12 LANDSCAPE AND VISUAL

12.1 Introduction

This Landscape & Visual Impact Assessment (LVIA) has been prepared by Chartered Landscape Architects at Stephenson Halliday on behalf of Planree Ltd (the "Applicant") in respect of their proposed Meenbog wind farm development (the "Proposed Development"). Stephenson Halliday have undertaken the LVIA for over 140 wind energy schemes across the UK and in Ireland.

The LVIA assesses the likely significant effects of the Proposed Development upon the "Site" (defined as the area within the red line planning application boundary) during construction, operation and decommissioning.

The LVIA has been undertaken in accordance with established methodology and guidance, including the Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3), prepared by the Landscape Institute and the Institute for Environmental Management and Assessment (2013) and the Guidelines On The Information To Be Contained In Environmental Impact Assessment Reports, Draft, Environmental Protection Agency (August 2017).

This LVIA is organised in the following sections:

- Introduction;
- Scope of the Assessment;
- Assessment Methodology and Significance Criteria;
- Legislation & Policy Context;
- Baseline Conditions;
- The Proposed Development including Design Based Mitigation;
- Visibility Analysis;
- Assessment of Landscape Effects;
- Assessment of Visual Effects;
- Assessment of Cumulative Effects; and
- Summary.

The chapter is supported by the following appendices:

- 12a: Figures 12.1-12.23;
- 12b: Methodology;
- 12c: Landscape Character Sensitivity Assessment Tables; and
- 12d: Viewpoint Assessment.

The Visualisations (1 – 14) are presented in Volume 2 of the EIAR

12.2 Scope of the Assessment

The LVIA study area has been defined as 20km from the outer-most turbines (see Figure 12.1). In addition, a detailed study area of 5km from the outer-most turbines has been used in order to focus in detail on the closest landscape and visual receptors which have the most potential to experience significant effects as a result of the Proposed Development.

This radius is informed by ZTV analysis, reference to the findings of field survey and viewpoint analysis, as well as professional experience from previous assessments. Operational turbines within the study area form part of the baseline and are considered in the main LVIA where relevant. The Assessment of Cumulative Effects section describes the potential combined cumulative effects of the Proposed Development in association with operational, consented and proposed developments. Issues raised by the Planning Inspector in relation to the 2015 application (Report reference PL05.PA0040) are addressed through the LVIA where relevant, specifically:

- Barnesmore Gap: effects upon the Barnesmore Gap, including how the design responds to the Gap and the Inspectors concerns are set out in the Assessment of Landscape Effects

- Eastern End- Lismullyduff: turbines around Lismullyduff no longer form part of the proposal. Consequently, concerns raised by the Inspector in relation to Lismullyduff are no longer relevant; and

- Wider Views in a sub-county and border region context: these are considered in the Assessment of Landscape Effects.

12.3 Assessment Methodology and Significance Criteria

The methodology is set out in full in Appendix 12b, and summarised below. It is based on the following best practice guidance:

- Guidelines for Landscape and Visual Assessment, Third Edition (Landscape Institute and Institute of Environmental Management and Assessment 2013);

- Guidelines On The Information To Be Contained In Environmental Impact Assessment Reports, Draft, Environmental Protection Agency (August 2017); and

- Advice Notes on Current Practice (in the preparation of Environmental Impact Statements) (EPA, 2003). It also takes account of advice within the following documents:

- 'Assessing the Cumulative Impact of Onshore Wind Energy Developments'; SNH, 2012;

- 'Siting and Designing Windfarms in the Landscape' Version 2; SNH, May 2014;

- 'Photography and Photomontage in Landscape and Visual Assessment'; Landscape Institute Advice Note 01/2011 (2011); and

- 'Visual Representation of Wind Farms' Version 2.1; SNH, December 2014.

The aim of the LVIA is to identify, predict and evaluate the likely significant effects arising from the Proposed Development. Wherever possible, identified effects are quantified, in accordance with best practice guidance, but the nature of landscape and visual assessment requires interpretation by professional judgement. In order to provide a level of consistency to the assessment, the prediction of magnitude and assessment of significance of the residual landscape and visual effects have been based on pre-defined criteria.

GLVIA 3 states that 'Professional judgement is a very important part of LVIA.' (para 2.23). 'In all cases there is a need for the judgements that are made to be reasonable and based on clear and transparent methods so that the reasoning applied at different stages can be traced and examined by others.' (para 2.24). 'There are no hard and fast rules about what effect should be deemed 'significant' but LVIAs should always distinguish clearly between what are considered to be the significant and non-significant effects' (para 3.32).

12.3.1 Assessment Procedures

Landscape and Visual assessments are separate, though linked procedures. The assessment of the potential effect on the landscape is carried out as an effect on the environmental resource (i.e. the landscape). Visual effects are assessed as an inter-related effect on visual receptors.

Landscape effects derive from changes in the physical landscape which may give rise to changes in its character and how this is experienced, including consideration of landscape perception which may in turn affect the perceived value ascribed to the landscape.

Visual effects relate to changes that arise in the composition of available views as a result of changes to the landscape, to people's responses to the changes and to the overall effects with respect to visual amenity.

The assessment of landscape effects and assessment of visual effects are presented separately.

12.3.2 Significance Criteria

The significance of any identified landscape or visual effect has been assessed in terms of Major, Moderate, Minor or negligible (refer to Appendix 12b). Intermediate correlations are also possible and depend upon professional judgement, e.g. Major/Moderate.

These categories are based on the juxtaposition of viewpoint or landscape sensitivity with the predicted magnitude of change. This juxtaposition is not used as a prescriptive tool, rather it allows for the exercise of professional judgement. Thus in some instances a particular parameter may be considered as having a determining effect on the analysis.

Where the landscape or visual effect has been classified as Major or Major/Moderate this is considered to be equivalent to likely significant effects.

12.4 Legislation and Policy Context

12.4.1 Donegal County Development Plan 2012-2018 Wind Energy and Landscape Policies and Objectives

The Donegal County Development Plan 2012-2018 sets out an overall strategy for the proper planning and sustainable development of the administrative area of Donegal County Council.

Chapter 7 of the Plan outlines policies and objectives relating to wind energy developments. The development plans identifies areas which are considered suitable for wind energy development in the county, and was based on information including

potential for wind energy, existing and proposed grid connection, natural heritage designations and landscape sensitivity.
The strategy identified two types of area, Areas Open to Consideration and Not Favoured Areas. The Development Plan defines these as follows:

- Areas Open to Consideration – These areas are open to consideration for appropriate wind energy proposals. They have been identified having regard to a range of factors, including wind energy potential (through the wind speed atlas www.seai.ie), existing grid connections, proposed grid connections, natural heritage designations and landscape sensitivity, the road infrastructure is adequate and where likely conflict with natural heritage designations can be protected. Islands with communities have also been included to enable consideration to be given to appropriate community wind turbine(s) and as a consequence encourage self-sufficiency.

- Not Favoured – Areas where wind energy proposals will not be favoured have been identified due to the significant environmental, heritage and landscape constraints. These include; SAC and SPA (Natura 2000) Sites, NHAs, unspoiled areas of EHSAs, Areas of Fresh Water Pearl Mussel, important views and prospects. It is considered that these areas have little or no capacity for wind energy development.

Section 7.2.3 of the Donegal County Development Plan 2012-2018 includes the following requirement for wind energy developments:

- E-P-9: It is a policy of the Council that development proposals for wind energy shall be in accordance with the requirements of the Wind Energy Development Guidelines: Guidelines for Planning Authorities, 2006 (or as may be amended).

- E-P-11 It is the policy of the Council to facilitate the development of appropriate wind energy proposals in the "Areas Open to Consideration" as identified on the Wind Energy Map No. 9.

All of the proposed turbine locations are located within an area which is defined as an Area Open to Consideration and therefore considered appropriate for wind energy development. There are no turbines located within Not Favoured areas.

12.4.2 Development and Technical Standards

Section 10.6 of the Donegal County Development Plan refers in particular to two important areas, Glenveagh National Park and Donegal Airport in Carrickfinn, to be considered in any wind energy application. 10.6.5: Wind turbines must meet the requirements and standards set out in the DEHLG Wind Energy Development Guidelines 2006, or any subsequent related Guidelines and in addition must not be located within:

(a) The zone of visual influence (ZVI) of the Glenveagh National Park.

(b) The zone of influence/ flight path at Donegal Airport.

The ZVI of Glenveagh National Park is described as follows:

- 10.6.6: Glenveagh National Park: Zone of Visual Influence

    - The environmental and visual character of Glenveagh National Park consists of the geographic extent of the park and its immediate

environs. The implementation of the relevant policy should not be interpreted as relating to lands with limited physical or visual connection to the park. The onus is on the applicant to demonstrate the extent of the potential impact a proposed wind energy development has on the National Park.

The site is located over 20km from the Glenveagh National Park.

12.4.3 Views and Prospects

Map 8 of the current County Development Plan includes a map of views and prospects. The Plan states in Policy NH –0-8 and NH P – 14 that in seeking to preserve views and prospects, particular attention will be paid to views between public roads and sea, lakes and rivers.

The following policies and objectives are relevant:

- NH-O-8: To protect the character of the landscape where and to the extent that, the proper planning and development of the area requires it, including the preservation of views and prospects and the amenities of places and features of natural beauty or interest.
- NH-P-14 It is a policy of the Council to seek to preserve the views and prospects of special amenity value and interest, in particular, views between public roads and the sea, lakes and rivers. In this regard, development proposals situate on lands between the road and the sea, lakes or rivers shall be considered on the basis of the following criteria:
    - Importance;
    - Whether the integrity of the view has been affected to date by existing development;
    - Whether the development would intrude significantly on the view;
    - Whether the development would materially alter the view;
    - In operating the policy, a reasonable and balanced approach shall be implemented so as to ensure that the policy does not act as a blanket ban on developments between the road and the sea, lakes and rivers.

- NH-P-10 It is a policy of the Council to protect landscapes of Especially High Scenic Amenity (EHSA) and views and prospects and to preserve the character of distinctive regional, local and cultural landscapes in the County.

The views and prospects within the study area are set out in the Landscape Receptor section below.

12.4.4 Donegal County Development Plan Landscape Policies and Objectives

Chapter 7 of the Donegal County Development Plan sets out policies and objectives regarding the natural and built heritage. The Plan acknowledges the European Landscape Convention which was ratified by Ireland, which requires commitment to introducing policies regarding the protection, management and planning of landscapes. The Plan also refers to the Draft Guidelines on Landscape and Landscape Assessment, and the ongoing preparation of the National Landscape Strategy for Ireland. It is noted that the Strategic Environmental Assessment (SEA) for the Plan recommends the preparation of a Landscape Character Assessment for County Donegal, which is now complete and adopted.

