



Bracklyn Wind Farm

Chapter 9:  
Landscape

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## 9.1 Introduction

This chapter describes the landscape context of the proposed development and assesses the likely significant landscape and visual impacts of the scheme on the receiving environment.

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

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

Cumulative landscape and visual impact assessment is concerned with additional changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments (associated or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future. While this assessment predominately focuses on the likely impacts of the proposed wind turbines due to their scale, detailed appraisal of all elements of the overall proposed development have been assessed including ancillary infrastructure (access tracks and site entrances), 110kv substation and associated grid connection, and haul route upgrade works.

This assessment uses methodology as prescribed in the following guidance documents:-

- Environmental Protection Agency (EPA) publication '*Guidelines on the Information to be contained in Environmental Impact Statements* (Draft 2017) and the accompanying *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements* (Draft 2015);
- Landscape Institute and the Institute of Environmental Management and Assessment publication entitled '*Guidelines for Landscape and Visual Impact Assessment – Third Addition*' (2013);
- Scottish Natural Heritage (SNH) '*Guidance Note: Cumulative Effect of Wind' Farms* (2012);
- Department of the Environment, Heritage and Local Government '*Wind Energy Development Guidelines for Planning Authorities*' (2006); and
- Scottish Natural Heritage (SNH) '*Visual representation of wind farms: Best Practice Guidelines*' (version 2.2 - 2017).

### 9.1.1 Statement of Authority

This landscape and visual assessment (LVIA) was prepared by Richard Barker (MLA MILI) and Cian Doughan (BSLA) of Macro Works Ltd, a specialist LVIA company with over 20-years of experience in the appraisal of effects from a variety of energy, infrastructure and commercial developments. Relevant experience includes LVIA work on over 140 on-shore wind farm proposals throughout Ireland, including numerous Strategic Infrastructure Development (SID) wind farms. Macro Works and its senior staff members are affiliated with the Irish Landscape Institute.

### 9.1.2 Description of Proposed Development

A full description of the proposed development is presented in **Chapter 3**. In summary, the proposed development comprises the following main components:-

- 9 no. wind turbines with an overall tip height of 185m, and all associated ancillary infrastructure;
- Upgrades to the turbine component haul route;
- Construction of a 110kV electricity substation and installation of c. 6.3km of underground electricity line between the proposed substation and the existing Corduff-Mullingar 110kV overhead electricity line; and
- All associated and ancillary site development, excavation, construction, landscaping and reinstatement works, including provision of site drainage infrastructure.

The majority of the proposed development is located within the administrative area of County Westmeath; while approximately 2.5km of underground electricity line and the proposed end masts will be located within County Meath. Additionally, candidate quarries which may supply construction materials are also located within County Meath.

The indicative turbine component haul route is also located within the counties of Waterford, Kilkenny, Carlow, Kildare and Dublin.

### 9.1.3 Definition of Study Area

The *Wind Energy Development Guidelines for Planning Authorities 2006* published by the Department of the Environment, Heritage and Local Government specify different radii for examining the zone of theoretical visibility (ZTV) of proposed wind energy developments. The extent of this study area is influenced by turbine height, as follows:-

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

These radii are mirrored in the draft *Revised Wind Energy Development Guidelines 2019*. In the case of this proposed development, the blade tips are 185m in height and, thus, the minimum ZTV radius recommended is 20 km from the outermost turbines of the scheme. However, the Tower of Lloyd; located to the west of Kells, Co. Meath; is situated just over 20km northeast of the proposed development site and, consequently, per the 2006 Guidelines, it is recommended to include this receptor, even though it falls outside of the principle study area.

Notwithstanding the full 20km extent of the study area, there will be a particular focus on receptors and effects within the central study where there is higher potential for significant impacts to occur. When referenced within this assessment, the 'central study area' is the landscape within 5km of the site.

## 9.2 Methodology

The production of this LVIA involved desktop studies to understand the existing baseline environment; fieldwork recording the elements and characteristics of the landscape and the selection and capture of images to allow the preparation of photomontages; and the professional evaluation of the baseline environment and the effects which may occur as a result of the proposed development based on the photomontages prepared.

### 9.2.1 Desk Study

The desk study involved:-

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

### 9.2.2 Fieldwork

The fieldwork undertaken to inform this assessment included:-

- Recording a description of the landscape elements and characteristics within the study area;
- Selection of a refined set of VRP's for assessment. This includes the capture of reference images and grid reference coordinates for each VRP location for the visualisation specialist to prepare photomontages;
- Following the selection of VRPs, photo-realistic images (photomontages) of the proposed development were prepared by Galetech Energy Services (GES); and
- Wireframe images of the proposed 110kV substation were prepared by Macroworks.

### 9.2.3 Appraisal

This assessment, undertaken following the completion of fieldwork and the preparation of photomontages & wireframes has included:-

- Consideration of the receiving landscape with regard to overall landscape character as well as the salient features of the study area including landform, drainage, vegetation, land use and landscape designations;
- Consideration of the visual environment including receptor locations such as centres of population and houses; transport routes; public amenities and facilities and; designated and recognised views of scenic value;
- Consideration of design guidance and planning policies;
- Consideration of potentially significant effects and the mitigation measures that could be employed to reduce such effects;
- Estimation of the significance of residual landscape impacts;
- Estimation of the significance of residual visual impacts aided by photomontages prepared at all of the selected VRP locations; and

- Estimation of cumulative landscape and visual effects in combination with other surrounding developments that are either existing or permitted.

### 9.2.3.1 Assessment Criteria for Landscape Impact

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

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

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

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

**Table 0.1: Landscape Value and Sensitivity**

The magnitude of a predicted landscape impact is a product of the scale, extent or degree of change that is likely to be experienced as a result of the proposed development. The magnitude takes into account whether there is a direct physical impact resulting from the loss of landscape components and/or a change that

extends beyond the proposed site boundary that may have an effect on the landscape character of the area.

Magnitude of Impact	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.

**Table 0.2: Magnitude of Landscape Effects**

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

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

**Table 0.3: Landscape Impact Significance Matrix**

\*The significance matrix provides an indicative framework from which the significance of impact 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.

\*\* Significance judged to be 'Substantial' and above is deemed to be significant in EIA terms

### 9.2.3.2 Assessment Criteria for Visual Impact

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

#### Visual sensitivity

Unlike landscape sensitivity, visual sensitivity has an anthropocentric basis. Visual sensitivity is a two-sided analysis of receptor susceptibility (people or groups of people) versus the value of the view on offer at a particular location.

To assess the susceptibility of viewers and the amenity value of views, the assessors use a range of criteria and provide a four-point weighting scale to indicate how strongly the viewer/view is associated with each of the criterion. Susceptibility criteria are extracted directly from the *IEMA Guidelines for Landscape and Visual Assessment (2013)*, whilst the value criteria relate to various aspects of a view that might typically be related to high amenity including, but not limited to, scenic designations. The susceptibility criteria are set out below.

#### *Susceptibility of receptor group to changes in view*

This is one of the most important criteria to consider in determining overall visual sensitivity because it is the single category dealing with viewer susceptibility. In accordance with the *IEMA Guidelines for Landscape and Visual Assessment* 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; and
- Users of road, rail or other transport routes where such travel involves recognised scenic routes and awareness of views is likely to be heightened.

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

- People engaged in outdoor sport or recreation, which does not involve or depend upon appreciation of views of the landscape; and
- 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 Development Plans, at least, a public consultation process is required.

### *Views from within highly sensitive landscape areas*

Again, highly sensitive landscape designations are usually part of a Landscape Character Assessment, which is then incorporated into the County Development Plan and is therefore subject to the public consultation process. Viewers within such areas are likely to be highly attuned to the landscape around them.

### *Intensity of use, popularity*

Whilst not reflective of the amenity value of a view, this criterion relates to the number of viewers likely to experience a view on a regular basis and whether this is significant at county or regional scale.

### *Connection with the landscape*

This considers whether or not receptors are likely to be highly attuned to views of the landscape i.e. commuters hurriedly driving on busy national route versus hill walkers directly engaged with the landscape enjoying changing sequential views over it;

### *Provision of elevated panoramic views*

This relates to the extent of the view on offer and the tendency for receptors to become more attuned to the surrounding landscape at locations that afford broad vistas.

### *Sense of remoteness and/or tranquillity*

Remote and tranquil viewing locations are more likely to heighten the amenity value of a view and have a lower intensity of development in comparison to dynamic viewing locations such as a busy street scene, for example.

### *Degree of perceived naturalness*

Where a view is valued for the sense of naturalness of the surrounding landscape, it is likely to be highly sensitive to visual intrusion by obvious human interventions.

### *Presence of striking or noteworthy features*

A view might be strongly valued because it contains a distinctive and memorable landscape feature such as a promontory headland, lough or castle.

### *Historical, cultural or spiritual value*

Such attributes may be evident or sensed at certain viewing locations that attract visitors for the purposes of contemplation or reflection heightening the sense of their surroundings;

### *Rarity or uniqueness of the view*

This might include the noteworthy representativeness of a certain landscape type and considers whether other similar views might be afforded in the local or the national context;

### *Integrity of the landscape character in view*

This criterion considers the condition and intactness of the landscape in view and whether the landscape pattern is a regular one of few strongly related components or an irregular one containing a variety of disparate components;

### *Sense of place*

This criterion considers whether there is special sense of wholeness and harmony at the viewing location; and

### *Sense of awe*

This criterion considers whether the view inspires an overwhelming sense of scale or the power of nature.

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

### *Visual Impact Magnitude*

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

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

For wind energy developments, a strong visual presence is not necessarily synonymous with adverse impact. Instead, the 2012 Fáilte Ireland survey entitled 'Visitor Attitudes On The Environment – Wind Farms' found that:- *“Compared with other types of development in the Irish landscape, wind farms elicited a positive response when compared to telecommunication masts and steel electricity pylons”.... and that “most (tourists) felt that their presence did not detract from the quality of their sightseeing, with the largest proportion (45%) saying that the presence of the wind farm had a positive impact on their enjoyment of sightseeing...”*.

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

It should be noted that as a result of this two-sided analysis, a high order visual presence can be moderated by a low level of effect on visual amenity and vice versa. Given that wind turbines do not represent significant bulk, visual impacts result almost

entirely from visual 'intrusion' rather than visual 'obstruction' (the blocking of a view). The magnitude of visual impacts is classified in the following table.

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.

**Table 0.4: Magnitude of Visual Impact**

### 9.2.3.3 Visual Impact Significance

As stated above, the significance of visual impacts is a function of visual receptor sensitivity and visual impact magnitude. This relationship is expressed in the same significance matrix included for Landscape Impact Significance at **Table 0.1**

## 9.3 Description of Existing Environment

### 9.3.1 Landscape Baseline

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

A description of the landscape context of the proposed development site and wider study area is provided below under the headings of landform and drainage, and vegetation and land use. Centres of population, transport routes and tourism, and recreational and heritage features form part of the visual baseline and are dealt with in **Section 9.3.3** below.



**Figure 9.1 Aerial photography showing the landscape context of the site and its immediate surrounds.**

### 9.3.1.1 Landform and Drainage

The landform of the site and the central study area is typified by relatively flat terrain that sits around c. 70m AOD. Some gentle undulations occur to the west of the site, where the flat terrain begins to transition to the rolling drumlin landscape that characterises much of the wider western and northern half of the study area (see **Figure 9.2**). Two low rolling hills occur to the west and northwest of Raharney and rise to a maximum elevation of c. 150m AOD. The settlement of Delvin is also located along a locally elevated hill that rises to a height of c. 100m AOD.

Whilst the wider eastern half of the study area is generally typified by flat to low-rolling terrain, the Hill of Ward rises to a maximum elevation of c. 110m AOD and is a prominent land form within its flat surrounds. The most elevated parts of the study area occur in its northwest quadrant where Slieve Na Calliagh rises to a maximum elevation of c. 270m AOD and comprises a number of rolling hilltop summits.

The River Deel is the nearest notable watercourse to the proposed development and is oriented in a general north-south direction, passing just over 2km to the west of the nearest proposed turbine, before it merges with the River Boyne in the southeast quadrant of the study area. The Stoneyford River also flows through the central study area just over 3km north of the proposed wind turbines (and c. 2km east of the proposed end masts), before similarly merging with the River Boyne in the wider eastern half of the study area. A number of small streams and drainage ditches also occur within the near surrounds of the proposed development and typically drain in an easterly direction into the River Boyne and its surrounding tributaries.

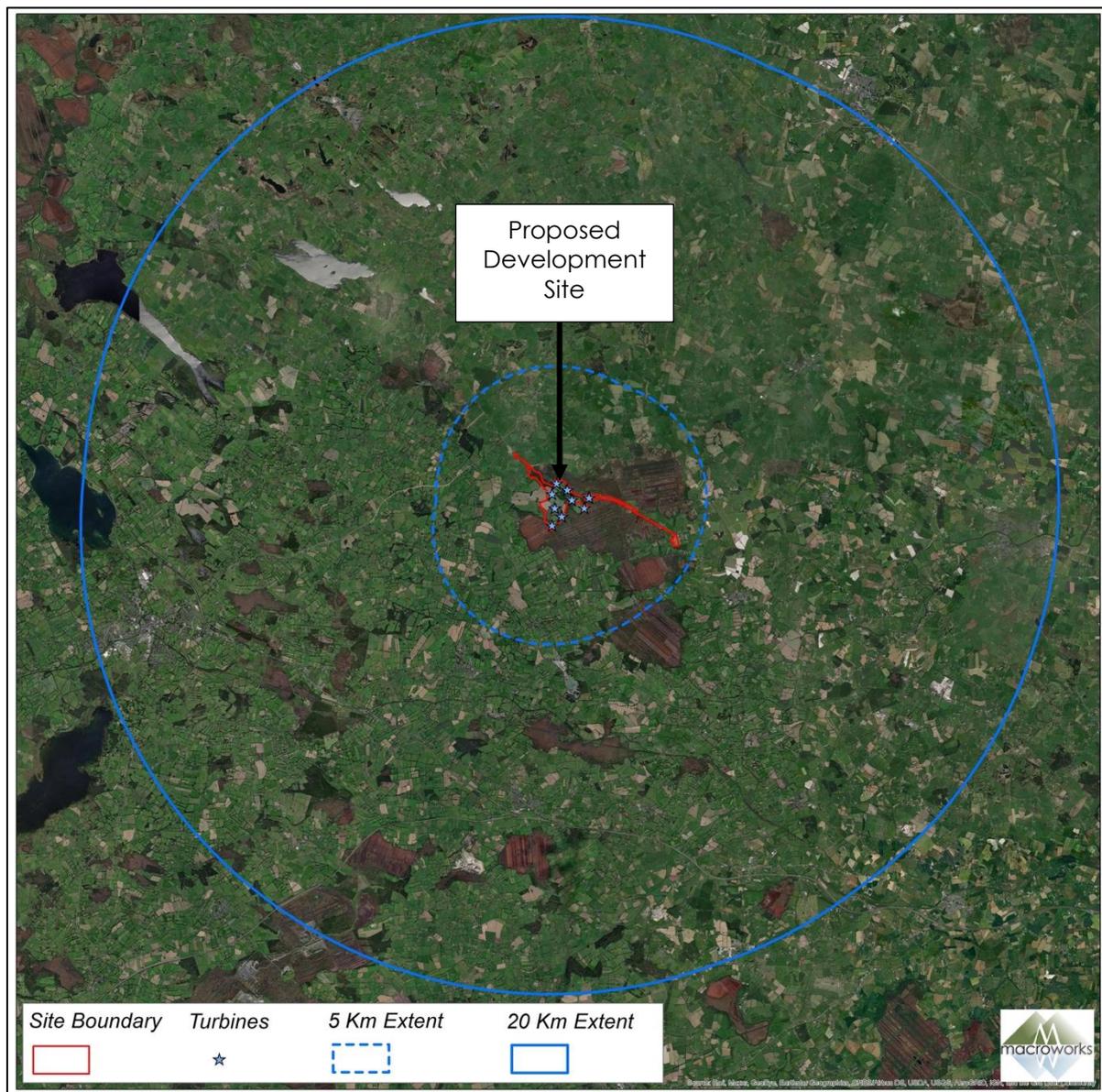
The River Boyne is one of the more prominent watercourses within the 20km study extents and primarily runs throughout its wider eastern half passing some c. 8km from the proposed development at its nearest point. The River Boyne enters the study area in the southeast quadrant where it also intersects the Royal Canal just west of the settlement of Longwood. The Royal Canal flows through the southern half of the study area and passes through the centre of Mullingar town on the western periphery of the 20km study area extents. The wider western half of the study area also encompasses several modest sized lakes in addition to a number of streams and rivers. Both Lough Bane and Lough Lene are located in the northwest quadrant of the study area, whilst the more sizable Lough Derravaragh and Lough Owel are situated on the western periphery of the study area.

### 9.3.1.2 Vegetation and Land Use

The two most prominent forms of land cover within the central study area are that of large scale peat bogs and pastoral farmland. In terms of the landscape pattern, the agricultural farmland within the central study area ranges from broad open fields to a more complex patchwork of smaller pastoral fields which often flank the outer periphery of the extensive peat bogs surrounding the proposed development. Intricate networks of hedgerow vegetation typically enclose these pastoral fields and tend to be well established, often comprising of dense mature tree-lines and contribute to a notable sense of enclosure. A number of conifer forest plantations are located within the immediate surrounds of the site, whilst several linear corridors of broadleaf woodland that once formed the outer periphery of historic demesne landscape are also evident. The site itself is contained in a mix of pastoral farmland, areas of marginal woodland scrub, and small blocks of conifer forest. The site is bound to the north, south, and west by extensive areas of peat bog whilst a number of large pastoral fields extend to the east of the site. In terms of urban land uses, the only settlements within the central study area are Delvin to the north of the site and the small village of Raharney to the south of the site. Other notable land uses within the central study area include both the linear transport corridors of the N51 and N52 in addition to Delvin Castle Golf Club.

The wider study area comprises predominately of pastoral farmland, whilst large scale peat bogs also make a notable imprint on the landscape. The Girley Bog is located within the northeast quadrant of the study area and a number of large scale bogs are also located within the wider southern half of the study area in the surrounds of Kinnegad. The wider study area also contains a number of commercial conifer plantations, whilst the remnants of old demesne landscapes are also evident in the form of mature tree lines and densely wooded thickets. An example of this is Ballinlough Castle and Gardens which is located some c. 5km northeast of Delvin. In terms of linear transport corridors, the M4, M6, and Royal Canal corridors are all prominent land uses within the southern half of the study area. The relatively large

number of towns and village settlements within the wider study area contributes to the notable degree of urban land cover. Mullingar accounts for the largest expanse of urban land cover and flanks the western periphery of the 20km study area.



