref.	No. of other wind farms potentially in the view in addition to the proposed turbines	Nearer or further than proposal	Combined view (within a single viewing arc)	Succession view (within a series of viewing arcs from the same location)	Sequential view (view of different developments moving along a linear receptor)
DR1	1	Similar distance	Yes	No	Yes
DR2	Not applicable because the proposed turbines not visible	-	-	-	-
DR3	1	Nearer	Yes	No	No
DR4	0	-	-	-	-
DR5	1	Further	Yes	No	No
DR6	Not applicable because the proposed turbines not visible	-	-	-	-
DR7	1	Further	Yes	No	No
DR8	0	-	-	-	-
DR9	1	Further	Yes	No	No
DR10	1	Further	Yes	No	No
DR11	1	Further	No	Yes	No
DR12	0	-	-	-	-
DR13	0	-	-	-	-
DR14	0	-	-	-	-
DR15	0	-	-	-	-
DR16	0	-	-	-	-
DR17	0	-	-	-	-

VP Ref.	No. of other wind farms potentially in the view in addition to the proposed turbines	Nearer or further than proposal	Combined view (within a single viewing arc)	Succession view (within a series of viewing arcs from the same location)	Sequential view (view of different developments moving along a linear receptor)
DR18	1	Similar distance	Yes	No	No
DR19	1	Further	Yes	No	No
DR20	1	Further	Yes	No	No
DR21	1	Further	Yes	No	No
DR22	1	Further	Yes	No	No
DR23	1	Further	Yes	No	No
DR24	1	Further	Yes	No	No
DR25	Not applicable because the proposed turbines not visible	-	-	-	-
DR26	1	Further	No	Yes	No
DR27	0	-	-	-	-
LC1	1	Further	No	Yes	No
LC2	0	-	-	-	-
LC3	0	-	-	-	-
LC4	1	Further	Yes	Yes	No
LC5	2	Further	Yes	Yes	No
CP1	0	-	-	-	-
CP2	0	-	-	-	-
CP3	0	-	-	-	-
CP4	0	-	-	-	-
CP5	0	-	-	-	-
CP6	0	-	-	-	-
CP7	0	-	-	-	-
MR1	1	Similar distance	No	Yes	Yes
MR2	0	-	-	-	-
MR3	0	-	-	-	-

VP Ref.	No. of other wind farms potentially in the view in addition to the proposed turbines	Nearer or further than proposal	Combined view (within a single viewing arc)	Succession view (within a series of viewing arcs from the same location)	Sequential view (view of different developments moving along a linear receptor)
MR4	0	-	-	-	-
MR5	1	Further	Yes	No	No
MR6	1	Further	No	Yes	Yes
MR7	1	Further	Yes	No	No
MR8	0	-	-	-	-
MR9	0	-	-	-	-
MR10	1	Nearer	No	Yes	No
AH1	0	-	-	-	-
AH2	0	-	-	-	-
AH3	1	Further	Yes	No	No
AH3a	1	Further	Yes	No	No
AH4	0	-	-	-	-
AH5	Not applicable because the proposed turbines not visible	-	-	-	-

13.9.3. Cumulative Effects Assessment

Using the cumulative baseline information outlined above, a summary assessment of cumulative effects is provided hereunder.

The contracted Derrane and the existing Skrine Wind Farms contain two turbines each while the existing Sliabh Bawn Windfarm is composed of 20 no. turbine thus is the most likely to be relevant in terms of potential cumulative effects.

From slightly less than half (23) of the 54 viewshed reference points, one other wind farm will be visible in conjunction with the proposed development and, in all but two instances, inter-visibility relates to the Sliabh Bawn Wind Farm. However, given the separation distances involved (8 km) and the fact that the Sliabh Bawn turbines tend to be seen in the background of the proposed turbines, clear viewing conditions are required, where there is no fog, precipitation or haze.