The protection of sensitive landscapes from unsuitable developments is seen as one of the Council's most important roles. The Plan describes the designation of landscapes of the highest quality which are characterised by wilderness and which have little or no

man-made structures, including high quality coastal or upland areas. These areas are known as Areas of Especially High Scenic Amenity (EHSAs). These are mapped on Map 8 of the Development Plan.

The Donegal County Development Plan 2012-2018 sets out policies and objectives for landscape conservation as follows:

- NH-O-5: To protect the areas of Especially High Scenic Amenity from intrusive and/or unsympathetic developments and to review these landscape designations within the lifetime of this Plan. Strategic Infrastructure projects which seek to enhance roads, rail, air and port connectivity, power supply, broadband/telecommunications, waste water treatment, or similar type public infrastructure development, may be considered within areas of Especially High Scenic Amenity. These proposals will also be subject to all material considerations, including environmental designations and amenity considerations.

- NH-O6: to ensure where appropriate the protection and conservation of hedgerows, stone walls and traditional field boundaries as natural heritage corridors and migration routes for wildlife where they are shown to play a significant heritage role.

- NH-O-7: To prepare a Landscape Character Assessment that shall provide a framework for the identification, assessment, protection, management and planning of the landscape (and County Donegal Development Plan including seascape) of County Donegal in accordance with current legislation and ministerial guidelines, and having regard to the European Landscape Convention, 2000.

- NH-O-8: To protect the character of the landscape where and to the extent that, the proper planning and development of the area requires it, including the preservation of views and prospects and the amenities of places and features of natural beauty or interest.

- NH-P-9 It is a policy of the Council to protect the integrity of the Shore Walks from Moville to Greencastle, Bundoran to Tullaghan, Buncrana to Stragill and the walkway encircling Trusk Lough, Ballybofey, by the management of development.

- NH-P-10 It is a policy of the Council to protect landscapes of Especially High Scenic Amenity (EHSA) and views and prospects and to preserve the character of distinctive regional, local and cultural landscapes in the County.

- NH-P-11 It is a policy of the Council to protect the character of the following approach roads to
    - Glenveagh National Park;
    - Glendowan to Doochary Road;
    - Dunlewey to Termon Road;
    - Churchill to Termon/Dunlewy Road;
    - Muckish Gap to Cabiber Bridge.

- NH-P-12 It is a policy of the Council to safeguard prominent skylines and ridgelines from inappropriate development.

12.4.5 Walking Routes and Cycleways

Section 10.12 of the County Development Plan lists a number of walks and trails within the County. Walks within the study area are listed in the Visual Receptor section below.

12.4.6 Draft Donegal County Development Plan 2018-2024

The forthcoming Donegal County Development Plan 2018-2024 is currently at draft stage, and proposes a number of changes to existing wind energy and current landscape/scenic amenity designations contained within the current CDP.

At time of writing this EIAR the period for public submissions to be made to the Draft Plan has been closed and the Planning Authority are preparing the Chief Executives report on all submissions made by the public and various statutory bodies and stakeholders, to inform the further consideration of the Councillors in the Plan making process.

Planree Ltd. have engaged with the Planning Authority and made a submission to the Draft Plan process. In relation to landscape designations in the vicinity of the study area the submission included the landscape representation included in Appendix 2.
As the Plan preparation process continues through its next stages towards final adoption the relevant provisions will become clearer.

The pertinent Development Plan remains the 2012-2018 CDP.

12.5 Baseline Conditions

With reference to Figures 12.1-12.5, this section describes baseline conditions in relation to existing landscape character, local landscape elements and features, landscape planning designations, operational turbines and visual receptors.

Distances quoted are the shortest distance between the receptor and the closest turbine unless otherwise stated (i.e. from closest turbine to settlement edge, as opposed to settlement centre).

12.5.1 Site Description and Context

The Site is located in a moderately elevated area ranging in level between 180m to 300m and slopes downwards generally in a north westerly direction. Lough Mourne lies to the North West of the site. The proposed turbines are about 2.5 km east of the N15 and 3.5 km east of the Barnesmore Gap.

This area has a large/vast scale, and is a remote and undeveloped upland area covered predominantly by commercial forestry in geometric blocks and some peat covered hills and upland bogs.

12.5.2 County Landscape Character

Landscape character across the study area is defined at the County level by the 'Landscape Character Assessment of County Donegal' (DCC, 2015) ('LCACD') and the Northern Ireland Regional Landscape Character Assessment (Northern Ireland Environmental Agency, Jan 2014).

The Site is located within landscape character area (LCA) 40: Cashelnavern Border & Uplands as defined by the LCACD. The key characteristics of LCA 40: Cashelnavern Border & Uplands are:

- Land Form and Land Cover;
    - This upland hilly landscape comprises a varied mosaic geology of schist, breccia and quartzite beneath a primarily peat and upland bog landscape;
    - Lough Mourne freshwater lake is in the centre of this LCA at the north of Barnesmore gap and within the broad river valley;
    - Croaghonagh Bog Special Area of conservation is within this LCA and supports some of the best examples of wet lowland blanket bog in the county. The SAC site adjoins two good examples of oligotrophic lake habitat namely Lough Mourne and Lough Carn;
- Settlements;
    - There are no settlements within this LCA;
- History, Culture and Heritage;
    - There is 1 Recorded Monument in this area, however a recent excavation at the north end of Lough Mourne uncovered a court tomb and a wedge tomb from the early Bronze Age period along with a cairn and other relics and artefacts, evidencing the importance of the Site and this route through the Bluestacks, from pre-history;
    - Important vernacular and imposed built heritage including 7 NIAH structures;
- Access and Recreation;
    - The N15 traverses this site south towards Barnesmore Gap and alongside Lough Mourne. Limited access to the remainder of the area is via a limited county road network leaving much of the remote uplands inaccessible;
    - Disused County Donegal Railway line runs alongside the N15;
    - Adjoins Northern Ireland's LCA 19, 'Killeter Uplands Landscape';
    - Historic Landscape Characterisation identifies this area as overwhelmingly Blanket bog overlaid with large areas of Plantation woodland and forest (Generic HLC-types);
    - Network of way-marked walks used by walkers and ramblers;
- Biodiversity;
    - Ecologically important landscape containing 311.6ha of Natura 2000 sites (SAC & SPA), 451.7ha of NHA sites and 126.2ha of pNHA sites;
    - Croaghonagh Bog Special Area of conservation is near to the oligotrophic lake habitats of Lough Mourne and Lough Carn, it supports some of the best examples of wet lowland blanket bog in the county and is the subject of a conservation project.

Forces for change are identified as:

- Renewable energy development (windfarms);
- Afforestation;
- Telecommunications and infrastructural development;

Extension to Lough Mourne to facilitate water supply.The existing Lough Golagh wind farm is located approximately 2km south west but just inside the adjacent LCA 41 Croaghnameal Border & Uplands. Despite its relatively close proximity, the varied upland terrain and extensive forestry cover across the Meenbog site limit the influence of the Lough Golagh wind farm on the Meenbog site.

Other LCAs within the study area are illustrated on Figure 12.4 and include:

- LCA 38 Bluestack located to the west of the Site covering the Bluestack Mountains;

- LCA 41 Croaghnameal Border & Uplands, located to the south west of the Site covering hilly terrain; and
- NI RLCA 5 West Tyrone Hills and Valleys.

12.5.3 Landscape and Visual Designations / Policy protections

The Site is not within any landscape designation.

Landscape and visual designations within the study area are illustrated on Figure 12.2 and include:

- Areas of Especially High Scenic Amenity ('AEHSA'), defined on County Donegal Development Plan 2012-2018 ('CDDP') - Map 8. There are several AEHSA within the study area. They are not named within the CDDP, nor are specific reasons given for their designation; and

- Views and Prospects, defined on County Donegal Development Plan 2012-2018 - Map 8. There are numerous protected Views and Prospects across the study area. The only one with the potential to be affected is the view south west towards the Barnesmore Gap across Lough Mourne from the N15

The Barnesmore Gap is a dramatic mountain pass at the south eastern edge of the Bluestack Mountains. This view from the N15 towards the gap south west across Lough Mourne is identified on Map 8 of the CDDP.

However, beyond an arrow on the plan which identifies the location and direction of the protected view, there is no further definition.

It is important to clearly define the angle of view which is protected in order to accurately assess any potential impact upon the protected view from proposed development.

As noted by the Planning Inspector on the original submission, 'The protected view sheds are not precisely delineated for each view and prospect in the CDP and there is a degree of interpretation to the required level of preservation of the landscape'[1].

The Highland Council have produced best practice guidance[2] based on research by the University of Stirling[3] which defines the maximum clear area of vision seen by the human eye. The maximum area of clear vision is an appropriate method to define what should be included within the protected view identified by the CDDP.

[1] Inspector's Report, PL05.PA0040, page 42

[2] Visualisation Standards for Wind Energy Developments, The Highland Council, 2016 and 2013

[3] The Effect of Focal Length on Perception of Scale and Depth in Landscape Photographs: Implications for visualisation standards for wind energy developments, University of Stirling, 2012

This maximum clear area of vision seen by the human eye is defined as 39.6° (equivalent to a single frame photograph taken with a 50mm lens)[4].

This guidance has informed best practice guidance produced by Scottish Natural Heritage[5] (SNH) who advocate a wider 53.5° angle of view should be presented in photomontages as this also presents landscape and visual context within which to appreciate development proposals.

These guidance documents provide an independent and robust method which can be used to define what is within the protected view from a particular point: 39.6° for the maximum clear area of vision, and the wider 53.5° to provide some context around that main view.

These angles have been mapped in Figure 12.3 in order to define the protected view from the N15 towards the Barnesmore Gap and also south west across Lough Mourne. The location for this viewpoint on Figure 12.3 was selected to represent the view as described (across Lough Mourne and towards the Barnesmore Gap) and also as the first point on the N15 when travelling south west where a view towards the Barnesmore Gap and the Site becomes possible. From points further north east along the N15 either the Barnesmore Gap or the Site are screened by topography and/or forestry and hence the Proposed Development could have no effect upon the protected view.

12.5.4 Visual Receptors

Visual receptors considered within the LVIA include:

- Residents in individual dwellings and settlements;
- Road users; and
- Users of long distance recreational routes.

The ZTV (Figures 12.6-12.10) illustrate theoretical visibility at:

- Limited parts of Ballybofey and Stranolar c.8km north east;
- Limited parts of Killygordon c.13km north east;
- Limited parts of Castlederg c.16km east; and
- Limited parts of Castlefin c.19km north east.