**Figure 9.2 Aerial photograph showing the landscape context of the wider study area – primarily contained in pastoral farmland interspersed with a number of large peatbogs**

### 9.3.2 Landscape Policy Context Designations

#### 9.3.2.1 Wind Energy Development Guidelines for Planning Authorities 2006/2019 (draft) revision

The Wind Energy Development Guidelines for Planning Authorities (2006/2019 revision) provide guidance on wind farm siting and design criteria for a number of different landscape types. The site of the proposed development is considered to be located within a landscape that is consistent with the 'Flat Peatland' landscape type. In such instances, the Guidelines recommend consideration of the advice for each landscape type including:-

<i>Location</i>	<i>"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."</i>
<i>Spatial extent</i>	<i>"The vast scale of this landscape type allows for a correspondingly large spatial extent for wind energy developments."</i>
<i>Spacing</i>	<i>"Regular spacing is generally preferred, especially in areas of mechanically harvested peat ridges."</i>
<i>Layout</i>	<i>"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"</i>
<i>Height</i>	<i>"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."</i>
<i>Cumulative</i>	<i>"The openness of vista across these landscapes will result in a clear visibility of other wind energy developments in the area. Given that the wind energy developments are likely to be extensive and high, it is important that they are not perceived to crowd and dominate the flat landscape. More than one wind energy development might be acceptable in the distant background provided it was only faintly visible under normal atmospheric conditions."</i>

In instances where two or more landscape types are potentially applicable, the Guidelines recommend consideration of the advice for each landscape type rather than just one which it is considered to be most applicable. The Guidance specifically states (p100):-

*"It is, however, common that a wind energy development is located in one landscape character type but is visible from another, for example, where the site comprises an unenclosed moorland ridge standing above a broad flat farmland. In such an instance, the entire visual unit should be taken into consideration...."*

In combination with the recommendations for 'Flat Peatland', the siting and design recommendations for the 'Hilly and Flat Farmland' have also been considered for the proposed wind farm. In general, the proposed Bracklyn Wind Farm development is consistent with the siting and design guidelines for both the 'Flat Peatland' and 'Hilly and Flat Farmland' landscape types.

### 9.3.2.2 Westmeath County Development Plan 2021-2027

A Landscape Character Assessment has been undertaken for County Westmeath and is included within the County Development Plan 2021-2027 (CDP). The Landscape Character Assessment divides the county into 11 no. landscape character areas (LCAs) with the proposed development situated within 'LCA 3 – River Deel Lowlands' (**Figure 9.3** refers). This LCA is *"typified by low-lying pasture punctuated with small lakes which are flanked by scrub and wet woodland. These rivers form part of the River Boyne and Blackwater SAC complex. The area east of Delvin and running south along*

*the Meath border is characterised by cutover, cutaway bogs and small tracts of intact bog...This part of the county has a strong historic landscape component with several demesne landscapes occurring within the area."* A number of landscape character policies are outlined in Chapter 13 of the current CDP and are included below:-

*"CPO 13.1 – Support the implementation of the National Landscape Strategy.*

*CPO 13.2 – Protect the distinctiveness, value and sensitivity of County Westmeath's landscapes and Lakelands by recognising their capacity to sustainability integrate development.*

*CPO 13.3 – Support and implement objectives contained in any Regional Landscape Character Assessment.*

*CPO 13.4 – Conserve and enhance the high nature conservation value of the Landscape Character Areas in order to create/protect ecologically resilient and varied landscapes.*

*CPO 13.5 - Identify and integrate new green and blue infrastructure networks within the existing landscape character areas in the interests of biodiversity and climate change and in recognition of the tourism potential of these assets.*

*CPO 13.6 - Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality."*

Other landscape character areas within the wider study area include 'LCA 01 – Northern Hills and Lakes', 'LCA 4 – Central Hills and Lakes', 'LCA 5 – Royal Canal Corridor' and 'LCA 10 – Lough Ennell and South Eastern Corridor'. Whilst no sensitivity classifications are identified for the landscape character areas in Westmeath, LCAs 1, 4 and 5 are all noted for their "high scenic quality".

The current CDP also identifies a number of landscape Policy Objectives. Those that are relevant to the proposed development area are included below:-

*"CPO 13.8 – 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.*

*CPO 13.9 - 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.*

*CPO 13.10 - Ensure development reflects and, where possible, reinforces 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.*

*CPO 13.12 - Require a Landscape and Visual Impact Assessment for proposed developments with the potential to impact on significant landscape features within the county."*

A number of 'Areas of High Amenity (HAA)' are also designated in county Westmeath, three of which are located within the outer north-western quadrant of the study area and include, Lough Lene, Lough Derravaragh and Lough Owel. These areas are noted for their amenity and recreational value and "should be protected". A number of high

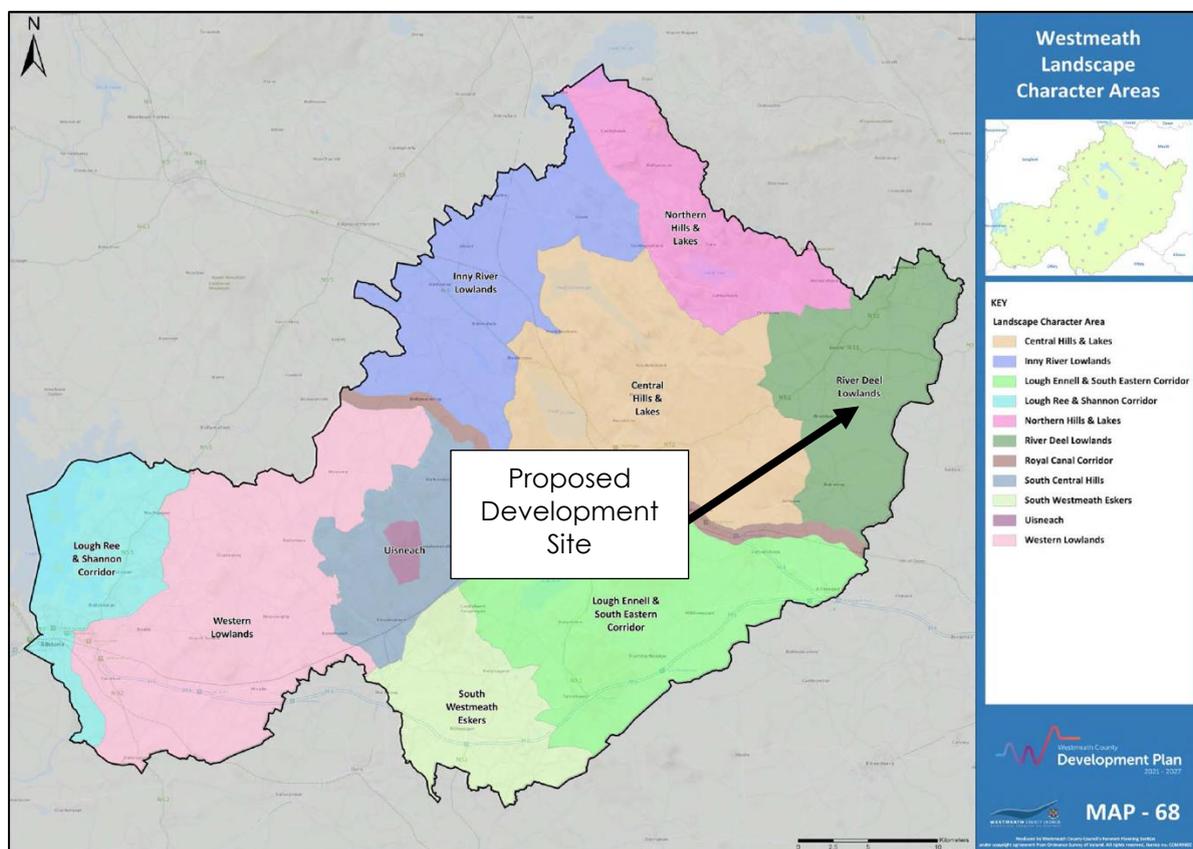
amenity policies, applicable to the proposed development and the surrounding study area, are included within the development plan and are outlined below:

*“CPO 13.20 - Protect High Amenity areas from inappropriate development and reinforce their character, distinctiveness and sense of place.*

*CPO 13.21 - Protect and preserve designated High Amenity Areas from inappropriate urban generated housing development or any other development which would be injurious to or detract from the natural amenity of Areas of High Amenity.*

*CPO 13.22 - Protect lakeshores from any inappropriate development which would detract from the natural amenity of the area.*

*CPO 13.23 - Protect and enhance the special landscape character and exceptional landscape value of the Lough Ree Islands, including their significant archaeological, cultural and natural heritage value. Support the preparation for a Plan for the Islands in conjunction with the National Monuments Service and the National Parks and Wildlife Service.”*



**Figure 9.3: Map 68 of the current CDP illustrating Landscape Character Areas in Westmeath in relation to the proposed development.**

### 9.3.2.3 Meath County Development Plan 2013-2019

Whilst the draft Meath County Development Plan 2021-2027 is currently available for review, it remains in draft form and has not yet been adopted. Consequently, the current CDP (2013-2019) will be the principal document for landscape related policy in Meath used within this assessment. Furthermore, it is noted that, currently, the extant

Landscape Character Assessment for County Meath (prepared in 2007) will also form part of the draft Meath County Development Plan 2021-2027.

Whilst the majority of the proposed development is contained within County Westmeath, some of the ancillary elements of the development, including the underground electricity line and end masts, are located in County Meath. A landscape character assessment was produced for Meath in 2007 and forms part of the current CDP. The landscape character assessment divides the county into 4 no. landscape character types (LCTs) and 20 no. geographically specific landscape character areas (LCAs). The nearest and most relevant LCT to the proposed development is 'lowland landscapes' whilst the nearest LCA to the proposal site is 'LCA 15 – southwest lowlands' (**Figure 9.4** refers), which is described as *“an area characterised by rolling hills interspersed with beech copses and well-wooded hedgerows dividing rough pasture...Views within this area are generally limited by the complex topography and mature vegetation except at the tops of drumlins and from bridges crossing the Royal Canal where panoramic views are available. Short-range views are channelled along narrow valleys between drumlins often along roads and the lowland adjacent to the Royal Canal.”* LCA 15 has been classified with a 'high' landscape value, 'high/medium'<sup>1</sup> landscape sensitivity, and 'regional' landscape importance. A number of recommendations are outlined for the LCA15 and those which are deemed relevant to the proposed development are included below:-

*“1: Have regard to the presence of national and European designated ecological sites in this LCA.*

*4: Protect the existing rural nature of this LCA by integrating new development within existing settlements providing design guidelines on the styles, scales and materials that suit the local vernacular.”*

The landscape character assessment also identifies the potential capacity for LCAs to accommodate different forms of development, and in relation to wind energy development, LCA 15 is identified as having a *“medium potential capacity to accommodate wind farms or single turbines because views within the LCA are generally short range and limited by topography and vegetation so there are opportunities for choosing locations where visual impacts are minimal...”*. It is also important to note that LCA15 has been identified with a *“medium capacity to accommodate overhead cables, substations and communications masts because views within this LCA are generally short range and limited by topography and vegetation so there are opportunities for choosing locations where visual impacts are minimal”*.

Two other LCAs also occur along the Westmeath-Meath border within/adjacent to the central study area and included 'LCA 6 – Central Lowlands' and 'LCA 17 – South West Kells Lowlands'. LCA 6 is designated with a 'High' landscape value, 'Medium' landscape sensitivity and 'Regional' landscape importance, whilst LCA 17 has been classified with a 'Moderate' landscape value, 'Medium' landscape sensitivity and 'Local' landscape importance. A summary of the landscape character areas that fall

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<sup>1</sup> Map 3 of the landscape character assessment identifies LCA 15 with a 'high' sensitivity designation whilst page 73 of the landscape character assessment categorises LCA 15 with a 'medium' sensitivity designation.

within the central and wider study area in addition to their value, sensitivity and importance is included in **Error! Reference source not found.** below

LCA	Landscape Value	Landscape Sensitivity	Landscape Importance
Central Study Area <5km			
LCA 15 – Southwest Lowlands	High	High/Medium	Regional
Wider Study Area c. 5-20km			
LCA 5 – Boyne Valley	Exceptional	High	International
LCA 6 – Central Lowlands	High	Medium	Regional
LCA 13 – Rathmoylan Lowlands	High	High	National
LCA 14 – Royal Canal	High	Medium	Regional
LCA 16 – West Navan Lowlands	Medium	Medium	Local
LCA 17 – South West Kells Lowlands	Moderate	Medium	Local
LCA 18 – Lough Sheelin Uplands	High	High	Regional
LCA 19 – Loughcrew & Slieve na Calliagh Hills	Exceptional	High	National/International

**Table 0.5: Summary of landscape character areas in County Meath contained within the study area.**

Chapter 9 of the current CDP identifies policies and objectives relating to the landscape which are included below:-

*“Strategic Policy*

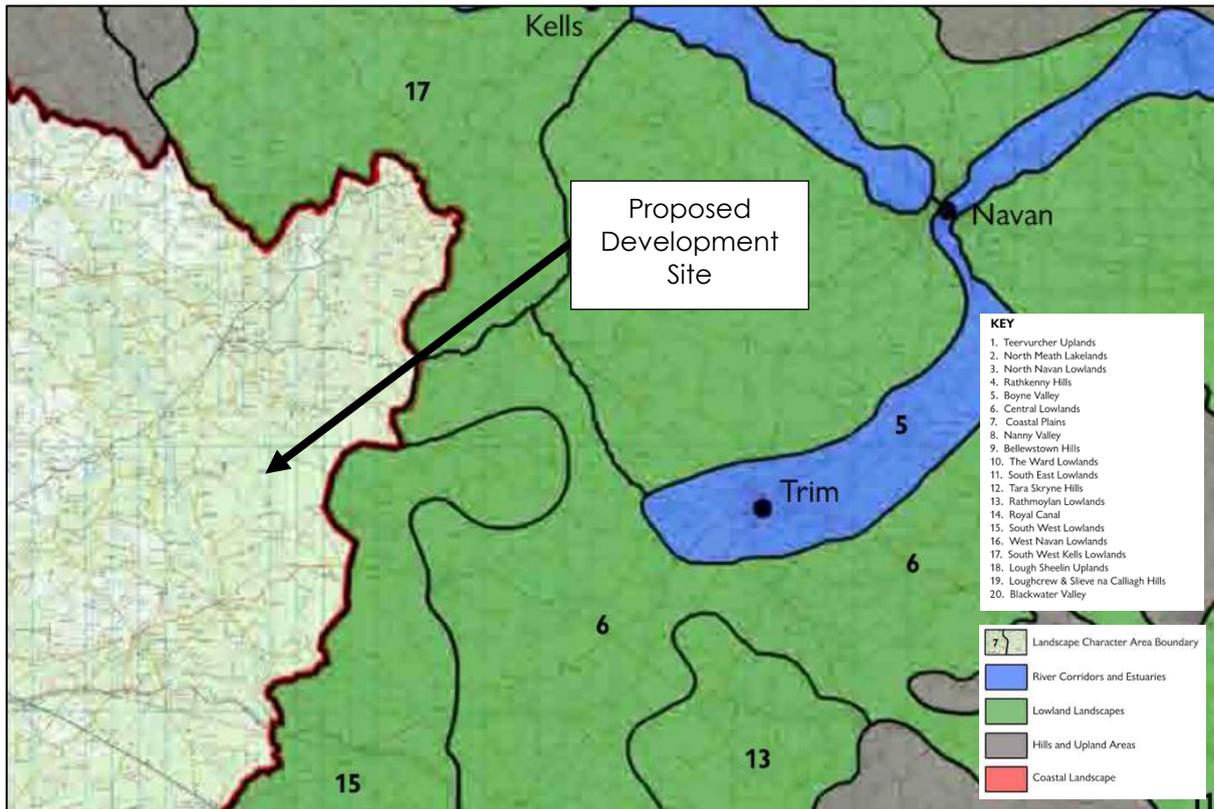
*LC SP 1 – To protect the landscape character, quality, and local distinctiveness of County Meath in accordance with relevant government policy and guidelines and the recommendations included in Meath Landscape Character Assessment (2007) in Appendix 7.*

*Policy*

*LC POL 2 – To require that any necessary assessments, including landscape and visual impact assessments, are provided when undertaking, authorising, or approving development.*

*Objectives*

*LC OBJ 1 – To seek to ensure the preservation of the uniqueness of all landscape character types, and to maintain the visual integrity of areas of exceptional value and high sensitivity.”*



**Figure 9.4: Excerpt from Map 1, Appendix 7 of the current CDP showing Landscape Character Types and Landscape Character Areas in relation to the proposed development.**

9.3.2.4 Kildare County Development Plan 2017-2023

The Kildare-Meath County bounds occurs in the wider south-eastern quadrant of the study area, and therefore it is important to considered landscape related designations in County Kildare. A landscape character assessment was undertaken in 2004 for County Kildare and identifies a number of distinctive landscape character areas within the county. The most relevant of these is the 'North-western Lowlands' which skirts the Meath-Kildare county boundary within the study area. This LCA has been categorised with a 'Low' landscape sensitivity designation and 'high' likely compatibility with wind energy developments.