The Sliabh Bawn turbines are generally seen within the same viewing arc and often in direct alignment with the proposed development (combined visibility). Only in five instances are they visible in a different direction (successional visibility). This may be accounted for by the fact that the viewpoint set is selected on the basis of open visibility of the proposed turbines and other

than for hilltop views, there are few locations with open visibility in all directions within the lowland landscape of the study area. Whilst there are a number of major routes passing through the study area that afford views of both the proposed turbines and the Sliabh Bawn turbines this tends to be combined visibility from particular locations rather than a sequence of views of each development in isolation in a journey scenario.

Whilst the Wind Energy Development Guidelines 2006 and the Draft 2019 highlight the potential aesthetic issue of turbines from different developments becoming stacked in perspective if seen on the same alignment, this is not a particular issue in this instance. This is on the basis that the Sliabh Bawn turbines are most commonly seen as small-scale distant features on an elevated forested ridge, when seen in-combination (same viewing arc) as the proposed development turbines. By comparison, the closer proposed development turbines are seen at a much larger scale with a grid-like layout within the open, flat, lowland context of a cutaway peatland. Atmospheric perspective (fading of distant objects) also serves to differentiate between the turbines of each development ensuring that there will not be confusing or cluttered cumulative views of the two developments. From any location where the turbines from each of these developments are seen at a comparable scale, such as from the R371 regional road that lies between these developments, they are seen at widely disparate viewing angles or in opposite directions.

It is considered that the number of developments and total number of turbines within the 30 km radius study area is very low compared to many parts of the country so the proposed wind farm will contribute little to a sense of wind farm proliferation in this area. Whilst between them, Sliabh Bawn and Derryadd will total 42 turbines, neither is excessive in scale for its respective landscape context, and they are separated by a generous distance and contained in separate landscape types.

For the reasons outlined above, the magnitude of cumulative effect is deemed to be Low.

13.10.SUMMARY

The significance of landscape effects is assessed on the basis of the sensitivity of landscape receptors balanced against the magnitude of the landscape effect. For a proposal of this scale and extent, landscape receptors can range from entire Landscape Character Areas (LCAs) down to distinctive collections of landscape elements or individual features. Landscape effects may occur from direct physical effects and/or due to changes in landscape character in the local or wider area.

13.10.1. Landscape Effects

There will be physical effects on the land cover of the site as a result of this proposed wind farm, but these will be relatively minor in the context of the cutaway peatland context and the high proportion of existing access tracks that will be utilised during and the operational phase. There will be a minor loss of hedgerow and peatland scrub vegetation due to the delivery of turbine components and construction, but these will be reinstated insofar as possible. Internal site borrow pits will be utilised for the winning of construction material and these are of a relatively small scale in the context of the vast cutaway peatland context. Likewise, trenching operations for internal and external cable routes represent minor and temporary disturbance of already modified land.

In terms of effects on landscape character, which is the main landscape effect consideration in this instance, there is predicted to be a 'Moderate–slight' significance of effect within the central portion of the study area (c. 5 km radius). This is on the basis of a 'Medium-low' landscape sensitivity judgement within this central zone, coupled with a 'Medium-low' magnitude of landscape effect judgement. Although higher sensitivity sections of the River Shannon and the Royal Canal are contained within this central portion of the study area, they do not have a strong influence on the overall landscape character beyond their immediate corridors. Conversely, the proposed wind farm is not considered to alter the salient character of these waterways even where there is a degree of inter-visibility. The canal is also a man-made feature constructed in the spirit of industry to move goods. Thus, there is something of a thematic link to the productive nature of the proposed wind farm. For the vast majority of the central portion of the study area the defining landscape character relates to agricultural farming and cutaway peatland with the Lanesborough Power Station standing as an iconic testament to the productive values associated with the surrounding landscape.

Throughout the wider study area, agricultural farmland remains the predominant land use with a generally lesser proportion of peatland. Occasional lakes and upland zones also occur and although these are individually considered be of higher landscape sensitivity, on balance the wider study area is also deemed to have a Medium-low level of landscape sensitivity. In terms of landscape effect magnitude, the proposed wind farm will often be visible as a background feature in the context of the wider study area. However, it will be one of a range of rural land uses and will not significantly influence or alter landscape character even in the context of higher sensitivity landscape features, when diluted by distances in excess of 5 km. Thus, the significance of landscape effect in the wider study area is considered to be Low, dissipating to Negligible with greater distance, as the proposed wind farm becomes a proportionately smaller component of the overall landscape fabric.