12.5.5 Road Users

Roads from where theoretical visibility occurs include (distances are the shortest distance between the section of road within the ZTV and the nearest proposed turbine):

- N15 c.2.5km west; and
- The local road network in the vicinity of the Site.

12.5.6 Recreational Receptors

Recreational routes within the study area are illustrated on Figure 12.5 and include:

- Northwest Cycle Trial within 1km north;
- Lough Mourne to Barnesmore Railway c.2km west;
- Trusk Lough Walkway c.4km north east;

[4] Paragraph 1.5, Visualisation Standards for Wind Energy Developments, The Highland Council, 2016 and Paragraph 7.5 (in conjunction with Table at paragraph 13.5) and paragraph 8.7, Visualisation Standards for Wind Energy Developments, The Highland Council, 2013

[5] Visual Representation of Wind Farms. SNH, 2014

- Slina Finne c.9.5km north west;
- Bluestack Way c.10km west; and
- Ulster Way c.16km south east

Taking into account the visual baseline described above, a number of viewpoints were selected to represent and assess the visual impacts of the Proposed Development that would be experienced by various groups of people (visual receptors) within the study area.

The selected viewpoints are representative of the views experienced at different distances and directions from the Site, and from a variety of LCAs in the study area from which the Proposed Development would be visible. These viewpoints are all publicly accessible and are listed in Table 12.1: Representative Viewpoints, and shown on all Figures.

Table 12.1 Representative Viewpoints

Viewpoint number	Viewpoint	Distance from Site (km)	Visual Receptor
1.	View from Meenbog	0.9km	Road users, nearby residents
2.	View from Local Road in the Townland of Taughboy	2.2km	Road users, nearby residents
3.	View from The National Road N15 in the townland of Croghanagh	2.6km	Road users
4.	View from Local road in the townland of Croaghonagh	2.7km	Road users
5.	View from Townland of Cashelnavean	2.8km	Road users
6.	View from National Road N15 in the townland of Cashelnavean	2.9km	Road users
7.	View from National Road in Meenacrumlin	3.2km	Road users
8.	View from Local road in the townland of Kinletter	4.5km	Road users
9.	View from Townland of Tievecloghoge	5.1km	Road users, nearby residents
10.	View from Local road to the southeast of Deevoge bridge	5.4km	Road users, nearby residents
11.	View from Townland of Altnapaste	6.4km	Road users, walkers
12.	View from Track and Bluestacks Way in the in the townland of Greenan	11.3km	Walkers
13.	View from Local road in the townland of Magheraval	13.8km	Road users
14.	View from Class B road B72 south of the village of Castlederg	16.7km	Road users, nearby residents

12.5.7 Cumulative baseline

Cumulative wind farms/turbines which are operational or under construction at the time of assessment are considered within the LVIA as part of the baseline. Consented and proposed cumulative developments are considered separately within the Assessment of Cumulative Effects. For reference, cumulative developments (operational, consented, proposed and scoping-stage) within a 20km radius of the Proposed Development are illustrated in Figure 12.11.

The cumulative baseline within the 20km study area is set out in Table 12.2

Table 12.2 Cumulative baseline (operational turbines)

Wind farm	No. of Turbines	Blade Tip Height	Approximate distance from the Site
Lough Golagh	25	62	2km
Meenadreen	4	75	6.7km
Crighshane	14	99.9	8.3km
Churchill	8	99.9	11.2km
Meenagrauv	4	75	12.5km
Meenanilta	3	75	13km
Meenanilta ii	3	75	12.8km
Meehahorna	7	100	13.5km
Meenlaban	7	121.2	14km
Culliagh	18	68.5	15km
Culliagh Extn	3	121.25	15km
Meentycat 1	9	121.2	15.2km
Cark	25	67.5	18.3km
Ballystrang	6	74	17km
Cark Extension	6	67.5	16.7km
Cark/Largymore	9	99	16.8km
Anarget WF	6	73.5	17.7km
Lough Hill ii	6	85	19km

12.6 The Proposed Development including Design Based Mitigation

The description of the Proposed Development including the site selection rationale and the iterative design process is described within Section 3 and Section 4 of the EIAR. The design of the Proposed Development has been an iterative process with the aim of arriving at an optimal design configuration in respect of landscape and visual effects and a range of other environmental and technical factors.

The final layout incorporates the following landscape and visual design considerations:

- All turbines have been located outside of the protected view form the N15 across Lough Mourne towards the Barnesmore Gap;
- All turbines have been located outside of the Area of Especially High Scenic Amenity;
- All turbines are located over 4x tip height residential dwellings in order to protect residential amenity;
- All turbines are located over 10x tip height (1,565m) from any third party residential dwellings;
- The turbines have been designed to create a legible array with consistent spacing and minimal overlapping turbines;

- The track layout makes use of the existing tracks where possible (to be upgraded for the delivery of wind turbine components), to minimise the requirement for new tracks within the Site; and
- Felling of existing coniferous plantation would be predominantly limited to localised parts of the Site.

12.6.1 The Proposed Development

The Proposed Development is illustrated on Figure 4.1 and comprises 19 wind turbines, with a tip height of up to 156.5m.

The Proposed Development includes associated turbine foundations and transformers, hardstanding areas for erecting cranes at each turbine location, a series of on-site tracks connecting each turbine, underground cables linking the turbines to the grid connection, an on-site substation, a construction compound, up to three borrow pits, and new site access from the local road north of the site. Forestry felling would be minimised to a radius around each turbine base and to facilitate the other infrastructure including some access roads.

Each wind turbine requires an area of hard-standing (a "crane pad") to provide a level and firm base for the cranes at the location of each turbine which would be surfaced with coarse aggregate.

There will be 2 no. temporary construction compounds / storage area. The construction compound at the north of the Site will be re-purposed as a community amenity hub. Final turbine selection will be made following the granting of planning permission. The Applicant wishes to ensure that they maintain flexibility in the choice of turbine model available for installation. The candidate turbine to be used for assessment purposes will be the Nordex N117 3.6MW.

12.6.2 Construction Phase

The construction phase is expected to last between 12-18 months (refer to Chapter 4). The activities and temporary features with the potential to cause an effect on landscape and visual amenity include:

- Construction of the access into the Site from the N15;
- Construction and upgrading of site access tracks and hardstandings;
- Forestry felling;
- Installation and use of a temporary site compounds;
- HGV deliveries and abnormal load deliveries to Site and movement of vehicles on Site;
- Installation of electrical infrastructure;
- Construction of control building/sub-station;
- Construction of wind turbine foundations and crane pads;
- Erection using cranes and commissioning;
- Introduction of mitigation and enhancement measures including forestry re-planting;
- Development of the community amenity hub located at the north-eastern temporary construction compound; and
- Site reinstatement and restoration.

The location and management of these features have been carefully considered to limit the transitory effects of the construction phase.

12.7 Visibility Analysis

12.7.1 ZTV Analysis

The ZTV analysis (Figures 12.6) illustrates that visibility of the Site would be well contained by the surrounding topography.

To the west rising ground would limit theoretical visibility to approximately 5km, with very little potential for visibility from the Bluestack Mountains further west.

To the north theoretical visibility would again be largely contained within 5km with little visibility possible from the southern slopes and base of the Finn Valley, with areas of theoretical visibility possible from the south facing northern slopes.

To the east theoretical visibility would extend to areas of higher ground and the elevated plateau with limited visibility possible from the lower settled slopes and valleys.

To the south theoretical visibility would again be patchy beyond 5km occurring on higher areas of the upland terrain.

12.7.2 Viewpoint Assessment Summary

Viewpoint analysis has been undertaken from a total of 14 viewpoints. The viewpoint locations are illustrated on all Figures. The visualisations (comprising photographs of the existing view, wireframes and photomontages) are illustrated with reference to Viewpoints 1 to 14.

The findings of the viewpoint analysis are set out below in Table 12.3: Viewpoint Analysis Summary. Distances are listed in relation to the nearest turbine in each case.

Table 12.2 Viewpoint Assessment Summary

Viewpoint No.	Viewpoint	Approx. distance from nearest turbine	Landscape Character Area Sensitivity (at viewpoint location)	Scale of Landscape Change	Visual Receptor Sensitivity (at viewpoint location)	Scale of Visual Change
1	View from Meenbog	900m	Cashelnaven Uplands Medium/Low	Large	Road user Medium/Low	Large
2	View from Local Road in the Townland of Taughboy	2.2km	Cashelnaven Uplands Medium/Low	Medium / large	Road users Medium/Low Nearby Residents High	Medium / large
2	View from The National Road N15 in the townland of Croghanagh	2.6km	Cashelnaven Uplands Medium/Low around viewpoint in the direction of the site (whilst this is located at the edge of the AEHSA which covers the Bluestack Mountains, the focus of the view is across the simple Cashelnaven Uplands of lower sensitivity)	Medium / large	Road user Medium/Low (this view looks away from the protected Barnesmore Gap view, and the road is busy with fast moving traffic)	Medium / large
3	View from Local road in the townland of Croaghonagh	2.7km	Bluestack Medium/Low around viewpoint in the direction of the site (whilst this is located at the edge of the AEHSA which covers the Bluestack Mountains, the focus of the view is across the simple Cashelnaven Uplands of lower sensitivity)	Small	Road user Medium/Low (this view looks away from the protected Barnesmore Gap view, and the road is busy with fast moving traffic)	Small

Viewpoint No.	Viewpoint	Approx. distance from nearest turbine	Landscape Character Area Sensitivity (at viewpoint location)	Scale of Landscape Change	Visual Receptor Sensitivity (at viewpoint location)	Scale of Visual Change
4	View from Townland of Cashelnavean	2.8km	Cashelnaven Uplands Medium/Low around viewpoint in the direction of the site (whilst this is located at the edge of the AEHSA which covers the Bluestack Mountains, the focus of the view is across the simple Cashelnaven Uplands of lower sensitivity)	Medium / large	Road user Medium/Low (this view looks away from the protected Barnesmore Gap view, and the road is busy with fast moving traffic)	Medium / large
5	View from National Road N15 in the townland of Cashelnavean	2.9km	Cashelnaven Uplands Medium/Low around viewpoint in the direction of the site (whilst this is located at the edge of the AEHSA which covers the Bluestack Mountains, the focus of the view is across the simple Cashelnaven Uplands of lower sensitivity)	Medium	Road user Medium/Low (this view looks away from the protected Barnesmore Gap view, and the road is busy with fast moving traffic)	Medium
6	View from National Road in Meenacrumlin	3.2km	Cashelnaven Uplands Medium/Low around viewpoint in the direction of the site (whilst this is located at the edge of the AEHSA which covers the Bluestack Mountains, the focus of the view is across the simple Cashelnaven Uplands of lower sensitivity)	Negligible	Road user Medium/Low (this view looks away from the protected Barnesmore Gap view, and the road is busy with fast moving traffic)	Small
7	View from Local road in the townland of Kinletter	4.5km	Cashelnaven Uplands Medium/Low	Small / medium	Road users Medium/Low	Small / medium
8	View from Townland of Tievecloghoge	5.1km	Cashelnaven Uplands Medium/Low	Small	Road users Medium/Low Nearby Residents High	Small