9.3.2.5 Westmeath County Development Plan 2021-2027 – Wind Energy Policy

Chapter 10 of the current Westmeath CDP relates to Transport, Infrastructure and Energy and includes subsection 10.23 which relates to Wind Energy. A wind energy development capacity map is also included in Volume 2: Map 69 which outlines areas of 'low capacity' and 'no capacity' within County Westmeath. It is important to note that the above mentioned capacity designations are the only two wind energy designations within the county. The proposed development is sited in an area identified as 'Low capacity' in relation to wind energy developments as identified in **Figure 9.5** below. Policies and objectives relating to wind energy developments are also included within the current CDP. Those deemed relevant to the proposed development are provided below:-

*“CPO 10.142: Have regard to the principles and planning guidance set out in Department of Housing, and Local Government publications relating to ‘Wind*

*Energy Development' and the DCCAE Code of Practice for Wind Energy Development in Ireland and any other relevant guidance which may be issued in relation to sustainable energy provisions.*

*CPO 10.143\*: Provide the following separation distances between wind turbines and residential dwellings:*

*-500 metres, where height of the wind turbine generator is greater than 25 metres but does not exceed 50 metres.*

*-1000 metres, where the height of the wind turbine generator is greater than 50 metres but does not exceed 100 metres.*

*-1500 metres, where the height of the wind turbine generator is greater than 100 metres but does not exceed 150 metres.*

*-More than 2000 metres, where the height of the wind turbine generator is greater than 150 metres.*

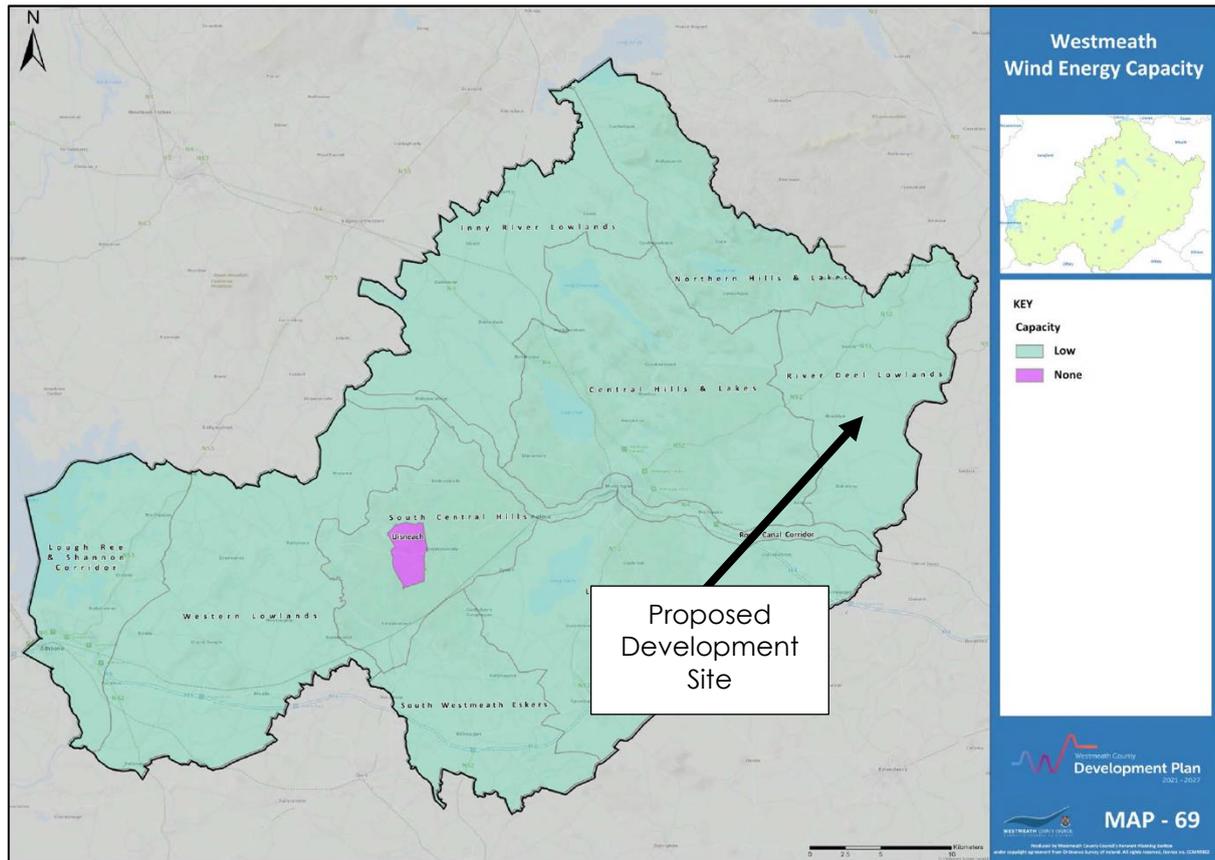
*CPO 10.144: To strictly direct large-scale energy production projects, in the form of Wind Farms, onto cutover cutaway peatlands in the county, subject to environmental, landscape, habitats and wildlife protection requirements being addressed. In the context of this policy, industrial scale/large-scale energy production projects are defined as follows:*

*Projects that meet or exceed any of the following criteria:*

*-Height: over 100m to blade tip, or*

*-Scale: More than five turbines*

*-Output: Having a total output of greater than 5MW"*



**Figure 9.5: Map 69 of the current CDP showing wind energy capacity in Westmeath in relation to the proposed development.**

*\*At the time of writing, this policy and the mapping above at Figure 9.5 is the subject of a Draft Ministerial Direction.*

### 9.3.2.6 Meath County Development Plan 2013-2019 – Wind Energy Strategy

Whilst the draft Meath County Development Plan 2021-2027 is currently available for review, it remains in draft form and has not yet been adopted. Consequently, the current CDP (2013-2019) will be the principal document for landscape related policy in Meath used within this assessment. Furthermore, it is noted that, currently, the extant Landscape Character Assessment for County Meath (prepared in 2007) will also form part of the draft Meath County Development Plan 2021-2027.

Whilst the majority of the proposed development is located within County Westmeath, some of the ancillary elements of infrastructure are located in County Meath, and therefore wind energy designations for County Meath should also be considered. Chapter 8 of the current CDP relates to Energy and Communications, with subsection 8.1.5 referring to wind energy development. The CDP states that *“the assessment of individual wind energy development proposals needs to be conducted within the context of a “plan led” approach which involves identifying areas considered suitable or unsuitable for wind energy development. The Landscape Characterisation Assessment identifies areas of the County that are sensitive to this form of development from a landscape perspective.”*

With regard to the capacity of the receiving landscape to accommodate wind energy development, the nearest LCA to the proposed wind farm, LCA 15 has been identified with a ‘Medium’ capacity, whilst the two neighbouring landscape

character areas, LCA 6 and LCA 17 would have 'low' capacity, although it is worth noting that LCA 6 would have a "medium potential capacity to accommodate single turbines because extensive views could be more easily limited by vegetation and through careful location."

A number of policies and objectives are outlined in chapter 8 of the current CDP, and those that are deemed relevant to the proposed development are provided below:-

"Policies:

*EC POL 1: To facilitate energy infrastructure provision, including the development of renewable energy sources at suitable locations, so as to provide for the further physical and economic development of Meath.*

*EC POL 3: To encourage the production of energy from renewable sources, such as from biomass, waste material, solar, wave, hydro, geothermal and wind energy, subject to normal proper planning considerations, including in particular, the potential impact on areas of environmental or landscape sensitivity and Natura 2000 sites.*

*EC POL 4: To support the National Climate Change Strategy and, in general, to facilitate measures which seek to reduce emissions of greenhouse gases.*

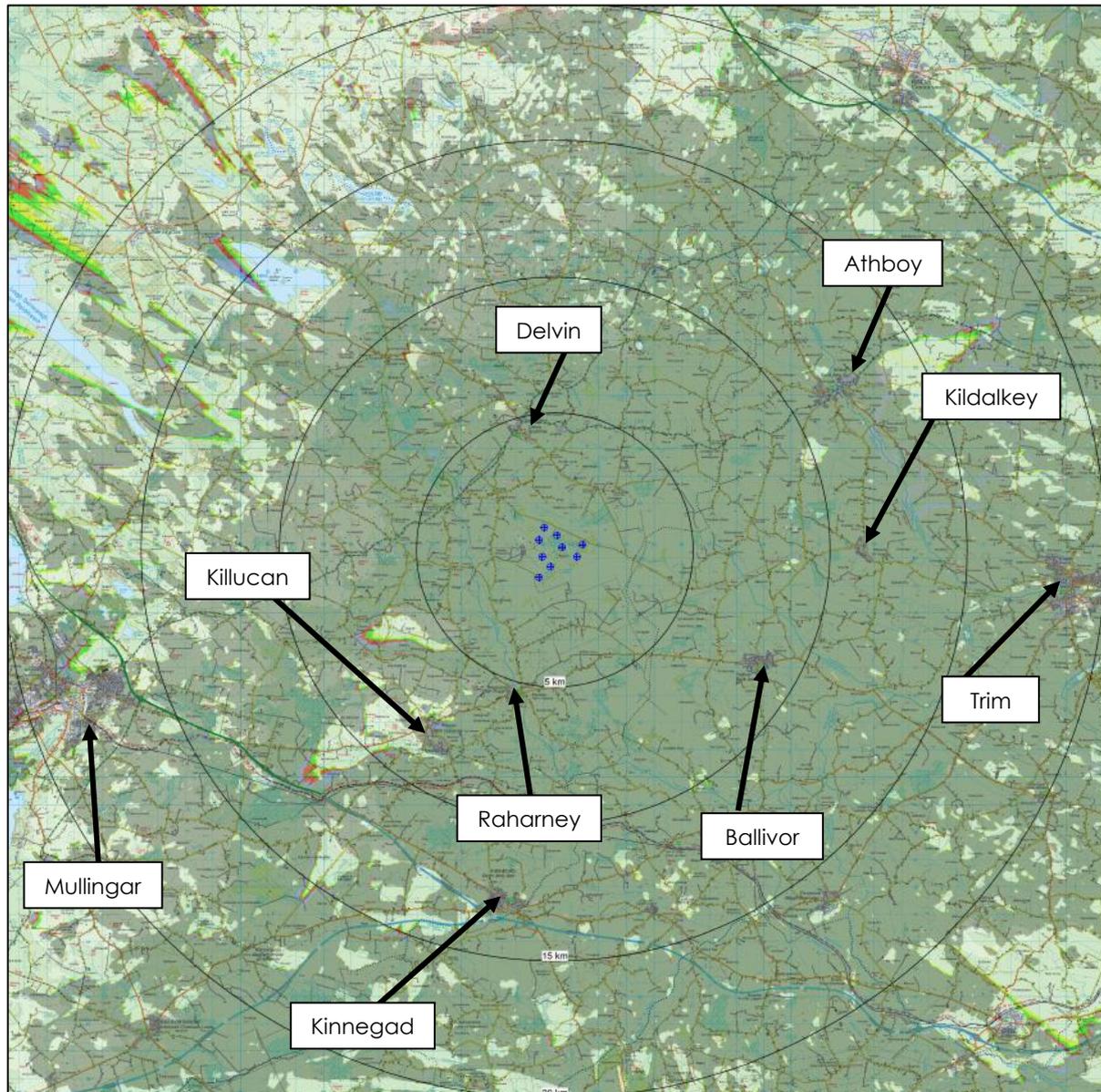
*EC POL 20: To encourage the development of wind energy, in accordance with Government policy and having regard to the Landscape Characterisation Assessment of the County and the Wind Energy Development Guidelines (2006)."*

### 9.3.3 Visual Baseline

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

#### 9.3.3.1 Zone of Theoretical Visibility (ZTV)

A computer generated Zone of Theoretical Visibility (ZTV) map has been prepared to illustrate where the proposed development is potentially visible from. The ZTV map is based solely on terrain data (bare ground visibility) and ignores features such as trees, hedges or buildings which may screen views. Given the complex vegetation patterns within this landscape, the main value of this form of ZTV mapping is to determine those parts of the landscape from which the proposed development will definitely not be visible, due to terrain screening, within the 20km study area.



**Figure 9.6: Bare-ground Zone of Theoretical Visibility (ZTV) Map. (See Annex 9.1 for larger scale map)**

The following key points are illustrated by the 'bare-ground' ZTV map (**Figure 9.6** refers). It should be noted that the colouring system used in the above ZTV relates to the degree of turbine visibility based off a 'bare-ground' scenario (Grey/Black = 8-9 turbines theoretically visible, Blue = 6-7 turbines theoretically visible, Red = 4-6 turbines theoretically visible and Green = 2-3 turbines theoretically visible). Where there is no colour pattern, visibility of the proposed turbines is entirely eliminated:-

- The most notable aspect about the ZTV is that comprehensive theoretical visibility of all of the proposed turbines has the potential to occur throughout almost the entirety of the central study area as a result of the relatively flat nature of the surrounding terrain;
- Comprehensive visibility of the proposed turbines also has the potential to occur throughout a large proportion of the wider study area, most notably to the east and south where the terrain is typically flat to low rolling. Such broad bare-ground visibility patterns are common within flat midlands landscapes, but they

do not represent the reality of visibility because vegetation patterns (not accounted for in the ZTV map) generally restrict the visibility of turbines to about 2-3km other than in areas of elevated ground;

- The ZTV pattern is also relatively consistent up to 10km throughout the entire study area, although a number of areas of 'no visibility' (no colour pattern) occur to the north and west of the settlement of Killucan. Nevertheless, the central areas of Killucan have the potential to afford comprehensive visibility of all of the proposed turbines;
- ZTV coverage becomes more sporadic within the wider extents of the 20km study radius, most notably to the west and north where the terrain transitions to that of a rolling drumlin landscape. Within the wider western and northern parts of the study area visibility is typically associated with the more elevated sections of the rolling drumlin hills, whilst the lower-lying terrain surrounding the inter-drumlin lakes and hollows will afford no visibility of the proposed turbines;
- Whilst some small blocks of no ZTV pattern(no visibility) occur within the wider eastern and southern half of the study area, comprehensive ZTV coverage extends out to the 20km study radius boundary;
- With regard to settlements, Devlin is the nearest to the proposed development and is located in an area of comprehensive ZTV pattern;
- Many of the towns and small village settlements within the wider study area also have the potential to experience theoretical visibility of the proposed turbines and include; Kildalkey, Ballivor, Raharney, Killucan, Kinnegad, Clonmellon, Crossakiel, Athboy, Trim, Miltownpass and Longwood; and
- Located in the wider northwest quadrant of the study area, Castlepollard will experience no visibility, whilst in the wider surrounds of Mullingar the ZTV pattern is relatively sporadic and includes some areas of comprehensive visibility, although the central areas of the town experience no ZTV pattern.

### 9.3.3.2 Views of Recognised Scenic Value

Views of recognised scenic value are primarily indicated within County Development Plans in the context of scenic views/routes designations, but they might also be indicated on touring maps, guide books, road side rest stops or on post cards that represent the area.

All of the scenic routes and views that fall inside the ZTV pattern were investigated during fieldwork to determine whether actual views of the proposed development might be afforded. Where visibility may occur, a viewpoint has been selected for use in the visual impact appraisal later in this chapter.

### 9.3.3.3 Westmeath County Development Plan 2014-2021

Appendix 5 and Volume 2 of the current Westmeath County Development Plan include a range of preserved views and prospects in County Westmeath. All identified views situated within the 20km study radius are included in **Table 0.6** below in addition to their relevance to the proposed development.

Westmeath CDP Reference	Relevance to visual impact appraisal	VP Reference
Protected Views		
26	<b>Not Relevant</b> – Scenic view oriented in the opposite direction to the proposed development	-

28	<b>Not Relevant</b> – Viewpoint located outside of ZTV	-
29	<b>Not Relevant</b> – Viewpoint located outside of ZTV	-
30	<b>Not Relevant</b> – Viewpoint located outside of ZTV	-
31	<b>Not Relevant</b> – Viewpoint located outside of ZTV	-
Scenic Routes/Amenity Routes		
Mullingar Cycle Hub	<b>Yes Relevant</b> – Majority of routes are located outside of ZTV and outside of the study area, however, there is some potential for turbine visibility along cycle loop 1 northwest of Mullingar	VP17
Fore Walks	<b>Not Relevant</b> - Majority of routes located outside of ZTV. Visual amenity here stems from localised views of nearby lakes and heritage features.	-
Royal Canal Way	<b>Yes Relevant</b> – Potential for views of the proposed turbines	VP34

**Table 0.6: Rational for selection of scenic designations within the Westmeath County Development Plan**

Policies and objectives relating to views and prospects In County Westmeath are included within Chapter 13 of the current development plan and are included below:-

*“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.”*

#### 9.3.3.4 Meath County Development Plan 2013-2019 (Draft 2021-2027 CDP<sup>2</sup>)

The current Meath County Development Plan identifies its protected views and prospects in Appendix 12 and in Volume 3, Map 9.5.1. All identified views situated within the 20km study area are included in **Table 9.7** below in addition to their relevance to the proposed development.

Meath CDP Reference & Significance	Relevance to visual impact appraisal	VP Reference
4 - Regional	<b>Not Relevant</b> – Scenic view oriented in the opposite direction to the proposed development	-

<sup>2</sup> A new map of views & prospects is included within the draft Meath CDP 2021-2027. Nonetheless, the viewpoint designations within the study area remain the same as the current CDP designations which are outlined in **Table 9.7**.

5 – Regional	<b>Yes Relevant</b> – Views oriented in the direction of the site. (One illustrative view has been chosen from this area to represent multiple elevated designated views)	VP1
6 – National	<b>Yes Relevant</b> – Views oriented in the direction of the site. (One illustrative view has been chosen from this area to represent multiple elevated designated views)	VP1
7 – Regional	<b>Not Relevant</b> – Viewpoint located outside of ZTV	-
8 – Regional	<b>Not Relevant</b> – Scenic view oriented in the opposite direction to the proposed development.	-
9 – Regional	<b>Not Relevant</b> – Viewpoint located outside of ZTV	-
10 – National	<b>Not Relevant</b> – Scenic view oriented in the opposite direction to the proposed development.	-
11- Local	<b>Yes Relevant</b> – Views oriented in the direction of the site.	VP3
13 – National	<b>Yes Relevant</b> – Views oriented in the direction of the site.	VP2
50 – Regional	<b>Yes Relevant</b> – Views oriented in the direction of the site. (One illustrative view from Trim Castle has been chose to represent views within the settlement of Trim)	VP22
51 – Local	<b>Not Relevant</b> - Scenic view oriented in the opposite direction to the proposed development.	-
52 – Regional	<b>Yes Relevant</b> – Views oriented in the direction of the site.	VP8
53 – Local	<b>Not Relevant</b> - Scenic view oriented in the opposite direction to the proposed development. Views are localised in scale and a high degree of mature vegetation occurs in the direction of the site.	-
54 – Regional	<b>Yes Relevant</b> – Views oriented in the direction of the site.	VP35
55 – Local	<b>Not Relevant</b> – Viewpoint located outside of ZTV	-
56 – Regional	<b>Not Relevant</b> - Scenic view oriented in the opposite direction to the proposed development.	-
57 – Local	<b>Yes Relevant</b> – Views afforded in the direction of the site	VP40
78 – Local	<b>Not Relevant</b> – High degree of dense mature vegetation to the west. View of turbines unlikely	-

79 – Local	<b>Not Relevant</b> - Scenic view oriented in the opposite direction to the proposed development.	-
83 – Local	<b>Yes Relevant</b> – Views afforded in the direction of the site	VP36
94 – Local	<b>Not Relevant</b> – Viewpoint located outside of ZTV	-

**Table 0.7: Rational for selection of scenic designations within the Meath County Development Plan**

Chapter 9 of the current county development plan includes an objective relating to views and prospects in County Meath which is included below:-

*“LC OBJ 5: To preserve the views and prospects and the amenity of places and features of natural beauty or interest listed in Appendix 12 and shown on Map 9.5.1 from development that would interfere with the character and visual amenity of the landscape.”*

#### 9.3.3.5 Kildare County Development Plan 2017-2023

There are no designated viewpoints within the areas of County Kildare that occur within the southeast quadrant of the study area.

#### 9.3.3.6 Centres of Population and Houses

The most notable settlement in relation to the proposed development is that of Delvin which is located just under 4km northwest of the proposed development site at its nearest point. Located along the corridor of the River Deel, the small village of Raharney is also located on the periphery of the central study area and is just under 5km south of the site.

In terms of large/medium-sized towns within the wider study area, the most notable of these are Kinnegad situated 13km south of the site, Mullingar situated just over 16km southwest of the site and Trim situated 17km east of the site.

A number of smaller villages and ‘cross-road’ settlements are also situated throughout the wider study area and include Ballivor 8km southeast of the site, Kilucan 8km southeast of the site, Drumcree 8km northwest of the site, Hill of Down 11km southeast of the site, Kildalkey 10km east of the site, Clonmellon 10km northeast of the site, Athboy 11km northeast of the site, Collinstown, 12.5km northwest of the site, Clonard 13km southwest of the site, Ráth Chairn 15km northeast of the site, Fore 15km northwest of the site, Longwood 16km southeast, Crossakiel 16km north of the site and Castlepollard 18km northwest of the site.

#### 9.3.3.7 Transport Routes

The M4 and M6 motorways are the most notable major routes within the study area. The M4 is situated just over 11km southwest of the site whilst the M6 diverges from the M4 just south of Kinnegad and is located just over 12km south of the site at its nearest point. The M4 culminates east of Mullingar where it becomes the N4 national primary route which traverse the southwest quadrant of the study area, passing north of and is located just over 12km southwest of the site at its nearest point. The N52 national secondary route is the nearest major route to the proposed development and is located just over 3km northwest of the site at its nearest point. The N51 extends from the settlement of Delvin in an easterly direction and is located just over 3km north of

the proposal site. The N3 national primary also briefly enters the wider north-eastern periphery of the study area and is located just over 18km northeast of the site.