The proposed wind farm site is also deemed to be appropriately designed in respect of its receiving landscape context, which is consistent with the 'Flat Peatland' landscape type in the Wind Energy Development Guidelines (2006 and Draft 2019).

For the reasons contained herein, it is considered that the proposed wind farm will not give rise to significant landscape effects within either the central or wider study area. This reflects the fact that it has been located and designed in accordance with relevant local and national level policy documents.

13.10.2. Visual Effects

Visual effects are assessed on the basis of visual receptor sensitivity versus the magnitude of the visual effect. Sensitivity is established on the basis of viewer (receptor) susceptibility as well as the value associated with the view in question. Effect magnitude is the function of the visual presence of the proposal and its effect on visual amenity. Visual effects are assessed at 54 no. visual receptor locations throughout the study area, which are classified in terms of receptor type including; designated scenic views; key views; local community views; centres of population; major routes, and; tourism, heritage and amenity features.

Receptor sensitivity is considered to range widely across the study area between Very High at DR24 – 'Hill of Uisneach' and Low for several of the 'major route' receptors where visual amenity is strongly influenced by the busy road corridor. Those receptor locations at the upper end of

the spectrum (High to High-medium) tend to be designated scenic views from hilltops and elevated ground where vast panoramic views are afforded across the relatively homogenous rural and peatland landscape of the midlands. At the lower end of the spectrum are locations that take in more contained views from within the rural lowlands where hedgerow vegetation tends to limit the extent of view across typical rural farmland. More open views are often afforded across cutaway peatlands, but in these cases the extent of visibility is balanced by the anthropogenic nature of the extracted peatland. Whilst it is acknowledged that local residents are among the most susceptible receptors, this is accounted for in the sensitivity judgements, which must also balance the value of the views on offer (local value versus regional or national value). On balance, most local views encompassing typical rural scenes are generally considered to be in the order of Medium-low in terms of receptor sensitivity. It is not considered that canal views are particularly sensitive to new forms of development such as that proposed, on the basis that they are industrial heritage features themselves. Nonetheless, the Royal Canal and its associated towpaths are a tranquil recreational feature with some of the naturalistic amenities of a river corridor and a High-medium level of sensitivity has been applied to the representative viewpoint locations in this instance (AH1 and AH2).

The majority of visual effect magnitude judgements are in the mid to low range due to a combination of high levels of screening, the dispersed layout of the proposed wind farm site and the robust rural landscape context in view. However, there are a small proportion of views within close proximity to turbines where mid to high order visual effect magnitude is considered to occur. At these locations, the nearest turbines invariably have a dominant visual presence within the scene and the intensity or lateral extent of turbines is also likely to be considerable. A notable aspect of this proposed wind farm is that there are several VRP locations where the turbines have a highly dominant or dominant visual presence that is moderated in terms of aesthetics by a clear and legible view of the proposed turbines running away from the viewer with a strong sense of perspective. This scenario most notably occurs at MR5 and MR7 on regional roads between turbine clusters and AH3 from the Corlea Trackway visitors centre just to the southeast of the development. In many ways these particular views epitomise the nature of the receiving environment and its assimilation potential for the proposed development.