Viewpoint No.	Viewpoint	Approx. distance from nearest turbine	Landscape Character Area Sensitivity (at viewpoint location)	Scale of Landscape Change	Visual Receptor Sensitivity (at viewpoint location)	Scale of Visual Change
9	View from Local road to the southeast of Deevoge bridge	5.4km	West Tyrone Hills and Valleys Medium/Low	Small / Negligible	Road users Medium/Low Nearby Residents High	S m a l l
10	View from Townland of Altnapaste	6.4km	Cashelnaven Uplands Medium around viewpoint in the direction of the site (whilst this is within the edge of the AEHSA which covers the Bluestack Mountains, the focus of the view is across the simple Cashelnaven Uplands of lower sensitivity)	Small	Road users Medium/Low Walkers High	Small
11	View from Track and Bluestacks Way in the in the townland of Greenan	11.3km	Lough Eske Medium/High	Negligible	Walkers High	Negligible
12	View from Local road in the townland of Magheraval	13.8km	Finn Valley Medium	Negligible	Road Users Medium / Low	Small / Negligible
13	View from Class B road B72 south of the village of Castlederg	16.7km	West Tyrone Hills and Valleys Medium/Low	Negligible	Road users Medium/Low Nearby Residents High	Small / Negligible

12.8 Assessment of Landscape Effects

12.8.1 Effects of the Construction Phase (fabric and character)

During construction, there would be short term effects on the landscape fabric and character within the Site, which predominantly comprises coniferous plantation forestry and some peat covered hills.

The main change to the landscape fabric would be the localised forestry felling around each turbine, and some very limited loss of peat for turbine bases and access tracks which are not located in the forestry. There would also be the loss of landscape fabric for the borrow pits, met mast and substation, and also the temporary construction compound and laydown areas.

The landscape fabric within the Site is considered to be of medium/low landscape sensitivity to the construction activities. Good site management plus reinstatement of temporary elements and removal of features no longer required at the end of the construction phase would minimise the extent of these effects. The loss in landscape fabric during the construction phase would be small, relative to the extensive areas of forestry in the vicinity and accordingly would be of slight magnitude, giving rise to a moderate/minor level of effect (not significant).

The effects on the character of the landscape during the construction phase would result primarily from the erection of the turbines / crane and activity and movement of large construction vehicles on the Site. These activities would disturb the static qualities of the landscape character. The landscape character of the Site and its surroundings is considered to be of medium/low landscape sensitivity to temporary construction activity based on the large scale topography and the influence of existing forestry. The effects of construction activity on this character are considered to be moderate in scale, however the effects would be temporary and of short duration, resulting in a moderate / slight magnitude of change and moderate/minor effects which would not be significant.

12.8.2 Effects of the Operational Phase: Landscape Fabric

Changes to landscape fabric can occur where there would be direct physical changes to the landscape. In this instance, direct changes to landscape fabric would only occur within the Site boundary.

The Proposed Development would result in a Minor loss of forestry and peat upland areas on the Site to accommodate the turbine bases as well as to provide crane pads, access tracks and substation, which is considered as part of the construction effects above. The community amenity hub (described in full in Chapter 4) would occupy a small area to the north of the Site. It would be barely visible from the surrounding landscape and would not be visible from any of the LVIA viewpoints. The effects arising from this element of the proposals would be imperceptible compared to the turbines, and so it is not considered any further. The change would be slight in magnitude, leading to moderate/minor effects which would not be significant.

12.8.3 Effects of the Operational Phase: Landscape Character

The effect of the proposed turbines on landscape character largely depends on the key characteristics of the receiving environment; the degree to which the turbines may be considered to be consistent with, or at odds with them; and how the Development would be perceived within its setting, with perceptions being influenced by:

- Distance to the Site;
- Weather conditions; and
- The appearance and 'fit' of the Proposed Development.

There is an overlap between perception of change to landscape character and visual amenity, but landscape character in its own right is generally derived from the combination and pattern of landscape elements within the view. The effects of the Proposed Development on landscape character would arise from its relationship to these combinations and patterns.

Of the landscape types/areas within the study area, only LCA 40 Cashelnavern Uplands would experience direct effects.

12.8.4 Cashelnavern Border & Uplands

Appendix 12c sets out a site specific assessment of landscape sensitivity (comprising susceptibility to change and landscape value) which draws on the LCACD in combination with detailed landscape character assessment undertaken as part of this LVIA (including site assessment).

The Site is located in a landscape which is very large scale and exposed. The primary land cover is peat and upland bog with extensive large blocks of coniferous forestry. These areas are simple landscapes with very little built character. Views are expansive and long distance where not contained by plantation woodland.

Overall the susceptibility of the landscape to the change brought by the Proposed Development is considered to be medium/low.

To the west of the Site is an AEHSA and the protected view towards the Barnesmore Gap from the N15. The condition of the landscape is moderate, however it has little obvious historical continuity. Amenity/ recreational function is limited to some footpaths for walkers. Overall the landscape in the vicinity of the Site is considered to be medium value.
Overall the landscape in the vicinity of the Site is considered to be of medium/low sensitivity to the Proposed Development.

Table 12.4 outlines the local characterising effect the Proposed Development would have on the key characteristics of the Cashelnavern Border & Uplands.

Table 12.4 Effects on Key Characteristics of the Cashelnavern Border & Uplands

Key Characteristic	Effect of the Proposed Development
Primarily a very large scale exposed landscape, open and exposed where not forested;	The Proposed Development would have no impact upon this key characteristic.
Primary land cover is peat and upland bog with extensive large blocks of coniferous forestry;	There would be some limited loss of peat and the felling of forestry. This limited loss would have no effect upon this key characteristic at the level of the LCA.
Some small to medium sized fields of primarily semi-improved pasture, rectilinear but irregular in shape along peripheral edge to Finn Valley to the north creates a smaller scale more agrarian character;	The Proposed Development would have no impact upon this key characteristic.
Undulating topography, typically between 100m – 300m AOD;	The Proposed Development would have no impact upon this key characteristic.
Views are expansive and long distance where not contained by plantation woodland. Some long distance views are possible across the lower lying Finn Valley LCA to the north;	Turbines would become a prominent feature in views across the southern parts of the very large scale uplands but would not affect views across the Finn Valley. The expansive nature or long distance of views would be unaffected by the Proposed Development.
Lough Mourne freshwater lake is in the centre of this LCA at the north of Barnesmore Gap and within the broad river valley;	The Proposed Development would have no impact upon this key characteristic
There are no settlements within the core of this LCA, with low density settlement of scattered dwellings and small farmsteads along the peripheral edge with the Finn Valley to the north and some eastern areas;	The Proposed Development would have no impact upon this key characteristic
The N15 traverses this site south towards Barnesmore Gap and alongside Lough Mourne. Limited access to the remainder of the area is via a limited county road network leaving much of the remote uplands inaccessible.	The Proposed Development would have no impact upon this key characteristic

Disused County Donegal Railway line runs alongside the N15;	The Proposed Development would have no impact upon this key characteristic
Network of way-marked walks used by walkers and ramblers	The Proposed Development would have no impact upon this key characteristic (visual effects upon users of walks are considered under Assessment of Visual Effects)

Although there would be no physical loss of the existing elements which together characterise the landscape, the addition of the Proposed Development into the landscape would have a characterising influence on some of the perceptual characteristics of local landscape character where views of the turbines are available. Within the immediate vicinity of the turbines visibility would be predominantly restricted by forestry and mainly glimpsed, partially restricted views from limited open areas / tracks would be possible. Only from the immediate north would close proximity views be possible from an open landscape around Meenbog. From these open areas the scale of change would be large, however the geographic extent of such change would be limited.

There would be little possibility for views in close proximity of the proposed Meenbog turbines and the existing Lough Golagh turbines due to the forestry cover across the site.

Beyond the immediate vicinity and with increasing distance from the Site the relationship of the array to the large scale exposed upland landscape would be more clearly perceived. The turbines would remain prominent vertical features contrasting with the largely static landscape, however there would be variations in the intensity of influence that the proposed turbines would have on the local landscape, even from relatively close locations due to the variations in topography and extent of forestry. From areas with largely unobstructed views including the slightly lower lying land north of the turbines (along the N15 corridor) the Proposed Development would be perceived in the context of the simple upland landscape and the scale of the turbines would accord with that of the landscape as illustrated in Viewpoints 3, 5 and 6 . In some of these wider views the existing Lough Golagh turbines are also possible and would form the context for the proposed Meenbog turbines.

From the settled north eastern edge of the LCA the turbines would be perceived as more distant features, as opposed to prominent foreground features, as illustrated by Viewpoint 8. Their presence would not dominate the smaller scale transitional landscapes or skyline.

From these areas the scale of change arising from the proposed turbines would be medium - small.

With increasing distance, beyond approximately 3-4km from areas to the north and west, visibility would become limited to higher ground due to intervening topography. From these more distant areas of higher ground the array would be seen in the context of extensive upland landscapes and the turbines would accord with the larger scale attributes of the landscape and landform as illustrated by Viewpoint 11.

The Proposed Development would be absorbed into the wider landscape and the movement of the blades would attract less attention. Within this area of the LCA, the scale of change would be small or less.

Whilst in the immediate vicinity of the site there would be a large scale change to the landscape over a limited area, the overall scale of change to LCA 40 Cashelnavern Border & Uplands would be medium. The extent over which this would occur would be medium. Overall there would be moderate magnitude of change and a moderate – moderate / minor effect upon the LCA which would not be significant.

Visibility of the turbines from Northern Ireland would be limited by topography as illustrated by Figure 12.6. As illustrated by Viewpoint 10 and 14, located within Northern Ireland, the Proposed Development would be perceived as an isolated cluster of turbines and would not give rise to any community barrier effect. Whilst they would be located adjacent to the Northern Ireland border, there is no access across the border at this point, so the turbines would not present any physical or perceived barrier.