In terms of regional roads, the nearest route is that of the R156 regional road, which passes through the settlements of Ballivor, Raharney and Kilucan in the southern half of the study area and is located just over 3.5km south of the site at its nearest point. The R395 regional road also extends out to the north of Delvin and links with the settlements of Drumcree, Collinstown and Castlepollard within the northwest quadrant of the study area, and is located less than 4km north of the site at its nearest point.

A number of other regional roads also occur within the wider study area, linking many of the small village and towns and include the R148, R154, R159, R160, R161, R164, R195, R394, R446. A relatively dense network of local roads also traverses the predominantly flat terrain of the central study area, the nearest of which passes immediately north of the proposal site.

#### 9.3.3.8 Tourism, Recreational and Heritage Features

Whilst the central study area is not synonymous with outdoor recreation, a number of waymarked trails and walking routes are located within its wider surrounds. The most notable of these is the Royal Canal Way – a 144km national waymarked trail, which follows the corridor of the Royal Canal throughout the wider southern half of the study area. The Royal Canal Greenway also follows the corridor of the Royal Canal commencing at the Westmeath – Meath county border as it travels west before exiting the study area west of Mullingar. The Drewstown Woods/Girley Bog looped walk is located in the northeast quadrant of the study area and is located just over 13km northwest of the site at its nearest point. St. Feichin's Way is a 3km looped walk that takes in the historic village of Fore and is located just over 14km northwest of the site. Several of the on-road Mullingar Cycle Hub Loops also occur within the south-western periphery of the study area.

There is also a number of heritage features within the wider study area. The most notable of these is the Loughcrew complex situated on the north-western periphery of the study area. Loughcrew is the site of a megalithic cemetery contained up to 30 passage tombs and is situated across three hills near the town of Oldcastle in County Meath. Said to be one of the “most important prehistoric cemeteries in Ireland”, the Loughcrew complex hosts a number of walks across these hills and affords elevated distant views across the surrounding landscape. The Loughcrew complex is located along the 225km Boyne Valley Drive, which passes a number of other important heritage features also located within the northern and eastern half of the study area. These include the Tower of Lloyd situated just over 20km northeast of the site, the Hill of Ward situated on the outskirts of Athboy some 12.5km northeast of the site, and Trim Castle situated just under 18km east of the site.

Other notable heritage features within the wider study area include Ballinlough Castle and Gardens, Fore Abbey, and Loughcrew House and Gardens. Both the central and wider study areas also contain a number of other finer scale heritage features including ringforts, enclosures and earthworks. In addition, 2 no. National Monuments are located within the central study area. The potential for visual impacts on these monuments has been considered in this chapter and the assessment should be read in conjunction with **Chapter 10** (Cultural Heritage).

### 9.3.4 Identification of Viewshed Reference Points

The results of the ZTV analysis provides a basis for the selection of Viewshed Reference Points (VRPs/VPs), which are the locations used to study the landscape and visual impact 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 impacts arising from the project. Instead, receptor locations were selected that are likely to provide views of the proposed development from different distances, different angles and different contexts.

The visual impact of a proposed development is assessed using up to 6 no. 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.

The characteristics of each receptor type vary as does the way in which the view is experienced. These are described below.

#### 9.3.4.1 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.

#### 9.3.4.2 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.

#### 9.3.4.3 Local Community Views

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

#### 9.3.4.4 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.

#### 9.3.4.5 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 proposal site, but with a preference towards close and/or elevated views. Major routes typically provide views experienced whilst in motion and these may be fleeting and intermittent depending on screening by intervening vegetation or buildings.

#### 9.3.4.6 Tourism, Recreational and Heritage Features

These views are often one and the same given that heritage locations can be important tourist and visitor destinations and amenity areas or walking routes are commonly designed to incorporate heritage features. Such locations or routes tend to be sensitive to development within the landscape as viewers are likely to be in a receptive frame of mind with respect to the landscape around them. The sensitivity of this type of visual receptor is strongly related to the number of visitors they might attract and, in the case of heritage features, whether these are discerning experts or lay tourists. Sensitivity is also heavily influenced by the experience of the viewer at a heritage site as distinct from simply the view of it. This is a complex phenomenon that is likely to be different for every site.

Experiential considerations might relate to the sequential approach to a castle from the car park or the view from a hilltop monument reached after a demanding climb. It might also relate to the influence of contemporary features within a key view and whether these detract from a sense of past times. It must also be noted that the sensitivity rating attributed to a heritage feature for the purposes of a landscape and visual assessment is not synonymous with its importance to the Archaeological or Architectural Heritage record.

VRP No.	Location	Distance to nearest turbine	Direction of view
VP1	Slieve Na Calliagh	18.5km (T1)	SE
VP2	Spire of Lloyd, Kells	20.4km (T10)	NW
VP3	L1633 southwest of Crossakiel	14.9km (T1)	S
VP4	Girly Bog National Looped Walk	14km (T10)	SW
VP5	Local Cemetery at Clonmellon	10.2km (T1)	SW
VP6	R395 at Drumcree	8.3km (T1)	SE
VP7	Ballinlough Castle	7.3km (T1)	SW
VP8	Hill of Ward	12.6km (T10)	SW
VP9	N51 southwest of Athboy	9.5km (T10)	SW
VP10	N52 at Delvin	3.7km (T1)	SE
VP11	N52 south of Delvin	3.5km (T1)	SE
VP12	N51 at Crowinstown	4.5km (T10)	S
VP13	Local road at Martinstown	1.7km (T1)	SE

VP14	Local road at Ballyhealy	2.1km (T6)	S
VP15	Cemetery at Pasonstown, east of R394	14.6km (T2)	E
VP16	St. Dymrna's National School, Kildalkey	10.2km (T10)	W
VP17	N5 Northeast of Lough Owel	18.9km (T2)	E
VP18	Local road at Bracklin, west of site	1.6km (T2)	E
VP19	Local road at Bracklin east of site	1.3km (T10)	W
VP20	N52 at Killynan	7.7km (T5)	E
VP21	L1501 at Killagh	3.3km (T5)	E
VP22	Trim Castle	17.8km (T10)	W
VP23	R161 west of Trim	17.1km (T10)	W
VP24	Local road at Cloghbrack	3.2km (T11)	NW
VP25	Local road at Craddanstown southeast of site	2.6km (T5)	NW
VP26	Local road at Craddanstown southwest of site	2.4km (T5)	NE
VP27	Woodgrove Residential Estate, Ballivor	7km (T11)	NW
VP28	R156 at Grange More	3.6km (T5)	N
VP29	Lakepoint Park, Mullingar	15.7km (T5)	NE
VP30	R156 Raharney Road	4.7km (T5)	NE
VP31	Cemetery South of Raharney	4.5km (T5)	N
VP32	The Old Glebe Road, Killucan	6.8km (T5)	NE
VP33	N4 Overpass at Newdown	12.1km (T5)	NE
VP34	Royal Canal Way/Greenway at Cushinstown	8.3km (T5)	NE
VP35	R161 Killyon Bridge	10.8km (T5)	NW
VP36	L8030 Blackshade Bridge	12.5km (T11)	NW
VP37	Manorfield Residential Housing Estate at Kinnegad	11.4km (T5)	N
VP38	Abbeyfields Residential Housing Estate at Clonard	12.6km (T5)	NW
VP39	L5001 Overbridge of M4	15.1km (T5)	NW
VP40	Local road at Rathcore	19.2km (T11)	NW

**Table 0.8: Outline description of selected Viewshed Reference Points (VRPs)**

### 9.3.5 Cumulative Baseline

The Scottish Natural Heritage (SNH) Guidelines relating to the Cumulative Effects of Wind Farms (2012) identify that cumulative impacts on visual amenity consist of combined visibility and sequential effects. The same categories have also been subsequently adopted in the Landscape Institute's 2013 revision of the *Landscape and Visual Impact Assessment Guidelines*:-

*"Combined visibility occurs where the observer is able to see two or more developments from one viewpoint. Combined visibility may either be in combination (where several 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.)"*

Cumulative impacts 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 (2005)* and the DoEHLG *Wind Energy Development Guidelines for Planning Authorities (2006)*, cumulative impacts can be experienced in a variety of ways.

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

In terms of visual amenity, there is a range of ways in which an additional wind farm might generate visual conflict and disharmony 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 9.** below provides criteria for assessing the magnitude of cumulative impacts.

Magnitude of Impact	Description
Very High	<ul style="list-style-type: none"> <li>• The proposed wind farm will strongly contribute to wind energy development being the defining element of the surrounding landscape.</li> <li>• It will strongly contribute to a sense of wind farm proliferation and being surrounded by wind energy development.</li> <li>• Strongly adverse visual effects will be generated by the proposed turbines in relation to other turbines.</li> </ul>
High	<ul style="list-style-type: none"> <li>• The proposed wind farm will contribute significantly to wind energy development being a defining element of the surrounding landscape.</li> <li>• It will significantly contribute to a sense of wind farm proliferation and being surrounded by wind energy development.</li> <li>• Significant adverse visual effects will be generated by the proposed turbines in relation to other turbines.</li> </ul>
Medium	<ul style="list-style-type: none"> <li>• The proposed wind farm will contribute to wind energy development being a characteristic element of the surrounding landscape.</li> </ul>

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

**Table 9.9 Outline Magnitude of Cumulative Impact**

There are no operational wind farms contained within the study area, however there is one permitted wind farm in the southern half of the study area. There is also one proposed wind farm that is yet to be submitted for planning, which is situated to the immediate east/southeast of the site. These are set out in **Table 0.10** below.

Wind Farm Name	Number of Turbines	Distance and Direction from Proposed Development Site	Status
Yellow River Wind Farm	29	c. 17km southwest	Permitted
Ballivor Wind Farm	26 <sup>3</sup>	c. 500m southeast	Proposed

**Table 0.10: Cumulative Wind Farms within Study Area**

## 9.4 Description of Likely Effects

### 9.4.1 Landscape Impacts

Landscape impacts are assessed on the basis of landscape sensitivity weighed against the magnitude of physical landscape effects within the proposed development site and effects on landscape character in the wider landscape setting. This wider setting is considered in respect of the central study area (<5 km) as well as the broader scale of the study area (5-20km).

#### 9.4.1.1 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 (<5km), as well as the broader scale of the study area (5-20km). Landscape sensitivity in this project level LVIA context needs to go beyond the generic measures of sensitivity employed in the county Landscape Character Assessment and focus on the attributes of the proposal. In terms

<sup>3</sup> At the time of writing, this proposed development remains the subject of pre-application consultations with An Bord Pleanála. On the basis of publicly available information, the project is understood to comprise 26 no. turbines.

of sensitivity to this proposed wind farm development, the most sensitive landscapes and landscape features are likely to be those that exhibit enclosed, intricate landform and land use patterns, and/or a strong sense of heritage or past times not strongly influenced by modern development. Areas with a strong sense of the naturalistic, or with low levels of built development, are also likely to be sensitive to the proposed development.

### Central Study Area (<5km)

The landscape of the proposed development site and its immediate surrounds is that of a flat to gently undulating landscape of agricultural farmland and large-scale peat bogs that is typical of the midlands of Ireland. Whilst some broad distance views are afforded across the extensive flat peat bogs within the central study area, the flat nature of the central study area in combination with the dense intervening tree-lined hedgerows and blocks of mature conifer forest plantations, often tend to restrict any notable sense of openness within the near environs of the proposed development site. The central study area is predominately characterised by rural productivity both in the past by the harvesting of peat for fuel and at present by intensive agricultural activities and is not considered to be a highly distinctive landscape setting.

Much of the rural population within the central study area is scattered throughout the landscape and often comprises of small linear clusters of dwellings and isolated farmsteads. Aside from the immediate surrounds of the large peat bogs, the central study area is a relatively settled landscape, with a strong rural population located along the local and regional road network. Nevertheless, the only notable town and village settlements within the central study area include Delvin and Raharney, both of which are located on its outer periphery.

There is a general absence of scenic and recreational amenity value within near surrounds of the site, which is reflected by the fact that there are no designated scenic views located within either the Westmeath or Meath County Development Plans in the central study area. Nor are there any designated national or regional walking routes or cycling trials within the central study area. Instead recreational value within the central study area typically relates to local amenity's such Delvin GAA club and Delvin Castle golf club. The settlement of Delvin also has some heritage associations in the form of the remnants of Delvin Castle, whilst the proposed development site itself is located to the rear of Bracklyn demesne. Nevertheless, Bracklyn demesne would not be regarded as a pristine example of a demesne landscape in the midlands of Ireland as it is currently in use as an active farmstead, whilst much of its surrounding woodland is contained in conifer forest plantations. Within Bracklyn demesne, the majority of the small scale and intricate field pattern(s) associated with this type of designed landscape have been replaced by larger scale open fields, which are now used for intensive agricultural purposes.

In terms of landscape designations, the proposed site is located within 'LCA 3 – River Deel Lowlands' in the Westmeath County Development Plan. Whilst the current CDP does not outline the sensitivity of each of Westmeath's LCAs, it does identify a number of 'Areas of High Amenity' which are highly regarded for their amenity and recreational value. None of these areas of high amenity are located within the central study area or its near surrounds.

As the proposed wind turbines are located c. 2km west of the Meath County border, it is important to consider landscape-related designations in County Meath. The nearest and most relevant LCA is 'LCA 15 – Southwest Lowlands' which has been

classified with a 'high' landscape value, 'medium' landscape sensitivity, and 'regional' landscape importance. It is important to note that the 'high' value designation is the median classification of five.

On the basis of the factors outlined above, it is considered that this is principally a productive rural landscape of strong integrity and one that contributes to the rural subsistence and amenity of the surrounding rural population. There is also some sense of heritage within the central study area in the form of demesne landscapes, however, the central study area is a highly-modified landscape that is principally influenced by anthropogenic features such as cutaway peat bogs, busy transport routes, and small rural industry. This is not a distinctive or unique landscape and instead, it is fairly typical of rural landscapes found within the midlands of Ireland. Landscape values here tend to relate to rural productivity over any susceptible scenic, naturalistic or recreational ones, and as a result, the sensitivity of the central study area is considered to be **Medium-low**.

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

Whilst the central study area could be described as a typical, non-distinctive landscape setting in the midlands of Ireland, the wider study area has a more complex composition, which comprises of a variety of land forms and land uses and is strongly diverse in terms of heritage and amenity features. This results in a highly contrasting wider study area in terms of landscape sensitivities and values which are covered below.

The most notable aspect of the wider study area is its high concentration of heritage features and demesne landscapes. This is in part due to the fact that the Boyne Valley flows through the eastern half of the study area and has a distinct heritage value associated with it, as does much of County Meath. Situated across a number of elevated rolling hills, one of the most notable heritage features within the study area is the Loughcrew complex which is located on the north-western periphery of the study area. The Loughcrew complex is a megalithic cemetery of international importance, and as a result of its elevated location, it encompasses a number of scenic designations within the Meath CDP. Other prominent heritage features within the study area include the Hill of Ward, Trim Castle and the Spire of Loyld, all of which are connected by a 225km tourist driving route known as the 'Boyne Valley Scenic Drive'. All of these heritage features are considered to be highly sensitive and are often associated with scenic view designations in the Meath CDP, some of which have been categorised of national and international importance. In terms of demesne landscapes, the most notable include Ballinlough Castle and Demesne and Loughcrew Estate and Gardens. These add additional layers of sensitivity to a wider study area that already has a high prevalence of built heritage features.

One of the key landscape features within the wider southern half of the study area is the Royal Canal which has associated scenic and recreational amenity values and encompasses the Royal Canal Way national waymarked trail and Royal Canal Greenway. Nevertheless, much of the associated scenic value is heavily contained within the corridor of the canal which is typically enclosed by dense canal side vegetation. Furthermore, any sense of tranquillity along the canal is typically well contained within its corridor setting. In similar circumstances to the Royal Canal, the Girley Bog which is located in the eastern half of the study area provides a notable degree of recreational amenity as it encompasses a national looped walking trail. However, as this bogland context is heavily contained by its surrounding dense

vegetation, it has little influence on the surrounding landscape. The Girley Bog is also designated a Natural Heritage Area and Special Area of Conservation and is therefore highly sensitive to development of any kind.

In terms of other landscape designations, three 'High Amenity Area' designations are located in the wider western half of the study area and relate to Lough Lene, Lough Derravaragh and Lough Owel. Due to the scenic nature of these lakes, a number of designated views in the Westmeath CDP are also located in the immediate surrounds. Nevertheless, many of these lakes are located in inter-drumlin hollows, and therefore much of their scenic amenity is contained by the surrounding rolling drumlin hills. **Table 0.5** above summarises the landscape designations in County Meath and whilst some of these landscape units are deemed to be highly sensitive and of national/international importance, these are typically located on the periphery of the 20km study extents.

Despite the relatively high proportion of heritage features and sensitive landscape features within the wider surrounds of the study area, it is also important to note that the majority of the wider study area presents a relatively homogenous rural landscape in the midlands of Ireland, similar to that of the central study area. Furthermore, the wider study area is also comprised of some highly anthropogenic features such as the corridors of the M4, M6 and N4, all of which have a notable influence on the wider southern half of the study area. Several medium to large-scale settlements are also located throughout the wider southern half of the study area, the most notable of which is Mullingar and accounts for one of the largest areas of urban land use within the entire study area.

Overall, it is considered that the wider study area has a complex composition as it comprises of landscape features and elements that contribute to a broad range of landscape values and sensitivities. The presence of highly sensitive heritage features has a notable impact on the overall sensitivity of the wider study area, especially within the areas of the study area located within County Meath. There is also some sense of recreational amenity within the wider study area, much of which is related to the canals, rivers and lakes. Nevertheless, much of the wider study area constitutes a typical rural landscape where landscape values relate mostly to rural productivity and the subsistence of the rural economy. Overall, it is considered that the wider study area has a combined **Medium** landscape sensitivity albeit some of the wider heritage landscapes in county Meath have localised pockets of high and even very high landscape sensitivity.

#### 9.4.1.2 Magnitude of Landscape Impacts – Construction Phase

The physical landscape, as well as the character of the proposed development site and its immediate surrounds, is affected by the proposed wind turbines as well as ancillary development such as access tracks, areas of hardstanding and site entrances. By contrast, for the wider landscape of the study area, landscape impacts relate almost exclusively to the influence of the proposed turbines on landscape character.

It is considered that the proposed development will have a modest physical impact on the landscape within the site as none of the proposed development features have a significant 'footprint'. The topography and land cover of the proposed development site will remain largely unaltered with construction being limited to turbine locations, access tracks and site entrances, areas of hardstanding, spoil

deposition areas, the temporary site construction compound and underground cabling.

A 104m meteorological mast comprising of a slender lattice structure is also proposed to be constructed. Excavations will tie into existing ground levels and will be the minimum required for efficient working. Any temporary excavations or stockpiles of material will be re-graded to marry into existing site levels and reseeded appropriately.

The finalised internal access track layout has been designed to avoid environmental constraints, and every effort has been made to minimise the length of necessary newly constructed roadway whilst utilising existing tracks within the site. Furthermore, the access track layout has been designed to follow the natural contours of the land where possible. All internal and grid connection cabling will be located underground. Indeed, the land cover of the site will only be interrupted as necessary to build the structures of the proposed wind farm and to provide access. Whilst many of the access tracks and turbine locations will be located in open pastoral fields, some turbines and sections of access track are proposed to be situated in areas of existing conifer woodland. As a result, c. 28ha of tree felling will be required to facilitate proposed infrastructure, including turbine hardstand and set down areas, access tracks and the 110kV substation. Impacts from land disturbance and vegetation loss at the site are considered to be relatively minor in the context of this modified and managed landscape setting.