On the basis of sensitivity versus magnitude, only two of the VRP locations are considered to experience a Substantial-moderate significance of effect. This occurs at LC1 from a local graveyard and amenity area to the north of the site and AH3/AH3A at Corlea Trackway visitors centre. At LC1, this level of significance occurs as a result of the proposed wind farm having a mid to high level of visual presence in the view (Dominant / Co-dominant) and with turbines appearing intermittently at different scales above and between sections of intervening vegetation. At AH3 the visual presence of the proposed wind farm is deemed to be Dominant, but the turbines are also seen with a high degree of legibility and within a vast cutaway peatland context that can absorb the proposed wind farm site in terms of scale and extent. These competing factors are likely to polarise opinion as to the significance of visual effect at this location but, on balance, the overall effect is deemed to be Substantial-moderate. From experience, this is a low proportion of VRPs to incur this mid to high order of significance, which is testimony to the robustness of the receiving visual context. At five of the VPs, the significance of effect is judged to be Moderate, which is also a relatively small proportion of the viewpoint set to experience mid-range significance. Nearly half of the remaining VRP locations are

considered to incur a Moderate-slight significance of effect with the others ranging between Slight and Imperceptible.

Based on the visual effect assessment contained herein, it is not considered that the proposed wind farm will result in any significant visual effects.

13.10.3. Cumulative Effects

There are presently two existing and one permitted wind farms within the study area, so wind energy development is considered to be a familiar, but not strongly characteristic or defining feature of the landscape within the study area. The contracted Derrane and the existing Skrine Wind Farms contain two turbines each while the existing Slieve Bawn Windfarm is composed of 20 no. turbine thus is the most relevant in terms of potential cumulative effects. The proposed wind farm will most commonly be viewed in isolation from within the lowland context of the study area, but from occasional elevated vantage points, which also tend to be designated as scenic views, the proposal will be commonly seen in conjunction with the Slieve Bawn Wind Farm (20 turbines) some 8 km to the northwest. Aside from the physical separation between these wind farms, they occupy different landscape contexts with Sliabh Bawn on an upland ridge and the proposed development on flat cutaway peatland. This contextual separation tends to accentuate the physical distance between them and there is little sense of wind energy proliferation within the study area.

Overall, it is considered that the proposal will contribute to wind energy development becoming a more characteristic feature of this midland's context, but it is not considered to give rise to a significant cumulative effect. Instead, this effect is deemed to be Low.

13.11.INTERACTIONS BETWEEN EFFECTS ON DIFFERENT FACTORS

The proposed wind farm involves features and activities that have the potential to generate physical changes to the landscape and visual environment (both physical and perceptual), which will also incur wider environmental impacts. This includes aspects relating to vegetation loss, construction of access roads, and the presence of construction and maintenance plant on the site. Likewise, there are aspects (such as noise) that have the potential to influence experiential aspects of landscape character.

Whilst these aspects will generate a degree of change to the landscape and visual environment, the main interactions relate to the construction and presence of the turbines and other vertical infrastructure due to their visibility.

The main interactions are considered to relate to Population and Human Health, and Cultural Heritage as follows:

13.11.1. Landscape and Visual and Population and Human Health

Landscape and Visual impacts arising from the construction, operation, and decommissioning of the wind turbines are considered in the LVIA with respect to the effect on perceived landscape character, views and on the general visual amenity experienced by people, including local residents. Proportionately, the operational effects of the turbines are considered to give rise to the most notable landscape and visual effects given the long-term nature of the change, and a greater focus is placed on them. However, whilst they have the potential to be prominent, the turbines will be seen in the context of a modified landscape, and it is noted that the findings of

the assessment did not identify any significant impacts in relation to receptors in the Central or Wider Study Area. The findings of the LVIA have contributed to the Population and Human Health assessment.

13.11.2. Landscape and Visual and Cultural Heritage

Common receptors were considered in relation to landscape character and the setting of heritage features as well as views from heritage features visited by the public and for whom views of the landscape are a contributing factor to the experience. Whilst the turbines have the potential to be visible, they will be seen in the context of an extensively modified landscape. From Corlea Trackway, which is an important heritage feature and tourism feature, the turbines would be prominently visible and have been attributed a Substantial-moderate and Negative visual effect. However, this is not deemed to be a significant effect in EIA terms and the findings of the LVIA have contributed to the Cultural Heritage assessment.

13.12. DIFFICULTIES ENCOUNTERED WHEN COMPLETING THE CHAPTER

No difficulties or limitations were encountered when completing the landscape and visual impact assessment.