12.8.5 West Tyrone Hills and Valleys

This is a strongly rural and relatively remote landscape. Hills are covered with moorland or are forested with exposed upland grazing and peat bogs. The most extensive coniferous plantations in Northern Ireland are found at Killeter and Lough Bradan Forests. Based on site specific analysis set out at Appendix 12c this LCA is considered to be of medium/low susceptibility and medium/low value, resulting in a medium/low sensitivity to the Proposed Development overall.

The northern parts of this LCA closest to the Site are extensively forested. Whilst theoretical visibility is possible, the extensive forestry across the landscape would prevent visibility of the Proposed Development from most northern parts of this LCA. Taking into account the screening by topography and the extensive forestry, there would only be limited locations within this LCA where the Proposed Development would influence landscape character.

From the limited open areas at the north eastern tip of the LCA along Corgary Road there would be open views towards the turbines beyond the forested near horizon to the west. Where this would occur, the scale of change within these few open areas would be substantial/moderate. From open areas at greater distance including around Meenbog Hill approximately 5km east of the Site, the scale of change would be Moderate or less.

However, the geographic extent of these changes in the context of the LCA as a whole would be very limited. The Proposed Development would not affect the key characteristics of the landscape. Considering the limited extent of change which would occur at the level of the LCA the overall magnitude of change would be moderate resulting in moderate-moderate/minor effects upon the LCA as a whole which would not be significant.

12.8.6 Finn Valley

This is a good quality agricultural riverine landscape of small scale semi-improved geometric fields with scattered farms, farmsteads and one off rural dwellings served by a number of rural villages and towns. The Finn Valley LCA is dominated by the River Finn, its tributaries and associated valleys carved from the surrounding uplands.

In the west of this LCA the Rivers Finn and Reelan cut through highland bog areas creating 2 steep narrow river valleys. These smaller rivers converge as the River Finn close to Cloghan into a notably broader and more level valley of larger square agricultural fields overlooked by transitional settled farmland on the transition between higher valley slopes and upland edge. The landscape eastwards from Ballybofey Stranorlar towards Castlefinn is a fertile agricultural plain alongside the river within a wider gently undulating agricultural landscape of large square fields.

The western parts of the area comprise areas of EHSA and a protected view, however these are not close to or orientated towards the Site. The south eastern parts of this LCA in the vicinity of the Site are considered to be of medium value as set out in Appendix c. There is a lower density of settlement than within other parts of the valley, which comprises scattered dwellings and small farmsteads. The susceptibility is considered to be medium, resulting in an overall medium sensitivity to the Proposed Development.

As illustrated by the ZTV of Figure 12.8, there would be very little visibility of the turbines from the southern parts of this LCA. Visibility would be mainly limited to the south facing northern slopes. From these distances the turbines would comprise only a minor feature of the view as illustrated by Viewpoint 13.

The size, scale and extent of change would be small, resulting in a slight magnitude of change and moderate/minor effects which would not be significant.

12.8.7 Bluestack LCA

As illustrated by Figure 12.8, there would be only very limited potential for any theoretical visibility of the Proposed Development to occur from the Bluestack LCA due to the topography of the mountains. Whilst from the easternmost tip the turbines would be seen in relatively close proximity, they would be seen in long distance elevated easterly views.

The turbines would be perceived within a very large scale landscape and would not significantly affect the key characteristics of the landscape or conflict with the scale of landscape. The geographic extent of area from where visibility would be possible would be very limited, and overall the magnitude of change upon the Bluestacks LCA would be slight and the effect on this medium/high sensitivity landscape would be moderate-moderate/minor which would not be significant.

12.8.8 Cronaghnameal Borders and Uplands

As illustrated by Figure 12.8, theoretical visibility of the Proposed Development would be limited to the eastern edge of the LCA due to topography. Whilst from the easternmost edges the western cluster of turbines would be seen in relatively close proximity, they would be seen in long distance elevated north easterly views. The proposed turbines would be seen in the context of the existing Lough Golagh turbines.

The turbines would be perceived within a very large scale landscape and would not significantly affect the key characteristics of the landscape (which already include the presence of large scale turbines due to the Lough Golah turbines) or conflict with the scale of landscape.

The geographic extent of area from where visibility would be possible would be very limited, and overall the magnitude of change upon the Cronaghnameal Borders and Uplands LCA would be slight and the effect upon this medium/high sensitivity landscape would be moderate-moderate/minor which would not be significant.

12.8.9 Other LCAs

From other LCAs within the study area the combination of distance and the screening effects of topography and forestry or woodland cover across the landscape would limit visibility towards the Proposed Development. The array would be perceived as an element in the background of the view rather than as a key component of those landscapes. The key characteristics of these landscapes would remain intact and would not be significantly affected as illustrated by Viewpoint 12 At these greater distances, the magnitude of change would be Slight or less and the effect Moderate or less and not significant.

12.8.10 Effects of the Operational Phase: Landscape Designations

12.8.10.1 Areas of Especially High Scenic Amenity

There are several AEHSA within the 20km study area. They are not named within the CDDP, nor are specific reasons given for their designation.

The closest AEHSA to the Site covers the Bluestack Mountains and is located to the west of the site. This is the largest AEHSA in the study area. Whilst there are no specific reasons set out in policy for the designation boundaries, it is reasonable to assume that this AEHSA exist to protect the scenic amenity of the Bluestack Mountains, including the Barnesmore Gap at the eastern edge of the mountains.

As illustrated by Figure 12.9, theoretical visibility towards the Proposed Development would only be visible from the eastern edges of this AEHSA. From the majority of the AEHSA the Proposed Development would not be visible.

From the eastern edges the Proposed Development would be perceived in the context of the simple upland landscape and the scale of the turbines would accord with the large scale landscape as illustrated in Viewpoint 3, 5 and 6. The turbines would not be seen in the context of the Bluestack

Mountains or the Barnesmore Gap which are the focus of protection, rather they would be located to the east, away from the AEHSA.

As illustrated by Viewpoints 3, 5 and 6, the layout achieves a balanced composition of well-spaced turbines with minimal potential for overlapping blades to be seen. Blades would be seen against the sky above the horizon, however the array would appear legible and would not add excessive visual clutter into the view. Its scale and composition in the landscape would not compete with the views towards the Bluestack Mountains or Barnesmore Gap (considered in more detail below).

With increasing distance visibility of the turbines would become limited to higher ground due to intervening topography. The turbines would be absorbed into the wider landscape and the movement of the blades would attract less attention.

The substation would be located adjacent to the boundary of the AEHSA. The substation has been designed to integrate into the landscape. It is set within cutting and surrounded by a planted earth berm which together will limit visibility of it to just the lightning conductor masts and gantries. These slender lattice towers will not be noticeable beyond their very close proximity, as illustrated by Viewpoint 4. They would be visually recessive and their limited scale (and location within cutting) would not give rise to any confusing visual clutter. They would not harm the AEHSA compete with or distract from the grandeur of the Barnesmore Gap.

Overall due to the limited potential for visibility of the Proposed Development from the eastern edges of AEHSA, and its location away from the focus of policy protection, the Proposed Development would not result in a significant effect upon the protected AEHSA.

No significant effects would occur from any of the other smaller AEHSA within the study area as they are all located over 15km from the Site and would be subject to only limited theoretical visibility.

12.8.11 Protected Views and Prospects

12.8.11.1 Protected View 1: view south west towards the Barnesmore Gap across Lough Mourne from the N15

As set out above, a robust method has been used to define what is within the protected view. This is illustrated on Figure 12.3. From this location the turbines would be largely screened by intervening landform and also seen in the context of the infrastructure around Lough Mourne, as illustrated by Viewpoint 7.

The opportunity for unrestricted views in both directions to the Gap and to the Site would only be possible from locations further south west. Viewpoint 5 illustrates the first such opportunity. Photomontage 5c illustrates the view towards the site and Photomontage 5d illustrates the view towards the Barnesmore Gap. They show more than the maximum clear area of vision experienced by the human eye.

The turbines of the Proposed Development would not encroach into the protected view towards the Gap, as illustrated by Figure 12.3 and Photomontage 5d as there is considerable angle or distance of separation. The dramatic views towards the Barnesmore Gap would remain unchanged. The turbines would be seen in a different view quadrant towards the south-east and would be peripheral to the views protected by policy, as illustrated below.

The diagrams below illustrate the views from viewpoints 5, 3 and 4 (in sequential order when travelling south west) towards the Barnesmore Gap and towards the wind farm, clearly demonstrating the separation between the views towards the Gap and the view towards the proposed development.

The maximum clear area of vision is illustrated, within which the Gap is indicated and in a separate segment the fill extent of the wind turbines is indicated. Viewpoints 6 and 7 are not illustrated as from these viewpoints either the Barnesmore Gap, or the turbines are partially screened by landform or vegetation.

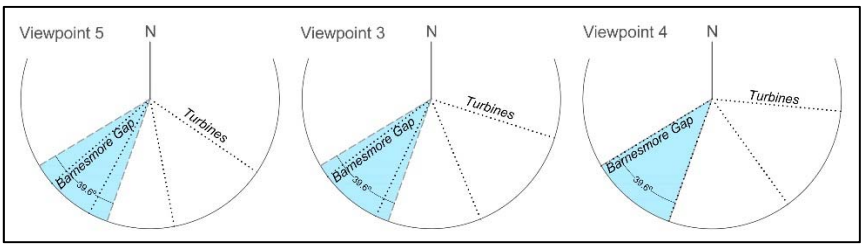

Illustration 12.1 Extents of View

As illustrated by Viewpoints 3 and 5, in views to the south east the layout achieves a balanced composition of well-spaced turbines. There would be limited potential for overlapping blades to be seen and the array would appear legible and would not add excessive visual clutter into the view.

The separation between the turbines and the protected view and the simple legible layout would allow the turbines to be present without detracting from the views towards the Gap.

It is also important to recognise that whilst the protected view is shown on the plan as a fixed point, there is no formal viewpoint on the side of the N15 for people to stop and appreciate the view towards the Barnesmore Gap. The view is experienced primarily from vehicles as road users travel along the N15 in a south westerly direction. This section of the N15 is maximum speed limit zone (100km/h). When travelling anything close to this speed the view would be experienced for a relatively short duration, and often be partially filtered or screened by roadside vegetation as the road winds along its route.

By their nature the photomontages present a static view in the direction of the site. Again, this is not the predominant experience of the road user. Drivers would necessarily be focussed on the road ahead, and the view towards the Barnesmore Gap. Any views to the south east in the direction of the Site would be fleeting and of short duration.

As the road user travels south west towards the Barnesmore Gap the Gap itself would increase in prominence, and the Proposed Development would move further out of the peripheral vision to a being perpendicular to the direction of travel until it would be behind the direction of travel.