A 110kV substation is also proposed as part of the development. The proposed substation is situated centrally within the wind farm site and will be located in an area which primarily consists of existing conifer plantation. Up to 3ha of plantation will be cleared to facilitate the full footprint of the proposed substation. Due to the high degree of screening in the surrounds of the site and substation, it is not considered that the proposed substation will be clearly discernible from surrounding receptors. The substation is identified in the wireframe views of VRPs 18, 19, 24 and 25, which are located at **Annex 9.2**. In light of the above, it is considered that no further/supplementary landscaping will be required around/surrounding the proposed substation.

The grid connection will run from the wind farm site across a combination of private lands and public roads which will generate some land disturbance works and the removal of some small pockets of vegetation. This will require ground excavation, laying of cables and subsequent reinstatement of trenches, and will result in minor and very localised construction stage landscape effects. No overhead lines are required for this section of the grid connection.

Two end masts will be constructed as part of the proposed development and will be located in an area of agricultural farmland in the townland of Coolronan to the east of the main wind farm site. The proposed end masts will rise to a height of c. 16m and will comprise of a thin steel lattice structure. Nonetheless, even if viewed from the nearest local roads, electrical infrastructure such as this are considered to be familiar features throughout the Irish countryside, and therefore will not appear incongruous in this robust working rural context.

Site activity will be at its greatest during the construction phase due to the operation of machinery on site and movement of heavy vehicles to and from site. This phase will have a more significant impact on the character of the site than the operational phase but is a 'short-term' impact that will cease as soon as the proposed

development is constructed and becomes operational (approximately 15-18 months from the commencement of construction).

There will be some construction stage effects on landscape character generated by the intensity of construction activities (workers and heavy machinery) as well as areas of bare-ground and stockpiling of materials as identified in the Construction and Environmental Management Plan (CEMP). Such effects will be temporary/short term in duration and, therefore, not considered to be significant.

#### 9.4.1.3 Magnitude of Landscape Impacts – Operational Phase

For most commercial wind energy developments, the greatest potential for landscape impacts to occur is as a result of the change in character of the immediate area due to the introduction of tall structures with moving components. Thus, wind turbines that may not have been a characteristic feature of the area become a new defining element of the landscape character. In this instance, wind turbines are not a characteristic feature of the study area and the effect, therefore, is the introduction of a new form of land use rather than the intensification of an existing one.

In terms of scale and function, the proposed wind farm is well assimilated within the context of the central study area. This is due to the broad scale of the landform and land use patterns. These attributes prevent the height and extent of the proposed wind farm causing the type of scale conflict that can occur in more intricate landscape areas. The extensive areas of peat bog have a strong thematic relationship with the proposed development as these large boglands once harvested peat for energy, whereas now the proposed development will harvest wind as a source of energy. Although there are also a number of major transport routes that pass through the central study area, the proposed development represents a notable intensification of built development within the central study area and will impact the character of Bracklyn demesne which it is situated within.

It is important to note that in terms of duration, this development proposal represents a long term, but not permanent, impact on the landscape and is reversible. The lifespan of the project is 30 years, after which time it will be dismantled (unless planning permission shall have been obtained for its continued use) and the landscape reinstated to prevailing conditions. Within 2-3 years of decommissioning, there will be little evidence that a wind farm ever existed on the site, albeit the proposed substation and associated grid connection infrastructure may remain in perpetuity as part of the national grid infrastructure.

The decommissioning phase will have similar temporary impacts as the construction phase with the movement of large turbine components away from the site. There may be a minor loss of roadside and trackside vegetation that has grown during the operational phase of the project, but this can be reinstated upon completion of decommissioning. Areas of redundant hard standing will be reinstated and reseeded to blend with the prevailing surrounding land cover of the time. It is expected that the decommissioning phase would be completed within a reduced timeframe to that of the construction phase.

In summary, there will be physical impacts on the land cover of the site as a result of the proposed development during the operational phase, but these will be relatively minor in the context of this productive rural landscape that comprises large scale peat bogs and blocks of commercial conifer forest. The scale of the proposed development will be well assimilated within its landscape context without undue conflicts of scale with underlying land form and land use patterns. For these reasons,

the magnitude of the landscape impact is deemed to be **Medium** with the Central Study Area, whereas, beyond 5km from the site, the magnitude of landscape impact is deemed to reduce to **Low** and **Negligible** at increasing distances as the wind farm becomes a proportionately smaller component of the overall landscape fabric.

#### 9.4.1.4 Significance of Potential Landscape Impacts

The significance of landscape impacts is a function of landscape sensitivity weighed against the magnitude of landscape impact. This is derived from the significance matrix (**Table 0.3**) used in combination with professional judgement. Based on a Medium-low sensitivity judgement and a Medium magnitude of landscape impact, the significance of impact is considered to be **Moderate-slight** within the central study area. Thereafter, significance will reduce to Slight and Imperceptible at increasing distances as the development becomes a progressively smaller component of the wider landscape fabric even in the context of higher sensitivity landscape features.

### 9.4.2 Visual Impacts

#### 9.4.2.1 Visual Receptor Sensitivity

Unlike landscape sensitivity, visual sensitivity has an anthropocentric basis. Visual sensitivity is a two-sided analysis of receptor susceptibility (people or groups of people) versus the value of the view on offer at a particular location.

To assess the susceptibility of viewers and the amenity value of views, the assessor uses a range of criteria and provides a four point weighting scale to indicate how strongly the viewer/view is associated with each of the criterion identified in **Section 9.2.3.2** above.

Strong association	Moderate association	Mild association	Negligible association

**Table 09.0 91: Analysis of Visual Receptor Sensitivity at Viewshed Reference Points**

Values associated with the view	VP1	VP2	VP3	VP4	VP5	VP6	VP7	VP8	VP9	VP10	VP11	VP12	VP13	VP14	VP15	VP16	VP17	VP18	VP19	VP20	
Susceptibility of viewers to changes in views																					
Recognised scenic value of the view																					
Views from within highly sensitive landscape areas																					
Primary views from residences																					
Intensity of use, popularity (number of viewers)																					

Viewer connection with the landscape																			
Provision of vast, elevated panoramic views																			
Sense of remoteness / tranquility at the viewing location																			
Degree of perceived naturalness																			
Presence of striking or noteworthy features																			
Sense of Historical, cultural and / or spiritual significance																			
Rarity or uniqueness of the view																			
Integrity of the landscape character within the view																			
Sense of place at the viewing location																			
Sense of awe																			
Overall sensitivity assessment	<b>VH</b>	<b>VH</b>	<b>ML</b>	<b>M</b>	<b>ML</b>	<b>ML</b>	<b>M</b>	<b>H</b>	<b>ML</b>										

Values associated with the view	VP21	VP22	VP23	VP24	VP25	VP26	VP27	VP28	VP29	VP30	VP31	VP32	VP33	VP34	VP35	VP36	VP37	VP38	VP39	VP40
Susceptibility of viewers to changes in views																				
Recognised scenic value of the view																				



N = Negligible; L = low sensitivity; ML = medium-low sensitivity M = medium sensitivity; HM = High-medium sensitivity; H = high sensitivity; VH = very high sensitivity

9.4.2.2 Magnitude of Visual Impacts at Viewshed Reference Points

Viewshed Reference Point		Direction of View	Distance to proposal:
VP1	Slieve Na Calliagh	SE	18.5km (T1)
Representative of:	Designated Scenic View Heritage Feature		
Receptor Sensitivity	<b>Very High</b>		
Existing View	This is a vast elevated view afforded from the south facing slopes of the Loughcrew – Slieve Na Calliagh complex in north county Westmeath. The Slieve Na Calliagh complex comprises of a number of archaeological sites located across 3 no. hilltop summits that are often referred to as the Loughcrew cairns. The depicted view is oriented to the south and looks across a flat to low rolling landscape context contained in pastoral farmland bound by mixed hedgerow vegetation. In the distance, the dense layers of vegetation become stacked in perspective and cloak the terrain throughout the background of the view. A number of existing wind turbines are faintly discernible in the distance to the south, whilst further to the southeast, the rolling ridges and foothills of the Wicklow Mountains contain the distant background of the view.		
Visual Impact of the proposed development	<p>All 9 no. of the proposed turbines will be visible rising above the distant flat terrain and will be viewed at a modest scale. Whilst some of the turbines will be viewed partially backed by terrain, the majority of them will be viewed in silhouette against the sky with a very low degree of contrast. Although the moving turbine components have the potential to be a noticeable feature from here, they occupy a very small lateral extent of this broad sweeping panorama. In this regard, the proposed turbines are considered to have a sub-dominant to minimal visual presence.</p> <p>In terms of aesthetics, the turbines are viewed in a relatively loose arrangement albeit it with some degree of turbine overlap in the western extent of the turbine array. However, such effects are strongly diluted by the considerable viewing distance. The proposed development will add marginally to the intensity and diversity of built development within the distant, productive landscape context, but will not materially detract from the visual amenity of this vast panorama which already contains views of distant turbines. As a result, the magnitude of visual impact is deemed to be <b>Low-negligible</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Very High	Low-negligible	Slight

Viewshed Reference Point		Direction of View	Distance to proposal:
VP2	Spire of Lloyd, Kells	SE	20.4km (T10)
Representative of:	Designated scenic view Heritage feature		
Receptor Sensitivity	<b>Very High</b>		
Existing View	This is a locally elevated broad view from the grounds of the Spire of Lloyd northwest of the settlement of Kells. The depicted view is oriented to the southeast where the terrain descends swiftly away from the viewer in the near foreground. Beyond this, the view extends across a flat to low rolling landscape contained in a patchwork of pastoral fields bound by networks of hedgerow vegetation. The view is contained in the distance by a number of low rolling ridges topped with dense mature tree-lined hedgerows.		
Visual Impact of the proposed development	All 9 no. of the proposed turbines will be visible rising above the distant layers of stacked vegetation and will be viewed at a modest scale primarily in silhouette against the sky with a low degree of contrast. Given the viewing distances involved (20km+), visibility is also diminished by 'atmospheric perspective' (fading of distant objects). Whilst there will be a small degree of visual clutter generated by the overlapping of turbines, these effects will be heavily offset by the distant nature of this view and the minimal visual presence of the proposed development. Consequently, the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Very High	Negligible	Slight imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP3	L1633 southwest of Crossakiel	S	14.9km (T1)
Representative of:	Designated scenic view		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a locally elevated designated scenic view* from the L1633 local road at the Ardglasán crossroads southwest of the small village of Crossakiel. The terrain descends away from the viewer in the foreground where much of the south-eastern aspect of the view is screened by a near ridge. To the south, the view extends across a landscape cloaked in arable farmland interspersed with a mix of low-clipped hedgerow vegetation and dense mature treelines. The view is contained in the distance by numerous layers of stacked winter vegetation.		

	*This scenic view designation has been classified with a 'local' level of significance, the lowest of 4 significance ratings.		
Visual Impact of the proposed development	<p>The proposed turbines are visible rising above the distant stacked layers of Winter vegetation at a modest scale. The visible sections of the turbines will be present in silhouette against the sky with a low degree of contrast and will slightly increase the intensity of built development in this rural vista. Due to the viewing distances involved and the relatively small lateral extent of the development in this view, the proposed development is deemed to have a minimal visual presence here.</p> <p>The nacelles of all 9 no. of the turbines rise well above the vegetated skyline and although there will be a minor degree of visual clutter generated by the overlapping of turbine blades, such effects are strongly diluted by the clearer views of the other proposed turbines and the considerable viewing distances involved. As a result, the magnitude of visual impact is deemed to be <b>Low-negligible</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Low-negligible	Slight-imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP4	Girly Bog National Looped Walk	SW	14km (T10)
Representative of:	Amenity feature		
Receptor Sensitivity	<b>Medium</b>		
Existing View	This is a view from a section of a national loop walk within the Girley Bog. In the foreground, the view extends across an area of raised bog cloaked in dense low growing vegetation which is backed by an area of marginal woodland scrub. This dense area of woodland scrub is backed by further areas of mature woodland which encloses much of the surrounds of the Girley Bog and contains this view in the background.		
Visual Impact of the proposed development	The proposed development will not be visible from here as a result of the dense layers of intervening vegetation. The magnitude of visual impact is <b>negligible</b> by default.		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		

	Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of Visual Impact
	Medium	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP5	Local Cemetery at Clonmellon	SW	10.2km
Representative of:	Centre of population		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a view from a local cemetery in the settlement of Clonmellon some c. 10km north of the site. The depicted view looks towards a hedgerow that defines the southern boundary of the cemetery and truncates this view at a near distance. A number of mature trees occur just beyond the near hedgerow and further heighten the sense of enclosure.		
Visual Impact of the proposed development	The proposed wind farm will not be visible from here due to screening by dense intervening mature vegetation. For these reasons, the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP6	R395 at Drumcree	SE	8.3km (T1)
Representative of:	Centre of population Major route		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a view from the R395 regional road corridor east of the small village of Drumcree that affords a view across a low rolling landscape contained in pastoral farmland. In the foreground, the view extends across a near hedgerow that lines the southern verge of the regional road corridor and contains much of the view at a near distance. Beyond the roadside hedgerow, a glimpse is afforded of a number of neighbouring pastoral fields interspersed with small clusters of mature trees and hedgerow vegetation. The view is contained shortly beyond by further layers of stacked hedgerow vegetation.		

Visual Impact of the proposed development	<p>Whilst a near mature tree screens the proposed development from here, the turbine blade sets have the potential to be visible from other nearby sections of the regional road corridor where they will be seen rotating above the distant intervening layers of tree-lined hedgerows. In terms of aesthetics, a partial view of turbine blades can generate some sense of visual ambiguity, however, this is offset by the low degree of turbine visibility from here. Overall, the magnitude of visual impact is considered to be <b>Low-negligible</b>.</p>		
Summary	<p>Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.</p>		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Low-negligible	Slight-imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP7	Ballinlough Castle	SW	7.3km (T1)
Representative of:	Amenity and heritage feature		
Receptor Sensitivity	<b>Medium</b>		
Existing View	<p>This is a view afforded from the grounds of Ballinlough Castle. The depicted view is afforded from the front lawns of the 17<sup>th</sup> Century castle and looks south over an area of gently rolling terrain interspersed with clumps of mature vegetation. The view is contained further to the south by areas of stacked mature vegetation that denote the boundary of the Ballinlough demesne.</p>		
Visual Impact of the proposed development	<p>The blade tips of a number of the proposed turbines are partially visible rotating above the layers of intervening vegetation in the distance to the south. The visible sections of the turbines rise just above the vegetated skyline and are viewed at a modest scale backed by the sky with a low degree of contrast. Nevertheless, the moving turbine blade tips have the potential to draw the eye in circumstances where there is little other evidence of built development within this aspect of the view. Overall the turbines are deemed to have a sub-dominant to minimal visual presence. Even though the view of blade tips rotating on this small section of the vegetated skyline is not preferable in an aesthetic sense, given the very low degree of visibility it will not significantly detract from the visual amenity at this location. On the basis of the reasons outlined above, the magnitude of visual impact is considered to be <b>Low-negligible</b>.</p>		
Summary	<p>Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.</p>		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium	Low-negligible	Slight-imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP8	Hill of Ward	SW	12.6km (T10)
Representative of:	Heritage feature Designated scenic view		
Receptor Sensitivity	<b>High</b>		
Existing View	<p>This is a view from a local hilltop summit situated to the east of Athboy known as the Hill of Ward. The Hill of Ward has a strong historical connection as it is said to be the location at which the festival of Samhain originated. The depicted view looks west/southwest from the hilltop summit towards a mature treelined hedgerow that marks the western boundary of the pastoral field that contains the hilltop enclosure. The near hedgerow truncates much of the view, however distant views across a landscape carpeted in dense stacked vegetation are afforded through gaps in the tree-lined hedgerow.</p> <p>It is important to note that much of the visual amenity from this hilltop summit stems from the broad distance views to the east and south, where there is little in the way of hedgerow vegetation to contain the view.</p>		
Visual Impact of the proposed development	<p>Up to 5 no. of the proposed turbines will be visible from here at a modest scale rising above the distant terrain through a gap in the nearby, dense, tree-lined hedgerow. The turbines will be seen rotating freely above the distant vegetation with a very low degree of visual contrast against the sky. In the context of this broad panoramic hilltop view, the visible turbines are considered to have a minimal visual presence.</p> <p>The visible turbines present in a relatively clear and comprehensible manner rising out of the distant rural landscape context. There is a very minor sense of visual clutter generated by the overlapping of turbines T7 and T3, however, any such effects are heavily offset by the viewing distances involved and clearer views of the other turbines. It is not considered that the turbines appear out of place in this vast productive landscape, and consequently, the magnitude of visual impact is deemed to be <b>Low-negligible</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	High	Low-negligible	Slight-imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP9	N51 southwest of Athboy	SW	9.5km (T10)
Representative of:	Centre of population Major route		

Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a view from the N51 road corridor as it approaches the settlement of Athboy from the southwest. The view takes in the national road corridor which is flanked to the south by a large open pastoral field contained in cropping. The view is contained shortly beyond the near field by dense layers of stacked hedgerow vegetation and mature tree lines.		
Visual Impact of the proposed development	The proposed wind farm will not be visible from here due to screening by layers of intervening dense vegetation in the direction of the site. For these reasons, the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP10	N52 at Delvin	SE	3.7km (T1)
Representative of:	Centre of population Major route Heritage feature		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a view from the corridor of the N52 national secondary route as it passes directly through the centre of the settlement of Delvin. The depicted view is situated immediately adjacent to the remnants of Delvin Castle which are situated immediately adjacent to a small terrace of buildings that line the eastern side of the N52 and truncate this view at a short distance. A view is also afforded of the steeple of St Marys Church further to the south.		
Visual Impact of the proposed development	The proposed wind farm will not be visible from here due to screening nearby built development within the centre of Delvin. For these reasons, the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP11	N52 south of Delvin	SE	3.5km (T1)
Representative of:	Centre of population Local community views Major route		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a partially open view across a roadside hedgerow afforded from the corridor of the N52 on the southern outskirts of the small town of Delvin. The view looks across the road corridor in the foreground towards an area of pastoral farmland. The viewshed is contained in the distance by dense stacked layers of hedgerow vegetation and mature tree lines.		
Visual Impact of the proposed development	<p>Visibility of all the turbines has the potential to be afforded from here, albeit, several of the proposed turbines are screened by a mature tree in the neighbouring field in the depicted view. The majority of the turbines will be almost fully revealed rising above the layers of stacked intervening vegetation and will be a noticeable feature in this aspect of the view. The proposed turbines are likely to draw the eye of passing road users, and therefore, the visual presence of the proposed wind farm development is deemed to be co-dominant.</p> <p>In terms of aesthetics, the proposed turbines are viewed in a relatively clear and simple manner with some turbine overlap. There is also some sense of perspective generated by the variation in the scale of the turbines from nearest to furthest. Overall, the turbines present here at a prominent, but not overbearing scale and do not appear incongruous in this hinterland context.</p> <p>As a result, the magnitude of visual impact is considered to be <b>medium-low</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Medium-low	Moderate-slight

Viewshed Reference Point		Direction of View	Distance to proposal:
VP12	N51 at Crowinstown	S	4.5km (T10)
Representative of:	Major route Local community views		
Receptor Sensitivity	<b>Medium-low</b>		

Existing View	This is a relatively contained view from the N51 national secondary route corridor in the townland of Crowinstown. The view looks towards the intersection of a local road and the N51 and is partially contained immediately beyond by a dense clipped roadside hedgerow. To the south, the view extends slightly further along the local road corridor where glimpses of the neighbouring pastoral fields are afforded through gaps in the roadside hedgerow.		
Visual Impact of the proposed development	<p>The blade sets of up to 6 no. of the proposed turbines will be visible just above the near-clipped hedgerow. The turbines are seen to rotate along the distant vegetated skyline and will be viewed against the sky with a low degree of contrast. Whilst the moving turbine components have the potential to draw the eye, they are considered to have a sub-dominant visual presence in the context of this busy road setting.</p> <p>There is some sense of clutter and visual irritation generated here by the degree of turbine overlap and the partial view of turbine blade sets rotating along the distant vegetated skyline. There is also a degree of visual ambiguity as all but one of the nacelles is screened by the layers of foreground and middle ground vegetation. Nevertheless, these effects are somewhat offset by the fact that the partially visible turbines occupy a relatively small section of the overall view. Furthermore, the turbines do not appear out of place in this working rural landscape in terms of their scale or function.</p> <p>For the reasons outlined above, the magnitude of visual impact is deemed to be <b>Low</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Low	Slight

Viewshed Reference Point		Direction of View	Distance to proposal:
VP13	Local road at Martinstown	SE	1.7km (T1)
Representative of:	Local community views		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a view from an agricultural gateway that affords a view across a low rolling pastoral field. The view extends across the neighbouring lands in the foreground where the terrain rises to a small hillock backed by mature vegetation which partially contains this aspect of the view. Further to the southeast, the view is similarly contained by areas of intervening, mature, stacked vegetation on the opposite side of the pastoral field.		

<p>Visual Impact of the proposed development</p>	<p>All of the proposed turbines are clearly visible from here at a near distance rising above the intervening layers of vegetation in silhouette against the sky. The turbines are viewed at a considerable scale and will be a prominent feature of this view which is characterised by little other built development. Consequently, the proposed turbines are considered to have a dominant visual presence.</p> <p>Whilst the turbines are a dominant feature of this view, they are viewed in a relatively clear and legible manner. There will be a number of instances of turbine overlap which has the potential to generate a sense of visual clutter, however, any such effects are offset by the relatively simplistic view of the turbines. There is a strong sense of perspective generated here by the variation in scale of the turbines which also highlights the depth and dispersion of the turbines providing greater legibility to instances of overlap. The proposed turbines will markedly increase the intensity of development in this view, however, they will not unduly conflict with the character or scale of this productive rural landscape setting.</p> <p>For the reasons outline above, the magnitude of visual impact is deemed to be <b>High-medium</b>.</p>		
<p>Summary</p>	<p>Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.</p>		
	<p><b>Visual Receptor Sensitivity</b></p>	<p><b>Visual Impact Magnitude</b></p>	<p><b>Significance of Visual Impact</b></p>
	<p>Medium-low</p>	<p>High-medium</p>	<p>Moderate</p>

Viewshed Reference Point		Direction of View	Distance to proposal:
VP14	Local road at Ballyhealy	S	2.1km (T6)
Representative of:	Local community views		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	<p>This is a view afforded from a local road corridor in the townland of Ballyhealy. The depicted view looks south from the local road corridor towards a number of pastoral fields contained along the remnants of an esker system. The view is contained in the middle distance by the uneven rolling terrain in combination with a number of areas of mature vegetation.</p>		
Visual Impact of the proposed development	<p>Up to 6 of the proposed turbines will be partially and intermittently visible rotating against the near vegetated ridge. The proposed turbines will be viewed at a noticeable scale from a distance of just over 2km and will likely draw the eye as one of the only built elements visible in this aspect of the view. In this regard, the visible turbines are considered to have a visual presence in the order of sub-dominant.</p> <p>The turbines present with a sense of ambiguity from here and generate a degree of visual irritation as the nacelles and blade sets of the turbines are only partially and intermittently visible, and are seen to rotate against the near ridge or through a dense veil of winter vegetation. Nevertheless,</p>		

	the proposed turbines are substantially screened and only occupy a relatively short extent of the near ridge. Consequently, the magnitude of visual impact is deemed to be <b>low</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Low	Slight

Viewshed Reference Point		Direction of View	Distance to proposal:
VP15	Cemetery at Pasonstown, east of R394	E	14.6km (T2)
Representative of:	Major route Heritage feature		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is an open view afforded from a local cemetery that abuts the eastern verge of the R394 regional road in the townland of Pasonstown. The depicted view is oriented to the east and extends across an area of rolling terrain contained in pastoral farmland and densely stacked vegetation. The view is contained in the distance by a dense band of vegetation that cuts across the horizon.		
Visual Impact of the proposed development	The proposed wind farm will not be visible from here due to the dense layers of stacked intervening vegetation. For these reasons, the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP16	St. Dymphna's National School, Kildalkey	W	10.2km (T10)
Representative of:	Centre of population		
Receptor Sensitivity	<b>Medium-low</b>		

Existing View	This is a view afforded from a local road that extends north from the small village of Kildalkey. A filtered view of a neighbouring agricultural field contained in pasture is afforded in the near foreground whilst a partial glimpse of several residential dwellings is afforded to the southeast. The view is contained just beyond the foreground field by a dense, mature, tree-lined hedgerow.		
Visual Impact of the proposed development	The proposed wind farm will not be visible from here due to the dense layers of stacked intervening vegetation. For these reasons, the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP17	N5 Northeast of Lough Owel	E	18.9km (T2)
Representative of:	Major route Amenity feature (Mullingar Cycle Loop)		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a fleeting view from the verge of the N5 national primary route north of Lough Owel. The view looks across a timber fence towards a neighbouring, sloping, pastoral field. As the terrain falls away from the viewer, a filtered vista is afforded across the rolling distant landscape contained in a mix of pastoral farmland and dense areas of mature vegetation.		
Visual Impact of the proposed development	A fleeting glimpse of the blade sets of the proposed turbines will be partially visible in the distance rotating against the vegetated skyline backed by the sky with a low degree of visual contrast. The proposed turbines will be unlikely to be noticed in this brief view and therefore the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
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VP18	Local road at Bracklin, west of site	E	1.6km (T2)
Representative of:	Local community views		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a view afforded from a local road corridor in the townland of Bracklin. The depicted view is oriented to the east and looks across an open field contained in rough grassland. Beyond this foreground field and a number of intervening hedgerows, the terrain begins to rise towards a low ridge line that forms a middle distance horizon and is cloaked in dense mature vegetation, which further contains the view.		
Visual Impact of the proposed development	<p>All 9 no. of the proposed turbines will be visible from here to varying degrees rotating beyond the middle-distance vegetated ridgeline. Some of the turbines will be almost fully revealed from here whilst only a partial view of blade sets will be afforded of others. The turbines will present at a notable scale but are not perceived to be overbearing in this broad landscape setting. Nevertheless, the proposed turbines will be a prominent and distinctive feature from here and are considered to have a dominant visual presence.</p> <p>Aesthetically, there is some sense of ambiguity as to the actual landscape setting into which the turbines are anchored whilst a degree of visual irritation is also generated by the partial view of turbine blade sets rotating against an intervening tree line. There are also a number of instances of turbines overlap, which will generate a minor sense of visual clutter within this scene. Nevertheless, the proposed turbines do not appear thematically out of place or over-scaled in this working rural landscape. The slight variation in the scale of the turbines also generates a notable sense of perspective and highlights the separation distances and three-dimensional layout of the turbines within the site.</p> <p>On balance of the reasons outlined above, the magnitude of visual impact is deemed to be <b>Medium</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Medium	Moderate

Viewshed Reference Point		Direction of View	Distance to proposal:
VP19	Local road at Bracklin east of site	W	1.3km (T10)
Representative of:	Local community views		
Receptor Sensitivity	<b>Medium-low</b>		

Existing View	This is a relatively enclosed view afforded from a local road (L5508) in the townland of Bracklin. In the foreground, the view looks across a small field that is bound on the opposite site by dense winter vegetation and truncates much of the view at a short distance. The view extends slightly further along the local road corridor to the west where it is also eventually contained by the dense vegetation that lines its path.		
Visual Impact of the proposed development	<p>The proposed turbines rise above the dense veil of winter vegetation in the foreground and are viewed at a prominent but not overbearing scale from this near distance. All 9 no. of the turbines will be visible to some degree from here, ranging from partial views of turbine blade sets rotating against the winter vegetation to almost fully revealed views of turbines rising in silhouette against the sky. The proposed turbines are contained within a relatively remote area where there are few other existing forms of built development and therefore they are considered to have a dominant visual presence.</p> <p>Although the turbines are viewed from here at a considerable scale, they present in a highly legible manner where the variation in the scale of the turbines from nearest to furthest, generates perspective and highlights the depth and dispersion of the proposed turbine layout. Whilst there are some minor instances of turbine overlap that have the potential to generate a sense of visual clutter, this is a relatively unambiguous view of a wind energy development from a near distance that will not be incongruous in this rural bog fringe landscape context. Nevertheless, the turbines will markedly increase the intensity of built development in this remote rural vista.</p> <p>On balance of the reasons outlined above, the magnitude of visual impact is deemed to be <b>High-medium</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	High-medium	Moderate

Viewshed Reference Point		Direction of View	Distance to proposal:
VP20	N52 at Killynan	E	7.7km (T5)
Representative of:	Major route		
Receptor Sensitivity	<b>Medium-Low</b>		
Existing View	This is a busy roadside view from the verge of the N52 national secondary route in the townland of Killynan. The view takes in the intersection of two roads in the near foreground, both of which are flanked by gently undulating agricultural fields. The view is contained in the distance by a dense band of mature intervening vegetation that cuts across the horizon line.		

Visual Impact of the proposed development	<p>The partial blade sets of all of the turbines will be visible to varying degrees rotating above the distant intervening vegetation. The turbines will be viewed at a modest, but noticeable scale from this distance and are viewed with a low degree of visual contrast. Whilst the moving turbine components may catch the eye of the viewer along this busy road corridor, the proposed turbines are considered to have a sub-dominant visual presence.</p> <p>The turbines are seen here partially rotating against the vegetated skyline with a number of instances of turbine overlap, which can cause a degree of visual ambiguity and clutter. Nevertheless, the turbines occupy only a relatively small extent of the visible skyline and do not appear incongruous in this busy anthropogenic scene.</p> <p>On balance of the factors outlined above, the magnitude of visual impact is judged to be <b>Low</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-Low	Low	Slight

Viewshed Reference Point		Direction of View	Distance to proposal:
VP21	L1501 at Killagh	E	3.3km (T5)
Representative of:	Local community views		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	<p>This is a slightly uphill view from the intersection of two local roads in the townland of Killagh. The depicted view looks across the intersection towards the boundary of two neighbouring pastoral fields which is comprised of hedgerow vegetation and a post and wire fencing. A brief view is afforded of the fields beyond, which is curtailed only a short distance thereafter by a low ridge that runs across the fields and contains this view at a short distance.</p>		
Visual Impact of the proposed development	<p>Around 3-4 of the proposed turbines will be briefly visible through an agricultural gateway to the neighbouring fields. Three of the turbines will be seen in a tight cluster whilst the blade sets of a number of the other turbines will be partially visible rotating in the distance beyond the near hedgerow vegetation. Even in this brief glimpse, the turbines will have the potential to draw the eye. Filtered views of the turbines are also likely to be afforded along intermittent sections of this local road where gaps in the roadside hedgerows occur. On balance, the magnitude of visual impact is deemed to be sub-dominant.</p> <p>A stacked view of three of the proposed turbines (T3, T7, T10) will be afforded through the near gateway and will generate some degree of visual clutter. A notable sense of ambiguity is also evident here in relation to the actual landscape setting of the proposed turbines relative to the viewpoint. Nevertheless, whilst the turbines will add to the intensity of built</p>		

	<p>development in this scene, this is a brief and filtered view of the proposed development where the turbines will not appear out of place in this productive rural landscape context.</p> <p>As a result of the reasons outline above, the magnitude of visual impact is deemed to be <b>Medium-Low</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Medium-low	Slight

Viewshed Reference Point		Direction of View	Distance to proposal:
VP22	Trim Castle	W	17.8km (T10)
Representative of:	Amenity and heritage feature Centre of population Scenic view		
Receptor Sensitivity	<b>Very high</b>		
Existing View	This is a contained view from the grounds of Trim Castle located along a bend in the River Boyne in the historic settlement of Trim. The view is afforded from the eastern part of the castle grounds and looks across an area of dense vegetation that denotes the eastern boundary of the castle grounds. Glimpses of neighbouring rooflines area afforded just beyond the castle grounds, after which an area of mature vegetation truncates the vista.		
Visual Impact of the proposed development	The proposed wind farm will not be visible from the grounds of Trim Castle due to the dense intervening vegetation. Nevertheless, intermittent views of the proposed turbines have the potential to be afforded from the upper floor windows of the castle which is accessible to visitors via a number of constructed gangways. These views will likely be similar in nature to those afforded from VP40 where the proposed turbines will be faintly visible across a broad flat landscape, and from this considerable distance, the magnitude of visual impact is considered to be no greater than <b>Low-negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Very High	Low-Negligible	Slight-Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
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VP23	R161 west of Trim	W	17.1km (T10)
Representative of:	Centre of population		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a relatively contained view from the R161 regional road on the western outskirts of the settlement of trim. The depicted view looks across the regional road in the foreground towards a sizable agricultural field that is primarily contained in cropping. A dense mature tree-lined hedgerow defines the boundary of the field on its opposite side and contains the eastern aspect of this view.		
Visual Impact of the proposed development	The proposed wind farm will not be visible from here due to the dense intervening vegetation. For these reasons, the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP24	Local road at Cloghbrack	NW	3.2km (T11)
Representative of:	Local community views		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a view afforded from a local road in the townland of Cloghbrack. The depicted view looks above the adjacent roadside hedgerow towards a number of small agricultural fields in the near foreground. The small intricate field pattern is defined by mixed hedgerow vegetation and post and wire fencing. Glimpses of neighbouring pastoral fields are also afforded through gaps in the dense hedgerows however, shortly beyond this the view is contained by the multiple layers of stacked intervening hedgerow vegetation.		
Visual Impact of the proposed development	<p>Most of the proposed turbines will be partially and intermittently visible from here rotating along the vegetated skyline. The nacelles and blade sets of up to 6 turbines will be visible from here whilst the blade sets of two others will be partially visible rotating beyond the layers of stacked vegetation. The turbines will be a prominent feature of this brief view which is characterised by little other built development. In the context of this remote local road laneway, the proposed turbines are considered to have a visual presence in the order of co-dominant.</p> <p>Aesthetically, the turbines present with a notable degree of clutter due to the numerous instances of turbine overlap. It is also not ideal to have partial views of blade sets rotating among the treetops as it can lead to</p>		

	<p>a sense of visual irritation. However, these effects are slightly offset by the clearer views of some of the other more clearly visible turbines. The turbines will notably increase the intensity of built development in the context of this remote rural setting, however, they will not appear out of place in terms of their scale or function in this productive rural setting. There will be some reduction in the visual amenity at local residential dwellings in the immediate surrounds of this viewpoint where similar views of the proposed turbines have the potential to be afforded. However, this view likely represents one of the worst-case scenarios in terms of visual exposure of the scheme from this locality, as much of the immediate surrounding context is heavily enclosed by dense tree-lines and hedgerows.</p> <p>On balance of the reasons outline above, the magnitude of visual impact is deemed to be <b>Medium-low</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Medium-low	Moderate-Slight

Viewshed Reference Point		Direction of View	Distance to proposal:
VP25	Local road at Craddanstown southeast of site	NW	2.6km (T5)
Representative of:	Local community views		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a view afforded from a local road in the townland of Craddanstown. The depicted view looks across a small scrubby field that flanks the northern verge of the local road corridor and is located immediately adjacent to a linear cluster of residential dwellings. The nearby dwellings contain one aspect of the afforded vista, whilst a number of intervening hedgerows contain the other aspect of the vista only a short distance further to the north of these dwellings.		
Visual Impact of the proposed development	<p>The proposed turbines will be visible from here to the north of the residential dwellings that line the local road corridor. The turbines are revealed to varying degrees with the easternmost turbines fully revealed in silhouette against the sky, with a low degree of visual contrast. The turbines will be viewed at a considerable scale and will be a prominent feature of this view, especially when viewed from the rear of these dwellings. Whilst the turbines do not present in a spatially overbearing manner, in the context of this relatively short distance view, the proposed development is considered to have a co-dominant visual presence.</p> <p>The partial view of some of the turbine blade sets partially rotating above the nearby treetops and intervening hedgerows can generate a degree of ambiguity and visual clutter, however, these effects are offset to some degree by the clearer and more comprehensible view of the easternmost turbines which rise more clearly in silhouette. Whilst the</p>		

	<p>turbines will not appear out of place in this working rural context, they will considerably increase the intensity of built development within the northern aspect of this view and there will be some loss in the visual amenity at these nearby dwellings.</p> <p>For the reasons outlined above, the magnitude of visual impact is deemed to be <b>Medium</b>.</p>		
Summary	<p>Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.</p>		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Medium	Moderate

Viewshed Reference Point		Direction of View	Distance to proposal:
VP26	Local road at Craddanstown southwest of site	NE	2.4km (T5)
Representative of:	Local community views		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	<p>This is a locally elevated view afforded from a local road in the townland of Craddanstown. The depicted view is oriented to the northeast where it is partially truncated on the opposite side of the road corridor by a tightly clipped roadside hedgerow. A number of mature trees rise above the near hedgerow in the neighbouring field, beyond which, a dense band of mature vegetation cuts across the horizon and contains the view. A short glimpse into the neighbouring field is afforded further to the north where the road descends away from the viewer.</p>		
Visual Impact of the proposed development	<p>All 9 of the proposed turbines are visible from here rotating above a dense band of mature vegetation and are viewed against the sky. Whilst the turbines are seen at varying scales, they will be a prominent feature of this rural vista and will draw the eye along this section of the local road. The proposed development occupies a relatively modest visual envelope in the context of the full panorama afforded from here, but the tall moving structures will likely have a visual presence in the order of co-dominant from this distance.</p> <p>Whilst there are some instances of turbine overlap in this view, the proposed turbines present in a relatively unambiguous manner. Some of the westernmost turbines are partially obscured by a near mature tree, however, the remaining turbines are typically viewed in a clear and simple manner rotating along an uncomplicated vegetated skyline. The variation in scale of the proposed turbines from furthest to nearest also highlights the layout depth of the proposed development site and generates a notable sense of perspective. The turbines will noticeably increase the intensity of built development in this view, though they are not considered to appear out of place in a contextual sense within this productive rural setting.</p> <p>On balance of the factors outlined above, the magnitude of visual impact is deemed to be <b>Medium</b>.</p>		

Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Medium	Moderate

Viewshed Reference Point		Direction of View	Distance to proposal:
VP27	Woodgrove Residential Estate, Ballivor	NW	7km (T11)
Representative of:	Centre of population		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a view afforded from the Woodgrove residential housing estate on the outskirts of the small town of Ballivor. The depicted view is oriented across a small greenspace that is partially backed by a tall row of poplar trees and an immature mixed broadleaved tree-line. Both of these are backed by a stonewall which contains much of this vista at a near distance. A glimpse of the neighbouring sports pitches is afforded just beyond the near immature tree-line, after which, a distance band of mature vegetation contains the view.		
Visual Impact of the proposed development	The proposed wind farm will not be visible from here due to the dense intervening vegetation. For these reasons, the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP28	R156 at Grange More	N	3.6km (T5)
Representative of:	Major route Local community views		
Receptor Sensitivity	<b>Medium-low</b>		

Existing View	<p>The is a view afforded from the R156 regional road corridor in the townland of Grange More. The depicted view looks north across a low scrubby roadside hedgerow which is back by a number of large pastoral fields. The view is contained on the far side of these fields by a dense mature tree-lined hedgerow.</p>		
Visual Impact of the proposed development	<p>The blade sets of up to 7 no. of the proposed turbines rise above the middle distance tree-lined hedgerow and are viewed oblique to the regional road corridor at a modest, but noticeable scale. Although partially screened, the moving turbine components will likely draw the eye of the road user as one of the only elements of built development in this otherwise simple rural vista. In this regard, the proposed development is considered to have a visual presence in the order of sub-dominant.</p> <p>In terms of aesthetics, there is a notable degree of ambiguity generated by the fact that only a partial view of blade sets rotating within treetops is afforded from here. There are also some instances of turbine overlap which will generate a slight sense of visual clutter. Nevertheless, the turbines do not appear over-scaled or out of place in this broad, uncomplicated vista, however, they will notably increase the intensity of built development within this aspect of the view.</p> <p>For the reasons outlined above, the magnitude of visual impact is deemed to be <b>Low</b>.</p>		
Summary	<p>Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.</p>		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Low	Slight

Viewshed Reference Point		Direction of View	Distance to proposal:
VP29	Lakepoint Park, Mullingar	NE	15.7km (T5)
Representative of:	Centre of population		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	<p>This is a view from Lakepoint Park residential housing estate west of the centre of Mullingar. In the foreground, the view takes in an open amenity area in the centre of the residential estate which is surrounded by mixed tree planting and residential dwellings. The view is contained in the middle distance by a dense band of mature vegetation that screens the N4 national primary route which is located less than c.500m to the west of the view.</p>		
Visual Impact of the proposed development	<p>The proposed wind farm will not be visible from here due to the dense intervening vegetation. For these reasons, the magnitude of visual impact is deemed to be <b>Negligible</b>.</p>		

Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP30	R156 Raharney Road	NE	4.7km (T5)
Representative of:	Centre of population Major route Heritage feature (Ringfort) Local community views		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a view from the R156 regional road southwest of Raharney village. This is a representative view near a local enclosed ringfort situated in an agricultural field southeast of the depicted view. The depicted view is oriented to the northeast where a number of single storey residential dwellings line the regional road corridor and partially enclose the view at a near distance. A glimpse over a nearby manicured hedge is afforded toward the rear of these dwellings where a number of mature trees contain this north-eastern aspect of the view.		
Visual Impact of the proposed development	The blade tips of up to 4 no. of the proposed turbines will be partially revealed from here and will rotate along the vegetated skyline in the distance. This fleeting and partial view of the proposed turbines is unlikely to draw the eye of the casual observer, and in the context of this complex and anthropogenic vista, the proposed turbines are considered to have a minimal visual presence.  Whilst it is not an ideal scenario in an aesthetic sense to have a partial view of turbine blade sets rotating along the skyline, this is heavily offset by the low degree of visual exposure of the proposed development. Consequently, it is not considered that the proposed development will detract from the visual amenity of this scene, and therefore the magnitude of visual impact is considered to be <b>Low-negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Low-negligible	Slight-imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
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VP31	Cemetery South of Raharney	N	4.5km (T5)
Representative of:	Heritage feature Centre of population Local community views		
Receptor Sensitivity	<b>Medium</b>		
Existing View	This is a view from Kilcolum Church and Graveyard south of the village of Raharney. In the foreground, the view extends across a low stone wall towards a rolling pastoral field contained in rough grazing. A local road abuts the pastoral field in the near middle ground where a number of residential dwellings and small farmsteads line its path. Beyond the context of the local road corridor, a dense band of mature vegetation cuts across the middle distance horizon and contains this aspect of the view.		
Visual Impact of the proposed development	The uppermost portion of the blade tips of some of the turbines has the potential to be visible from here rotating along the vegetated skyline. Only a very minimal extent of the turbine blades will be visible and this is unlikely to catch the eye of the casual observer. This partial view of the turbine blade tips along the skyline is not considered to have any notable impact on the visual amenity of this scene, and as a result, the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP32	The Old Glebe Road, Killucan	NE	6.8km (T5)
Representative of:	Centre of population		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is an open view afforded from the Old Glebe Road, which extends in a south-easterly direction from the centre of Killucan village. The view takes in a number of gently sloping agricultural fields in the near foreground which are enclosed on the opposite side by a network of mature treelined hedgerows. A number of residential dwellings are partially visible in the settlement of Killucan are visible to the north whilst further to the northeast glimpses of rolling agricultural farmland is afforded through gaps in the intervening tree-lined hedgerow. The view is contained in the distance by densely stacked tree-lined hedgerows.		

Visual Impact of the proposed development	The proposed wind farm will not be visible from here due to the dense intervening vegetation situated in the direction of the proposal site. For these reasons, the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP33	N4 Overpass at Newdown	NE	12.1km (T5)
Representative of:	Major route		
Receptor Sensitivity	<b>Low</b>		
Existing View	<p>This is a locally elevated view afforded from an overpass of the N4 in the townland of Newdown. The depicted view looks across the context of the N4 overpass which occupies much of the near foreground. The terrain swiftly descends away just beyond the road and is cloaked in a dense layer of mature vegetation that contains much of the northern aspect of the view. A large factory is located only a short distance to the northwest comprising of a number of large warehouse buildings. A prominent telecommunications mast is also located beside the factory in the middle ground. In the distance, a low rolling hill rises above the dense carpet of vegetation and contains the background of the view.</p>		
Visual Impact of the proposed development	<p>The proposed turbines will be faintly visible at a small scale against the sky with a very low degree of visual contrast. The nacelles of almost all of the visible turbines will rise just above the vegetated skyline ridge and will occupy a relatively modest visual envelope in this broad view. In the context of this busy anthropogenic scene, the proposed turbines are considered to have a visual presence in the order of sub-dominant to minimal.</p> <p>This is a relatively clear distant view of a wind farm albeit with some degree of clutter generated by the turbine overlap between the easternmost turbines. The remaining turbines appear well-spaced in this view which is strongly characterised by other anthropogenic elements. In this regard, the proposed turbines do not appear out of place. Furthermore, this is a representative view of the N4 national primary route which is located at a slightly lower elevation and will likely be afforded heavily screened views of the proposed development.</p> <p>On balance of the reasons outlined above, the magnitude of visual impact is considered to be <b>Low-negligible</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		

	Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of Visual Impact
	Low	Low-negligible	Slight-imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP34	Royal Canal Way/Greenway at Cushinstown	NE	8.3km (T5)
Representative of:	Amenity feature		
Receptor Sensitivity	<b>High-medium</b>		
Existing View	This is a view afforded from the corridor of the Royal Canal which forms part of the Royal Canal Way national waymarked trail. The depicted view looks across the canal corridor towards an area of open low rolling terrain contained in pastoral farmland. The northeastern aspect of the view is contained in the middle distance by a dense tree-lined hedgerow that extends perpendicular from the canal, whilst glimpses of residential dwellings on the outskirts of the settlement of Killucan contain the background of the view.		
Visual Impact of the proposed development	The blade tip of turbine T7 will be faintly visible through a veil of winter vegetation that cuts across the middle ground of the view. The proposed turbine is likely to go unnoticed from here and will have little to no effect on the visual amenity of this scene. On balance, the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	Visual Receptor Sensitivity	Visual Impact Magnitude	Significance of Visual Impact
	High-medium	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP35	R161 Killyon Bridge	NW	10.8km (T5)
Representative of:	Designated scenic view Centre of population Amenity feature		
Receptor Sensitivity	<b>High-medium</b>		

Existing View	This is a locally elevated designated scenic view afforded from an overbridge of the Royal Canal in the townland of Hill of Down. The depicted view looks northwest across the Royal Canal corridor which is bordered to the north by two residential dwellings. A large open pastoral field occurs beyond the two near residential dwellings and is backed by layers of intervening vegetation in the distance which contain this aspect of the view.		
Visual Impact of the proposed development	<p>A number of the proposed turbines will be visible from here rotating along the vegetated skyline in the distance. The turbines are viewed here at a small scale and will be revealed to varying degrees backed by the sky with a very low degree of visual contrast. The turbines will not be visible along the immediate alignment of the canal which is the reason for its scenic designation ("Views along Royal Canal to the east and west at the intersection with R161"). In this regard, the proposed turbines are considered to be a distant background feature and will have a sub-dominant to minimal visual presence.</p> <p>In terms of aesthetics, it is not ideal to have turbine blade sets rotating against tree lines as it can cause a sense of visual irritation. There is also a number of instances of turbine overlap, which can generate a sense of visual clutter, however, any such effects are heavily diluted by the viewing distances involved and the low degree of visual exposure. Furthermore, this viewpoint is taken from the most elevated section of the R161 as it crosses the canal and therefore much of the surrounding landscape, including the canal corridor will unlikely afford views of the proposed turbines. Furthermore, the proposed turbines do not appear out of place in this working rural landscape and will have little if any impact on the visual amenity of the canal corridor, which is the most sensitive aspect of this view.</p> <p>On balance of the reasons outlined above, the magnitude of visual impact is deemed to be <b>Low-negligible</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	High-medium	Low-negligible	Slight-imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP36	L8030 Blackshade Bridge	NW	12.5km (T11)
Representative of:	Designated scenic view Amenity feature		
Receptor Sensitivity	<b>High-medium</b>		

Existing View	This is a relatively contained view from the L8030 local road at the Blackshade Bridge over the Royal Canal corridor. This slightly elevated view looks across the context of the Royal Canal corridor which is flanked by a pedestrian footpath on its northern verge. Much of the western aspect of the view is contained at a near distance by dense areas of vegetation that line the southern banks of the canal. The canal corridor curves out of view only a short distance to the west of the local road overbridge, whilst the view to the northwest is truncated by a dense area of mature vegetation that flanks the northern boundary of the canal corridor.		
Visual Impact of the proposed development	<p>Faint glimpses of the proposed turbine blade tips will be visible here rotating in the distance just beyond the dense vegetation that lines the northern verge of the canal corridor. These will be faintly visible in silhouette against a backdrop of sky and at this distance, they are unlikely to be noticed by a casual observer even in clear viewing conditions such as those depicted. In this regard, the proposed development is considered to have a minimal visual presence.</p> <p>Whilst it is not ideal in an aesthetic sense to have turbine blade tips partially rotating among the treetops, any negative aesthetics effects are heavily diluted by the extremely low degree of visual exposure of the proposed turbines. This brief glimpse of turbine blade tips will have little material effect on the visual amenity of the view.</p> <p>As a result of the reasons outlined above, the magnitude of visual impact is deemed to be <b>Low-negligible</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	High-medium	Low-negligible	Slight-imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP37	Manorfield Residential Housing Estate at Kinnegad	N	11.4km (T5)
Representative of:	Centre of population		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is an enclosed view from Manorfield residential housing at the settlement of Kinnegad. The view looks across an area of rough grassland at the northern edge of the residential estate which is enclosed by a stone wall shortly thereafter. A section of dense hedgerow occurs shortly beyond the stone wall in the neighbouring lands and contains the view at a short distance.		
Visual Impact of the proposed development	The proposed wind farm will not be visible from here due to the dense intervening vegetation situated in the direction of the proposal site. For these reasons, the magnitude of visual impact is deemed to be <b>Negligible</b> .		

Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP38	Abbeyfields Residential Housing Estate at Clonard	NW	12.6km (T5)
Representative of:	Centre of population		
Receptor Sensitivity	<b>Medium-low</b>		
Existing View	This is a view afforded from the northern edge of Abbeyfields residential housing estate in the settlement of Clonard. The depicted view looks north from an area of open green space at the northern edge of the residential estate towards an area of rolling uneven terrain contained in rough grassland, which partially contains the view at a near distance. A low hill cloaked in dense woodland rises beyond the uneven terrain in the foreground and contains the northern/north-western aspect of the view. A glimpse of distant low rolling farmland is afforded to the northeast.		
Visual Impact of the proposed development	The proposed wind farm will not be visible from here due to the dense intervening vegetation situated in the direction of the proposal site. For these reasons, the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Medium-low	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP39	L5001 Overbridge of M4	NW	15.1km (T5)
Representative of:	Major route		
Receptor Sensitivity	<b>Low</b>		
Existing View	This is a slightly elevated view from a local road overbridge of the M4 motorway. This highly anthropogenic view looks northwest across the motorway corridor towards a number of pastoral fields enclosed by mixed hedgerow vegetation. The view is contained in the distance by a number of dense intervening layers of hedgerow vegetation.		

Visual Impact of the proposed development	The blade sets of a number of the proposed turbines will be faintly visible in the distance and are viewed backed by the sky with a very low degree of visual contrast. The visible turbines will be barely noticeable and will have almost no consequence on the visual amenity of road users crossing the overpass. Furthermore, the proposed turbines will likely be entirely screened from the M4 motorway corridor which is the principal receptor in this instance. As a result, the magnitude of visual impact is deemed to be <b>Negligible</b> .		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>
	Low	Negligible	Imperceptible

Viewshed Reference Point		Direction of View	Distance to proposal:
VP40	Local road at Rathcore	NW	19.2km (T11)
Representative of:	Designated scenic view		
Receptor Sensitivity	<b>Medium</b>		
Existing View	This is a broad locally elevated scenic view afforded from a local road in the townland of Rathcore. This broad view takes in a number of pastoral fields throughout the fore-to-middle ground context which are enclosed by dense networks of hedgerow vegetation. Glimpses of residential dwellings are also afforded where gaps in the hedgerow vegetation occur throughout the view. The dense layers of hedgerow vegetation become stacked in perspective and cloak the landscape in the background of the view.		
Visual Impact of the proposed development	<p>All of the turbines will be faintly visible rotating above the distant vegetated skyline. Due to the considerable viewing distances involved, the turbines will be viewed with a very low degree of visual contrast against the sky and due to 'atmospheric perspective' and will be difficult to discern even in the clearest viewing conditions such as those depicted. The turbines occupy a very modest visual envelop in this broad panoramic view and will have a minimal visual presence.</p> <p>Although there are a number of instances of turbine overlap, this is heavily offset by the viewing distances involved. Furthermore, even if discernible from this distance of near 20km, the proposed turbines will not appear out of place in this vast rural landscape context and instead will simply add to the diversity of land use present.</p> <p>Overall, the visual impact of the proposed development is considered to be <b>Low-negligible</b>.</p>		
Summary	Based on the assessment criteria and matrices outlined above, the significance of visual impact is summarised below.		
	<b>Visual Receptor Sensitivity</b>	<b>Visual Impact Magnitude</b>	<b>Significance of Visual Impact</b>

	Medium	Low-negligible	Slight-Imperceptible
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### 9.4.3 Cumulative Impacts

The appraisal of cumulative impacts with other wind energy developments is based on the cumulative ZTV maps and wireframes provided at **Annex 9.1**. Given the absence of other tall structures within the study area, it is assessed that there is no potential for in combination effects with other types of development.

The cumulative ZTV map (**Figure 189, Annex 9.1**) shows the potential for cumulative visibility between the proposed development and all other permitted and proposed wind farm developments within the 20km study area. At present there are no operating wind farms within the study area, however Yellow River Wind Farm is a permitted large-scale wind farm development situated in the wider southern half of the study area some c. 17km southwest of the site. Situated immediately east of the proposed Bracklyn Wind Farm site, the proposed Ballivor Wind Farm is, at the time of writing, in the pre-planning development stage and a planning application has not yet been progressed. As a result, the cumulative assessment will be broken down into two sections, existing baseline and potential future baseline. As the proposed Ballivor Wind Farm is still in the pre-planning development stage, it will form part of the cumulative assessment as the potential future baseline.

#### 9.4.3.1 Cumulative Impact Assessment – Existing Baseline

Due to the considerable separation distances between both the proposed Bracklyn Wind Farm and the permitted Yellow River Wind Farm, the potential for cumulative impacts is heavily reduced within the study area. Cumulative impacts are also further reduced due to the flat landscape context in which much of the site and study area are comprised. Whilst some open views are afforded across areas of peat bog in the central study area, much of the central and wider study area affords very little sense of openness due to the dense layers of hedgerow vegetation and mature tree-lines that enclosed the agricultural fields throughout the 20km study area.

The highest likelihood of both developments to be viewed in combination is from locally elevated parts of the landscape in the southern half of the study area. One example of this is from VP40 where a slightly elevated broad view is afforded across the wider landscape. Nevertheless, even if visibility of both developments is afforded from here, both wind energy developments will present as two distinct and separate developments, and therefore the proposed and permitted wind farms are not considered to contribute to a strong sense of wind farm proliferation. Furthermore, the proposed and permitted development's also have the potential to be visible from other elevated parts of the wider northern and western half of the study area such as VP1. However, due to the considerable viewing distances involved here (c. 30km+), the permitted Yellow River Wind Farm will be barely discernible. It is also considered that the proposed development is entirely consistent with the guidance in the current *Wind Energy Development Guidelines for Planning Authorities 2006* which states that *"More than one wind energy development might be acceptable in the distant background provided it was only faintly visible under normal atmospheric conditions"* in relation to the 'Flat Peatland' landscape type.

In terms of sequential cumulative views, the proposed development will theoretically be visible in combination with the Yellow River Wind Farm along a number of notable linear receptors such as the M4, M6 and Royal Canal Way. Nevertheless, much of the turbine visibility will be limited along the M4 and M6 as a large proportion of its corridor

is flanked by dense roadside vegetation or large embankments, and in some cases a combination of both. Similar to this, much of the Royal Canal corridor is heavily enclosed by dense canal side vegetation, and therefore there is limited potential for visibility of either development. Overall, whilst intermittent views of both permitted and proposed developments have the potential to be afforded along some sections of the linear receptors within the study area, these will often be heavily obscured by mature vegetative screening. Consequently, cumulative impacts along these routes are not considered to be significant.

Overall, it is considered that the proposed development will contribute an additional cumulative effect that is in the order of Low-negligible in respect of the impact classification at **Table 9.9** above.