As set out above, the substation has been designed to integrate into the landscape. It is set within cutting and surrounded by a planted earth berm which together will limit visibility of it to just the lightning conductor masts and gantries. These slender lattice towers will not be noticeable beyond areas in very close proximity, as illustrated by Viewpoint 5. They would be visually recessive, limited in scale and located within a cutting to mitigate any visual effects. They would not compete with or distract from the grandeur of the Barnesmore Gap or the scale of the enclosing hills.
In summary, the setting and integrity of the protected views towards the Barnesmore Gap, Lough Mourne and its hinterland would remain intact.

12.8.12 Other Protected Views

The other protected views and prospects within the study area are either located outside the ZTV or are also orientated away from the Site, and as such would not be affected by the Proposed Development.

12.9 Assessment of Visual Effects

12.9.1 Introduction

This section draws on the review of the Proposed Development, ZTV and viewpoint analysis, and other field work observations. It considers the potential effects of the Proposed Development on the visual amenity of the following groups of potential receptors, as identified in the baseline:

- Residents in individual dwellings and settlements;
- Road users; and
- Users of long distance walking routes;

The following assessment considers the extent of predicted and actual visibility, magnitude of change, sensitivity of the location for each receptor type and whether changes would be significant. Sensitivity is derived from an appreciation of the value of the view and the susceptibility of the receptor (as described in more detail with Appendix 12b Methodology), which will be stated explicitly in this section.

12.9.2 Effects upon residential visual amenity

The study area is sparsely populated. There are no dwellings within 4x tip height (626m) of the turbines.

All dwellings within a larger area of 10x tip height (1,565m) have an involvement with the proposed development. The fact that residents at these dwellings are supportive of the scheme indicates that there is an acceptance of it, and that they consider any potential effects to be acceptable.

Visibility towards the turbines from dwellings within 1,565m would be limited to varying degrees to by surrounding forestry or tree cover. The closest dwellings are also orientated away from the Site, so that primary views from the dwellings would be away from the turbines and remain

unaffected, with partial views of turbines only possible from the rear of the dwellings.

From the limited number of dwellings in the wider area beyond 10x tip height, visibility towards the turbines would be limited by intervening tree cover around the dwellings and across the landscape, and/or the orientation of dwellings so only oblique views would be possible, thus leaving the primary views unaffected.

When visible from these greater distances, the scale of the turbines would accord with the expansive scale of the upland landscape around the site, and the large scale commercial forestry. They would often be seen in the context of the existing turbines at Lough Golagh, so would not be adding uncharacteristic elements into the view.

Considering the nature of views from the dwellings, and the extent and degree to which the views would be affected, the effect upon residential visual amenity at the limited number of dwellings in the wider area to the north of the proposed wind farm would be no more than moderate.

12.9.3 Other Settlement

Ballybofey and Stranolar, Killygordon and Castlefin are all located along the base of the Finn Valley. Theoretical visibility towards the turbines would be very limited as illustrated by the ZTV at Figure 12.6. Visibility would be further restricted by tree cover across the landscape resulting in negligible effects from these settlements.

From Castlederg, views would again be largely restricted by landform and vegetation, with only limited visibility possible. The turbines would be seen over 16km west as very minor components of the view. The magnitude of change for such views would be slight/negligible resulting in minor effects which would not be significant.

12.9.4 Roads

The baseline has identified those roads where theoretical visibility of the Proposed Development is predicted. The sensitivity of road users depends both on the value of views from the road (classification and general purpose of use/speed of travel) and the susceptibility of the receptor to change.
In the context of this assessment, road users are generally considered to have a medium/ value and a medium/low susceptibility resulting in a medium/low sensitivity.

12.9.5 N15

The N15 runs through the study area from south west to north east, and passes within approximately 2.5km of the Site to the west of the turbines. It passes through the Barnesmore Gap, through Ballybofey and Stranolar and along the base of the Finn Valley.

Traveling west / south west, the turbines would be screened by topography and forestry until the road passes the forestry at Meenacrumlin where views become possible towards the Barnesmore Gap to the south west, and the turbines to the south. As illustrated by Viewpoint 5, in views to the

south the turbines would appear as a balanced and well-spaced composition. There would be minimal potential for overlapping blades to be seen and so the array would appear legible and would not add excessive visual clutter into the view. The magnitude of change in southerly views would be moderate and the effect moderate-moderate/minor and not significant.

As the road users travel south west the turbines would quickly move further out from the peripheral vision to a point perpendicular to the direction of travel until they would be behind the direction of travel, as illustrated by Viewpoints 4 and 3.

Travelling north east, the turbines would be outside the natural focus of the road user and would first be visible, oblique to the direction of travel as the road users passes the Barnesmore Gap, illustrated by the ZTV (Figure 12.7). The turbines would initially appear partially screened by foreground establishing tree cover as illustrated by Viewpoint 3 and would have a moderate/minor impact upon views along this short stretch of road. As the road user continues north east the turbines would quickly be perpendicular to the direction of travel and appear as a legible array to the south east as illustrated by Viewpoint 4. The scale of change would be up to medium/large, but considering the short duration such views would be experienced from, the overall magnitude of change would be slight and the effect moderate/minor-minor at most.

12.9.6 Local Road Network

From the local road passing north of the site, and the road from Meenbog towards Ballybofey, the turbines would appear prominently as the roads pass the site. Within close proximity the scale of change would be large. However, the duration that such a change is experienced for would be small as visibility towards the turbines would be screened by forestry and topography respectively, as illustrated on Figure 12.6 and 12.7. Overall the magnitude of change for road users would be moderate, and the effects moderate-moderate/minor and not significant.

12.9.7 Recreational Receptors

Recreational receptors are considered to have a value and susceptibility to change based on the degree to which views of the landscape are important. Views from long distance walking and cycling routes are considered to have both a High value and their users are considered to have High susceptibility to change (High sensitivity overall).

12.9.8 Northwest Cycle Trail

Users of this route are considered to be high sensitivity based on placing a high value and susceptibility to change based on the degree to which views of the landscape are important.

This route passes through the Barnesmore Gap to the west of the Site, through Ballybofey and Stranolar, through Strabane to the north east the Castlederg to the south east before passing out of the study area to the south west again.

Travelling north east the turbines would first be visible as the cyclist passes through the Barnesmore Gap on the N15 as illustrated by the ZTV (Figure 12.10). The turbines would initially appear partially screened by foreground establishing tree cover as illustrated by Viewpoint 4 and would have a limited impact upon views along this short stretch of the route due to the short duration for which they'd be visible.

The route then turns off the N15 south east towards the turbines. The turbines would briefly be seen clearly in open views before the views are restricted as the route passes through forestry and then turns north towards Ballybofey. Whilst when visible the turbines would result in up to a large scale of change, the duration and extent of the route over which a change would be experienced would be very short, resulting in a moderate/slight magnitude of change and major/moderate-moderate effects over a short stretch of this route which would not be significant.
Once the route turns north towards Ballybofey the turbines would be behind the direction of travel so no further effects would occur.

Travelling south west the turbines would first come into view approximately 3km north east of the Site. They would be seen in the context of commercial forestry on the Site and the existing Lough Golagh turbines. They would increase in prominence as the route approaches and passes the array. The scale of change would increase to large, however the extent of the route over which such change would be experienced would be very short, resulting in a moderate/slight magnitude of change and major/moderate-moderate effects over a short stretch of this route which would not be significant.

Once the route passes the Site the turbines would be behind the direction of travel and then largely screened so no further effects would occur.

12.9.9 Trusk Lough Walkway

From this short circular walk around the Lough, the turbines would appear as a legible and simple composition in the distance, similar to views represented in Viewpoint 8. The turbines would be visible, perceived in the context of the simple upland landscape. The magnitude of change would be moderate/slight and the effect would be major/moderate-moderate and not significant.

From other routes in the study area the combination of distance and screening from topography and tree cover across the landscape would limit the visibility of the turbines. No significant effects are predicted for any other route within the study area.

12.10 Assessment of Cumulative Effects

This section presents an assessment of the potential cumulative landscape and visual effects of Meenbog Wind Farm (hereafter referred to as Meenbog for clarity) when considered in the context of the full baseline (operational, under construction and consented) and proposed wind farms.

Cumulative landscape and visual effects can arise in three reasonably distinct ways:

- First: The effect of an extension of an existing development or the positioning of a new development such that it would give rise to an extended and/or intensified impression of the original wind farm in the landscape as seen from fixed locations.
- Second: Cumulative effects can arise through an increase in the perceptions of wind farm development as seen from fixed points from which more than one wind farm would now be seen in different parts of the landscape.
- Third: An increase in the incidence of sequential perceptions of different turbines can occur through the recurrence of images and impressions arising from developments which are located at various points in the landscape and which are encountered when moving through it.

It is important to differentiate between the assessment of cumulative effects arising from Meenbog with projects that are operational or under construction; those which are consented and can therefore be considered as part of a scenario with some certainty; and those that are proposed but not yet determined and therefore about which there can be little certainty. The likely significant cumulative effects arising from the addition of Meenbog to the operational schemes are considered as part of the baseline and included within the LVIA above where relevant, and repeated here where helpful to do so. The cumulative assessment then describes further potential cumulative effects in the following way when helpful to do so:

The viewpoint assessment sets out the potential cumulative visual effects in two stages:

- the effects of the introduction of Meenbog assuming the fully consented baseline is constructed as consented; and
- the effects of the introduction of Meenbog assuming all operational, consented and proposed wind farms are consented and constructed. These effects should be tempered by the potential uncertainty surrounding the proposed wind farms as not all of them are likely to be consented and constructed.

The methodology used is set out in Appendix 12b.

12.10.1 Scope of the Cumulative Assessment

When establishing the scope of a cumulative assessment, 'the challenge is to keep the task reasonable and in proportion to the nature of the project under consideration…The emphasis in EIA is on the likely significant effects rather than on the comprehensive cataloguing of every conceivable effect that might occur' (GLVIA 3 para 7.5).

This proportionate approach has been adopted when agreeing the scope of cumulative assessment and supporting cumulative visual material. The assessment of cumulative landscape and visual effects is illustrated with reference to the cumulative figures 12.11-12.23 and the Cumulative Visualisations for four selected LVIA viewpoints.

This assessment considers all operational, consented and proposed wind energy developments within the 20km cumulative search area.

Data used for the cumulative assessment has been based on the information presented within submitted EIARs, planning applications and further publicly available information.

Table 12.5 Cumulative schemes within 20km of Meenbog.