#### 9.4.3.2 Cumulative Impact Assessment – Potential Future Baseline

The proposed Ballivor Wind Farm is intended to be situated immediately adjacent to the proposed Bracklyn Wind Farm and comprises of three separate turbine clusters, the nearest of which is situated immediately east/southeast of the proposed development whilst the furthest is situated c. 4km southeast. The location and layout of the proposed Ballivor Wind Farm is based on the latest available public information on the project, which details a draft project layout<sup>4</sup>. Due to the close proximity of both developments, they would likely be perceived as one large-scale wind energy development, as opposed to two distinct and separate developments. 6 viewpoints (VRP1, VRP11, VRP18, VRP19, VRP25 & VRP28) were chosen to representatively assess the potential cumulative impacts with the proposed Ballivor scheme. The majority of these were chosen on the basis that they are the nearest representative viewpoints to both proposed developments, and therefore, have the highest likelihood of affording clear views of the proposed turbines in combination. It is important to note that the likely cumulative impacts for the existing baseline scenario in **Section 9.4.3.1** above have been considered as part of the potential further baseline scenario.

With regard to cumulative impacts, the combined scale of both the proposed Bracklyn and Ballivor Wind Farms is highlighted in VRP1 where the visual envelope of potentially visible turbines has dramatically increased as a result of the proposed Ballivor Wind Farm. Whilst, elevated views such as these are not commonplace within the wider study area, even from this distance of c. 18km +, the combined view of both developments presents as one of the more prominent land-uses in this vast panorama and has the potential to notably increase the scale and extent of wind energy development within view and render it a much more characteristic feature of the midlands land use matrix. Even though this is a highly sensitive receptor, it is a considerable distance from the combined wind energy developments and the turbines are just part the distant backdrop setting within the rural plains rather than an intrusion on the immediate heritage landscape. Consequently cumulative impacts are not assessed to be significant.

Due to the flat nature of the study area and the near distance of both the proposed Bracklyn and Ballivor Wind Farms, the greatest likelihood of cumulative impacts to occur will be in the central portions of the study area. VRP11 is a representative view of the settlement of Devlin, and here the cumulative montage clearly demonstrates the marked increase in the intensity and extent of wind energy development that would be perceived from Devlin and its near surrounds. The addition of the proposed Ballivor Wind Farm almost doubles the lateral extent of wind energy development in

<sup>4</sup> [https://www.ballivorwindfarm.ie/wp-content/uploads/sites/14/2020/08/BNM\\_PG\\_01\\_18\\_Proximity-Map.jpg](https://www.ballivorwindfarm.ie/wp-content/uploads/sites/14/2020/08/BNM_PG_01_18_Proximity-Map.jpg)

the view, whilst the additional turbines will also generate an increased sense of clutter in combination with the Bracklyn Wind Farm where they become stacked in perspective. VRP19 is representative of the local rural population. The combined view of both developments at VP19 considerably increases the visual prominence of wind energy development from here and generates some sense of overbearing as the proposed turbines will, cumulatively, occupy the entire vista afforded to the rear of the nearby dwellings. The increased sense of visual clutter is further pronounced at VRP28 where the addition of the Ballivor Wind Farm would considerably increase the visual prominence of wind energy development along the R156 regional road.

Overall, it is considered that the proposed Bracklyn Wind Farm in combination with the proposed Ballivor Wind Farm could generate a notable degree of wind farm proliferation within the central study area, and would likely contribute to a cumulative effect that is consistent with a High-medium classification identified in **Table 9.9** above.

## 9.5 Mitigation Measures

### 9.5.1 Construction Phase

Aside from construction stage mitigation measures to minimise land and vegetation disturbance and dust emissions (which may reduce visual amenity), there are no specific mitigation measures to be implemented. The appropriate management and reinstatement of excavations, in a timely manner, will ensure that any adverse effects caused, for example at site entrances or road upgrade locations, are minimised insofar as possible. Similarly, the progressive reinstatement and landscaping of the site will remediate any short term adverse effects on the local landscape.

### 9.5.2 Operational Phase

Given the highly visible nature of commercial wind energy developments it is not generally feasible to screen them from view using on-site screening measures typically employed for other forms of development during the operational phase. Instead, landscape and visual mitigation measures have been incorporated into the siting and design of the development at an early stage (see **Chapter 2**). In the case of the proposed development, the guidance provided in the *Wind Energy Development Guidelines for Planning Authorities 2006* (and 2019 revision) was the principal consideration. The relevant guidance for the landscape types that constitute the landscape and visual setting of the proposed development are discussed in detail in **Section 9.3.2.1** above. It is considered that the proposed development is broadly in line with the recommendations contained within the Guidelines.

The proposed development has embedded landscape and visual mitigation measures and thus, the appraisal of potential landscape and visual effects is equivalent to any appraisal of residual effects in this instance.

Some of the general mitigation measures that will be implemented to make the development less intrusive and less eye catching on a localised level include:-

- The colour will be industry standard off-white/light grey semi-matt non-reflective finish;
- Transmission lines between individual turbines and the substation will be placed underground;
- Special care will be taken to preserve any features, insofar as possible, which contribute to the landscape character of the study area; and
- Counter rotation of blade sets will be avoided.

### 9.5.3 Decommissioning Phase

The turbines are expected to be fully operational for up to 30-years. After this period, and if planning permission is not sought for an extension of this use at the site, the turbines and ancillary developments will be deconstructed and removed from the site with the exception of electricity grid infrastructure which may remain as part of the national grid network in perpetuity. Aspects of the ancillary site development including the access tracks may be retained in-situ. These may facilitate the use of the site for, as stated, suitable future rural development uses including animal grazing or recreational activities including walks and bridleways.

### 9.6 Summary

A summary table is provided below, which collates the assessments of visual impacts. A discussion of the results is provided thereafter.

Visual Impact			
VRP	Visual Receptor Sensitivity	Magnitude of visual impact	Visual Impact Significance
VP1	Very High	Low-negligible	<b>Slight</b>
VP2	Very High	Negligible	<b>Slight-Imperceptible</b>
VP3	Medium-low	Low-negligible	<b>Slight-Imperceptible</b>
VP4	Medium	Negligible	<b>Imperceptible</b>
VP5	Medium-low	Negligible	<b>Imperceptible</b>
VP6	Medium-low	Low-negligible	<b>Slight-imperceptible</b>
VP7	Medium	Low-negligible	<b>Slight-imperceptible</b>
VP8	High	Low-negligible	<b>Slight-imperceptible</b>
VP9	Medium-low	Negligible	<b>Imperceptible</b>
VP10	Medium-low	Negligible	<b>Imperceptible</b>
VP11	Medium-low	Medium-low	<b>Moderate-slight</b>
VP12	Medium-low	Low	<b>Slight</b>
VP13	Medium-low	High-medium	<b>Moderate</b>
VP14	Medium-low	Low	<b>Slight</b>
VP15	Medium-low	Negligible	<b>Imperceptible</b>
VP16	Medium-low	Negligible	<b>Imperceptible</b>
VP17	Medium-low	Negligible	<b>Imperceptible</b>
VP18	Medium-low	Medium	<b>Moderate</b>
VP19	Medium-low	High-medium	<b>Moderate</b>
VP20	Medium-Low	Low	<b>Slight</b>
VP21	Medium-low	Medium-low	<b>Slight</b>
VP22	Very High	Low-Negligible	<b>Slight-Imperceptible</b>
VP23	Medium-low	Negligible	<b>Imperceptible</b>
VP24	Medium-low	Medium-low	<b>Moderate-Slight</b>
VP25	Medium-low	Medium	<b>Moderate</b>
VP26	Medium-low	Medium	<b>Moderate</b>
VP27	Medium-low	Negligible	<b>Imperceptible</b>
VP28	Medium-low	Low	<b>Slight</b>
VP29	Medium-low	Negligible	<b>Imperceptible</b>
VP30	Medium-low	Low-negligible	<b>Slight-imperceptible</b>
VP31	Medium	Negligible	<b>Imperceptible</b>
VP32	Medium-low	Negligible	<b>Imperceptible</b>

VP33	Low	Low-negligible	<b>Slight-imperceptible</b>
VP34	High-medium	Negligible	<b>Imperceptible</b>
VP35	High-medium	Low-negligible	<b>Slight-imperceptible</b>
VP36	High-medium	Low-negligible	<b>Slight-imperceptible</b>
VP37	Medium-low	Negligible	<b>Imperceptible</b>
VP38	Medium-low	Negligible	<b>Imperceptible</b>
VP39	Low	Negligible	<b>Imperceptible</b>
VP40	Medium	Low-negligible	<b>Slight-Imperceptible</b>
<b>Cumulative Impact (Existing baseline)</b>			<b>Low-negligible</b>
<b>Cumulative Impact (Potential future baseline)</b>			<b>High-medium</b>

**Table 9.13: Summary Impact Assessment**

### 9.6.1 Landscape Impacts

With regard to the Westmeath Landscape Character Assessment, the proposed development is primarily contained within 'LCA 3 – River Deel Lowlands' which is "characterised by cutover, cutaway bogs and small tracts of intact bog". The landscape character areas identified within the Westmeath Landscape Character Assessment are not classified with an overall sensitivity designation. Nevertheless, a number of 'Areas of High Amenity (AHA)' are designated throughout Westmeath and are noted for their "amenity and recreational value and should be protected". Three of these include Lough Lene, Lough Derravaragh and Lough Owel are located within the wider study area, with the nearest of the three located some c.11km northwest of the site. Whilst the majority of the proposed development, including the proposed wind turbines, 110kV substation and grid connection are located within County Westmeath, part of the grid connection and the proposed end masts are located within County Meath, in the landscape character area LCA 15 – Southwest Lowlands. This landscape unit has been classified with a 'high' value, 'high/medium' sensitivity, and 'regional' landscape importance, and has been designated with a medium potential capacity to accommodate wind farms as "*views within this LCA are generally short range and limited by topography and vegetation so there are opportunities for choosing locations where impacts are minimal*". For the same reasons, this LCA has also been classified with a medium potential capacity to accommodate "overhead cables, substations and communication masts" which further reinforces the robust nature of this landscape context. On balance, the study area comprises of some highly sensitive landscape features and built heritage features, however, the overriding character of this landscape is primarily influenced by the extensive peat bogs and pastoral farmland, which combined, form the most prominent land use within the central and wider study area. In this regard, this is a highly modified working rural landscape, where values tend to relate to the subsistence of the rural economy as opposed to any sensitive scenic, naturalistic or recreational landscape values. The sensitivity of the receiving landscape is therefore considered to be Medium-low with pockets of highly sensitive landscapes in the wider periphery of the study area.

There will be direct physical impacts on the site during construction and operational stages of the development, but such effects are considered to be modest in scale and nature in this already highly modified rural setting. There will also be effects on the landscape character of the central study area from the introduction of tall moving structures, and whilst turbines are not a familiar feature within the study area, there is some thematic relationship with the surrounding peat bog context where the

landscape was once used to harvest fuel for energy and will now harvest wind as a source of energy. Landscape impacts will arise during the construction and operational stages of the proposed substation, which is discreetly sited within the main wind farm site and is surrounded by dense vegetation. Within the central study area, the magnitude of landscape impacts is deemed to be 'Medium' which in combination with the previously identified 'Medium-low' landscape sensitivity, results in a landscape impact significance of 'Moderate-slight'.

Beyond the central study area (<5km), the proposed turbines will have a lesser background influence on prevailing landscape character. The wider northern, eastern and western portions of the study area, have the most notable accumulation of sensitive heritage features and highly sensitive landscape designations. As much of the landscape to the east comprises of flat terrain, the likelihood of turbine visibility is heavily reduced, and therefore so is the likelihood of the turbines affecting the character of these highly sensitive landscape settings. There will likely be some degree of turbine visibility from some of the elevated areas in the north-western quadrant of the study area. Effects on the landscape character of that landscape are heavily diluted by the considerable separation distance (c. 15km +) from the proposed development site as the turbines will simply read as distant background features in the context of the more immediate landscape setting. Indeed, landscape impacts beyond 5km are considered to be no greater than 'Slight' diminishing to 'Imperceptible' with distance and as the proposed wind farm becomes a comparatively small scale component of the overall landscape fabric.

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

### 9.6.2 Visual Impacts

Visual impacts were assessed at 40 no. visual receptor locations throughout the study area. As noted in the summary table above (**Table 9.3**), sensitivity ranged widely from Very High to Low. Those locations with the highest levels of sensitivity tend to be sensitive heritage features such as the Loughcrew complex, Trim Castle, and The Spire of Lloyd. Other views with medium to high sensitivity typically relate to elevated areas of terrain that afford distant views across the landscape, designated scenic views within the County Development Plans, and areas that provide a notable degree of scenic and/or recreational amenity. Medium-low sensitivity tends to be attributed to less remarkable and contained views from local and regional roads, often comprising a range of typical anthropogenic land uses. As identified in **Table 9.13** above, a large majority of the viewpoints have been classified with medium-low and lower sensitivity designations which reflect the robust working nature of this landscape context.

Local community views represent those people who live, work, and move around the area within approximately 5km of the site (the central study area). These are generally the people that are most likely to have their visual amenity affected by a wind energy development due to their proximity to the turbines. As a result of the flat landscape contained within the study area combined with the numerous layers of hedgerows and mature tree-lines, a notable degree of containment is apparent throughout the low-lying parts of the central and wider study. Consequently, the most notable visual impacts are likely to occur in the central study area, and therefore, it is important to have a high proportion of views that represent the local rural population within this

assessment. 8 no. viewpoints were specifically chosen from a variety of viewing angles and distances to depict the potential visual impacts on the local rural population (VRP13, VRP14, VRP18, VRP19, VRP21, VRP24, VRP25, and VRP26). The sensitivity of all 8 no. viewpoints was 'medium-low' which highlights the modified but robust nature of the central study area. Visual impacts ranged from High-medium to medium-low, with the highest impacts related to the clearest and nearest views of the proposed turbines. The highest visual impact of 'High-medium' is considered to occur at both VRP13 and VRP19, as these views will afford the clearest views of the turbines from a near distance. Whilst the turbines will present in both viewpoints with a dominant visual presence, they are not overbearing and generate little, if any, sense of visual ambiguity. Instead, they are viewed in a relatively comprehensible manner where all the turbines will be viewed within a single viewing arc. Nevertheless, whilst the turbines present in a clear and legible manner from both of these views, some of the local population will be afforded slightly ambiguous views of the proposed development, where the turbines will be partially visible rotating above layers of intervening vegetation. VRP18 is classified with a 'medium' magnitude of visual impacts and is illustrative of a view of the development that presents with some degree of visual ambiguity and clutter. However, as some of the turbines present here in a clearer manner than others, the sense of visual ambiguity is slightly diluted.

The nearest settlement to the proposed development is that of Delvin which is represented by both VRP10 and VRP11. VRP10 is located on the main street that runs through the centre of Delvin and will afford no visibility of the proposed turbines due to the built surrounds of the settlement. VRP11 is situated on the southern outskirts of the town and will afford a clear view of the proposed turbines resulting in an 'Moderate-slight' impact significance. Whilst the turbines will be a prominent feature from here, they do not present with any sense of overbearing, although they will increase the intensity of built development in the surrounding landscape.

A considerable number of viewpoints are located throughout the wider study area due to the notable concentration of amenity and heritage features. Many of these amenity and heritage features often coincide with designated scenic views in the county development plans. One of the most sensitive heritage features within the study area is that of the Loughcrew Complex (Scenic View 6 in the Meath CDP), which is represented at VRP1. Whilst elevated clear views across almost the entirety of the study area are afforded from here and will encompass a distant view of all of the proposed turbines, a 'low-negligible' magnitude of visual impact is considered to occur here. This is on the basis that the proposed turbines will be viewed as small-scale background features in a sweeping broad panoramic view that comprises a variety of rural land uses. Other highly sensitive heritage views within the wider study area include the Tower of Lloyd and Trim Castle. In similar circumstances to VRP1, the representative viewpoint from the Tower of Lloyd (Scenic View 6 in the Meath CDP) affords a distant (20km+) partial view of the proposed turbines, which will be barely discernible. This is because they will be seen at a very small scale in silhouette against the sky and also due to atmospheric perspective. This is deemed to generate an 'Slight-Imperceptible' significance of visual impact in the context of this broad view. The view from Trim Castle is heavily contained by surrounding vegetation and the urban surrounds of the settlement of Trim, and will afford no visibility of the proposed turbines from the grounds of the castle. Nevertheless, views of the turbines have the potential to be afforded from the elevated platforms within the castle, however, due to the viewing distances involved of c.18km +, the visual impact significance is considered to be no greater than 'Slight-Imperceptible'.

Landscape features within the wider study area that provide a notable sense of scenic and recreational amenity include the Royal Canal Way and the Drewstown Woods (Girley Bog) national looped walk. Both of these features are typically enclosed by dense areas of vegetation. Views along the Royal Canal Way are represented by VRP34, VRP35, and VRP36. Both VRP35 and VRP36 are also representative of scenic designations in the Meath CDP and are located on bridges over the canal, and therefore represent an increased degree of visual exposure than what will be afforded from the canal corridor itself. Due to the combination of dense vegetative screening surrounding the canal corridor and the separation distance from the site, it is not considered that any significant visual impacts will occur along the Royal Canal corridor. Instead turbine visibility will often be completely screened from view. In similar circumstance to the canal corridor, Drewstown Woods is heavily enclosed by dense surrounding vegetation and will afford little, if any turbine visibility.

The most notable point to make is that visual impacts are typically contained within the central portions of the study area, beyond which, the proposed turbines are often heavily screened by dense layers of hedgerow vegetation and mature tree-lines. This is further reinforced by the fact that out of the 29 no. representative viewpoints within the wider study area only two have an impact significance of 'Slight' with the remainder ranging between 'Slight-imperceptible' and 'Imperceptible'. Furthermore, although the turbines within the central study area have the potential to present in a highly dominant manner, the context of these views is representative of a highly modified, robust, working landscape and the turbines often present in a clear and legible manner, with little if any sense of overbearing. Thus, it is considered that a development of this scale and nature can be well accommodated here and will not appear incongruous in this productive rural landscape setting.

### 9.6.3 Cumulative Impacts

Wind energy development is a relatively unfamiliar feature within the study area, with no existing developments located within the 20km study area. Nevertheless, Yellow River Wind Farm is a permitted large-scale wind energy development comprising of 29 no. turbines that will be situated within the southern half of the study area. It is also important to note that wind energy development within the wider context of the midlands of Ireland is a relatively well-established feature in the broader landscape context. The potential for cumulative impacts were examined between the proposed Bracklyn Wind Farm and the permitted Yellow River Wind Farm. As a result of the considerable separation distance between both developments in combination with the flat and densely vegetated nature of the study area, it is not considered that the proposed development will contribute to a strong sense of wind farm proliferation. Thus, cumulative effects are not considered to be significant.

Notwithstanding the current cumulative scenario, there is a potential cumulative scenario that could include the adjacent proposed Ballivor Wind Farm. Nonetheless, due to its smaller scale, the proposed Bracklyn Wind Farm makes a considerably lesser contribution to cumulative effects in combination with the proposed Ballivor Wind Farm. Furthermore, given the pre-planning status of Ballivor Wind Farm, consideration of potential cumulative impacts is somewhat premature and should not necessarily be taken as the future reality.

### 9.6.4 Overall Significance

The highest level of impact significance occurs at VRP13, VRP18, VRP19, VRP25 and VRP26 which relates to a 'Moderate' visual impact significance and is representative

of views from the local community (within 5km). Outside of the central study area, the significance of impacts considerably reduces and ranges between 'slight' and imperceptible due to the flat nature of the study area and dense layers of vegetative screening. When coupled with the assessed landscape impact and cumulative impacts, it is assessed that the proposed development will not give rise to significant landscape and visual impacts or cumulative impacts.