Ref Figure 12.11	Wind Farm	Number of turbines	Blade tip height (m)	Distance / direction from Meenbog (km)	Landscape Character Type
Operational and Under construction Wind Farms					
1.	2. Lough Golagh	3. 25	4. 62	5. SW 2.1km	6. DNG 41: Croaghnameal Border & Uplands
7.	8. Meenadreen	9. 4	10. 75	11. SW 6.7km	12. DNG 41: Croaghnameal Border & Uplands
13.	14. Crighshane	15. 14	16. 99.9	17. SE 8.4km	18. NI RLCA: 5 West Tyrone Hills & Valleys
19.	20. Churchill	21. 8	22. 99.9	23. SE 11.7km	24. NI RLCA: 5 West Tyrone Hills & Valleys
25.	26. Meenagrauv	27. 4	28. 75	29. NE 12.5km	30. DNG 14: Finn Valley
31.	32. Meenanilta	33. 3	34. 75	35. N 12.5km	36. DNG 14: Finn Valley
37.	38. Meenanilta ii	39. 3	40. 75	41. N 12.8km	42. DNG 14: Finn Valley
43.	44. Meehahorna	45. 7	46. 100	47. N 13.6km	48. DNG16: Cark Mountain Uplands

49.	50.	Meenlaban	51.	7	52.	121.2	53. N	14.1km	54.	DNG16: Cark Mountain Uplands
55.	56.	Culliagh	57.	18	58.	68.5	59. N	14.9km	60.	DNG16: Cark Mountain Uplands
61.	62.	Culliagh Extn	63.	3	64.	121.25	65. N	14.4km	66.	DNG16: Cark Mountain Uplands
67.	68.	Meentycat 1	69.	9	70.	121.2	71. N	15.2km	72.	DNG16: Cark Mountain Uplands
73.	74.	Cark	75.	25	76.	67.5	77. N	16.7km	78.	DNG16: Cark Mountain Uplands
79.	80.	Ballystrang	81.	6	82.	74	83. N	17km	84.	DNG16: Cark Mountain Uplands
85.	86.	Cark Extension	87.	6	88.	67.5	89. N	16.7km	90.	DNG16: Cark Mountain Uplands
91.	92.	Cark/Largymore	93.	9	94.	99	95. N	16.8km	96.	DNG16: Cark Mountain Uplands
97.	98.	Anarget WF	99.	6	100.	73.5	101. W	17.8km	102.	DNG38: Bluestack
103.	104.	Lough Hill ii	105.	6	106.	85	107. SE	18.9km	108.	NI RLCA: 5 West Tyrone Hills & Valleys
109.	110.	Bin Mountain	111.	6	112.	92.25	113. SE	18.3km	114.	NI RLCA: 5 West Tyrone Hills & Valleys

Consented Wind Farms								
115.	116.	Meenakeeran	117.	4	118.	115	119. SW 3.1km	120. DNG: 40 Cashelnaven Uplands
121.	122.	Straness	123.	28	124.	112	125. SW 3.4km	126. DNG: 41 Croaghnameal Border & Uplands
127.	128. Ext.	Meenadreen	129.	5	130.	112	131. SW 6.2km	132. DNG: 41 Croaghnameal Border & Uplands
A.	B.	Lough Cuill	C.	8	D.	116	E. SW 6.2km	F. DNG: 41 Croaghnameal Border & Uplands
G.	H.	Croaghnameal	I.	7	J.	115	K. SW 6.2km	L. DNG: 41 Croaghnameal Border & Uplands
M.	N.	Tievenamenta	O.	15	P.	109.5	Q. SE 10.4km	R. NI RLCA: 5 West Tyrone Hills & Valleys
S.	T.	Seegronan Ext	U.	3	V.	119.5	W. SE 11.8km	X. NI RLCA: 5 West Tyrone Hills & Valleys
Y.	Z.	Seegronan	AA.	6	BB.	112	CC. SE 13.2km	DD. NI RLCA: 5 West Tyrone Hills & Valleys
EE.	FF.	Crilly Tullylinn	GG.	4	HH.	126.5	II. SE 13.8km	JJ. DNG 42: Lough

KK.	LL.	Altgolan	MM.	7	NN.	125	OO. SE	15.6km	PP. NI RLCA: 5 West Tyrone Hills & Valleys
QQ.	RR.	Altilow	SS.	1	TT.	67	UU. E	13.2km	VV. DNG 38: Bluestack
WW.	XX.	Meenagrauv 2	YY.	1	ZZ.	84	AAA. N	12.8km	BBB. DNG14: Finn Valley
CCC.	DDD.	Meenagrauv 4	EEE.	1	FFF.	101	GGG. N	12.8km	HHH. DNG14: Finn Valley
III.	JJJ.	Dromnahough	KKK.	15	LLL.	135	MMM. N	16.3km	NNN. DNG:16 Cark Mountain Uplands
OOO.	PPP.	Lenalea	QQQ.	9	RRR.	135	SSS. N	17.5km	TTT. DNG:16 Cark Mountain Uplands
Proposed Wind Farms									
UUU.	VVV.	Crighshane Extension	WWW.	5	XXX.	120.5	YYY. SE	9km	ZZZ. NI RLCA: 5 West Tyrone Hills & Valleys
AAAA.	BBBB.	Crighshane Ext	CCCC.	5	DDDD.	120.5	EEEE. SE	12.1km	FFFF. NI RLCA: 5 West Tyrone Hills & Valleys
GGGG.	HHHH.	Gronan	IIII.	4	JJJJ.	126	KKKK. SE	12.1km	LLLL. NI RLCA: 5 West Tyrone Hills & Valleys

MMMM.	NNNN. Meenamullen	OOOO. 4	PPPP. 125	QQQQ. 12.7km SE	RRRR. NI RLCA: 5 West Tyrone Hills & Valleys

12.10.2 Cumulative viewpoint selection and assessment

The cumulative viewpoints are a selection of the LVIA viewpoints (i.e. there are no viewpoints which appear in the cumulative assessment which do not also form part of the LVIA). The cumulative viewpoints have been selected to illustrate cumulative effects at a range of locations, distances and receptors: different landscape character areas including sensitive landscape designations; and different visual receptors.

12.10.3 Cumulative viewpoint assessment

The viewpoint assessment sets out the potential cumulative effects at the selected viewpoints.

Viewpoint 5: View from the Townland of Cashelnavean

WIND FARM	DISTANCE	DIRECTION
Meenbog	2.8km	SE
Operational & Under Construction		
Lough Golagh	5.9km	S
Consented		
Meenakeeran	8.1km	SE
Straness	8.1km	S

Operational and Consented Baseline

Lough Golagh is located on the horizon approximately 6km south and appears as a minor feature of the view. Only the tips of Meenakeeran will be visible beyond the forested horizon approximately 8km south west. The 1 tip of Straness which will be visible will appear beyond the Lough Golagh array and be indistinguishable from it. The addition of Meenbog to the operational and consented baseline would not be considered significant in its own right, nor result in any significant cumulative effects with the operational or consented turbines.

Baseline and Proposed Wind Farms

There are no proposed wind farms visible from this viewpoint. No significant cumulative effects would occur from this viewpoint.

Viewpoint 8: View Local Road in the townland of Kinletter

WIND FARM	DISTANCE	DIRECTION
Meenbog	4.5km	SW
Operational & Under Construction		
Lough Golagh	9.9km	SW
Ballystrang, Cark Largymore, Cark II, Cark Ext, Cuilliagh, Cuilliagh Ext, Meehahorna, Meenagrauv, Meenanilta I, Meenanilta II, Meenlaban, Meentycat I	10.1km	N
Consented		
Meenakeeran	7.1km	S
Straness, Lough Cuill, Croaghnameal	11.2km	SW

Dromnahough, Lenalea, Meenagauv II & III	10.3km	N

Operational and Consented Baseline

Lough Golagh is just visible on the horizon approximately 10km south west. The large group of operational wind farms to the north is just visible along the horizon over 10km north. The consented Meenakeeran will be visible approximately 7km south. The group of consented wind farms to the south west would be mostly screened by topography and forestry along the horizon. The consented wind farms to the north will also be largely screened by intervening topography and forestry, and when visible they would be subsumed by the operational turbines in that area. The addition of Meenbog to the operational and consented baseline would not be considered significant in its own right, nor result in any significant cumulative effects with the operational or consented turbines.

Baseline and Proposed Wind Farms

There are no proposed wind farms visible from this viewpoint. No significant cumulative effects would occur from this viewpoint.

Viewpoint 9: View from Townland of Tievecloghoge

WIND FARM	DISTANCE	DIRECTION
Meenbog	5.1km	W
Operational & Under Construction		
Lough Golagh	9.7km	SW
Consented		
Meenakeeran	5.3km	SW
Straness	10.3km	SW

Operational and Consented Baseline

Lough Golagh is predominantly screened by topography and forestry along the horizon. Other operational wind farms are screened by foreground forestry visible to the left of the view (although even if the viewpoint were located slightly west of the forestry block, topography and forestry along the horizon would still largely screen them. This is also the case for the consented wind farms which are theoretically visible from this viewpoint to the south east). The addition of Meenbog to the consented baseline would not result in any significant cumulative effects at this viewpoint.

Baseline and Proposed Wind Farms

The proposed wind farms theoretically visible from this viewpoint would be screened by foreground forestry visible to the left of the view (although even if the viewpoint were located slightly west of the forestry block, topography and forestry along the horizon would still largely screen them). Assuming the prior presence of the baseline and proposed wind farms, the addition of Meenbog would not result in any significant cumulative effects at this viewpoint.

Viewpoint 13: View from Local Road in the Townland of Magheravall

WIND FARM	DISTANCE	DIRECTION
Meenbog	13.8km	SW
Operational & Under Construction		
Meenanilta i, Meenanilta ii	0.69km	SW
Meenagrauv	1.0km	S
Cuilliagh, Cuilliagh Ext, Meehahorna, Meenlaban, Meentycat i	1.3 km	NE
Churchill	22.2km	S
Bin Mountain	27.3km	S
Lough Hill ii	27.9km	S
Lough Golagh	18.5km	S
Consented		
Meenagrauv ii, Meenagrauv iii	1.0km	S
Seegronan, Seegronan Ext, Altgolan, Crilly Tullylinn	22.5 km	S
Straness, Lough Cuill, Croaghnameal	20.67 km	S
Proposed		
Church Hill Ext, Gronan, Meenamullen	23.1 km	S

Operational and Consented Baseline

This viewpoint has operational turbines within close proximity; Meenagrauv and Meenalita i & ii to the south and south west, and the group consisting of Cuilliagh, Cuilliagh Ext, Meehahorna, Meenlaban, Meentycat i to the west. Together, these turbines have resulted in a large scale change at this viewpoint. The other operational turbines are well screened and located at such distance as to be barely noticeable.

The consented Meenagruav ii and iii turbines would be seen prominently, adjacent to the existing Meenagruav turbines, and would contribute to the existing cumulative effects at this viewpoint. The other cumulative sites would be well screened and located at such distance as to be barely noticeable.

The addition of Meenbog over 13km south would not make any significant contribution to these pre-existing effects.

Baseline and Proposed Wind Farms

The proposed wind farms theoretically visible from this viewpoint would be screened by forestry along the horizon. Assuming the prior presence of the baseline and proposed wind farms, the addition of Meenbog would not make any significant contribution to the pre-existing effects at this viewpoint.

12.10.4 Composite Cumulative Landscape and Visual Effects

In landscape terms, significant cumulative effects would occur when the presence of additional wind farm development would extend the geographical limits of existing character effects or when the added presence of the proposed development would be sufficient to combine

local characterising effects to transform or redefine the baseline landscape character.

Meenbog Wind Farm lies within LCA 40 Cashelnaven Border & Uplands. The location of other wind farm projects in relation to landscape character types within the study area is summarised in above. Figures 12.14 and 12.15 illustrates the cumulative schemes in relation to the landscape character and landscape planning designations.

Operational Baseline

As set out within the main LVIA, due to the varied terrain and extensive forestry cover across the site which would limit cumulative views of Meenbog and Lough Golagh, there would be little possibility for significant cumulative effects upon landscape character arising from Meenbog Lough Golagh. Cumulative Viewpoint 5 illustrates the limited cumulative effect between the two wind farms.

The next closest operational site is Meenadreen, located over 6km south west and separated from Meenbog by high ground so opportunities for cumulative visibility and therefore cumulative effects would be very limited. No significant cumulative effects would occur as a result of Meenbog and Meenadreen.

Due to separation distance and the screening effects of landform and woodland between Meenbog and all the other operational turbines no significant cumulative effects would arise as a result of Meenbog and the operational turbines.

Operational and Consented Baseline

With regard to the fully consented baseline, the closest consented wind farm is Meenakeeran located approximately 3km south east. As illustrated by the cumulative ZTV (Figure X), areas with theoretical cumulative visibility of both schemes are extensively forested, which would limit the potential for any significant cumulative effects. From greater distances topography would limit the potential for cumulative visibility (as illustrated by cumulative viewpoint 5), and the schemes would be seen with sufficient separation between them for them to be perceived as separate schemes which do not result in any significant cumulative effects together (as illustrated by cumulative viewpoints 8 and 9).

Other consented schemes are located at greater distance from Meenbog and often separated from it by higher ground. Consequently there would be no potential for any significant cumulative effects with the consented wind farms as illustrated by cumulative viewpoints 8, 9 and 13.
In summary, the addition of Meenbog to the operational and consented baseline (assuming all consented turbines are constructed) would not result in any significant cumulative effects upon landscape character.

Operational and Consented Baseline and Proposed Wind Farms

The closest proposal is Crigshane Extension located nearly 10km south east from Meenbog. As illustrated by the cumulative ZTV and cumulative visualisations, there would be limited area from where cumulative visibility of both schemes would be possible. Due to the separation distance and the screening effects of landform and woodland across the landscape no

significant cumulative effects would arise as a result of Meenbog and the Crigshane extension.

The other proposed wind farms are located over 10km from Meenbog. Again, due to the separation distance and screening landform and woodland, no significant cumulative effects would arise as a result of Meenbog and the proposed wind farms.

12.10.5 Areas of Especially High Scenic Amenity

Operational and Consented Baseline
As illustrated by cumulative viewpoint 5, from the closest parts of the AEHSA Lough Golagh would appear as a small component of the view on the horizon, and the consented Meenakeeran would be predominantly screened. The addition of Meenbog in views to the east, out of and away from the AEHSA would not result in any significant cumulative harm to the designated landscape along this eastern edge.

From greater distances both Meenbog and the operational and consented turbines would be perceived as minor features of the view, and would be absorbed into the wider landscape. The movement of the blades would attract less attention.

Overall the addition of Meenbog to the operational and consented wind farms would not result in any significant cumulative effects upon the AEHSA.

Operational and Consented Baseline and Proposed Wind Farms
Due to the distance of the proposed wind farms from the AEHSA, and the separation of high ground and forestry cover, the proposed wind farms would be barely visible from the AEHSA. No significant cumulative effects would occur upon the AEHSA.

12.10.6 Protected View 1: view south west towards the Barnesmore Gap across Lough Mourne from the N15

Operational and Consented Baseline
As illustrated by cumulative viewpoint 5, from the N15 Lough Golagh would appear as a small component of the view on the horizon, and the consented Meenakeeran would be predominantly screened. The addition of Meenbog in views to the east, out of the clear area of vision experienced by the human eye, would not result in any significant harm to the setting or integrity of the protected view towards the Barnesmore Gap across Lough Mourne.

Operational and Consented Baseline and Proposed Wind Farms
No proposed wind farms are visible from the protected view. There would not therefore be any significant cumulative effects resulting from the addition of Meenbog to the operational and consented baseline and proposed wind farms.

12.10.7 Potential Cumulative Visual Effects

Significant cumulative effects on visual amenity would potentially arise where there is: a reasonable portion of the Meenbog wind turbines visible and the clear presence of other wind farms/turbines within a realistic viewing range that would exert a significant effect in their own right; or a less than significant magnitude of influence such that the addition of Meenbog would raise this to a visually significant level.

As set out within the main LVIA, the addition of Meenbog to the operational baseline schemes would not result in any significant cumulative effects. With regard to the consented schemes, the closest are located to the south east and south west of the Meenbog site. Most sensitive visual receptors are located to the north (from north west to north east) of the Meenbog site as this is where the settled landscapes and transport routes are.

As illustrated by cumulative viewpoints 5, 8 and 9, cumulative visibility of Meenakeeran would be limited, and other consented sites would be barely noticeable if at all. From visual receptors to the north of the Meenbog site (including residents, road users, walkers and cyclists) Meenakeeran would not in its own right result in significant effects, and the addition of Meenbog would not raise the magnitude of influence to a significant level. There would not therefore be any significant cumulative visual effects arising from the addition of Meenbog to the operational and consented baseline.

There is very little visibility of the proposed wind farms from areas to the north of the site as illustrated by cumulative viewpoints 5, 8 and 9. There would not therefore be any significant cumulative effects resulting from the addition of Meenbog to the operational and consented baseline and proposed wind farms.

12.10.8 Cumulative Summary

No significant cumulative effects would occur with Meenbog in association with even the closest operational and consented turbines, due to the screening provided by intervening high ground and extensive forestry across the site and local landscape.

No significant cumulative effects would occur with the operational or consented turbines located at greater distance from the Meenbog site due to the screening effects of topography, forestry and also separation distance from Meenbog.

The proposed wind farms are located nearly 10km from the Meenbog site or more and also separated from it by high ground. Consequently, cumulative visibility would be very limited and no significant cumulative effects would occur with the operational, consented and proposed wind farms.

The addition of the Meenbog turbines (located beyond the AEHSA boundary) to the operational, consented and proposed wind farms would not result in any significant cumulative effects upon the AEHSA.

With regard to the protected views from the N15 across Lough Mourne towards the Barnesmore Gap, Meenbog would not result in any significant harm to the integrity or setting of the protected view.

Meenbog would not result in any significant cumulative effects for visual receptors in the study area due to the separation distance, intervening high ground and forestry between Meenbog and the operational, consented and proposed turbines.

12.13 Summary

The Proposed Development has been designed to minimise landscape and visual effects as far as possible. Issues identified by the Planning Inspector and Donegal County Council have been taken account of where relevant.
With regard to landscape effects, direct changes to landscape fabric would only occur within the Site boundary, and would be of a moderate/minor level which would not be significant.

With regard to effects upon landscape character, whilst in the immediate vicinity of the site there would be a large scale change to the landscape over a limited area, the overall magnitude of change within LCA 40 Cashelnavern Border & Uplands would be moderate, resulting in a moderate – moderate / minor effect upon the LCA which would not be significant. The scale, location and design of the Proposed Development would not give rise to any community barrier effect. There would not be any significant effects upon any other landscape character areas.

The closest Area of Especially High Scenic Amenity to the Site covers the Bluestack Mountains and is located to the west of the site. Due to the limited potential for visibility of the Proposed Development from the AEHSA, and its location away from the focus of policy protection, the Proposed Development would not result in any significant effects upon the protected AEHSA. No significant effects would occur from any of the other smaller AEHSA within the study area.

The design process for the layout focussed on maintaining a clear separation between the protected view and the turbines, and also creating a simple and legible composition when viewed from the N15. A robust method based on best practice guidance has also been used to define what is within the protected view from the N15 across Lough Mourne to the Barnesmore Gap. Consequently, the proposed turbines would not detract from the protected view towards the Gap. They would not compete with the drama of the Gap or the scale of the enclosing hills. The setting and integrity of the protected views towards the Barnesmore Gap, Lough Mourne and its hinterland would remain intact.

With regard to other visual effects, whilst the turbines would be visible from dwellings in the local area, effects would be mitigated by distance, the orientation of dwellings, the presence of screening, the relationship between the turbines and expansive scale of the landscape, and the context of more distant existing turbines within which they would be seen. Considering the detailed assessment undertaken, the overall residential visual amenity of the local area would not be significantly affected, and the turbines would not appear visually obtrusive.

No significant visual effects would occur for road users or users of the recreational routes passing through the study area.

No significant cumulative effects would occur upon landscape character, the AEHSA or the protected view from the N15 across Lough Mourne towards the Barnesmore Gap.

Meenbog would not result in any significant cumulative effects for visual receptors in the study area due to the separation distance, intervening high ground and forestry between Meenbog and the operational, consented and proposed turbines.

Overall the extent of significant landscape and visual effects is very limited considering the scale of the proposal. The significant effects are fully reversible; when the wind farm is decommissioned at the end of the operational life, the turbines will be removed or replaced following a revised assessment of the impacts.
The changes arising from a proposed development may engender positive or negative responses depending on individual perceptions regarding the merits of wind energy development. The same project may be seen by some as attractive, acceptable and contributing to the well-being of the natural environment, while others may take a negative stance regarding the wind farm. The assessment has taken a precautionary approach in considering that all effects on the landscape and on views which would result from the construction and operation of the Proposed Development would be adverse, however not all people would consider the effects to be adverse and this may not be the case in every landscape situation.